July 15, 1952 E. KLUG 2,603,150

ARTICLE TRIPPED MARKING DEVICE

Filed May 23, 1947 3 Sheets-Sheet 1

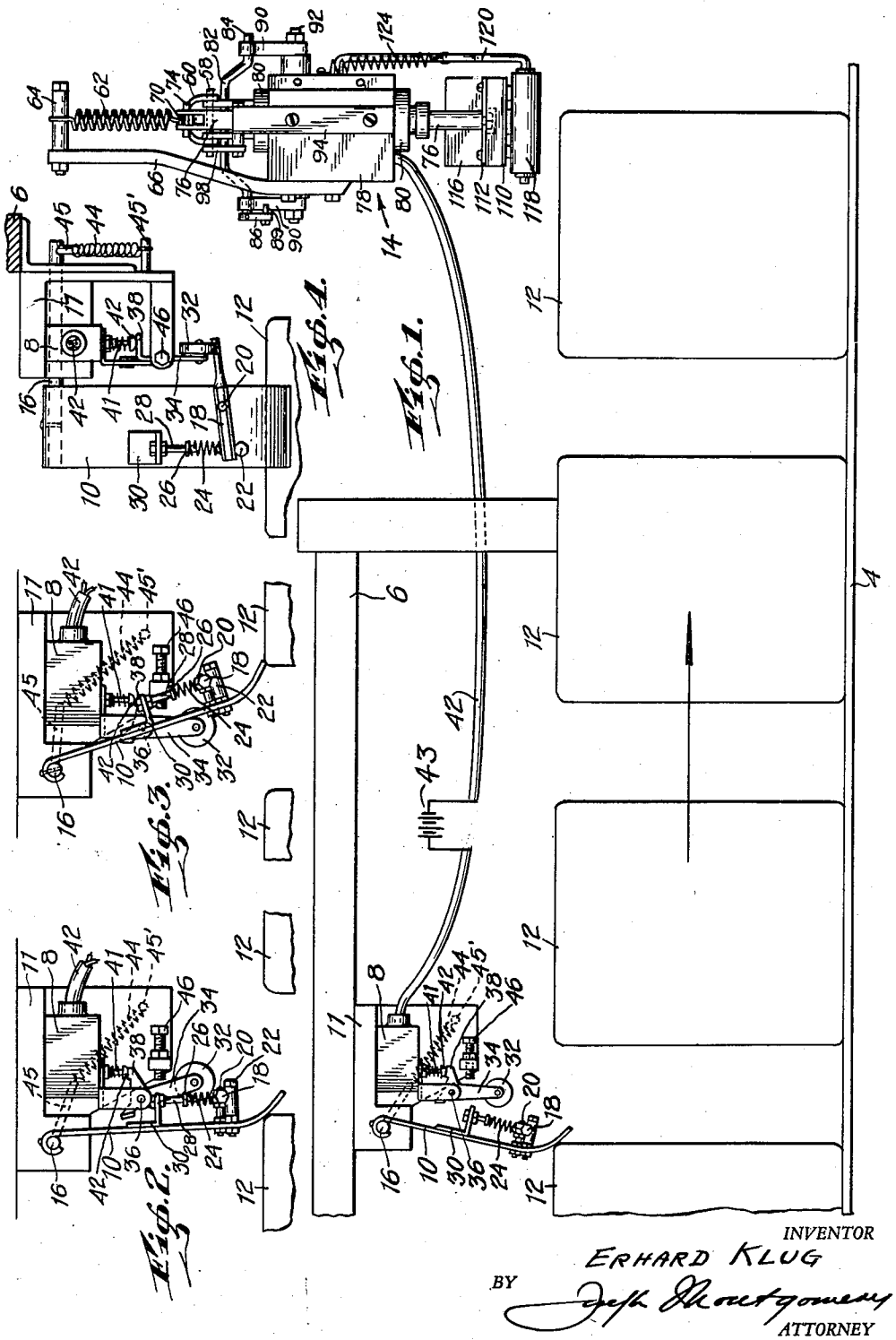


Fig. 1.

Fig. 4.

Fig. 3.

Fig. 2.

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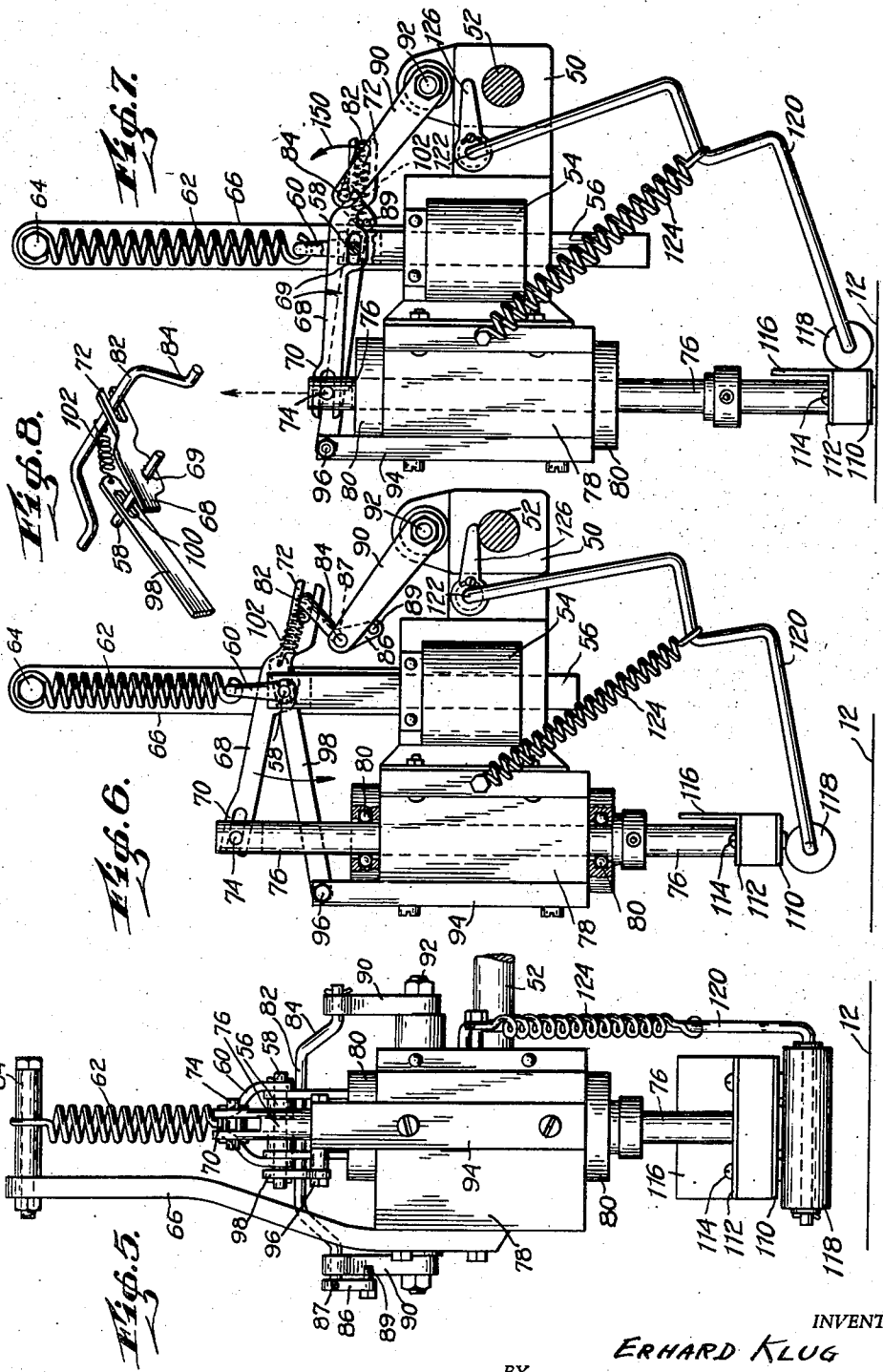


Fig. 7.

Fig. 8.

Fig. 6.

Fig. 5.

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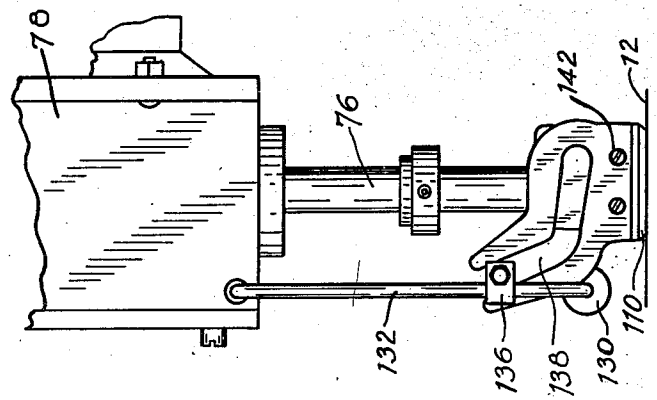


Fig. 11.

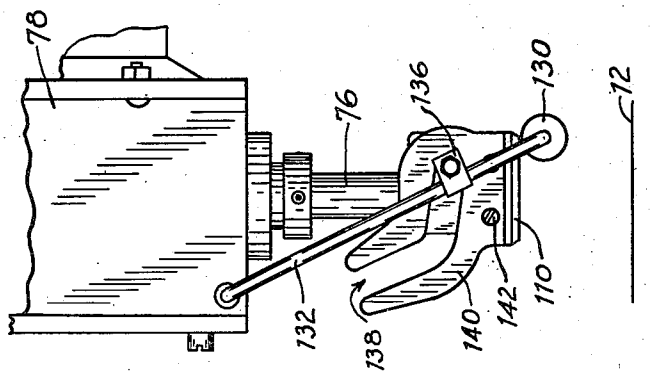


Fig. 10.

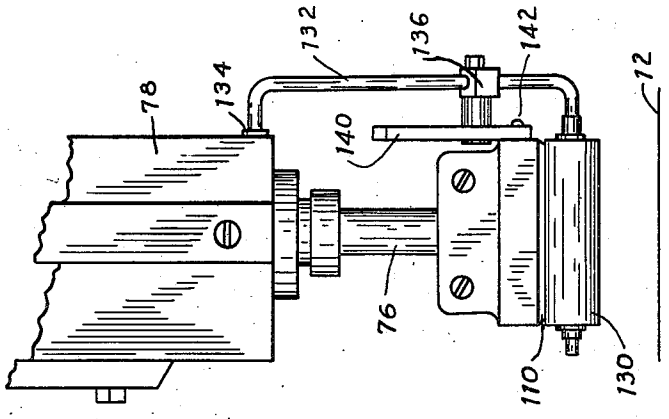


Fig. 9.

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Patented July 15, 1952 2,603,150

UNITED STATES PATENT OFFICE

2,603,150

ARTICLE TRIPPED MARKING DEVICE

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Application May 23, 1947, Serial No. 749,895

13 Claims. (Cl. 101—44)

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This invention relates to improvements in marking devices and is particularly directed to a device which is entirely automatic in operation.

The device of the present invention is adapted for marking articles regardless of whether the marking is carried out by marking on the surface, indenting in the surface, printing with type, etching with acid, stamping with dies or any other method whereby indicia in any form is applied to or embedded in the surface of an article.

While the present invention has application in many fields it is particularly well adapted for marking containers, packages or other objects while the same are in motion, although it is to be understood that the marking device is suitable also for marking articles that are stationary. However for convenience of illustration and description the invention is illustrated in the accompanying drawings as applied to the marking of moving objects, and that adaptation will herein be described, from which, the adaptation thereof to other fields readily will be appreciated; it being understood that the illustration and description of one adaptation is not to be construed as limiting the field of application of the device or the scope of the invention.

It is customary to mark many articles of manufacture with a trade-mark brand, date, code or other indicia. Some articles have the marking applied directly to the article, while others have the marking applied to the wrapper or package containing the article.

In some instances such marking is carried out by manually impressing on the article or package an inked rubber stamp, bearing the desired indicia. This being a relatively slow procedure attempts have been made to mark or imprint the packages or articles automatically as the same are fed through a wrapping machine or on a moving conveyor. These attempts, however, have not been successful because of blurring of the impression and for other reasons. In such devices the printing or type bar which generally is cam actuated, has a fixed stroke and the bar must complete its stroke in the printing direction under the influence of the cam before it is retracted. In the employment of such devices where the articles to be marked vary in size or where one is slightly above the height for which the type or printing bar is set, the bar will press tightly against or into the article resulting in blurring of the impression and sometimes injuring the article or package. On the other hand should one of the articles be below

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the height for which the type or printing bar is set, the article will not be marked. It will be appreciated that continued adjustment of the type or printing bar to accommodate articles of various sizes defeats the very purpose of automatic marking due to the time required for making such adjustments.

Moreover, where such devices are employed for marking moving objects great difficulty has been experienced in retracting the marking element before relative movement of the object, while in contact with the marking element, takes place. Such relative movement results in a blurring of the marking.

Other attempts to mark articles with an impression roller, by having the roller and article move relatively to each other, have the objection that the uneven surfaces of certain articles result in improper and inadequate marking.

One of the objects of the present invention resides in the provision of a device which will clearly and accurately automatically mark a series of successive articles regardless of variation in the size of the articles or the height at which the same are fed to the device.

Another object of the present invention is the provision of a device of the character indicated having novel means for advancing and retracting the marking element.

A further object of the invention is the provision of a device which will automatically mark objects of various sizes, or mark in recesses in objects, without the necessity of adjusting the device to accommodate such articles.

A further object of the invention is the provision of timing means for the marking operation.

A still further object of the invention resides in the provision of adjusting means for the marking device whereby the contacting of the impression element with the article can be varied widely from a very slight contact to a heavy blow.

A still further object resides in the provision of automatic inking means, and means for guiding an inking roller in contact with an impression element, whereby the surface of the element is properly inked without allowing the inking roller to contact any other part of the device.

Other objects of my invention will be manifest from the following detailed description and the accompanying drawings.

In the drawings:

Fig. 1 is a front elevational outline view of the conveyor of a packaging machine employing my improved marking device;

Figs. 2 and 3 are front elevational views of a switch and switch actuating mechanism for the device shown in different positions;

Fig. 4 is a side elevational view of the switch and mechanism of Figs. 2 and 3;

Fig. 5 is an enlarged front elevational view of the marking device;

Figs. 6 and 7 are side elevational views of the marking device in different positions;

Fig. 8 is a detailed view of one end of the toggle connecting bar shown in Figs. 6 and 7;

Fig. 9 is a fragmentary front elevational view of the device showing a modified inking mechanism; and

Figs. 10 and 11 are fragmentary elevational views of the device of Fig. 9 in different positions.

Referring to the drawings in detail and more particularly to Fig. 1, there is illustrated in outline a conveyor **4** and a frame **6** supporting a bracket **11** having a switch **8** and a switch actuating arm **10** mounted thereon adjacent each other. The arm **10** projects downwardly below the upper surface of substantially evenly spaced articles **12** on the conveyor so as to be engaged thereby as the articles are moved forward by the conveyor **4**. While this switch and arm are shown spaced to one side of the stamping device designated generally as **14**, it is to be understood that, if desired, they may be mounted on the same support as the stamping device. Instead of the switch **8** and the actuating arm **10**, it is to be understood that electronic equipment may be employed and actuated as the articles interrupt a light beam, in which event it is not necessary that the articles be evenly spaced on the conveyor.

As the conveyor **4** moves an article **12** to the right, as shown in Figs. 2 and 3, the lower curved portion of the arm **10** is engaged by the article and the arm is moved in a counterclockwise direction, the arm being secured to a rod **16** rotatably mounted in the bracket **11**. The arm **10** carries a bar **18** pivoted thereto at **20** (Fig. 4), and a stop **22** for one end of the bar **18** is also mounted on the arm **10** against which that end of the bar **18** is held by a compression spring **24**. The end of the spring opposite the end engaging the bar is held in position by a shoulder **26** on the projecting end of a rod **28** which is fixed to a bracket or lug **30** on the arm **10**. The end of the pivoted bar **18** remote from the end adjacent the stop **22** is preferably cylindrical and is reduced in diameter relatively to the major portion of the bar. The reduced end of the bar is adapted to engage a roller **32** carried on an arm **34** which is pivoted at **36** (Figs. 1, 2 and 3) and is provided with a laterally projecting flange or lug **38** adapted to press a switch button **40** of the switch **8** against the ction of its spring **41** to close an electrical circuit schematically shown at **43** in Fig. 1 through line **42** to the stamping device **14**.

It will be apparent that when an article **12** contacts the arm **10** and moves the same about its pivot the switch button **40** will be engaged by the lug **38** whereby the circuit will be closed to the stamping device as aforesaid. When the arm rides off the container, the arm is restored to its normal position by means of a spring **44** having one end secured to a pin **45** fixed to the rod **16** and having its other end secured to a pin **45'** on the bracket **11**.

An adjustable screw **46** is mounted on the bracket **11** for adjusting the limit of travel of the arm to predetermine the time the circuit to the marking device is maintained closed. As will be seen from Figs. 1 to 4 inclusive, when the lug

38 engages the button **40** and presses the same against the action of spring **41** to close the circuit as aforesaid, the further movement of the arm **10**, by reason of its engagement with one of the articles **12**, will cause the bar **18**, as it rides on the roller **32**, to move about its pivot against the action of its spring **24** and to ride off the roller whereupon the roller arm **34** and the button **40** will return to their respective normal positions thereby opening the circuit to the marking device.

It will be appreciated from the foregoing that the interval of time the circuit is closed can be readily adjusted by means of the adjustable screw **46**.

The switch mechanism just described is actuated in timed relation with the stamping device **14** so that an article is in proper position in alignment with the marking element of the device when the switch is actuated. It is to be understood that the article in alignment with the marking element may, if desired, be the same article that actuates the switching mechanism. The marking of the same article is accomplished by having the marking element mounted on the frame **6** adjacent the switching mechanism.

The marking device **14** preferably is mounted in a frame or casting **50** (Figs. 6 and 7) clamped in any suitable manner to a bar **52** which in turn is secured to the frame **6** or if desired may be part of, or secured to, an independent support for the device. The stamping device is operated by a solenoid **54** having a plunger **56**, the solenoid receiving its operating current through the line **42** leading from the switch **8**.

Extending through the upper end of the solenoid plunger **56** is a pin **58** (Fig. 8) the ends of which are secured in eyes in the ends of the C-link **60** (Fig. 5). A coil spring **62** is supported at its upper end on a pin **64** mounted on an arm **66** secured to the frame or casting **50** of the device, and has its lower end attached to the link **60**.

A rocker arm **68** passes transversely through the link **60** and has an aperture **69** through which the pin **58** passes whereby to provide a pivoted connection for the arm **68** with the solenoid plunger **56**. The ends of the arm **68** are bifurcated as shown at **70** and **72** (Figs. 6 and 7), but may be slotted if desired. The end engages a pin **74** carried by a marking rod **76** adapted for reciprocation in a bearing **78**. This bearing is provided at its top and bottom ends with circular ball bearing races **80** (Fig. 6) which provide free reciprocatory movement for the rod **76**. It is to be understood that any suitable type of bearings, other than the ball bearing races **80**, may be employed, if desired. The rocker arm **68** and the marking rod **76** may be regarded as a rocking arm. The other end of the rocker arm **68** engages the straight middle portion of a bail **82**, which is bent at an angle as shown in Fig. 8 and provided with laterally projecting ends pivotally mounted in a pair of fixed arms **90** secured to the respective ends of a rod **92** in the casting **50** by nuts as shown in Fig. 5.

A plate **94** secured to the outside of the bearing **78** carries a pin **76** at its upper end which provides a pivotal connection for an arm **98** (Figs. 6 and 7). As will be seen from Fig. 8, the other end of the arm **98** is slotted at **100** to receive the pin **58** of the link mechanism attached to the upper end of the solenoid plunger **56**. Instead of the pin **58** extending through the slot **100**, it may ride on the upper surface of the arm **98**, and the arm provided with an upwardly extending pro-

jection to limit the relative movement of the arm and pin. The extreme end of the arm 98 is connected to the bail 82 by a coil spring 102. The bail 82, spring 102 and arm 98 contstitute a toggle. The downward movement of the solenoid plunger carries with it the arms 68 and 98, and breaks the toggle to effect retraction of the marking rod 76 in the manner hereinafter described.

The mounting of the end of the spring 102 on the rod 98 as just described has an important function in the device of the present invention in that it determines the point of suspension of the spring 102. The other end of the spring 102 or the point of attachment thereof to the bail is adjustable relatively to the point of suspension, in the manner to be described presently.

It will be appreciated that the shorter the distance of travel of the toggle before breaking, the lighter will be the pressure of the impression element on the article; and the greater the distance of travel of the toggle before breaking, the heavier will be the blow of the impression element. The impact of the impression element will also depend on the power of the spring 62. In other words the starting point of operation of the toggle, and the power of the spring 62, determine the pressure of the element on the article.

Accordingly, I have provided adjusting means whereby the starting point of operation of the toggle can be adjusted which in turn will vary the pressure of the impression element on the article from a very slight contact to a relatively heavy blow. This adjusting means is such that the setting of the toggle can be varied from a point a minimum distance, or just slightly, in advance of dead center to a point a maximum distance from dead center whereby adjustment of the pressure applied to the article can be varied within a wide range.

The adjusting means comprises an adjusting arm 86 (Figs. 5 and 6) mounted on one end of the bail 82 by means of a set screw 87. This arm is provided with a pin 89 which projects laterally thereof, whereby to engage the fixed arm 90. By loosening the set screw 87 it will be appreciated that the arm 86 may be rotated to any desired adjusted position on the end of the bail 82 and may be locked in adjusted position by tightening the set screw 87.

For example, should it be desired to have the toggle brought closer to dead center than as shown in Fig. 6, it is merely necessary to loosen the set screw 87, depress the bail to the desired adjusted position while maintaining the pin 89 in contact with the arm 90 and then tighten the set screw in its adjusted position.

In the adjusted position just proposed it will be appreciated that the toggle will break on a shorter travel of the solenoid plunger than would be the case were the parts left in the position illustrated.

It is to be understood that other adjusting means may be provided instead of that illustrated. For example an adjusting block may be mounted in the casing directly over the bail 82 whereby upon adjusting the block the position of the bail 82, or the point of contact of the spring 102 with the bail 82 would be varied with respect to the point of suspension of the spring.

As previously mentioned one adaptation of the marking device illustrated is for stamping or printing an impression on articles, hence the marking rod 76 is provided at its lower extremity with an impression element, which may be a conventional rubber stamp 110 carried in a frame 112 which can be demounted for replacement of the impression element by removing the screw 114. The frame has an upwardly projecting flange 116 on which an inking roller 118 for the impression element may roll when out of contact with the face of the impression element during the printing operation. If desired, instead of the inking roller illustrated, an inked ribbon may be suitably supported intermediate the impression element and the article.

The roller 118 is freely rotatable on a shaft formed on the end of a rod 102, the other end of which is pivotally mounted at 122 to the casting or frame 50 (Figs. 6 and 7). A coil spring 124 for urging the inking roller 118 toward the impression element has one end secured to the frame of the bearing 78 and its other end attached to the inking roller arm 120. To prevent the inking roller 118 from passing beyond the impression element I provide an adjustable stop arm 126 adapted to engage the bar 52 of the support. It is to be understood that any desired adjustable stop may be substituted for the one illustrated.

It will be appreciated from the structure herein illustrated that the marking device, while shown as mounted in a vertical position is adapted to operate in any position.

The operation of the device is as follows: When one of the articles 12 is moved by the conveyor 4 into engagement with the switch actuating arm 10 the arm is moved in a counterclockwise direction closing the switch 8 to supply current to energize the solenoid 54 thereby causing the plunger 56 thereof to move downwardly placing the spring 62 under tension. As the plunger moves downwardly it will carry with it the rocker arm 68 which in turn causes the printing rod 76 to move downwardly in its bearing 78 until the impression element engages an article 12 directly below the impression element. During this downward movement of the plunger 56 and rod 76, the bail may remain in the position shown in Fig. 6, or it may move downwardly with the plunger and rod. In either event, the bail serves as a fulcrum for the rock arm 68 which pivots on the pin 58 during the movement of the plunger and arm. Immediately after engagement of the impression element with an article the impression element is retracted in spite of the continued travel of the plunger 56. If on the downward movement of the rocker arm, the solenoid plunger should reach its lowermost limit of travel, and the marking rod has not at that time reached the object to be marked, then the marking rod, through momentum, will continue its travel into contact with the article against the action of the spring 102, and under such conditions the rod will immediately be retracted in the manner aforesaid. This is one of the important features of the present invention. This immediate retraction is accomplished by the novel mechanism comprising the toggle connections. When the printing element contacts the article as shown in Fig. 7, its travel is interrupted and irrespective of the distance traveled, the continued downward movement of the plunger will pull the toggle past dead center whereupon the spring 102 will instantaneously flip or snap the rocker arm and move it in a clockwise direction about the pin 58 and retract the printing rod 76.

In the position of the parts shown in Figs. 5 and 6 the printing element is out of contact with the article to be marked and ready to be moved

into printing engagement therewith upon closing of the switch **8** to energize the solenoid **54**. In this position it will be noted that the arm **68** is free to rotate on the pin **58** upon downward movement of the solenoid plunger. Upon the printing element contacting the article, with the desired pressure, the parts are in the position as shown in Fig. 7, and as will be seen the toggle is on dead center with the spring **102** of the toggle under tension and is about to break on slight further downward travel of the solenoid plunger. Upon breaking of the toggle the end **72** of the rocker arm **68** is instantly depressed causing the other end of the rocker arm to be swung upwardly carrying the printing rod **76** with it.

After the plunger **56** has completed its stroke the plunger, rocker arm and toggle are restored to their respective normal positions as shown in Figs. 5 and 6 by means of the spring **62**.

As the printing rod moves downwardly as just described the inking roller **118** (Figs. 1, and 5 to 7 inclusive) will roll against the face of the impression element and apply ink thereto, and as the element continues its travel in the printing direction the roller is forced by the printing rod against the action of the spring **124** out of the path of the element to be ready for the next cycle of operation.

The modified inking mechanism illustrated in Figs. 9 to 11, inclusive, comprises an inking roller **130** carried on the end of a rod **132** pivotally mounted at **134** to the bearing **78**. The rod is provided with a cam follower **136** adjustably secured thereon and adapted to ride in a cam slot **138** of a cam member or bracket **140** which is secured to the frame **112** of the impression element **110** by means of screws **142**. As the printing rod **76** and the impression element move downwardly, in the manner previously described, the cam member or bracket **140** will be carried downwardly thereby, from the position shown in Fig. 10 to the position shown in Fig. 11, to make an impression on the article **12**. During this downward movement the cam follower **136** will ride outwardly of the cam slot **138** causing the inking roller to ride across in contact with the face of the impression element, whereby to ink the element. Upon upward movement of the impression element, the cam follower rides inwardly of the cam slot to the position shown in Figs. 9 and 10, whereby again to ride across in contact with the face of the element to again ink the same. The inward movement of the cam follower in the cam slot is arrested by the engagement of the follower with the bottom of the slot, whereby stop members, such as the stop arm **126** of Figs. 6 and 7, are unnecessary. Likewise by reason of the cam follower being guided into and out of inking position, by the cam member, there is no need for a spring such as the spring **124** of Figs. 1, 5, 6 and 7. Moreover, the inking roller in the modification of Figs. 9, 10 and 11 does not contact any part of the frame of the impression element, as does the inking roller **118** which must necessarily contact the flange **116**.

While I have described my invention as being automatically operated it is to be understood that the same is adapted for manual operation if desired. A foot or hand operated switch may be substituted for the switch **8** and placed at a convenient location for the operator. A cam switch, a motor flasher, photoelectric means, or any other desired type of switch or actuating means may be employed with my device within the purview of my invention.

In adapting my device to a different type of marking it is merely necessary to substitute for the impression element **110** an element to provide the different type of marking. For example, a steel die may be substituted therefor which will result in making a depression marking in the article to be marked. Or, if desired, the impression element may be an etching device which would receive the etching acid from a roller similar to the inking roller **118**, or **130**.

From the foregoing description it will be seen that the device is so delicately adjustable that a very slight contact of the printing rod with the article to be marked will cause the immediate retraction of the printing rod and the printing and withdrawal of the impression element are effected so quickly that if there is any relative movement of the articles and impression element during the impression effecting operation, it is so slight that there is no blurring of the impression made by the element.

Furthermore, the present invention provides a simple, reliable article marking mechanism which is sturdy in construction and can be subjected to prolonged use without necessitating repairs.

It is to be understood that I do not wish to be limited to the specific embodiment of the invention herein illustrated and described as obviously various changes and modifications may be made therein without departing from the spirit and scope of my invention.

This is a continuation-in-part of my application Serial No. 497,149, filed August 3, 1943, now abandoned.

What I claim is:

1. A device for marking articles comprising a marking rod carrying an impression element, a bearing in which said rod is adapted to reciprocate, a solenoid having a plunger, a swingable toggle, a lever pivotally attached intermediate its ends to the plunger of said solenoid and having one of its ends pivotally attached to said rod, the other end of said lever being attached to said toggle so that the latter acts as an anchor for said lever and movement of said plunger upon energization of the solenoid effects displacement of said rod toward an article to be marked, means swinging said toggle in response to continued movement of said plunger immediately after said impression element has engaged the article to be marked in a direction to cause said lever to rock about its pivotal connection to the plunger and retract the marking rod.

2. A device for marking articles comprising a marking rod carrying an impression element, a bearing in which said rod is adapted to reciprocate, a solenoid having a plunger, a toggle, a lever pivotally attached intermediate its ends to the plunger of said solenoid and having one of its ends pivotally attached to said rod, the other end of said lever being attached to said toggle whereby movement of said plunger upon energization of solenoid will cause said rod to move toward an article to be marked, means operative in response to continued movement of said plunger after said impression member has engaged the article to be marked to break said toggle and thereby cause said lever to move about its pivotal connection to the plunger in the opposite direction and retract the marking rod, and means for adjusting said toggle whereby to determine the extent of movement thereof.

3. A device comprising means for moving ar-

ticles successively in spaced relation; a rod carrying a marking element, a bearing member in which said rod is adapted to reciprocate; antifriction bearings in said bearing member; a solenoid having a plunger; link mechanism cooperating with said plunger for moving said rod in one direction; a spring for moving it in the opposite direction; an electrc circuit for said solenoid; and switch mechanism actuated by the moving articles to open and close said circuit whereby to energize and deenergize said solenoid to cause the plunger, link mechanism and spring to reciprocate said rod in synchronism with the advancing of the articles; said link mechanism including a toggle and a rocker arm pivoted intermediate its ends to the plunger of said solenoid and having a pivotal connection at one end to said rod and at its other end to said toggle, whereby upon the marking element reaching its limit of travel by engagement with an article, and upon continued movement of the plunger, the said spring will retract said rod.

4. A device comprising means for moving articles successively in spaced relation; a rod carrying a marking element; a bearing member in which said rod is adapted to reciprocate; a solenoid having a plunger; link mechanism cooperating with said plunger for imparting motion to said rod in one direction; a spring for moving the plunger in the opposite direction; an electric circuit for said solenoid; switch mechanism actuated by the moving articles to open and close said circuit whereby to energize and deenergize said solenoid to cause the plunger, link mechanism and spring to effect reciprocation of said rod in synchronism with the advancing of the articles; said link mechanism including a toggle and a rocker arm pivoted intermediate its ends to the plunger of said solenoid and having a pivotal connection at one end to said rod and at its other end to said toggle, whereby upon the plunger reaching its limit of travel the rod will continue by momentum until its marking element contacts the article, and upon said contact, the said spring will retract said rod; and means for regulating the throw of said toggle.

5. A device comprising means for moving articles successively in spaced relation; a rod carrying a marking element; a bearing member in which said rod is adapted to reciprocate; antifriction bearings in said bearing member; a solenoid having a plunger; link mechanism cooperating with said plunger for moving said rod in one direction; a spring for moving the plunger in the opposite direction; an electric circuit for said solenoid; and switch mechanism actuated by the moving articles to open and close said circuit whereby to energize and deenergize said solenoid to cause the plunger, link mechanism and spring to reciprocate said rod in synchronism with the advancing of the articles; said link mechanism including a toggle and a rocker arm pivotally connected intermediate its ends to the plunger of said solenoid and having one of its ends pivotally and slidably connected to said rod and its other end pivotally and slidably connected to said toggle; said solenoid when energized causing its plunger to move in the direction of an article to be marked and carrying said rod in its bearing member into contact with the article, the further movement of said plunger in its travel in the direction of the article breaking said toggle whereby the said rocker arm will be moved about its pivotal connection to said plunger to permit said rod to be retracted by said spring.

6. In a marking device, an impression member mounted for reciprocating movement, a lever having one end shiftably connected to said member, fulcrum means having the other end of said lever shiftably connected thereto, power actuated means pivotally connected to said lever between the ends thereof for moving said lever in a direction to cause said member to engage an article, spring means, shiftable linkage connecting said spring means with said lever adjacent said power actuated means connection, said spring means being adapted for moving said lever in a direction to retract said member upon shifting of said fulcrum and linkage means, and means for shifting said linkage means and said fulcrum means responsive to the engagement of the article by said member to render said spring means effective to move said lever in the direction to retract said member.

7. In a marking device, an impression member mounted for reciprocating movement, a lever having one end shiftably connected to said member and having a slot in the other end thereof, fulcrum means in said slot, power actuated means pivotally connected to said lever between the ends thereof for moving said lever in a direction to cause said member to engage an article, spring means, shiftable linkage including a slot connecting said spring means with said lever adjacent said power actuated means connection, said spring means being adapted for moving said lever in a direction to retract said member upon shifting of said fulcrum and linkage means, and means for shifting said linkage means and said fulcrum means in said slots responsive to the engagement of the article by said member to render said spring means effective to move said lever in the direction to retract said member.

8. In a marking device, an impression member mounted for reciprocating movement, a lever having one end shiftably connected to said member, fulcrum means having the other end of said lever shiftably connected thereto, power actuated means pivotally connected to said lever between the ends thereof for moving said lever in a direction to cause said member to engage an article, spring means, shiftable linkage connecting said spring means with said lever adjacent said power actuated means connection, said spring means being adapted for moving said lever in a direction to retract said member upon shifting of said fulcrum and linkage means, and means for shifting said linkage means and said fulcrum means responsive to the engagement of the article by said member to render said spring means effective to move said lever in the direction to retract said member, said last mentioned means including a resilient member constructed and arranged to normally retain said linkage and fulcrum means in a position to maintain said power actuated means effective and to yield upon engagement of the impression member with the article to permit said fulcrum shifting means to become operative to render said spring means effective.

9. In a marking device, an impression member mounted for reciprocating movement, a lever having one end shiftably connected to said member and having a slot in the other end thereof, fulcrum means in said slot having the other end of said lever shiftably connected thereto, power actuated means pivotally connected to said lever between the ends thereof for moving said lever in a direction to cause said member to engage

an article, spring means, shiftable linkage including a slot connecting said spring means with said lever adjacent said power actuated means connection, said spring means being adapted for moving said lever in a direction to retract said member upon shifting of said fulcrum and linkage means, and means in said slots for shifting said linkage means and said fulcrum means responsive to the engagement of the article by said member to render said spring means effective to move said lever in the direction to retract said member, said last mentioned means including a resilient member constructed and arranged to normally retain said linkage and fulcrum means in a position in said slots to maintain said power actuated means effective and to yield upon engagement of the impression member with the article to permit said fulcrum shifting means to become operative to render said spring means effective.

10. In a marking device, an impression element mounted for reciprocating movement, a lever having one end shiftably connected to said element, fulcrum means having the other end of the lever shiftably connected thereto, a solenoid having a plunger pivotally connected to said lever between the ends thereof for moving said lever to impart movement to said element in the direction of an article to be marked, spring means, shiftable linkage connecting said spring means with said lever, the said spring means yielding when the said plunger reaches the limit of its travel whereby to permit the said element to continue its travel under its momentum to bring the marking element into contact with the article to be marked, and being operable to retract the said element after the latter has contacted the article.

11. In a marking device, an impression member mounted for reciprocating movement, a lever having one end shiftably connected to said member, fulcrum means having the other end of said lever shiftably connected thereto, power actuated means pivotally connected to said lever between the ends thereof for moving said lever in a direction to cause said member to engage an article, spring means, shiftable linkage connecting said spring means with said lever adjacent said power actuated means connection, said spring means being adapted for moving said lever in a direction to retract said member upon shifting of said fulcrum and linkage means, means for shifting said linkage means and said fulcrum means responsive to the engagement of the article by said member to render said spring means effective to move said lever in the direction to retract said member, and means for adjusting the extent of movement of said shifting means.

12. In a marking device, an impression member mounted for reciprocating movement, a lever having one end shiftably connected to said member and having a slot in the other end thereof, fulcrum means in said slot having the other end of said lever shiftably connected thereto, power actuated means pivotally connected to said lever between the ends thereof for moving said lever in a direction to cause said member to engage an article, spring means, shiftable linkage including a slot connecting said spring means with said lever adjacent said power actuated means connection, said spring means being adapted for moving said lever in a direction to retract said member upon shifting of said fulcrum and linkage means, means in said slots for shifting said linkage means and said fulcrum means responsive to the engagement of the article by said member to render said spring means effective to move said lever in the direction to retract said member, said last mentioned means including a resilient member constructed and arranged to normally retain said linkage and fulcrum means in a position in said slots to maintain said power actuated means effective and to yield upon engagement of the article by said member to permit said fulcrum shifting means to become operative to render said spring means effective, and means for adjusting the extent of movement of said shifting means.

13. A device for marking articles comprising a marking rod carrying an impression element, bearing means supporting said rod for reciprocating movement, an operating solenoid having a plunger which is displaced when said solenoid is energized, a lever pivotally attached intermediate its ends to said plunger and at one end to said rod, a swingable fulcrum member pivotally connected to the other end of said lever, means connected to said fulcrum member to hold the latter in position to serve as an anchor for said lever when said plunger is displaced so that said rod is moved to marking position and operative in response to a predetermined displacement of said plunger to swing said fulcrum member and rock said lever in the direction effecting movement of said rod away from said marking position, an electric circuit for said solenoid, and means for energizing and de-energizing said circuit.

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