Aug. 5, 1941. G. C. GETTMAN 2,251,354

MARKING MACHINE

Filed March 8, 1940 3 Sheets-Sheet 1

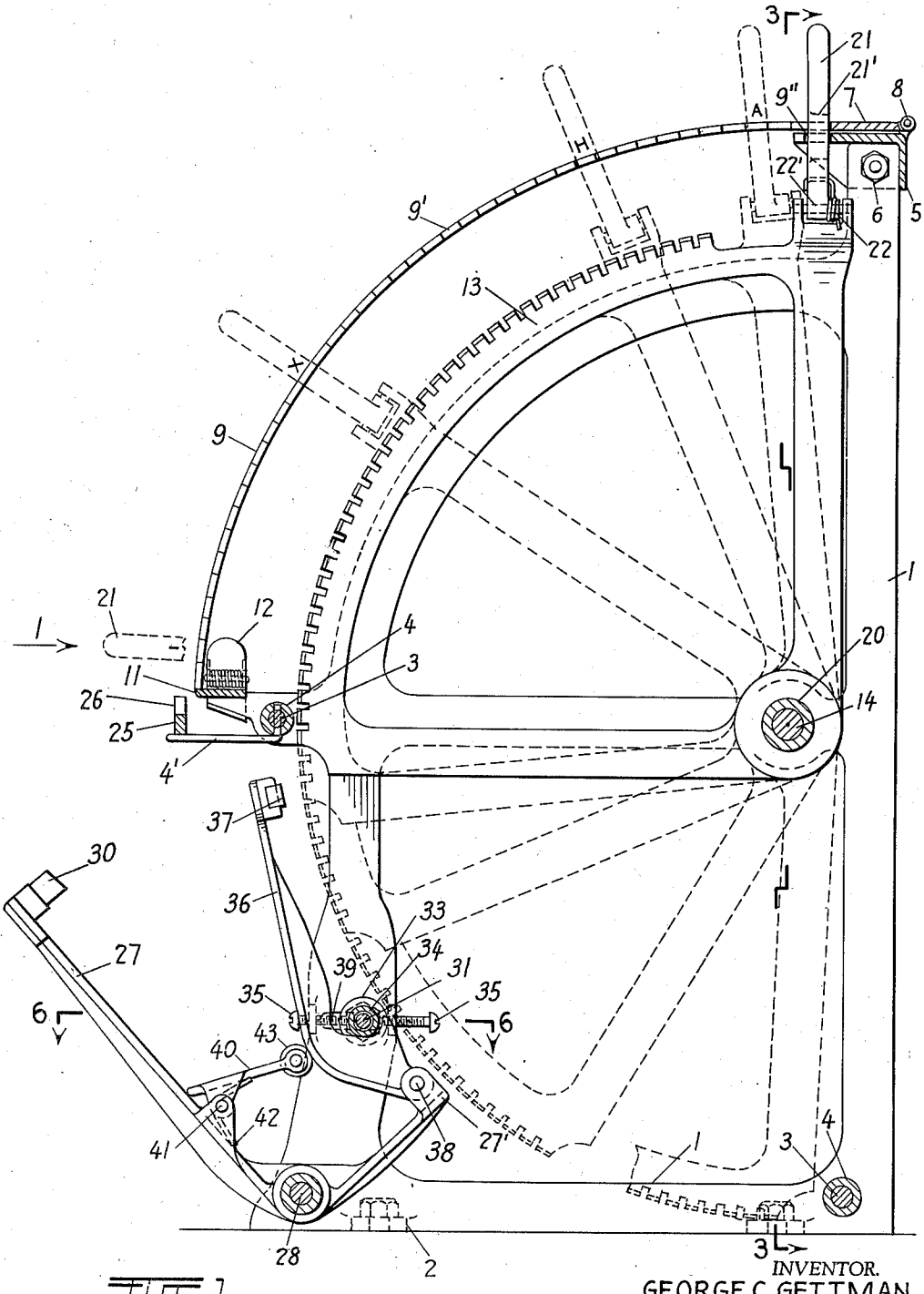

FIG. 1

INVENTOR.
GEORGE C. GETTMAN

BY

Rolland S. Trott
ATTORNEY.

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MARKING MACHINE

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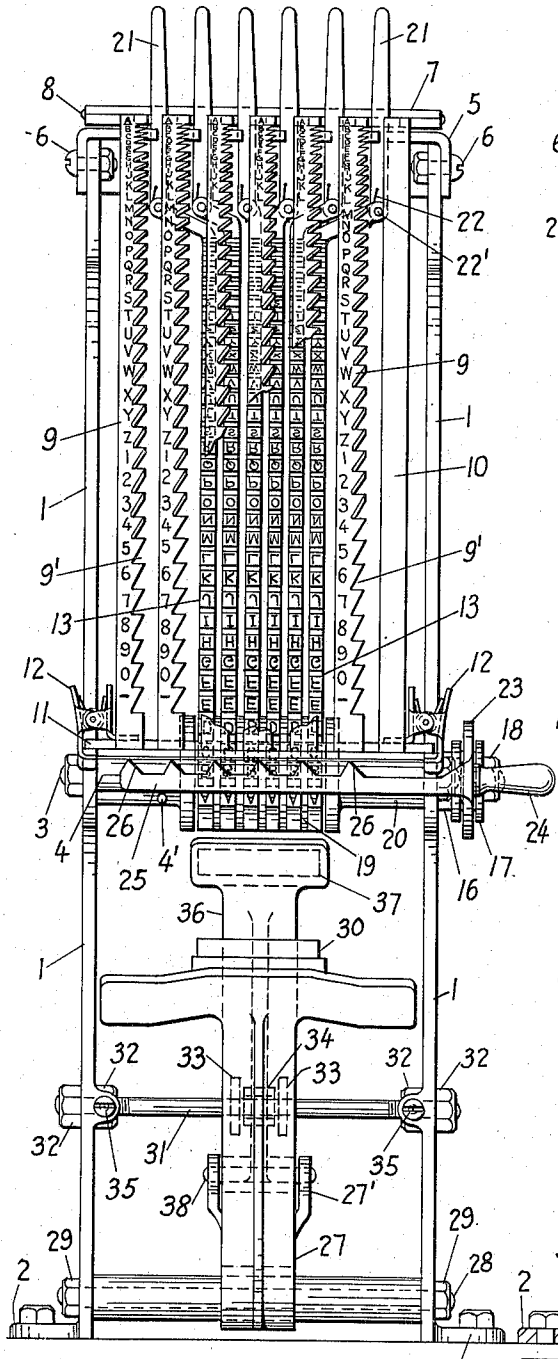

FIG. 2

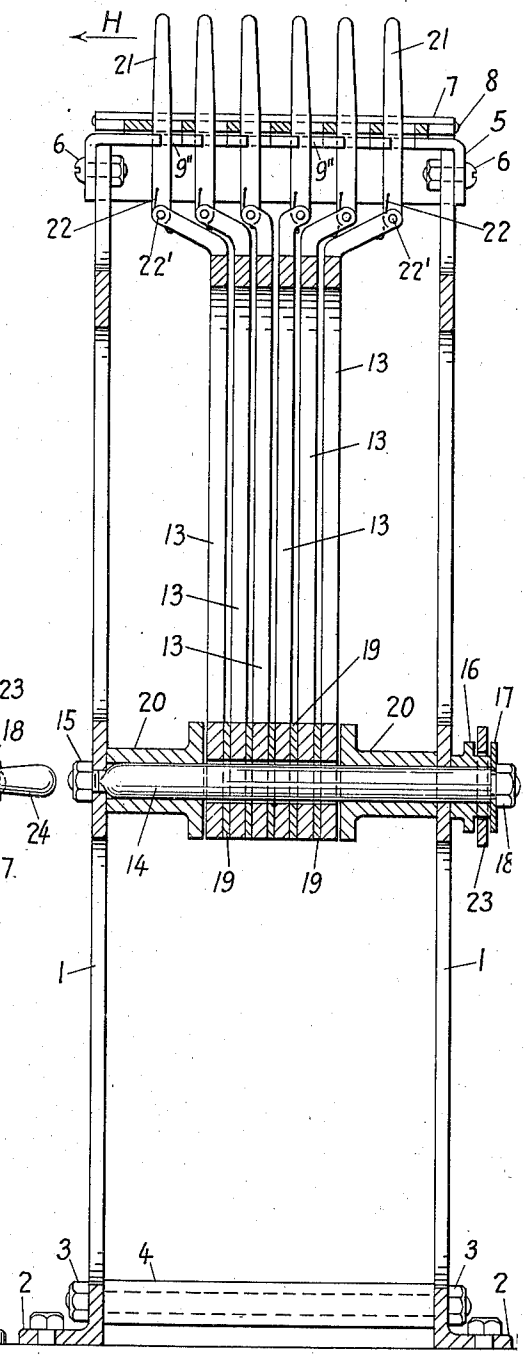

FIG. 3

INVENTOR.
GEORGE C. GETTMAN

BY

Rolland S. Trotter
ATTORNEY.

Aug. 5, 1941. G. C. GETTMAN 2,251,354

MARKING MACHINE

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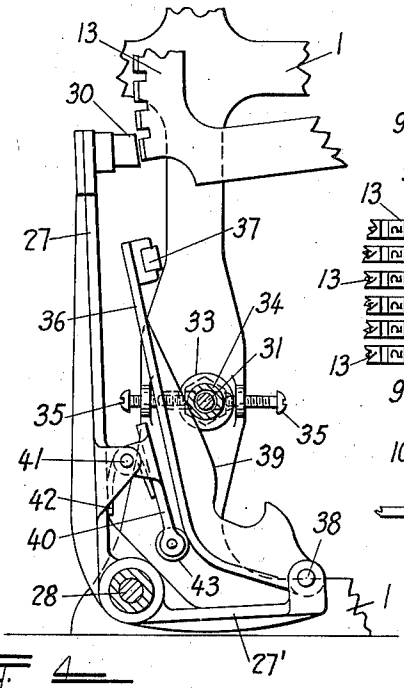

FIG. 4

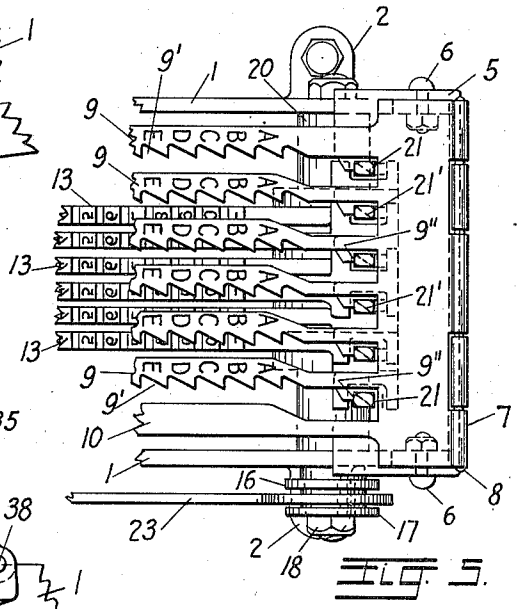

FIG. 5.

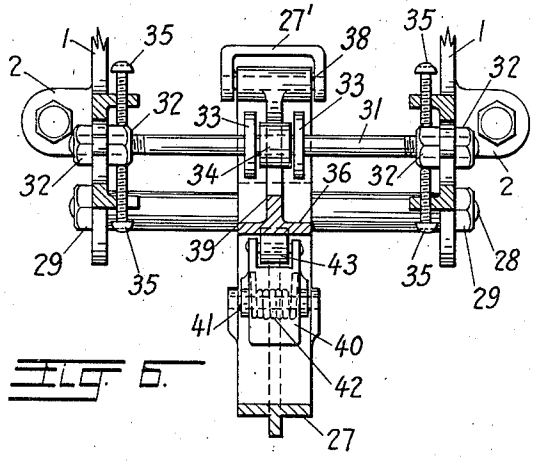

FIG. 6.

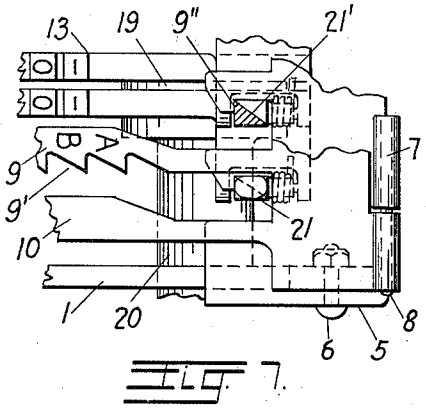

FIG. 7.

INVENTOR.
GEORGE C. GETTMAN

BY

Rolland S. Trott

ATTORNEY.

Patented Aug. 5, 1941

2,251,354

UNITED STATES PATENT OFFICE

2,251,354

MARKING MACHINE

George C. Gettman, Denver, Colo.

Application March 8, 1940, Serial No. 322,882

3 Claims. (Cl. 101—97)

My invention relates to marking machines for marking letters or numbers or both letters and numbers or other characters, upon laundry, shoes, packages or various types and kinds, and various types of merchandise, or other articles as desired.

Various marking machines have been marketed.

My invention relates to marking machines for marking articles with ink, whether the ink is black and indelible, or the normally invisible type of ink that can be seen only with the aid of certain kinds of artificial light or light rays.

Most marking machines now in use are not only complicated but are costly to manufacture.

Most marking machines now in use that employ ink, of whatever kind, are very difficult to clean, some of them even have to be partially or completely taken apart to clean the dried ink from the machine.

Many marking machines now in use employ gears, which not only complicates the machine, but raises its cost.

Many marking machines that use ink do not properly ink the characters before each marking, by direct non-sliding contact between the characters and an ink pad or other inking device.

Many marking machines are quite difficult to take apart or to assemble.

The object of this invention is to provide a marking machine for marking in ink, letters or numbers or both or other characters, which is simple, and which is cheap to manufacture.

A further object is to provide a machine from which the dried ink can easily and quickly be cleaned without in any way taking the machine apart.

A further object is to provide such a machine which contains no gears whatever.

A further object is to provide such a machine in which the inking pad is properly applied to the characters before each marking action, and by direct and non-sliding contact between the ink pad and the characters.

A further object is to provide such a machine, which may be easily and quickly taken apart or assembled.

I provide the above objects by a frame work composed of two side members and carrying a series of character sight quadrants, each sight quadrant displaying the letters and numbers or other characters which the machine is adapted to mark.

Each sight quadrant has a series of location notches which are located adjacent the characters.

The frame work also pivotally mounts a concentric series of marking or character quadrants which carry the characters for marking the desired letters or figures or other characters, and these marking quadrants are concentric with the sight quadrants mentioned above.

The marking quadrants also each carry a spring-held pivotally-mounted locking handle constructed to normally fit into the location notches of the sight quadrants, and thereby properly locate the marking quadrants to mark the character which is adjacent the location notch selected.

The sight quadrants and a stiffener quadrant, are attached together in one unit, which unit is at one end pivotally mounted upon the said frame work and at the other end is attached to the frame work by spring-held catches, the release of which catches permits the sight quadrant unit to be swung about its pivotal mounting on the frame work, so that the characters of the marking quadrants will be exposed for easy cleaning.

The inking of the characters and the marking is accomplished by a marking bellcrank which is pivotally mounted upon the said frame work, and which bell-crank has at the upper end of the upper arm a platten, and at the end of the other arm of the bell-crank a pivotal connection with an ink pad arm.

The marking bellcrank is pivotally connected by a spring-held toggle to a roller which rolls against the ink pad arm and resiliently maintains contact of the cam on the ink pad arm with a roller carried by the frame work.

This is so constructed that as the platten is first forced toward the characters, the ink pad arm moves quickly to bring its ink pad directly into contact with the characters as set, and then as the platten is moved further towards the characters, the cam construction moves the ink pad directly away from the characters and then downward out of the way of the platten before the article that is to be marked can touch the ink pad of the ink pad arm.

Thus there is no smearing or sliding of the ink pad while it is against the characters.

All of the above and other details will be more clearly hereinafter described and will be understood by reference to the drawings, in which—

Figure 1 is a side elevation in partial section, of my marking machine, with three dotted line positions of setting handles indicated, and also a

dotted line position of a setting handle at the character dash (—) position shown to indicate the position used for cleaning the sides of the character or marking quadrants.

Figure 2 is an elevation of the marking machine looking in the direction of the arrow 1, of Figure 1.

Figure 3 is a sectional view of the marking machine on the line 3—3 of Figure 1.

Figure 4 is an enlarged detail view of the marking bellcrank and the ink pad arm and associated parts, shown in the position for printing the characters.

Figure 5 is an enlarged detail in partial section, of the upper right hand portion of the marking machine as shown in Figure 1.

Figure 6 is an enlarged sectional detail on the line 6—6 of Figure 1.

Figure 7 is an enlarged sectional detail of a portion of Figure 5.

The frame work side members 1, 1 are provided with the mounting feet 2, 2, through which proper bolts or screws may be passed for properly mounting the machine upon a base or bench or other foundation. Any other proper method of holding the machine in place may be used, if desired.

The two side frame members 1, 1 are bolted together at the proper distance from each other by the bolts and nuts 3, 3 and the spacer tubes 4, 4 or any other proper means may be employed to properly attach and space the frame side members.

The two frame side members are also attached and spaced by means of the sight quadrant bracket 5, which is secured to each of the side frame members by the bolts and nuts 6.

The sight quadrant head 7 is pivotally attached to the sight quadrant bracket 5 by means of the removable pivot pin 8.

The sight quadrants 9 and the sight quadrant stiffener 10 connect the sight quadrant head 7 and the sight quadrant base 11, to form a single sight quadrant unit which is pivotally mounted on the quadrant bracket 5 by the pivot pin 8.

The spring-held catches 12, act to removably lock the sight quadrant unit (composed of the sight quadrants 9, the quadrant stiffener 10, the sight quadrant head 7 and the base 11) to the frame work in operating position.

Any other proper construction for removably locking the sight quadrant unit in place on the frame work may be used, if desired, so long as it provides the same results.

When the spring-held catches 12 are released, the sight quadrant unit may be raised upward about its pivot pin 8 for the cleaning of the characters of the character or marker quadrants, as will be seen hereinafter.

The sight quadrants 9 are each provided with the letters of the alphabet from A to Z, as shown, and with the numerals from 1 to 0 and with the dash — as shown.

The marking or character quadrants 13 are pivotally mounted upon the rounded shouldered through-bolt 14, held against one of the side frame members 1, by the nut 15, and held against the other side frame member 1, by the spacer 16, the washer 17 and the nut 18.

Between adjacent character quadrants 13 are the spacers 19, and between each side frame member 1, and the adjacent character quadrant is a spacer 20.

The shoulder of the bolt 14 is rounded for ease in passing the bolt 14 through the quadrants 13 and the spacers 19 and 20, in assembling.

Thus the construction acts to attach and space the side frame members 1 at the bolt 14 and also to space the character quadrants 13 so they will be held properly in place and yet free enough for easy movement of the quadrants 13 about the bolt 14.

Any other proper construction for pivotally mounting and spacing the marker quadrants may be employed, if desired, so long as the same desired results are provided.

Each character quadrant 13 is provided with a setting handle 21, which is pivotally mounted, as at 22' and which is spring-held by the spring 22 in the direction of the arrow H in Figure 3.

Each setting handle 21 has a wedge shaped cross sectional portion 21' adapted to fit into the series of wedge shaped location notches 9' of the sight quadrants 9, as shown in Figure 7.

Each character quadrant has, adjacent the quadrant head 7, a location notch 9'' for the neutral position of the marking or character quadrant, in which neutral position of the character quadrant, no character will be printed.

Each character or marking quadrant 13 has all the letters of the alphabet and the numerals from 1 to 0 and the dash — and any other characters desired; but it should be especially noted that these characters are in the reverse order to that of the characters on the sight quadrants.

For instance, when a handle 21 is moved from the neutral position, or location notch 9'' to the letter A on the sight quadrant, the character quadrant will be moved only till the character A is in the printing position.

When the handle 21 is moved to the character Z on the sight quadrant, the character quadrant will be moved till the character Z is in the printing position.

And when any handle 21 is released its spring 22 will move the wedge lock 21' of the handle 21 about the pivot 22'' and into the location notch 9' of the sight quadrant 9, so the character quadrant will be properly locked in place.

When all the handles 21 are set in the neutral position (the location notch 9'') the catches 12 may be released and the sight quadrant unit may then be moved upward about the pivot pin 8 so that all the characters of all the character quadrants will be exposed and easy to clean.

For cleaning the sides of the character quadrants, each character quadrant should be separately moved till its handle 21 is in the last location notch 9' for the character dash —.

This is the position illustrated by the handle 21 as at arrow 1 of Figure 1, which position is partially shown by broken dotted lines.

When in this position, both sides of the character quadrant can be easily cleaned. One quadrant should be cleaned at a time.

The clearance handle 24 also carries the clearance bracket 25, which has the clearance fingers 26.

These fingers 26 are aligned with the location notches 9' of the sight quadrants 9.

The mounting of the clearance arm 23 on the spacer 16 centers the clearance bracket 25 concentric with the character quadrants 13 and the sight quadrants 9.

So, when a mark has been printed and another mark is then required, the clearance handle 24 may be raised and when this is done the fingers 26 will contact the wedge shaped locks 21' of the handles 21 and force them back out

of the location notches 9', and all of the handles 21 and their character quadrants 13 will be moved back to the neutral position (the location notches 9'') and the machine is then ready for the markers to be set for making the next mark.

The stop 4' is mounted on the bolt 3 and tube 4 to normally locate the clearance handle 24 and the clearance bracket 25.

Any other proper construction for normally locating the clearance handle and bracket may be employed if desired, provided it gives the desired results.

The marking bellcrank (Figures 1 and 4) 27 is pivotally mounted on the bolt 28, which attaches the two side frame members by means of the nuts 29.

The platten 30 is mounted on the bellcrank 27 and is constructed to operate with the type of article to be marked and is of rubber or some other proper material.

The cam-operating bolt 31 passes through slots in the frame side members 1, 1 and is held in place by the nuts 32.

The bolt 31 has the two flanges 33, 33 pressed, peened, welded or otherwise positioned on the bolt 31.

The roller 34 is free to revolve on the bolt 31 between the flanges 33, 33.

The adjusting screws 35, 35 are threaded through the lugs in the side members 1, 1 and act to properly adjust the location of the roller 34.

Any other proper construction for mounting and adjusting the location of the roller 34 may be used, if desired, provided that thereby the proper results may be obtained.

The ink pad arm 36 is provided with the ink paid 37 and is pivotally mounted at 38 upon the arm 27' of the bellcrank 27.

The ink paid 37 is to be properly impregnated with the ink to be used to do the marking.

The ink pad arm 36 is provided with the cam 39 which rolls against the roller 34, the cam being designed to press the ink paid 37 against the characters as set for printing upon the first portion of the inward movement of the platten 30. Thereafter, further inward movement of the platten 30 moves the ink pad 37 directly away from the characters and then downward quickly out of the way of the platten 30.

The adjustment of the location of the bolt 31 by means of the screws 35, assists in the proper adjustment of the action of the ink pad 37 with respect to the action of the platten 30.

The toggle 40 is pivotally mounted at 41 upon the bellcrank 27 and its pivotally mounted roller is resiliently held in contact with the ink pad arm 36 by the action of the spring 42.

As the platten 30, with the article to be marked in contact with its forward face, is first moved toward the characters, the cam 39 contacting the roller 34 permits the spring 42 and the toggle 40 and its roller 43 to force the ink pad 37 directly against the characters of the character quadrants, and thereby apply the ink to the characters.

As the platten 30 and the article to be marked are then moved further toward the characters the cam 39 and the roller 34 act to quickly move the ink pad 37 directly away from the characters without sliding the ink pad along the characters, and then downwardly, and by the time the platten 30 and the article to be marked are adjacent the characters, the ink pad 37 has moved downwardly out of the way, as shown in Figure 1.

In operating my machine, as many of the handles 21 as the number of marks desired, are moved to the right to release them, and each handle 21 is then moved to the character on the sight quadrant desired and the handle wedge 21' is released into the locking notch 9' of that character in the sight quadrant 9, thus locking the character quadrant in place.

When the desired number of marks are thus correctly set, the article to be marked is placed against the front of the platten 30 and the bellcrank 27 is then forced toward the characters. the first portion of the movement of the bellcrank 27 pressing the ink pad 37 against the characters.

The platten 30 and the article to be marked are then forced further toward the characters, till contact is made and the mark is printed.

As this is done the ink pad 37 is quickly withdrawn directly away from the characters without smearing or sliding over the characters and the ink pad 37 is then moved quickly downward out of the way and the article to be printed is then pressed against the freshly inked characters and the impression and printing is thereby made.

In taking my machine apart the spring-held catches 12 may be released and the pivot pin 8 removed and the sight quadrant unit may be then removed from the frame work.

The nut 15 may then be removed from the bolt 14; the nut 18, washer 17 and clearance arm 23 removed, and the bolt 14 then removed and the character quadrants 9, handles 21 and spacers 20 and 19 may then be removed.

The nuts 29 and bolt 28 may then be removed and this permits the removal of the bellcrank 27 and the ink pad arm 36.

This leaves only the two side members 1, 1 which are held together still by the quadrant bracket 5, bolts and nuts 6, and the bolts and nuts 3 and spacer tubes 4.

It should be noted that when any of the handles 21 are set in a position, they are locked in that position, and the corresponding character quadrant is thereby locked in that posiiton, by means of the co-operation of the wedge lock 21' and the locking notch 9' of the sight quadrant 9.

It should also be noted that if it is desired to mark a series of articles, all with the same prefix, or under the same serial, the first handle 21 starting at the left, should be left undisturbed and set at the prefix desired, while the entire series of articles, all with the same prefix, are marked.

This means that while a series of articles are thus being marked with the same prefix, the clearance lever should not be moved. This will save re-setting the prefix for each mark.

It should also be noted that observation of the sight quadrant characters at which the different handles 21 are set, shows the characters that are set up and are in the printing position, without the necessity of looking directly at the character quadrants and the characters that are set thereon in the printing position.

Having now described my invention, what I claim as new and desire to protect by Letters Patent, is as follows:

1. In a marking machine for use in marking articles in laundries and the like, a framework having feet for attaching the marking machine to a table or other proper base, a cylindrical

mounting element supported on said framework, a plurality of printing segments pivotally mounted on said mounting element and movable from a zero position, each segment having a transversely movable, spring-held, setting and locking handle having a face remote from said zero position square with said segment and a face toward said zero position that is beveled, a quickly removable character bearing cover plate mounted on the framework and provided with slots for the reception of the movable setting and locking handles of the segments, the edge of each slot having handle receiving notches adjacent characters on said cover plate, the notch faces remote from said zero position being square with the said slot and the notch faces toward said zero position being beveled, whereby the beveled faces of the handles co-operate with the beveled faces of the cover plate, and the square faces of the handles co-operate with the square faces of the cover plate, and a clearance lever pivotally mounted upon said mounting element and having a cross bar having a plurality of bevel faced fingers whose beveled faces are each adapted to contact a setting handle and force the bevel face of said handle against the adjacent bevel face of said cover plate, whereby the action of the bevel faces of the fingers of the clearance lever cross bar and the bevel faces of the setting handles and of the cover plate will combine to move the setting handles transversely and thereby remove them from the cover plate notches and further movement of the clearance lever will move all segment handles to the zero position.

2. In a marking machine for use in marking articles in laundries and the like, a framework having feet for attaching the marking machine to a table or other proper base, a cylindrical mounting element supported on said framework, a plurality of printing segments pivotally mounted on said mounting element and movable from a zero position, each segment having a transversely movable, spring-held, setting and locking handle having a face remote from said zero position square with said segment and a face toward said zero position that is beveled, a quickly removable character bearing cover plate mounted on the framework and provided with slots for the reception of the movable setting and locking handles of the segments, the edge of each slot having handle receiving notches adjacent characters on said cover plate, the notch faces remote from said zero position being square with the said slot and the notch faces toward said zero position being beveled, whereby the beveled faces of the handles co-operate with the beveled faces of the cover plate, and the square faces of the handles co-operate with the square faces of the cover plate, and a clearance lever pivotally mounted upon said mounting element and having a cross bar having a plurality of beveled faces each adapted to contact a setting handle and force the beveled face of said handle against the adjacent beveled face of said cover plate, whereby the action of the beveled faces of the cross bar of the clearance lever, and the bevel faces of the setting handles and of the cover plate will combine to move the setting handles transversely and thereby remove them from the cover plate notches and further movement of the clearance lever will move all segment handles to the zero position, and manually operated inking means mounted on said framework for inking the segment characters as set.

3. In a marking machine for use in marking articles in laundries and the like, a framework, a cylindrical mounting element supported on said framework, a plurality of printing segments pivotally mounted on said mounting element and movable from a zero position, each segment having a transversely movable, spring-held, setting and locking handle having a face remote from said zero position square with said segment and a face toward said zero position that is beveled, a quickly removable character bearing cover plate mounted on the framework and provided with slots for the reception of the movable setting and locking handles of the segments, the edge of each slot having handle receiving notches adjacent characters on said cover plate, the notch faces remote from said zero position being square with the said slot and the notch faces toward said zero position being beveled, whereby the beveled faces of the handles co-operate with the beveled faces of the cover plate, and the square faces of the handles co-operate with the square faces of the cover plate, and a clearance lever pivotally mounted upon said mounting element and having a cross bar having a plurality of beveled faces each adapted to contact a setting handle and force the beveled face of said handle against the adjacent beveled face of said cover plate, whereby the action of the beveled faces of the cross bar of the clearance lever, and the bevel faces of the setting handles and of the cover plate will combine to move the setting handles transversely and thereby remove them from the cover plate notches, and further movement of the clearance lever will move all segment handles to the zero position, an inking means mounting element carried by the framework, and manually operated inking means mounted upon said inking means mounting element for inking the segment characters as set, the removal from said framework of said cylindrical mounting element and said inking means mounting element, permitting said segments and said inking means to be completely removed from said framework for cleaning and drying.

GEORGE C. GETTMAN.