

Aug. 28, 1962

F. C. WORTH
MARKING APPARATUS

3,051,081

Filed Sept. 13, 1960

3 Sheets-Sheet 1

FIG. 1

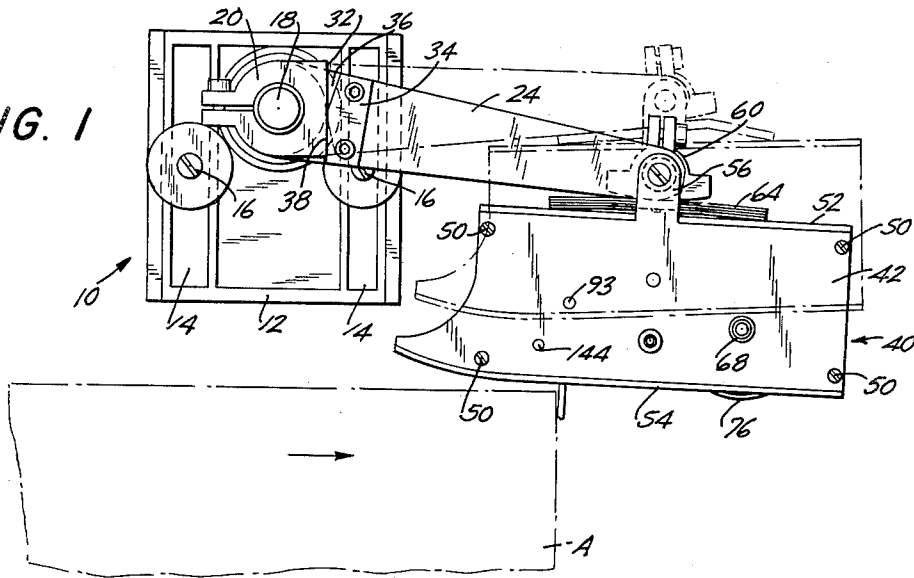
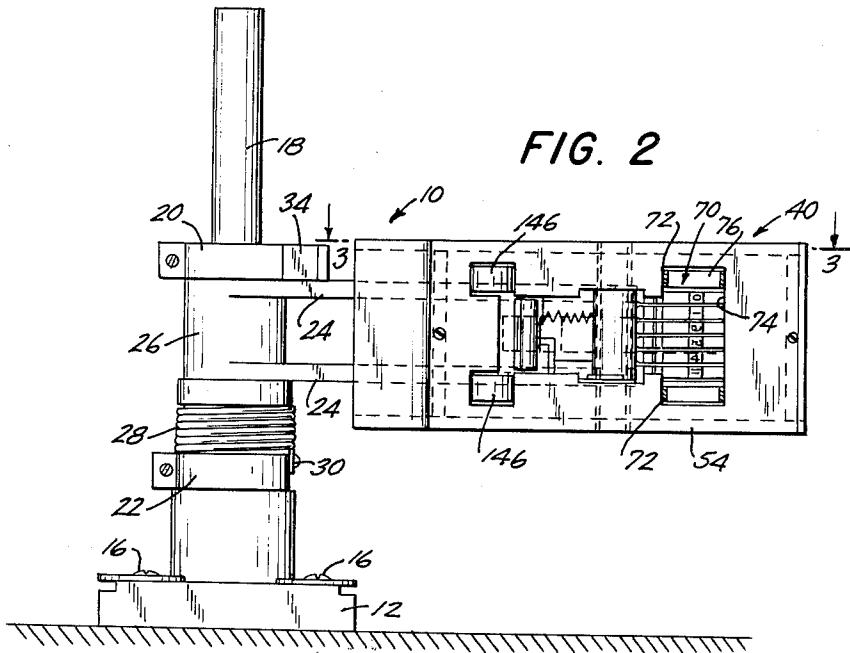


FIG. 2



INVENTOR.

FRANCIS C. WORTH

BY

John Montgomery

ATTORNEY

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FIG. 3

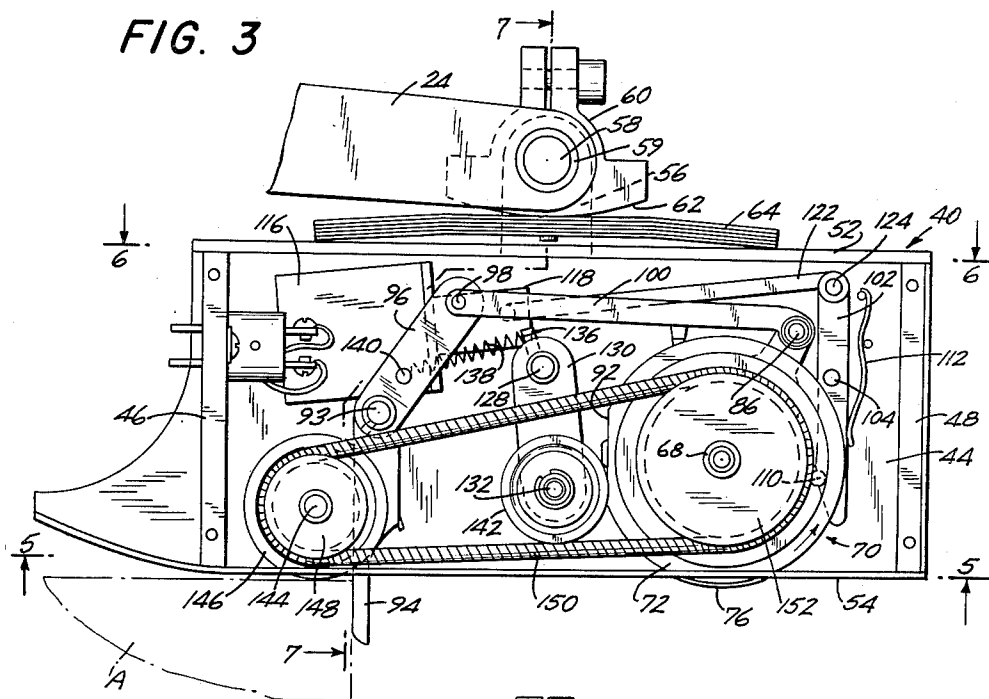
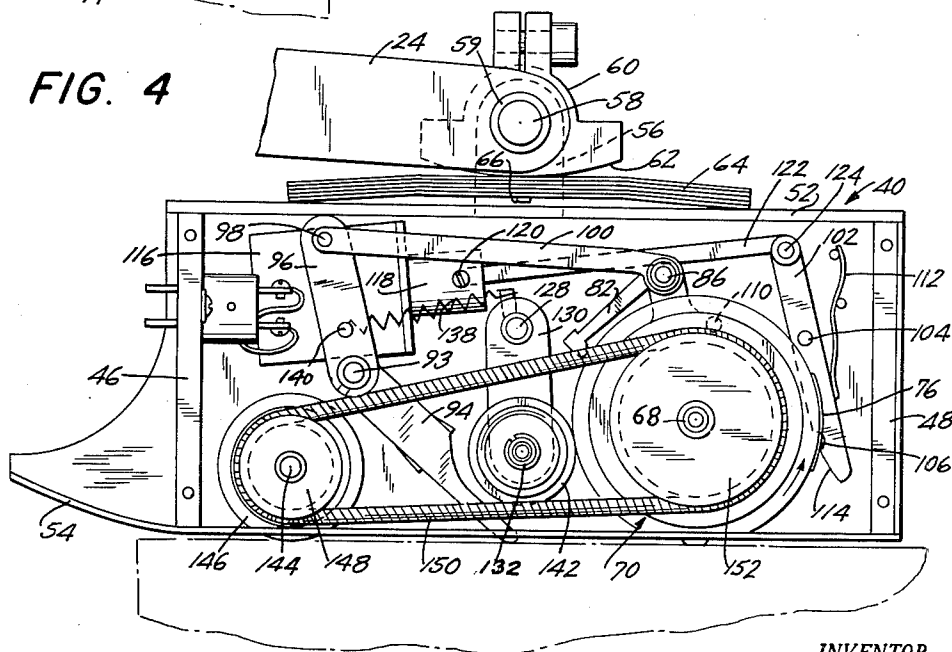


FIG. 4



INVENTOR.

FRANCIS C. WORTH

BY

John Montgomery

ATTORNEY

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3,051,081

MARKING APPARATUS

Francis C. Worth, Ridgewood, N.Y., assignor to Adolph Gottscho, Inc., Hillside, N.J., a corporation of New York

Filed Sept. 13, 1960, Ser. No. 55,681

13 Claims. (Cl. 101—35)

This invention relates generally to marking apparatus, and more particularly is directed to an apparatus for sequentially numbering articles, cartons, containers or the like that are successively conveyed past the apparatus.

It is an object of the present invention to provide a marking apparatus which applies inked impressions of a sequence of numbers to successive spaced apart articles which are conveyed past the apparatus, and wherein the successive conveyed articles actuate the marking apparatus.

In accordance with an aspect of the invention, a marking apparatus of the described character comprises a marking wheel rotatably supported so as to be frictionally driven by each conveyed article to be marked and including a decimal numbering device having a series of numbering discs each presenting type pieces corresponding to the digits of a decimal numbering system and being rotatable relative to each other in order to change the number represented by the type pieces appearing at a marking position of the marking wheel, and an article actuated mechanism for operating the decimal numbering device so that the number represented by the type pieces at the marking position and which is applied to the conveyed article during frictional driving of the marking wheel by the article is advanced by a single digit upon each actuation of such mechanism.

In accordance with another aspect of the invention, the marking wheel has bearer rims which are frictionally engageable by the article to be marked for driving the marking wheel, and which hold the article out of contact with the type pieces of the numbering discs except at the marking position of the marking wheel defined by flattened portions of the bearer rims, and the marking apparatus further includes an inking roll which is urged toward the marking wheel, but which is permitted to contact only those type pieces of the numbering discs which are disposed at the marking position of the marking wheel.

Another object of the invention is to provide a marking apparatus of the described character in which the marking wheel is returned to a predetermined rotational position after each marking operation thereof and is held in that rotational position by a latch mechanism which is selectively released by electromagnetically operated means in order to control the position of the marking applied to each of the successive conveyed articles.

A further object is to provide a marking apparatus of the described character wherein the frictional resistance to the movement of the conveyed article is reduced during sliding engagement of the latter with the bearer rims of the marking wheel while the latter is held against rotation by the latch mechanism, and wherein the apparatus further includes an arrangement for effecting rapid acceleration of the marking wheel to a peripheral speed equal to the speed of advancement of the conveyed article following the release of the latch mechanism in order to avoid blurring of the inked impression applied to the conveyed article when the marking wheel is turned to present its marking position to the conveyed article.

In accordance with a further aspect of this invention, the above object is achieved by providing the marking apparatus with drive rollers which are frictionally engaged by the conveyed article to be marked and which

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are connected to the marking wheel by way of a yieldable drive transmission capable of storing energy while the marking wheel is locked against rotation and releasing this energy for rapid acceleration of the marking wheel when the latter is released for rotation.

The above, and other objects, features and advantages 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 top plan view of a marking apparatus embodying the present invention;

FIG. 2 is a side elevational view of the apparatus shown in FIG. 1;

FIG. 3 is an enlarged top plan view of a housing included in the apparatus of FIGS. 1 and 2, but with the top wall of the housing being removed to show the structure therein;

FIG. 4 is a view similar to that of FIG. 3, but showing the condition of the apparatus during the marking of a conveyed article;

FIG. 5 is a side elevational view of the housing of FIG. 3 as viewed in the direction of the arrows 5—5, but with the face plate of the housing removed;

FIG. 6 is an elevational view of the housing of FIG. 3 as viewed in the direction of the arrows 6—6, but with the back wall of the housing being removed; and

FIG. 7 is a transverse sectional view taken along the line 7—7 of FIG. 3.

Referring to the drawings in detail, and initially to FIGS. 1 and 2, thereof, it will be seen that a marking apparatus embodying the present invention and there generally identified by the reference number 10 includes a base 12 having slots 14 therein through which bolts 16 may extend for adjustably securing the base 12 to a suitable frame or other structure adjacent a conveyor (not shown) which advances the spaced apart successive articles to be marked, for example, the article A shown in broken lines on FIG. 1, in the direction of the arrow thereon. A post 18 extends from the base 12 and has two split collars 20 and 22 adjustably clamped thereon at axially spaced apart locations. Support arms 24 are integral with a hub at one end which is rotatably mounted on the post 18 between the collars 20 and 22 so that the support arms extend radially from the post generally in the direction of movement of the conveyed articles and are angularly movable about the axis of the post. A helical torsion spring 28 extends around the post 18 between the collar 22 and the hub 26, and has one end fixed to the collar 22, as at 30 (FIG. 2), while the other end of the torsion spring is fixed relative to the hub 26. The spring 28 is effective to yieldably urge the arms 24 to swing relative to the fixed post 18 in the clockwise direction, as viewed in FIG. 1, that is, in the direction moving the free ends of arms 24 toward the path of the conveyed articles, and the force exerted by the spring 28 can be adjusted by angularly displacing the collar 22 relative to the fixed post 18.

In order to limit the movement of the support arms 24 towards the path of the conveyed articles, the collar 20 is formed with a flat peripheral surface 32 (FIG. 1) facing in the direction in which the arms 24 extend, and an abutment member 34 is secured on the upper arm 24 and is formed with a pair of converging surfaces 36 and 38 facing toward the surface 32 and adapted to selectively engage the flat surface 32 of collar 20 for limiting the angular movement of arms 24 in the direction away from the path of the conveyed articles and in the direction toward the path of the conveyed articles, respectively. It will be apparent that, by angularly adjusting the collar 20 on the fixed post 18, the opposite

limits of the movement of the arms 24 shown in full and broken lines on FIG. 1 may be displaced either toward or away from the path of the conveyed articles.

The marking apparatus 10 further includes a housing which is generally identified by the reference numeral 40, and which, as hereinafter described in detail, is mounted on the free ends of support arms 24 in a manner to permit angular displacement of the housing 40 relative to the support arms. The housing 40 includes top and bottom walls 42 and 44 (FIG. 5) secured to end walls 46 and 48, for example, by screws 50 (FIG. 1), a back wall 52 suitably secured, at its opposite ends, to the end walls 46 and 48, and a front wall or face plate 54 across which the successive conveyed articles are intended to slide. The face plate 54 has an arcuate end portion, as shown in FIG. 1, in order to ensure smooth initial engagement of each of the conveyed articles with the face plate.

The top and bottom walls 42 and 44 of the housing have rearwardly extending, substantially centrally located lugs 56 which are pivotally mounted on the opposite end portions of a pin 58 extending through a sleeve 59 carried by the free ends of support arms 24 (FIGS. 3, 4 and 7) with its axis extending parallel to the axis of post 18. Thus, the housing 40 is free to move angularly relative to the support arms 24 about the axis of the pin 58. In order to yieldably hold the housing 40 in an adjustably predetermined angular position relative to the support arms 24, a split clamp 60 (FIGS. 1, 3 and 4) is adjustably secured on the sleeve 59 between the support arms 24, and, at the side thereof facing toward the back wall 52 of housing 40, has an arcuate surface 62 to which bowed leaf springs 64 are centrally secured, as by the screw 66 (FIGS. 4 and 7), so that the opposite ends of the leaf springs 64 engage the back wall 52 of the housing to yieldably hold the latter in a predetermined angular position relative to the clamp 60. However, by loosening the clamp 60 and angularly adjusting the latter about the sleeve 59, it will be apparent that the angular position in which the housing is yieldably held by the springs 64 may be conveniently varied.

The top and bottom walls 42 and 44 of the housing 40 contain axially aligned bearings or bushings 68 which rotatably receive the opposite ends of the axle of a marking wheel which is generally identified by the reference numeral 70. As shown in FIG. 5, the marking wheel 70 is located adjacent the end wall 48 of the housing and includes an axially spaced apart pair of end flanges or bearer rims 72 which are diametrically dimensioned so as to project through an opening 74 (FIG. 2) formed in the face plate 54 of housing 40. The major portion of the periphery of each of the bearer rims 72 is formed of rubber or other friction material so that, when an article to be marked is conveyed along the face plate 54 of the housing and frictionally engages the rubber portion of the periphery of each of the bearer rims, the article effects rotation of the marking wheel 70. A relatively small portion of the periphery of each of the bearer rims 72 is formed of a material having a low coefficient of friction, for example, a brass strip or plate 76 (FIG. 5), so that, when the marking wheel 70 is locked in a rotational position where the metal plates 76 project through the opening or cutouts 74 of face plate 54, as hereinafter described in detail, the conveyed article to be marked can slide across the face plate and the brass slip plates 76 without encountering a great frictional resistance to its movement.

Between its bearer rims 72, the marking wheel 70 carries a conventional decimal numbering device which is made up of an axially arranged series of numbering discs 78 which correspond to the units, tens, hundreds, thousands, ten thousands and hundred thousands, respectively. These numbering discs are mounted on the body of the marking wheel 70 for rotation with the latter, but are individually turnable so as to sequentially vary the num-

ber which is imprinted on the successive conveyed articles. Each disc 78 has type pieces corresponding to the digits from "0" to "9" extending radially therefrom at circumferentially spaced apart locations. In order to effect sequential actuation of the decimal numbering device, a ratchet wheel 80 is formed integral with each of the numbering discs 78 at one side thereof for selective engagement by a pawl assembly 82 (FIGS. 6 and 7) which has fingers 84 of different lengths for cooperation with the ratchet wheels 80 of the several numbering discs 78. The pawl assembly 82 is rockably mounted on a pin 86 which extends parallel to the axis of marking wheel 70 and, at its opposite ends, is carried by radial arms 88 rotatably mounted on the body of the marking wheel. A torsion spring 90 (FIG. 6) acts on the pawl assembly 82 to urge the latter to rock about pin 86 in the direction moving the fingers 84 thereof towards the peripheries of the related ratchet wheels 80.

The decimal numbering device is initially placed in operation with all of the numbering discs 78 disposed so that the type pieces thereof corresponding to the digits "0" are in axial alignment at flattened portions 92 (FIG. 3) formed on the bearer rims 72. The bearer rims 72 are dimensioned to extend radially beyond the type pieces on the numbering discs 78 except at the flattened portions 92 of the bearer rims which thus define a marking position on the marking wheel 70. During successive oscillations of the pin 86 about the axis of the marking wheel 70, the pawl assembly 82 is first effective to cause step-by-step rotation only of the units numbering disc so that the numbers "1" to "9," inclusive, successively appear at the marking position or area of the marking wheel 70 defined by the flattened portions 92 of its bearer rims. However, when the units numbering disc has been turned to the position where its type piece corresponding to the digit "9" is disposed at the marking position, the corresponding finger 84 of the pawl assembly falls into a relatively deep recess of the related ratchet wheel 80 so as to permit the pawl finger corresponding to the tens numbering disc to effect angular displacement of the latter during the next oscillation of the pin 86. When the units and tens numbering discs have reached the positions where the type pieces thereof corresponding to the digit "9" are disposed at the marking position of the wheel 70, the pawl fingers for actuating the units and tens numbering discs fall into relatively deep recesses of the related ratchet wheels, whereupon the pawl finger corresponding to the hundreds numbering disc can engage the related ratchet wheel during the next oscillation of the pin 86 so as to shift the hundreds numbering disc as well as the units and tens numbering discs to the positions for applying the numeral "100."

In order to effect an oscillation of the pin 86 preparatory to the marking of each of the conveyed articles, the marking apparatus 10 further includes an axle 93 having its opposite ends rotatably journaled in the top and bottom walls 42 and 44 of the housing 40 and supporting a radially extending actuating finger 94 adapted to project through the opening 74 of the face plate 54 for engagement by the successive conveyed articles. An arm 96 is secured, at one end, to the axle 93 so as to turn with the latter and has its free end pivotally connected, as by a pin 98, to one end of a link 100, while the opposite end of the link 100 is pivotally connected to the pin 86.

As shown in FIG. 3, the actuating finger 94 is normally urged to a position where it projects through the opening 74 so that, as a conveyed article A comes into sliding engagement with the face plate 54, the front end of the conveyed article engages the finger 94 and pushes the latter into the confines of the housing, as shown in FIG. 4, thereby turning the axle 93 in the counter-clockwise direction, and the corresponding turning movement of the arm 96 is transmitted, by way of the link 100, to the pin 86 supporting the pawl assembly 82, thereby

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turning the pawl assembly 82 to a predetermined angular extent about the axis of the marking wheel 70 for changing or advancing, by one digit, the number presented by the numbering discs 78 at the marking position of the marking wheel defined by the flattened portions 92 of the bearer rims.

As shown in FIG. 3, the brass slip plates 76 are disposed on the bearer rims 72 at a location which is approximately 90 degrees from the location of the flattened portions 92 of the bearer rims, and, in accordance with the present invention, the marking wheel 70 is releasably locked in a rotational position where the brass slip plates 76 extend through the opening 74 of the housing face plate 54 for initial sliding engagement with the article to be marked. The releasable locking of the marking wheel in the described rotational position is achieved by means of a latch lever 102 which is pivotally mounted, intermediate its ends, on a pivot pin 104 carried by the bottom wall 44 of the housing (FIGS. 3 and 4). The latch lever 102 is formed with a notch or recess 106 adjacent one of its ends, and a disc 108 is fixed to the bottom end of the marking wheel 70 (FIG. 5) and has a locking pin 110 depending therefrom at a location adjacent the periphery which is selected so that when the pin 110 is received in the recess 106 of the latch lever, so as to prevent rotation of the marking wheel, the latter is disposed to present the slip metal plates 76 at the opening of the face plate 54. The latch lever 102 is yieldably urged by a leaf spring 112 to its locking position (FIG. 3) in which the recess 106 is disposed for receiving the locking pin 110, and the end of the latch lever 102 having the recess 106 therein is preferably formed with an inclined edge portion 114 (FIG. 4) so that, when the spring 112 has moved the latch lever 102 to its locking position, the pin 110 can cam along the inclined surface 114 to enter the recess 106.

In order to intermittently rock the latch lever 102 to its released position shown in FIG. 4, a solenoid 116 (FIGS. 3, 4 and 6) is secured to the bottom wall 44 adjacent the end wall 46 and has a movable armature 118 pivotally connected, as by a screw 120, to a link 122 which is, in turn, pivotally connected, as at 124, to the end of the latch lever 102 remote from the notch or recess 106. When the solenoid 116 is suitably energized, the armature 118 thereof is retracted, and this movement is transmitted, by way of the link 122, to cause rocking of the latch lever 102 to the released position shown in FIG. 4. The solenoid may be momentarily energized upon the closing and opening of a micro-switch (not shown) disposed in the path of and actuated by the successive articles to be marked.

Since the marking apparatus 10 embodying the present invention is intended to apply inked numerals to the successive conveyed articles, the apparatus further includes an inking roll assembly which is generally identified by the reference numeral 126. The inking roll assembly 126 includes a support rod or axle 128 having its opposite ends rotatably journaled in the top and bottom walls 42 and 44 of the housing. Radial arms 130 extend from the rod 128 at axially spaced apart locations generally in the direction toward the face plate 54. An inking roll 129 (FIG. 5) having a felt or other ink absorbent pad forming its surface is rotatably mounted on a shaft 132 carried by the free ends of the arms 130, and a shell 134 (FIG. 5) extends around the inking roll and is fixed to the arms 130 so that the inking roll may rotate within the shell 134. The shell 134 has a longitudinal slot extending therealong at the side facing toward marking wheel 70 to expose the surface of the inking roll 129 for contact with the raised type pieces of the numbering discs 78 of the decimal numbering device.

As shown in FIG. 3, a pin 136 projects radially from the rod 128 which supports the inking roll assembly and forms an anchor for one end of a tension spring 138 having its opposite end connected to a pin 140 extending

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from the arm 96. Thus, the spring 138 serves the dual function of urging the rod 128 to turn in the direction for urging the inking roll 129 towards the marking wheel, and of urging the arm 96 to turn in the direction for disposing the actuating finger 94 in its projecting position (FIG. 3).

The inking roll assembly 126 further includes rollers 142 rotatably mounted on the shaft 132 above and below the arms 130 and adapted to effect rolling engagement with the bearer rims 72 of marking wheel 70. The rollers 142 are diametrically dimensioned so as to prevent engagement of the inking roll 129 within shell 134 with the raised type pieces of the numbering discs 78 except when the rollers 142 engage the flattened portions 92 of the bearer rims, as in FIG. 3. Further, the inking roll assembly is located so that, when the marking wheel 70 is in its locked position, as shown in FIG. 3, the rollers 142 of the inking roll assembly have just entered into engagement with the flattened portions 92 of the bearer rims. Thus, during initial rotation of the marking wheel from its locked position in the counterclockwise direction, as viewed in FIG. 3, the raised type pieces of the numbering discs 78 will effect rolling engagement with the inking roll 129 through the slot of the shell 134, thereby to effect transfer of ink to the type pieces which are disposed at the marking position of the marking wheel 70. During the contact of the type pieces with the inking roll 129, the rotation of the marking wheel 70 is transmitted to the inking roll and effects angular displacement of the latter, so that, a different portion of the surface of the inking roll will be engaged by the type pieces during successive periods of contact of the latter with the inking roll. By reason of the engagement of the rollers 142 with the bearer rims 72, ink will not be applied to the typepieces of the numbering discs at locations other than the marking position, that is, the portion of the marking wheel 70 defined by the flattened portions 92 of the bearer rims.

Since the marking wheel is normally locked in a rotational position exposing the brass slip plates 76 for sliding engagement with the conveyed article moving across the face plate 54 of the housing, the frictional engagement of the article with the plates 76 would not be effective to ensure the immediate rotation of the marking wheel upon the movement of the latch lever 102 to its released position. In order to effect such immediate initial rotation upon the release of the latch lever, the apparatus 10 further includes an axle 144 having its opposite ends rotatably journaled in the top and bottom walls 42 and 44 adjacent the end wall 46 and carrying drive rollers 146 which are diametrically dimensioned so as to project through the opening 74 of the face plate 54. Thus, as an article A moves into sliding engagement with face plate 54, the article frictionally engages the rollers 146 and thereby effects rotation of the axle 144. The axle 144 has a grooved pulley 148 secured on its upper end portion and driving an endless spring belt 150 which runs around a grooved pulley 152 rotatably secured to the upper end of the marking wheel 70 (FIGS. 3 and 4). Since the continuous spring belt 150 is longitudinally yieldable, rotation of the drive rollers 146 by frictional engagement with the conveyed article will increase the tension in one run of the belt 150 and decrease the tension in the other run thereof so long as the marking wheel 70 is held against rotation by the latch lever 102. However, when the latch lever 102 is moved to its released position, the accumulated tension in one run of the belt 150 will effect an immediate angular acceleration of the marking wheel in order to bring the frictional or rubber portions of the bearer rims 72 into frictional engagement with the surface of the article moving across the face plate 54.

Since the bearer rims 72 project radially beyond the type pieces of the numbering discs 78 except at the marking position defined by the flattened portions 92 of the bearer rims, it will be apparent that only those type pieces of the numbering discs disposed at the marking position

will effect marking contact with the conveyed article A in order to apply an inked impression of the corresponding numeral to the article as the marking wheel 70 is rotated by frictional contact of the conveyed article with the bearer rims 72.

The above described marking apparatus 10 is intended to apply a sequence of numbers to successive conveyed articles which are dimensioned so that the marked surface of each article sliding along the face plate 54 of housing 40 has a length in the direction of its movement that is larger than the circumference of the bearer rims 72 of marking wheel 70. Thus, during rotation of the marking wheel by frictional engagement of its bearer rims with the conveyed article being marked, the marking wheel is returned to its initial rotational position, that is, to the position where the brass slip plates 76 again extend through the opening 74 and slidably engage the marked article. Since the solenoid 116 is only momentarily energized to release the latch lever 102 and thereby permit initial rotation of the marking wheel from its locked position where the pin 110 is engageable in the recess 106 of the latch lever, it is apparent that the latch lever 102 is returned to its locked position by the spring 112 before the marking wheel returns to its initial rotational position where the pin 110 again engages in the recess 106 to lock the marking wheel against further rotation even though it is still frictionally engaged by the marked article. Thus, the marking wheel 70 is returned to its initial or locked position after each marking operation and remains in that locked position until the solenoid 116 is again energized to release latch lever 102.

As the trailing end of the marked article moves past the finger 94, the latter is released by the article, and the spring 138 is then effective to return the actuating finger 94 to its projecting position (FIG. 3) where it is again disposed for engagement by the next conveyed article to be marked. Thus, each conveyed article, upon approaching the marking apparatus, actuates the mechanism by which the decimal numbering device is operated to advance, by one digit, the number represented by the type pieces of the numbering disc 78 disposed at the marking position of the marking wheel 70.

It will be apparent that, in the above described marking apparatus embodying the invention, the position on each conveyed article at which a number is printed is determined by the control of the energization of the solenoid 116 which is effective to release the latch lever 102 so that the position of the printed number can be altered by suitably varying the time of energization of the solenoid 116, and without changing or adjusting any of the structural elements of the marking apparatus. Further, by reason of the movable mounting of the support arms 24 and the resiliently displaceable mounting of the housing 40 on the support arms, the disposition of the housing 40 is automatically adjusted by contact with the conveyed article to be marked so as to accommodate variations in the size and shape of the conveyed article, and to ensure that such variations will not affect the clarity or intensity of the numeral printed thereon.

It is also to be noted that the spring belt 150 which yieldably drives the marking wheel 70 from the drive rollers 146 makes it possible to obtain rapid acceleration of the marking wheel from its condition of rest in the locked position where the brass slip plates 76 are slidably engaged by the conveyed article, thereby to ensure that the peripheral speed of the marking wheel will be equal to the speed of advancement of the conveyed article at the instant when the latter is marked by the type pieces of the numbering discs 78 disposed at the flattened portions 92 of the bearer rims, and thus avoiding any blurring of the inked marking applied to the conveyed article.

Although an illustrative embodiment of the invention has been described in detail herein with reference to the accompanying drawings, it is to be noted that the inven-

tion is not limited to that specific 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.

5 What is claimed is:

1. An apparatus for applying markings to successive conveyed articles, comprising a rotatable marking wheel carrying marking means at its periphery and including bearer rims which are adapted to be engaged by each conveyed article and which have minor portions of their peripheries formed of a material having a low coefficient of friction to permit the conveyed article to slide relative thereto, while the major portions of the peripheries of said rims are of a frictional material to effect rotation of the marking wheel when engaged by a conveyed article, releasable latch means for holding the marking wheel in a predetermined rotational position where said minor portions of the bearer rims are disposed for sliding engagement by each conveyed article, drive roller means adapted for frictional engagement by each conveyed article so as to be rotated by the latter, and yieldable transmission means between said drive roller means and said marking wheel to effect initial rotation of the latter from said drive roller means upon release of said latch means.

2. An apparatus for applying markings to successive conveyed articles, comprising a rotatable marking wheel carrying marking means at its periphery and including bearer rims which are adapted to be engaged by each conveyed article and which have minor portions of their peripheries formed of a material having a low coefficient of friction to permit the conveyed article to slide relative thereto, while the major portions of the peripheries of said rims are of a frictional material to effect rotation of the marking wheel when engaged by a conveyed article, releasable latch means for holding the marking wheel in a predetermined rotational position where said minor portions of the bearer rims are disposed for sliding engagement by each conveyed article, drive roller means adapted for frictional engagement by each conveyed article so as to be rotated by the latter, grooved pulleys rotatably coupled to said drive roller means and said marking wheel, respectively, and an endless spring belt running around said pulleys to provide a yieldable transmission by which said marking wheel is initially rotated from said predetermined position upon release of said latch means.

3. An apparatus for applying a sequence of numbers to successive articles which are conveyed past the apparatus in spaced apart relationship; comprising a rotatable marking wheel having bearer rims which are adapted to be engaged by each conveyed article for frictionally rotating the marking wheel, said rims having flattened portions which define a marking position on said marking wheel, decimal numbering means on said wheel including numbering discs having type pieces defining digits and projecting radially beyond said bearer rims only at said marking position, so that only the type pieces at said marking position can engage and mark a conveyed article while the latter effects rotation of the marking wheel, and actuating means for said decimal numbering means engageable by each conveyed article as the latter approaches said marking wheel and operative to sequentially change the number represented by the type pieces of said numbering discs which are disposed at said marking position.

4. An apparatus for applying a sequence of numbers to successive articles which are conveyed past the apparatus in spaced apart relationship; comprising a rotatable marking wheel having bearer rims which are adapted to be engaged by each conveyed article for frictionally rotating the marking wheel, said rims having flattened portions which define a marking position on said marking wheel, decimal numbering means on said wheel including numbering discs having type pieces defining digits

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and projecting radially beyond said bearer rims only at said marking position, so that only the type pieces at said marking position can engage and mark a conveyed article while the latter effects rotation of the marking wheel, an inking roll disposed adjacent said marking wheel and urged bodily toward the latter, rollers coaxial with said inking roll and engaging said bearer rims to permit said inking roll to contact and ink only those type pieces of the numbering discs disposed at said marking position, and actuating means for said decimal numbering means engageable by each conveyed article as the latter approaches said marking wheel and operative to sequentially change the number represented by those type pieces of said numbering discs which are disposed at said marking position.

5. An apparatus for applying a sequence of numbers to successive articles which are conveyed past the apparatus in spaced apart relationship; comprising a rotatable marking wheel having bearer rims which are adapted to be engaged by each conveyed article for frictionally rotating the marking wheel, said rims having flattened portions which define a marking position on said marking wheel, decimal numbering means on said wheel including numbering discs having type pieces defining digits and projecting radially beyond said bearer rims only at said marking positions, so that only the type pieces at said marking position can engage and mark a conveyed article while the latter effects rotation of the marking wheel, said decimal numbering means further including operating means which are oscillatable about the axis of said marking wheel and which are effective to turn said numbering discs so that the number represented by the type pieces at said marking position is sequentially advanced during each oscillation of said operating means, a rockable actuating finger yieldably urged to a position projecting into the path of travel of the conveyed articles in advance of said marking wheel so that said finger is rocked by each of the conveyed articles, and means connecting said actuating finger to said operating means of the decimal numbering means so that said operating means is oscillated in response to rocking of said finger.

6. An apparatus as in claim 5; further comprising an inking roll disposed adjacent said marking wheel and urged bodily toward the latter, rollers coaxial with said inking roll and engaging said bearer rims to permit said inking roll to contact and apply ink to only those type pieces of the numbering discs which are disposed at said marking position of the marking wheel.

7. An apparatus as in claim 6; wherein a common tension spring urges said inking roll toward the marking wheel and urges said actuating finger to said position projecting into the path of travel of the conveyed articles.

8. An apparatus for applying a sequence of numbers to successive articles which are conveyed past the apparatus in spaced apart relationship; comprising a rotatable marking wheel having bearer rims which are adapted to be engaged by each conveyed article for frictionally rotating the marking wheel, said rims having flattened portions which define a marking position on said marking wheel, decimal numbering means on said wheel including numbering discs having type pieces defining digits and projecting radially beyond said bearer rims only at said marking position, so that only the type pieces at said marking position can engage and mark a conveyed article while the latter effects rotation of the marking wheel, actuating means for said decimal numbering means engageable by each conveyed article as the latter approaches said marking wheel and operative to sequentially change the number represented by the type pieces of said numbering discs which are disposed at said marking position, releasable latch means for holding the marking wheel in a predetermined rotational position, drive roller means

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frictionally engageable by each conveyed article so as to be rotated by the latter, and yieldable transmission means between said drive roller means and said marking wheel to effect initial rotation of the latter from said rotational position when said latch means is released.

9. An apparatus as in claim 8; wherein said bearer rims have minor portions of the peripheries thereof formed of material having a low coefficient of friction and which are disposed to be slidably engaged by each conveyed article when said marking wheel is in said rotational position, while the remaining major portions of said bearer rims are formed of a frictional material to effect rotation of the marking wheel from the conveyed article after initial rotation of the marking wheel by said yieldable transmission means brings said major portions of the bearer rims into frictional engagement with the conveyed article.

10. An apparatus as in claim 9; wherein said flattened portions of the bearer rims are angularly spaced from said minor portions; and further comprising an inking roll urged bodily toward the latter at a location which is adjacent said marking position when the marking wheel is in said predetermined rotational position, and rollers coaxial with said inking roll and engaging said bearer rims to permit said inking roll to apply ink to only those type pieces of the numbering discs disposed at said marking position during said initial rotation of the marking wheel.

11. An apparatus as in claim 9; wherein said yieldable transmission means includes grooved pulleys rotatably coupled to said drive roller means and to said marking wheel, respectively, and an endless spring belt running around said pulleys.

12. An apparatus for applying markings to successive conveyed articles, comprising a support adapted to be mounted adjacent the path of the conveyed articles, an arm structure extending from said support generally in the direction of movement of the conveyed articles and being pivotally mounted, at one end, on said support so that the other end of the arm structure is movable toward and away from the path of the conveyed articles, means yieldably urging said arm structure in the direction moving said other end toward said path, means adjustably limiting the movement of the arm structure in said direction, a housing, means rockably mounting said housing on said other end of the arm structure, means yieldably holding said housing in an adjustably predetermined position relative to said arm structure, said housing including a face plate having an opening therein and adapted to be slidably engaged by each of the conveyed articles, and a marking wheel rotatably mounted in said housing and projecting through said opening of the face plate so as to be frictionally engaged and rotated by each conveyed article.

13. An apparatus as in claim 12; wherein said housing has a back wall and said means rockably mounting the housing includes a pivot pin disposed in back of said back wall; and wherein said means yieldably holding the housing includes a releasable clamp adjustable about the axis of said pivot pin, and bowed leaf springs carried centrally by said clamp and engaging said back wall of the housing.

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