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F. WORTH

2,963,962

MARKING APPARATUS

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2 Sheets-Sheet 1

FIG. 1

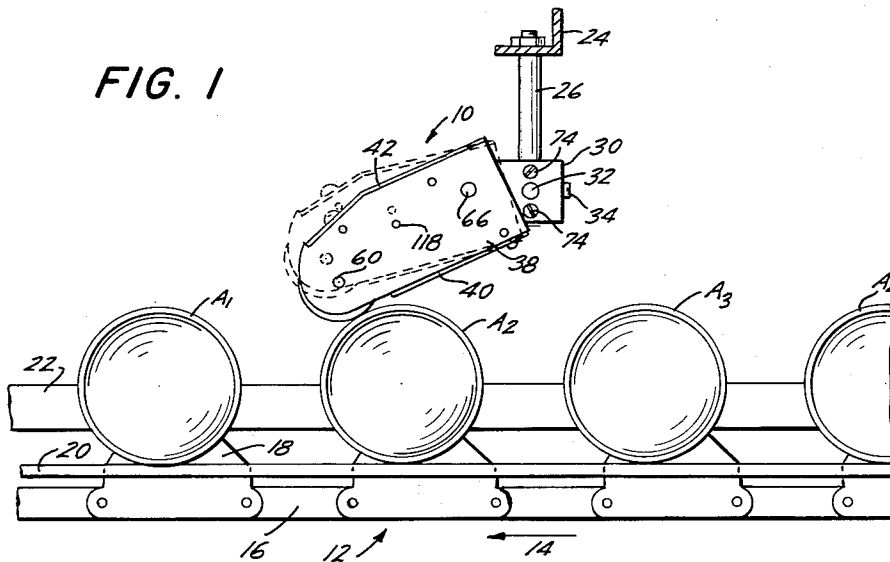


FIG. 2

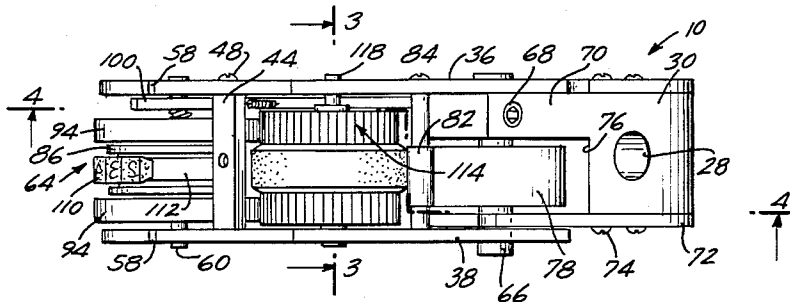
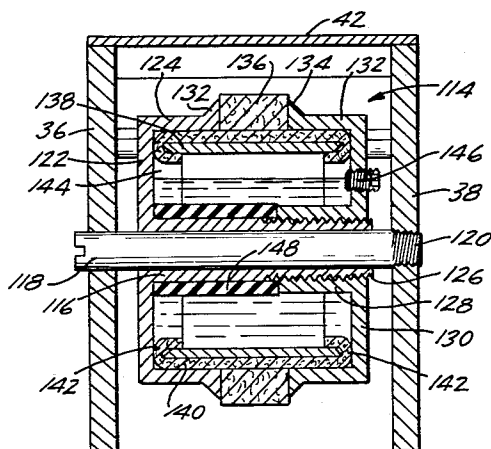


FIG. 3



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2,963,962

MARKING APPARATUS

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9 Claims. (Cl. 101—35)

This invention relates generally to marking apparatus, and more particularly is directed to a marking apparatus effective to apply markings, preferably in the form of inked impressions, to successive articles, cartons, containers or the like which are conveyed past the marking apparatus.

In the manufacture and distribution of many products, it is often desirable that such products be subsequently identifiable, for example, by means of code numbers or other markings applied either to the products or articles, or to the containers, cartons or the like in which the products or articles are sold to the eventual consumer. With the above in mind, many different forms of apparatus or devices have been provided in the past for applying inked or other markings to the products or articles, or to their containers, cartons or other packaging, as the same are conveyed past the marking apparatus or device. Usually, the existing marking apparatus or device includes a marking roller which is frictionally engaged, and thereby rotated, by the spaced apart successive articles, cartons, containers or the like conveyed past the marking apparatus so as to apply preferably inked markings to the articles during rotation by the latter, and a repositioning mechanism for returning the marking roller to a predetermined rotational position following its release by a marked article and before its frictional engagement by the article next conveyed past the marking apparatus, so that the markings will appear at substantially the same locations on the successive conveyed articles.

In providing a practical marking apparatus of the described character, two major problems need to be solved, namely, the provision of a repositioning mechanism that is reliable in operation even when the successive articles are conveyed at a relatively high speed past the marking apparatus, and the mounting of the marking roller so that it will be operative to apply a marking of uniform intensity to the desired surface of each of the successive conveyed articles even when that surface is not always at a uniform distance from the fixed support for the marking apparatus, for example, as is the case when there are relatively large tolerances with respect to the dimensions of the articles to be marked, or when the surface of each article to be marked is not flat, such as, the cylindrical side wall surface of a can or the like.

In a previously developed marking apparatus of the described character, the successive articles to be marked frictionally engage bearer rims so as to rotate the latter, and rotation of the bearer rims is transmitted to the body of the marking roller by way of slip clutches so that the body of the marking roller normally rotates with the bearer rims but can be held against rotation while the bearer rims are still engaged with a conveyed article, and hence rotated by reason of such engagement. The repositioning function is then performed by a latch assembly which is released when a conveyed article to be marked has attained a predetermined position in relation to the marking apparatus, and which reengages to halt rotation of the body of the marking roller when the

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latter has returned to a predetermined rotational position. In this existing apparatus, there is further provided a latch releasing mechanism actuated by each of the successive articles to be marked, and the mounting for the marking roller is movable generally at right angles to the path of the conveyed articles and is spring urged in the direction toward such path so as to maintain marking contact of the roller with the surface of each article to be marked even though that surface is not at a uniform distance from the fixed support of the marking apparatus. Since the actuation of the latch releasing mechanism is made independent of the movement of the mounting for the marking roller in the described existing apparatus, the latter necessarily presents a relatively complicated construction which is costly to produce.

Accordingly, it is an object of the present invention to provide a relatively simple, and hence inexpensive marking apparatus having a marking roller which is repositioned at the conclusion of each marking operation in order to properly register the applied markings with respect to the successive conveyed articles, and wherein the mounting for the marking roller ensures the proper contact of the latter with the surface to be marked on each of the successive articles, even though that surface is not at a uniform distance from the fixed support for the marking apparatus.

In accordance with an aspect of the invention, the mounting for the marking roller is movable so as to permit displacement of the latter generally at right angles to the path of the conveyed articles and is spring-urged in the direction for projecting the marking roller into the path of the conveyed articles so that as each article passes the marking apparatus and frictionally engages the bearer rims of the marking roller, the latter is displaced out of the path of the conveyed articles, and the consequent movement of the mounting for the marking roller is employed for releasing the latch mechanism which normally holds the body of the marking roller against rotation from a predetermined rotational position and which reengages upon the return of the body of the marking roller to that rotational position.

Another object of the invention is to provide a relatively simple marking apparatus of the described character which is capable of reliable and efficient operation in various orientations, for example, for applying markings to the top or side surfaces of the successive articles as the latter are conveyed past the marking apparatus.

The above, and other objects, advantages and features of the invention, will be apparent in the following detailed description of an illustrative embodiment thereof which is to be read in connection with the accompanying drawings forming a part hereof, and wherein:

Fig. 1 is a side elevational view of a marking apparatus embodying the present invention shown associated with a conveyor carrying successive articles to be marked;

Fig. 2 is a top plan view of the marking apparatus of Fig. 1, but on an enlarged scale and with the cover plate removed in order to better show the component parts thereof;

Fig. 3 is an enlarged, transverse sectional view taken along the line 3—3 of Fig. 2;

Fig. 4 is a longitudinal sectional view taken along the line 4—4 of Fig. 2 and showing the condition of the marking apparatus at the instant when the latter is first engaged by an article to be marked;

Fig. 5 is a view similar to that of Fig. 4, but showing the condition of the marking apparatus during the marking of an article; and

Fig. 6 is an enlarged, transverse sectional view taken along the line 6—6 of Fig. 5.

Referring to the drawings in detail, and initially to Fig. 1 thereof, it will be seen that a marking apparatus

embodying the present invention and generally identified by the reference numeral 10 is there shown associated with a conveyor 12 transporting a succession of spaced apart articles A_1 , A_2 , A_3 and A_4 past the marking apparatus in the direction of the arrow 14. The articles to be marked are shown, merely by way of example, in the form of cans having cylindrical side walls and are arranged with their axes extending transversely with respect to the direction of movement of the conveyor. The conveyor 12 may include a link chain 16 having spaced apart lugs or pushers 18 projecting upwardly through a slot in a support table 20 to drive the successive articles along such table as the articles are laterally positioned by guide members 22 which are slidably engaged by the opposite ends of the cans.

In the illustrated arrangement, the marking apparatus 10 is intended to apply the desired markings to the cylindrical side walls of the successive cans as the latter are transported by the conveyor 12, so that the marking apparatus is mounted above the conveyor, for example, on a cross-member 24 of the conveyor frame. The support for marking apparatus 10 includes a rod 26 depending from cross-member 24 and received in a bore 28 extending through a block 30 which forms part of the marking apparatus. The block 30 has another through-bore 32 extending at right angles to bore 28 and intersecting the latter, so that the rod 26 can be selectively engaged in either bore 28, as shown, or in bore 32, and a set-screw 34 (Figs. 1, 4 and 5) is screwed into the block 30 at the intersection of the bores 28 and 32 in order to secure the block at an adjusted position along rod 26.

The marking apparatus 10 further includes a housing made up of side walls 36 and 38, and a removable bottom wall 40 and top wall 42. Side walls 36 and 38 are held in spaced-apart, parallel relation by upper and lower transverse members 44 and 46 which are secured to the side walls by screws 48 and 50, respectively, extending therethrough, and the bottom and top walls 40 and 42 are removably held in position by screws 52 and 54 engaging tapped holes in transverse members 46 and 44, respectively. Each of side walls 36 and 38 is rounded at one end, as at 56, and is formed with a shoulder 58 adjacent the rounded end 56 to engage the end edge of top wall 42 and thereby position the latter.

A shaft 60 extends laterally between the rounded end positions 56 of side walls 36 and 38 and is journaled, at its opposite ends, in bearings 62 carried by the side walls (Fig. 6), and the end edge of bottom wall 40 adjacent the rounded end portions 56 terminates short of the latter (Figs. 4 and 5) so that the housing opens downwardly below shaft 60 to permit a marking roller assembly 64 mounted on that shaft, as hereinafter described in detail, to project downwardly from the housing for engagement with the successive articles on conveyor 12.

A shaft 66 extends laterally between side walls 36 and 38 adjacent the ends of the latter remote from shaft 60, and is held by a set-screw 68 in a bore extending through a forwardly projecting portion 70 of block 30 at one side of the latter (Fig. 2), so that shaft 66 serves to pivotally mount the housing on block 30 for swinging relative to the latter about an axis parallel to the axis of shaft 60. Such swinging movement of the housing displaces the marking roller assembly 64 on shaft 60 generally at right angles to the path of conveyor 12. In the illustrated arrangement, where shaft 66 extends horizontally, swinging of the housing raises and lowers the marking roller assembly 64. However, when block 30 receives rod 26 in the bore 32 thereof, shaft 66 then extends vertically and the housing of the marking apparatus then swings in a horizontal plane to move the marking roller assembly

64 generally laterally into and out of the path of the conveyed articles.

A plate 72 is secured, as by screws 74, to the side of block 30 remote from projecting portion 70 and extends parallel to the latter to define a recess 76 therebetween accommodating a spiral spring 78 which is anchored at one end to shaft 66, as at 80 (Fig. 5), and which has a loop 82 at its other end engaging a transverse pin 84 extending between side walls 36 and 38 so as to yieldably urge the housing to swing in the direction for projecting marking roller assembly 64 into the path of the conveyed articles.

Referring now to Fig. 6, it will be seen that the marking roller assembly 64 includes a cylindrical body 86 having a central axial bore receiving shaft 60 and being secured on the latter, for example, by a set screw 88. The axial dimension of body 86 is substantially smaller than the distance between side walls 36 and 38, and bearer discs 90 and 92 are rotatable and axially slidable on shaft 60 in the spaces between side walls 36 and 38 and the confronting side surfaces of body 86, respectively. Bearer discs 90 and 92 are provided with rims 94 of friction increasing material, for example, of rubber or the like, and are formed with annular recesses opening axially toward the adjacent side surfaces of body 86 accommodating annular friction clutch members 96 and 98, respectively, which are intended to frictionally engage the side surfaces of body 86 so as to tend to rotate the latter with the bearer discs 90 and 92.

A keeper or stop member 100 forming part of a latch assembly which is generally identified by the reference numeral 102 and is hereinafter described in detail, is fixed on shaft 60, for example, by being formed integral with the latter, and is located adjacent one end of shaft 60 in a space between bearer disc 90 and the adjacent side wall 36, and a helical compression spring 104 bears, at its opposite ends, against stop member 100 and bearer disc 90, respectively, in order to urge the latter axially against cylindrical body 86. Similarly, a helical compression spring 106 is disposed around the end portion of shaft 60 adjacent side wall 38 and bears, at its opposite ends, against a bearing washer 108 which is disposed against the inside surface of wall 38 and against bearer disc 92, respectively, in order to urge the latter axially against cylindrical body 86.

Bearer discs 90 and 92 are diametrically dimensioned so that the rims 94 thereof will project substantially into the path of the articles on conveyor 12 when the housing of marking apparatus 10 is pivoted toward such path by spring 78 to the fullest extent permitted by engagement of transverse member 46 with the underside of block 30, as in Fig. 4. Thus, as an article is conveyed past marking apparatus 10, for example, the article A_2 in Figs. 1, 4 and 5, the bearer rims 94 are frictionally engaged by such article and roll over the surface of the latter to cause rotation of bearer discs 90 and 92, and at the same time, to pivot the housing of marking apparatus 10 about shaft 66 in the direction causing displacement of the shaft 60 in the direction away from the path of the conveyed articles.

So long as shaft 60 is free to rotate, the friction clutch members 96 and 98 will effect rotation of body 86 with the bearer discs, so that a marking element or elements 110 carried by the periphery of body 86 is moved into rolling and marking contact with the surface of the article frictionally engaged by bearer rims 94.

In the illustrated embodiment of the invention, cylindrical body 86 has a peripheral groove 112 opening radially outward and having a dovetail cross-sectional configuration, as is apparent in Fig. 6, for receiving and retaining similarly shaped rubber type carrying elements forming the marking element or elements 110.

Since it is preferred that the marking element or elements 110 apply inked impressions to the surfaces of the conveyed articles, marking apparatus 10 further includes an inking roller generally identified by the reference

numeral 114 (Figs. 2 and 3). Inking roller 114 has a sleeve 116 which is rotatable on a shaft 118 extending parallel to shaft 60 and having one end received in a suitable opening of side wall 36, while the other end portion of shaft 118 is screw threaded, as at 120 (Fig. 3), and is received in a tapped opening in side wall 38. A radially directed end wall 122 extends outwardly from one end of sleeve 116 and, at its outer periphery, supports a cylindrical flange 124. The end portion 126 of sleeve 116 remote from end wall 122 is externally threaded and is engaged by an internally threaded tubular member 128 having a radially outward directed end wall 130 extending from the end thereof remote from end wall 122. A cylindrical flange 132 extends axially from the periphery of end wall 130 in the direction toward cylindrical flange 124, and the confronting end edges of flanges 124 and 132 are radially enlarged, as at 134, and an annular inking pad 136 of felt or other absorbent material is seated between the enlarged end edges 134.

A cylindrical carrying member 138 is disposed radially inside cylindrical flanges 124 and 132 and has a felt or other absorbent sleeve member 140 covering its outer surface, with the opposite end edge portions of the felt sleeve 140 being wrapped over the opposite end edges of cylindrical carrying member 138, as at 142.

It will be seen that sleeve 116, tubular member 128, end walls 122 and 130, flanges 124 and 132 and carrying member 138 cooperate to define an annular reservoir 144 that may be filled with ink through a suitable opening provided in end wall 130 and normally closed by a plug 146. In order to prevent the leakage of ink from reservoir 144 between the cooperating threads of sleeve 116 and tubular member 128, a rubber sealing sleeve 148 surrounds sleeve 116 and bears, at its opposite ends, against end wall 122 and against the end edge of tubular member 128.

It will be seen that the ink in reservoir 144 is carried, by the usual capillary action, through absorbent sleeve 140 to the absorbent inking pad 136, and shaft 118 is positioned relative to shaft 60 of marking roller 64 so that the outer surface of inking pad 136 is engaged by the marking element or elements 110 during rotation of the body 86 of the marking roller, thereby to cause corresponding rotation of inking roller 114 while ink is transferred from pad 136 to the raised marking surfaces of the marking element or elements.

By reason of the threaded engagement of tubular member 128 with the end portion 126 of sleeve 116, rotation of end wall 130 relative to end wall 122 varies the axial distance between such end walls and, since the wrapped over edge portions 142 of absorbent sleeve 140 are disposed between end walls 122 and 130 and the adjacent end edges of cylindrical carrying member 138, a change in the axial distance between the end walls will correspondingly vary the constriction of the wrapped over edge portions 142, and thereby control the rate at which ink is fed from reservoir 144 to inking pad 136 through the usual capillary action.

In order to ensure that the inked markings applied to the successive conveyed articles are properly registered with respect to the latter, marking apparatus 10 further includes the previously mentioned latch mechanism 102 operating as a repositioning device. As shown in Figs. 4 and 5, latch mechanism 102 includes a latch lever 150 pivoted, at one end, on a pin 152 projecting from side wall 36 and having a nose 154, at its free end, engageable with a shoulder or shoulders 156 formed on the periphery of the keeper or stop member 100 fixed to shaft 60. When the nose 154 of latch lever 150 engages a shoulder 156 of stop member 100, shaft 60, and hence the cylindrical body 86 of marking roller 64 is held against rotation. As is the usual practice, the marking element or elements 110 carried by the periphery of body 86 do not extend over the entire circumference of the latter, and each shoulder 156 of

stop member 100 is located so that, when such shoulder is engaged by nose 154 of latch lever 150, body 86 will be rotationally positioned to present a portion of its periphery which is devoid of marking elements, as at the bottom of Fig. 6, facing toward the path of the conveyed articles. Thus, while body 86 of marking roller 64 is held against rotation by latch lever 150, an article to be marked, for example, the article A_2 in Figs. 4 and 6, can engage the bearer rims 94 to rotate the bearer discs without the smearing of ink from the marking element or elements 110 onto the surface of the conveyed article.

In the illustrated embodiment of the invention, keeper or stop member 100 is provided with two shoulders 156 at diametrically opposed locations, and it is accordingly intended that body 86 of the marking roller should turn through 180° during each marking operation. However, it is to be understood that, if the marking to be applied to each of the conveyed articles has many indicia or letters therein requiring more than one-half of the periphery of body 86, then stop member 100 will only be formed with a single shoulder 156 and will rotate through a full revolution during each marking operation. On the other hand, if the marking element or elements required for applying the desired marking to each of the conveyed articles occupies only a small proportion of the periphery of body 86, stop member 100 can be provided with more than two shoulders 156, and the body 86 of the marking roller then turns through a correspondingly reduced fraction of a complete revolution during each marking operation.

It will be apparent from a comparison of Figs. 4 and 5 that, while latch lever 150 engaging a shoulder 156 of stop member 100 prevents rotation of body 86 of marking roller 64 during initial engagement of an article A_2 to be marked with bearer rims 94, that conveyed article causes displacement of the housing of marking apparatus 10 in the direction moving the marking roller out of the path of the conveyed articles, that is, in the direction raising the marking roller in the arrangement illustrated in the drawings, and such movement or displacement of the housing is relied upon, in accordance with the present invention, to effect the release of latch lever 150 from the shoulder 156, thereby to free body 86 for rotation with bearer discs 90 and 92.

In the illustrated embodiment of the invention, release of latch lever 150 is effected by a release lever 158 pivoted at one end on a pin 160 carried by a lug 162 depending from projecting portion 70 of fixed block 30 and having a nose 164 at its free end engageable with a shoulder 166 at the free end of latch lever 150, as shown in Fig. 4. A tension spring 168 is connected, at its opposite ends, to an arm 170 integral with latch lever 150 and to a projection 172 formed on release lever 158 intermediate the ends of the latter and continuously urges latch lever 150 to turn about pivot pin 152 in the clockwise direction, as viewed in Figs. 4 and 5, thereby to tend to hold nose 154 against the periphery of stop member 100. Spring 168 simultaneously urges release lever 158 to turn in the clockwise direction about its pivot pin 160, thereby to hold nose 164 of the release lever in engagement with shoulder 166 of the latch lever.

Since the pivoting axis of release lever 158, as defined by the fixed pivot pin 160, is offset downwardly with respect to the fixed pivoting axis of the housing of marking apparatus 10, as defined by the shaft 66, the pivotal movement of the housing in the direction for moving marking roller 64 out of the path of travel of the conveyed articles, that is, upwardly as viewed in Figs. 4 and 5, causes the nose 164 of release lever 158 engaged with shoulder 166 of latch lever 150 to rock the latter in the counter-clockwise direction, as viewed in Figs. 4 and 5, thereby to disengage the nose

154 of the latch lever from the shoulder 156 of stop member 100.

In order to free the nose 164 of release lever 158 from shoulder 166 of latch lever 150 following the release of nose 154 of the latch lever from a shoulder 156 of stop member 100, projection 172 of release lever 158 is formed with an inclined cam surface 174 which engages, and rides against a pin 176 projecting from the adjacent side wall 136 (Fig. 5) in order to deflect release lever 158 in the downward direction, as viewed in Figs. 4 and 5, during the final increment of the upward swinging of the housing of marking apparatus 10. Upon the release of nose 164 from shoulder 166, spring 168 rocks latch lever 150 so that the nose 154 thereof rides against the periphery of stop member 100 and is positioned to be engaged by a shoulder 156 of the stop member when body 86 has been rotatably returned to a position which it is to occupy at the end of a marking operation, and where it is properly positioned for the commencement of the next marking operation.

As a marked article moves out of engagement with the bearer rims 94 of marking roller 64, spring 78 again returns the housing of marking apparatus 10 to the position illustrated in Figs. 1 and 4, where the marking roller projects into the path of travel of the conveyed articles. During such return movement of the housing, the pin 176 moves out of engagement with the inclined cam surface 174 of release lever 158, and the spring 168 then returns the release lever to the position where its nose 164 again engages the shoulder 166 of latch lever 150.

With the above described arrangement of marking apparatus 10, the accurate repositioning of body 86 of marking roller 64 for each marking operation only requires that the distance along each conveyed article over which the latter is engaged by the bearer rims 94 be at least as long as the length of the arc of such bearer rims subtending the angle between the shoulders 156 of stop member 100. Thus, in the case where stop member 100 has two shoulders 156, as in the illustrated embodiment of the invention, the bearer rims must be engaged by the article to be marked over a distance which is larger than one-half the circumference of the bearer rims. Similarly, if the stop member 100 has only a single shoulder 156, then the bearer rims must be engaged by the article to be marked over a distance measured along the latter which is greater than the circumference of the bearer rims. In either case, the body 86 of the marking roller is disposed in a predetermined rotational position at the instant when the bearer rims are first engaged by an article to be marked, and is freed for rotation with the bearer discs, by the action of release lever 158 on latch lever 150, during the engagement of the bearer rims with the article. Further, the latch lever 150 is again engaged with stop member 100 to halt rotation of body 86 when the latter has been returned to a predetermined rotational position prior to the disengagement of the marked article from bearer rims 94.

From the above description of an illustrative embodiment of the invention, it is apparent that the movable mounting of marking roller 64 permits the latter to apply inked markings to surfaces of the conveyed articles which are not necessarily at a uniform distance from the fixed support of the marking apparatus, for example, as is the case when applying markings to the cylindrical side surfaces of cans or the like, as in Fig. 1, and that the movement of the housing of the marking apparatus for projecting the marking roller into the path of travel of the conveyed articles and for withdrawing the marking roller from such path during each marking operation is relied upon for effecting the release and reengagement of the latch mechanism 102 by which the body 86 of the marking roller is repositioned at the conclusion of each marking operation.

While the conveyor shown in the drawings, by way of example, comprises a link chain with spaced apart lugs or pushers, it is to be understood that any other suitable conveyor means may be employed. For example, the cylindrical articles may be rolled along a flat platform by means of a pair of spaced apart driven conveyor belts above and in contact with the articles, whereby a succession of spaced apart articles are transported past the marking apparatus. The marking apparatus of the present invention is particularly suited for use with the latter type of conveyor by reason of its relatively miniature design which permits it to fit between the upper conveyor belts in contacting the articles.

Although an illustrative embodiment of the invention has been described in detail herein with reference to the accompanying drawings, it is to be understood that the invention is not limited to that precise embodiment, and that various changes and modifications may be effected therein without departing from the scope or spirit of the invention, except as defined in the appended claims.

What is claimed is:

1. Marking apparatus for applying markings to successive spaced apart articles conveyed along a predetermined path; said apparatus comprising a marking roller carrying marking means at its periphery for rolling and marking contact with each of the successive conveyed articles, movable support means carrying said marking roller for bodily movement of the latter into and out of the path of the conveyed articles, means yieldably urging said movable support means in the direction for projecting said marking roller into the path of the conveyed articles so that each of the latter is engaged by the marking roller and displaces the latter out of said path during movement of the article past the marking apparatus, latch means operative to hold said marking roller against rotation in at least one predetermined rotational position, and means momentarily releasing said latch means to free said marking roller for rotation by a conveyed article engaged therewith in response to the bodily movement of the marking roller out of said path by the engaged article.

2. Marking apparatus for applying markings to successive spaced apart articles conveyed along a predetermined path; said apparatus comprising a fixed support adapted to be disposed adjacent said path of the conveyed articles, a movable mounting carried by said support for movement toward and away from said path, means yieldably urging said movable mounting toward said path, a marking roller rotatably carried by said movable mounting to project into, and be withdrawn from said path of the conveyed articles, said marking roller including a rotatable body having marking means at the periphery thereof, coaxial bearer rims frictionally rotated by a conveyed article moving past the apparatus while causing movement of said mounting away from said path and slip clutch means tending to transmit rotation of said bearer rims to said rotatable body, latch means operative to halt rotation of said body in at least one rotational position, and release means responsive to movement of said mounting away from said path of the conveyed articles to momentarily release said latch means and thereby permit rotation of said body with said bearer rims until said body has been returned to said rotational position.

3. Marking apparatus as in claim 2; wherein said latch means includes a stop member rotatable with said body and having a generally radial shoulder for each predetermined rotational position, and a pivoted latch lever spring urged toward said stop member for engagement with said shoulder; and wherein said release means includes a release lever pivoted on said fixed support and engageable with said latch lever to draw the latter away from said stop member and out of engagement with said shoulder in response to said movement of the mounting means away from said path of the conveyed articles, and

means operative to release said release lever from said latch lever after the latter is out of engagement with said shoulder so that the latch lever can return toward said stop member and again engage said shoulder when said body of the marking roller reaches the corresponding rotational position.

4. Marking apparatus as in claim 2; wherein said latch means includes a stop member rotatable with said body and having a generally radial shoulder for each predetermined rotational position of the body, and a latch lever pivoted on said movable mounting and spring urged toward said stop member for engagement with said shoulder of the latter; and wherein said release means includes a release lever pivoted on said fixed support for pivotal movement into and out of engagement with said latch lever, said release lever and movable mounting being relatively displaced in response to movement of said mounting away from said path so as to draw said latch lever away from said stop member and out of engagement with said shoulder so long as said release lever is engaged with said latch lever, and means operative to pivot said release lever out of engagement with said latch lever after the latter is disengaged from said shoulder so that the latch lever can return toward said stop member and again engage said shoulder upon the return of said body to the corresponding rotational position.

5. Marking apparatus for applying markings to successive spaced apart articles conveyed along a predetermined path; said apparatus comprising a fixed support adapted to be disposed adjacent said path of the conveyed articles; a housing pivoted at one end on said support for swinging movement displacing the other end of the housing toward and away from said path of the articles; a marking roller rotatably mounted in said housing adjacent said other end and projecting from the housing in the direction toward said path of the conveyed articles, said marking roller including a rotatable body having marking means at the periphery thereof for rolling and marking contact with each of the successive conveyed articles, bearer rims rotatable by frictional engagement with each of the successive conveyed articles and slip clutch means tending to rotate said body with said bearer rims; spring means urging said housing to swing in the direction moving said other end toward said path of the conveyed articles for projecting said marking roller into said path, whereby each conveyed article moving past the marking apparatus frictionally engages said bearer rims to rotate the latter and, simultaneously, to cause swinging of the housing in the direction moving said other end away from said path; latch means engageable in at least one predetermined rotational position of said body for holding the latter against rotational movement from said position; and latch releasing means operative in response to swinging movement of said housing in said direction moving said other end away from said path to momentarily release said latch means and thereby permit rotation of said body with said bearer rims until said body returns to said predetermined rotational position for re-engagement of said latch means.

6. Marking apparatus as in claim 5; further comprising an inking roller rotatably mounted in said housing to apply ink to said marking means during rotation of said body of the marking roller.

7. Marking apparatus as in claim 5; wherein said latch

means includes a stop member rotatable with said body of the marking roller and having a substantially radially directed shoulder on its periphery for each predetermined rotational position, a latch lever pivoted on said housing and having a nose engageable with said shoulder to halt rotation of said stop member and body, and spring means urging said latch lever to pivot in the direction moving said nose against the periphery of said stop member; and wherein said latch releasing means includes a release lever pivoted at one end on said fixed support to swing relative to the latter about an axis which is offset relative to the swinging axis of the housing so that said release lever and housing are relatively displaced upon swinging movement of the housing, said release lever having a nose adjacent its free end engageable with a cooperating shoulder on said latch lever to pivot the latter away from the periphery of said stop member in response to relative displacement of said housing and release lever resulting from movement of the other end of said housing away from said path of the conveyed articles, thereby to free said nose of the latch lever from said shoulder of the stop member, said spring means also urging said nose of the release lever into engagement with said shoulder of the latch lever, and means for pivoting said release lever in the direction freeing said nose of the release lever from said shoulder of the latch lever in response to said relative displacement of the release lever and housing beyond a predetermined extent, thereby to free said latch lever for return by said spring means into engagement of said nose of the latch lever with said periphery of the stop member.

8. Marking apparatus as in claim 7; wherein said means for pivoting the release lever includes a cam surface formed on the latter and an abutment on said housing engageable by said cam surface upon said relative displacement of the release lever and housing beyond said predetermined extent.

9. Marking apparatus as in claim 5; further comprising an inking roller mounted rotatably on a shaft carried by said housing and extending parallel to the axis of rotation of said marking roller, said inking roller including a sleeve rotatable on said shaft and having a radial end wall at one end with an axially directed peripheral flange, a tubular member threadably engaged on the other end portion of said sleeve and having a radial end wall with a peripheral flange directed axially toward the first mentioned peripheral flange, a cylindrical carrying member disposed radially inside of said peripheral flanges and axially between said end walls so that relative rotation of said threadably engaged sleeve and tubular member adjusts the axial clearances between said end walls and the end edges of said carrying member, an absorbent sleeve surrounding said carrying member and having its end edge portions wrapped around said end edges of the carrying member to extend through said axial clearances so that the rate at which ink is carried through said end edge portions of the absorbent sleeve from within said cylindrical carrying member is determined by the extent to which said end edge portions are constricted in said clearances, and an annular absorbent pad extending around the outside of said absorbent sleeve between the free edges of said peripheral flanges to receive ink from said absorbent sleeve and transfer such ink to said marking means of the marking roller.

No references cited.