

Feb. 8, 1955

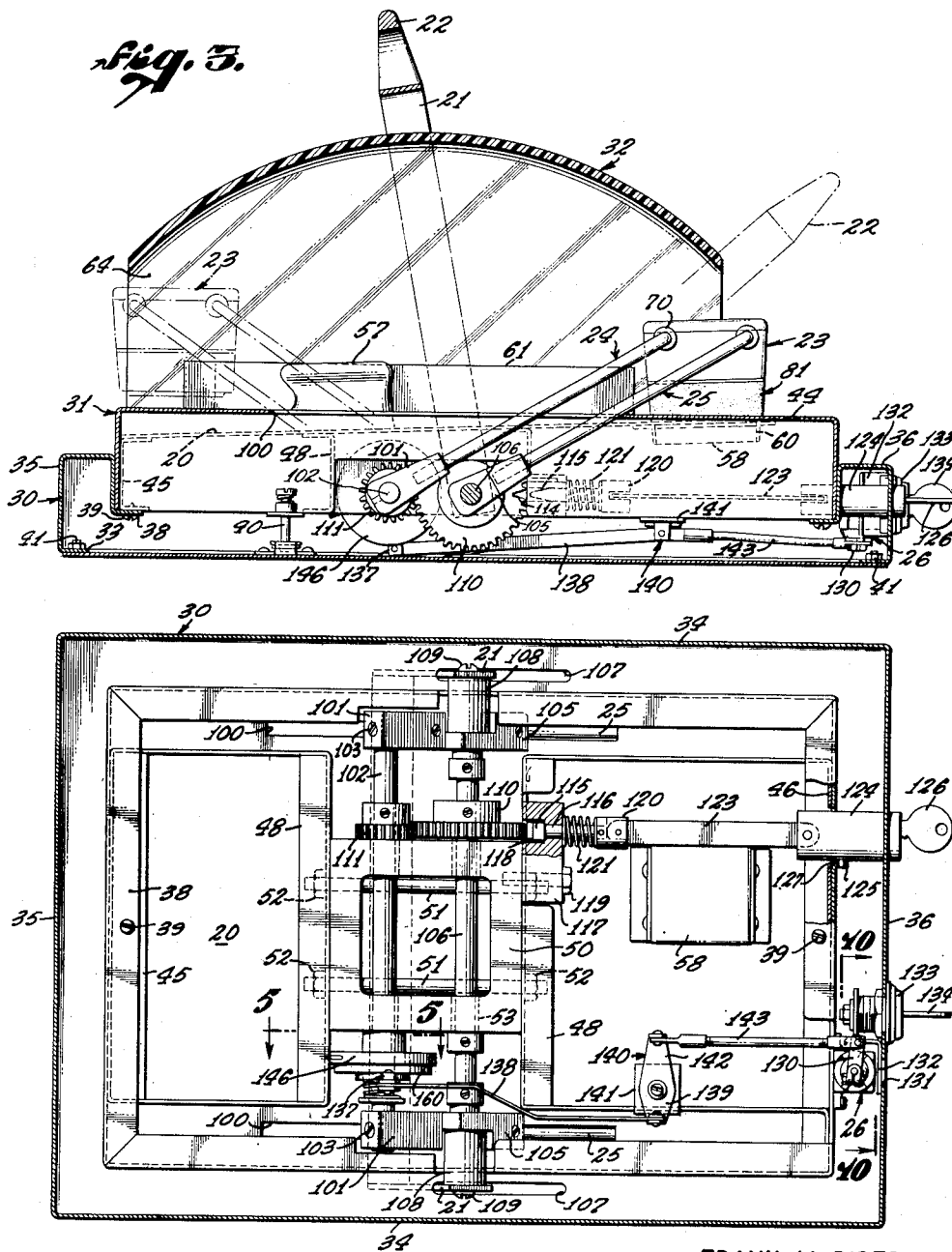
F. M. RIDER

2,701,520

STAMPING AND REGISTERING DEVICE

Filed Dec. 29, 1950

3 Sheets-Sheet 2



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3 Sheets-Sheet 3

Fig. 5.

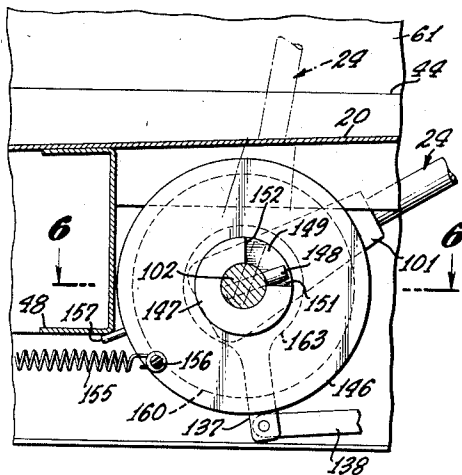


Fig. 7.

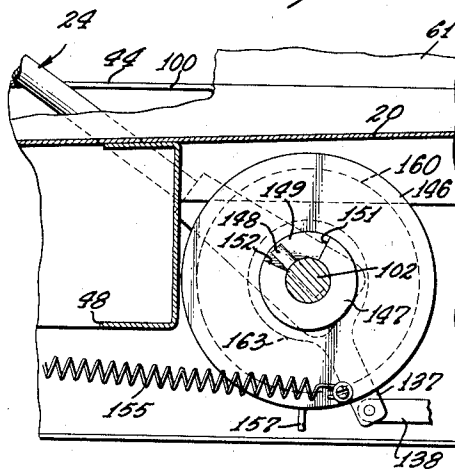


Fig. 6.

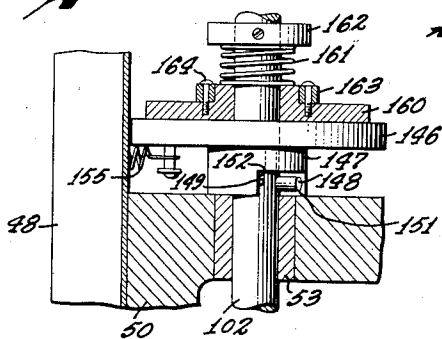


Fig. 8.

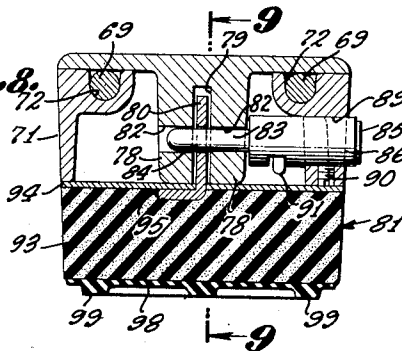


Fig. 9.

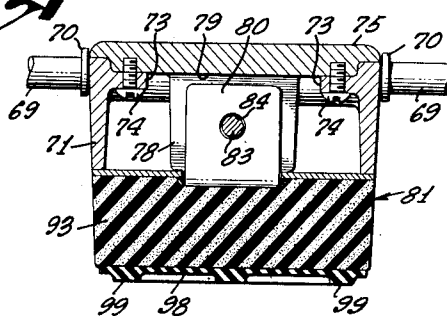
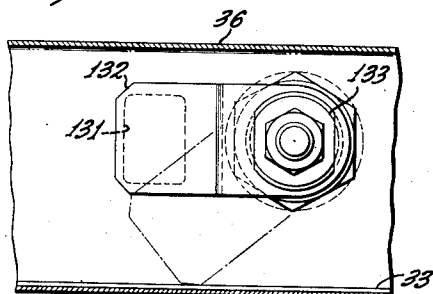


Fig. 10.



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2,701,520

STAMPING AND REGISTERING DEVICE

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Application December 29, 1950, Serial No. 203,393

8 Claims. (Cl. 101—41)

This invention relates to marking and counting devices, particularly such devices for use in handling and recording admissions to public gatherings and is directed specifically to improvements in devices for marking symbols on the hands of patrons as part of an admission checking and accounting procedure.

The use of a temporary symbol placed on the hand of a patron by a rubber stamp or other marking device to designate a paid or authorized admission to a public event has a number of advantages. The practice is especially desirable in eliminating the necessity for issuing pass-out checks, thus not only simplifying the pass-out checking procedure, but also avoiding possible abuses of the pass-out privilege.

The simple procedure of marking hands as a substitute for tickets or stubs to designate admissions does require, however, certain safe-guards to avoid new possibilities for error and fraud. It is too easy to use a simple rubber stamp without authorization and also too easy to miscount the number of times it is used with authorization.

The first step in the direction of safeguarding the use of such a stamp or marker is to mechanize its operation and to relate and inter-lock its operation with the operation of a suitable computing device or counter in such manner that every use of the stamp to place an identifying symbol on a human hand inevitably results in the register of a paid admission by the associated counter. This invention is directed to the problem of providing a mechanism as reliable and fool proof as possible for this purpose.

The mechanization of the marker operation necessarily means that the marker moves along some predetermined path from a retracted position to a marking position in contact with a patron's hand. There is always the possibility that either inadvertently or intentionally the mechanism may be manipulated to cause the marker to reciprocate over only a portion of its full range of movement. For example, one marking cycle of back and forth movement may be interrupted before completion by a succeeding marking cycle, with the result that each cycle is less than a full reciprocation, the first cycle being curtailed in the retraction movement and the second cycle being shortened in the advancing movement.

In this respect an important safeguard incorporated in the present device is highly sensitive responsiveness to the movement of the marker on the part of the counter in the sense that a fractional reciprocation of the marker causes the counter to respond with a complete counting cycle.

In general this responsiveness is accomplished by combining a printing or marking mechanism that has a relatively extensive operating movement with a counter that has a relatively short operating cycle so that the counter can be fully actuated by a severely curtailed cycle of the marking mechanism. In practice, as taught herein, the desired difference in magnitudes of movement may be obtained in part and to any degree needed by using a motion-multiplying means to operatively connect the two, so that a small movement of the marking mechanism is magnified in transmission to the counter.

The sensitive responsiveness of the counter must not, of course, interfere with the operation of the marking mechanism and a feature of the invention is the use of slippage means as exemplified by a friction clutch to operatively connect the marking mechanism with the

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counter so that the freedom of movement on the part of the marker is not limited by the relatively short cycle of the counter.

Another safeguard against erroneous counting is required when a marker is used in the form of a rubber stamp that must periodically make contact with some inking device. In the use of a rubber stamp it is frequently necessary to prepare for a printing operation by bringing the stamp or marker against an inking device several times with short reciprocating movement for proper ink distribution over the printing face of the marker. Gross error in the counting of admissions would be introduced by the registering of such inking reciprocations on the part of the sensitive counter. This difficulty is avoided by making the counter non-responsive to the movement of the marker in the region of the inking device. Preferably the desired result is accomplished by a suitable lost-motion connection between the marking mechanism and the counter.

It is desirable to design the mechanism to reciprocate the marker over a relatively long path not only for reasons given above but also because a conspicuous marking cycle is desirable for psychological reasons. Unfortunately, however, a long path of reciprocation in the printing operation means an extensive region in which the marker is exposed for possible misuse, and the freedom of the marker to move in the region of the inking device without operating the counter may even invite such misuse.

In this regard the invention is characterized by the use of a housing, preferably a largely transparent housing, to limit the accessibility of the marker from the outside and to limit the directions in which a hand may be moved into the region of the path of the marker.

Finally, safeguards are desirable against removal of the marker from the mechanism for unauthorized use apart from the counter and also against manipulation of the marker when the device is out of service. To this end the invention includes a special provision for securing the marker on the mechanism with a key-operated lock and a second provision for locking the mechanism in a position with the printing face of the marker completely inaccessible.

The above and other features and advantages of the invention may be understood from the following detailed description taken with the accompanying drawings:

In the drawings, which are to be regarded as merely illustrative,

Figure 1 is a perspective view of the preferred form of the invention;

Figure 2 is a plan view with the overhanging portion of the U-shaped operating handle broken away for clarity of illustration;

Figure 3 is a longitudinal section taken as indicated by the line 3—3 of Figure 2;

Figure 4 is a bottom view of the device with bottom flanges of the casing broken away for clarity of illustration;

Figure 5 is an enlarged fragmentary section taken as indicated by the line 5—5 of Figure 4 showing the clutch in one of its two limit positions;

Figure 6 is a section taken as indicated by the line 6—6 of Figure 5;

Figure 7 is a view similar to Figure 5 with the clutch in its second limit position;

Figure 8 is an enlarged section of the marker taken as indicated by the line 8—8 of Figure 2;

Figure 9 is a section of the marker taken as indicated by the line 9—9 of Figure 8; and

Figure 10 is an enlarged section taken as indicated by the broken line 10—10 of Figure 4 showing a mask arrangement for concealing the numerals of the counter.

General arrangement

The particular form of the invention shown in the drawings will be described by way of example and to illustrate the principles involved. It will be readily understood by those skilled in the art that the underlying inventive concepts may be embodied in widely dif-

ferent structural arrangements within the spirit and scope of the appended claims.

The principal parts of the particular form of the invention shown in the drawings include the following: a support member in the form of a plate 20 on which a patron may rest his hand for the marking or printing operation; a U-shaped operating lever, generally designated 21, with a handle 22 for actuating the mechanism of the device; a marker, generally designated 23, in the form of a rubber stamp mounted on a pair of U-shaped parallel arms, generally designated 24 and 25; and a computing device or counter, generally designated 26, that is operatively connected with the mechanism actuated by the operating lever 21.

When a patron places his right hand on the plate 20 the operator reciprocates the operating handle 22 by moving it back from the position shown in solid lines in Figure 3 to the position shown in dot-dash lines and then forward again to the starting position and this reciprocation of the handle causes a corresponding reciprocation of the parallel arms 24 in the opposite direction, the marker 23 moving forward from the retracted position shown in full lines in Figure 3 to the printing position shown in dash-dot lines in Figure 3 and then back to the retracted position. This printing cycle of the mechanism causes a cycle of operation of the counter 26 to register one admission for the accounting records of the event.

Supporting structure for the mechanism

The mechanism of the device is enclosed in a casing comprising a rectangular base generally designated 30, an inner frame generally designated 31 and a transparent housing generally designated 32, forming a guard member as will be hereinafter understood.

The rectangular base 30, which is open at the bottom and has inwardly extending bottom flanges 33, has side members 34, a front end member 35, and a rear end member 36, all of which members are open at the bottom. As shown in Figure 3 the rectangular base 30 also has an elevated inwardly directed flange 38 which forms a rectangular seat for the inner frame 31. The inner frame 31 may be anchored to the seat thus formed by a plurality of screw type fasteners 39. The bottom plate forming the lower wall of the base 30, is held against unauthorized removal by a series of blind-type screws 40. In addition, bolt and nut fasteners 41 are used to firmly fix the bottom plate to the flanges 33.

The inner frame 31 has two side members 44 (Figure 1 and 2) in the form of channels with open bottoms, a front end member 45 (Figure 4), and a rear end member 46, these two end members being in the form of inwardly turned channels. As shown in Figure 4, the inner frame 31 has a pair of spaced transverse channel members 48 to which is anchored a block of metal 50 by a pair of rods 51 the ends of which are threaded to receive suitable nuts 52. The block of metal 50, which is in the form of an open rectangle, may be called a bearing block since its function is to provide four bearings 53 for the mechanism of the device.

The previously mentioned plate 20 on which a patron's hand is to rest during the printing operation spans the space between the side members 44 of the inner frame 31 and is supported by downwardly turned ends 54 that rest on the inner flange 38 of the rectangular base 30. An outline 56 of a human hand may be marked or impressed in the plate 20 as shown in Figure 2 to indicate the proper position of a patron's hand for printing and further guidance for positioning of the hand may be provided by a triangular stop member 57 that is shaped to fit into the apex between the thumb and forefinger as shown.

When the marker 23 is in the form of a rubber stamp, as in this instance, a rectangular well 58 may be set in the plate 20 near its rearward end to contain an inking pad 60 for the marker. Preferably suitable sheet metal guards 61 are mounted on the side members 44 of the inner frame 31 on opposite sides of the plate 20 to keep a patron from inadvertently placing his hand in the path of the two parallel arms 24 and 25.

As best shown in Figure 1, the housing 32, which may be made in one piece of a suitable transparent plastic, has a longitudinally curved top wall 63 and two side walls 64 but is open at the front end to provide an entrance for the patron's hand and is open at the rear

end to permit access to the inking pad 60 as well as access to the marker 23 when the marker is in its extreme retracted position shown in Figure 3.

Printing mechanism

The marker 23 is mounted on the central horizontal portions 69 of the two U-shaped parallel arms 24 and 25 and is held against lateral movement thereon by suitable circular spring clips 70 that seat in suitable circumferential grooves in the parallel arms. Preferably the marker 23 is constructed in such a manner as to resist tampering and unauthorized removal and a feature of the invention is an inter-locking construction for this purpose as will now be described.

The body 71 of the marker 23 is in the form of an open rectangular frame formed with suitable recesses 72 to serve as bearings for the horizontal portions 69 of the two parallel arms 24 and 25, and is also formed with a pair of inner ears 73. Suitable screws 74 extend through the inner ears 73 to secure in place a suitable cover 75 for the body 71. As best shown in Figure 8 the cover 75 has two interior downwardly extending ears 78 spaced apart to form a slot 79, the purpose of the slot being to receive a tongue 80 for fastening a printing member, generally designated 81, to the body 71 of the marker. The two downwardly depending ears 78 have coaxial bores 82 to receive a locking pin 83, the locking pin normally extending through an aperture 84 in the tongue 80.

The locking pin 83 is carried by a cylindrical lock 85 that is slidably mounted in a cylinder 86. The cylinder 86 is mounted in a suitable bore 89 in the wall of the marker body 71 and is held in place by a concealed set screw 90. The lock 85 which is operated by a suitable key (not shown) has a locking finger 91 adapted to extend through an aperture in the cylinder 86 thereby to hold the locking pin 83 in its advanced locking position shown in Figure 8. When the locking finger 91 is retracted by the key, the cylindrical lock 85 may be withdrawn sufficiently for the locking pin 83 to clear the tongue 80 thereby releasing the printing member 81.

The particular printing member 81 shown in the drawings, with special reference to Figures 8 and 9, comprises a relatively thick rectangular block 93 of relatively soft rubber which is mounted on a metal base plate 94, the previously mentioned tongue 80 being an angular piece of metal that extends through the base plate 94 and is suitably attached thereto as by welding 95. Mounted on the lower face of the rubber block 93 is a piece of rubber 98 for performing the actual marking function, the piece of rubber being formed with raised portions 99 forming a symbol or indicia to be printed on patrons' hands.

The two ends of the U-shaped arm 24 extend through slots 100 in the side members 44 of the inner frame 31 and terminate in metal blocks 101, which metal blocks are carried by a driven shaft 102 journaled in the previously mentioned bearing block 50. The metal blocks 101 are suitably keyed to the driven shaft 102 as by means of set screws 103 so that rotation of the driven shaft 102 may swing the U-shaped arm 24 between the two extreme positions shown in Figure 3.

The ends of the second U-shaped arm 25 extend through the same slots 100 and terminate in metal blocks 105, the metal blocks 105 being mounted on a drive shaft 106 that is also journaled in the bearing block 50. The metal blocks 105 are rotatably mounted on the drive shaft 106 so that the drive shaft merely provides a pivot axis for the U-shaped arm 25 and may rotate independently of the arm. Thus the U-shaped arm 24 may be considered as an actuating arm carrying the marker 23 and the other parallel U-shaped arm 25 may be considered as a guide arm for maintaining the marker 23 substantially horizontal throughout its path of travel.

The previously mentioned U-shaped operating lever 21 may be connected to the drive shaft 106 in any suitable manner for direct actuation thereof. In the particular arrangement shown in the drawings the two lower ends of the U-shaped handle 21 extend through suitable slots 107 in the two side members 34 respectively of the rectangular base 30 and are carried by sleeves 108 that are fixedly mounted on the opposite ends of drive shaft 106, suitable retaining screws 109 holding the parts in place. A relatively large gear 110 on the drive shaft 106 meshes with a relatively small gear 111 on the driven shaft 102

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so that a given angular displacement of the drive shaft 106 produces a greater angular displacement of the driven shaft 102. Thus movement of the operating lever 21 approximately 60° between the two positions shown in Figure 3 causes the U-shaped arm 24 carrying the marker 23 to move in opposite respect through a larger arc on the order of 120°. In this manner the marker 23 is carried from its retracted position against ink pad 60 shown in full lines in Figure 3 to the position shown in dash-dot lines for printing the identifying symbol on a patron's hand and then is returned to its retracted position by return movement of the operating lever 21.

In the preferred practice of the invention suitable means is provided to lock the described printing mechanism in a position at which the marker 23 is held in its fully retracted position against the inking pad 60, thus making the printing surface of the marker inaccessible for unauthorized use. In the present embodiment of the invention the large gear 110 on the drive shaft 106 is cut away to provide a peripheral recess 114 (Figure 3) adapted to receive the tapered head 115 of a suitable locking pin 116. As best shown in Figure 4, the locking pin 116 is slidably mounted in a metal block 117, with the tapered head 115 normally retracted into a recess 118 in the block. The metal block 117 is suitably held in place by a bolt 119 that extends through the inner frame member 48 into the bearing block 50.

The outer end of the locking pin 116 is anchored in a sleeve 120, with a suitable coil spring 121 in compression between the sleeve and the metal block 117 to urge the locking pin towards its retracted position. A suitable link 123 in the form of a short bar connects the sleeve 120 to the body of a lock 124 that has a laterally positioned locking finger 125 under the control of a suitable aperture in the rear end member 36 of the rectangular base 30 and in the normal retracted position of the locking pin 116, the locking finger 125 is on the outer side of a lip 127 provided by the wall of the rear end member 36. By use of the key 126, the locking finger 125 may be retracted to permit the lock 124 to be moved inward thereby to advance the locking pin 116 into the locking recess 114 in the large gear 110, and then the locking finger 125 may again be extended laterally to engage the inner side of the lip 127 for holding the parts in locking position.

Counting mechanism

The previously mentioned counter 26 best shown in Figure 4, is of a well-known commercially available type in which the reciprocations of a short arm 130 are registered by totalizing numerals visible through a small window 131 in the rectangular base 30. In some instances, it is desirable that the numerals be normally concealed from view and for that purpose the window 131 may be normally closed from the inside by a masking blade 132 controlled by a suitable lock 133, as best shown in Figure 10. By insertion of a key 134, as shown in Figure 4, the lock 133 may be turned to swing the blade 132 from the solid line position of Figure 10 to the position shown in dash-dot lines, thereby exposing the numerals of the counter 26 to view.

The desired sensitivity of the counter 26 to the movement of the marker 23 whereby the counter records one admission in response to a relatively slight movement of the marker is favored by operatively connecting the marker 26 to the relatively extensively rotating driven shaft 102 rather than the lesser rotating drive shaft 106. The required sensitivity is further developed by employing motion-multiplying means to interconnect the shaft and counter. To this end, as best shown in Figures 3 and 4, a relatively long arm 137 actuated by the driven shaft 102 is connected by an angled link 138 to the shorter arm 139 of a lever, generally designated 140, that is pivotally mounted on a bracket 141. The longer arm 142 of the lever 140 is connected by a link 143 to the previously mentioned operating arm 130 of the counter 26.

As heretofore pointed out, the sensitivity of the counter 26 to the operation of the marker 23 must not interfere with the freedom of movement on the part of the marker, and it is further highly desirable that the marker 23 be free to move in the region of the inking pad 60 in complete independence of the marker. Provisions for such free action in the operation of the mechanism are incorporated in a clutch arrangement that operatively connects

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the driven shaft 102 to the arm 137, which clutch arrangement is shown in detail in Figures 5 to 7.

A friction clutch disc 146 with a hub 147 is rotatably mounted on the driven shaft 102 for actuation by the shaft through the medium of a radial pin 148. The hub 147 is cut away as shown in Figure 6 to provide a recess 149 for the sake of lost motion between the shaft and clutch disc, the shaft being free to rotate independently of the clutch disc through a range of angular displacement determined by the spacing of the two shoulders 151 and 152 at opposite ends of the recess.

In the completely retracted position of the U-shaped arm 24 shown in solid lines in Figure 5, which places the marker 23 against the inking pad 60 as shown in Figure 4, the recess 149 is in the rotational position shown in Figure 5 and is yieldingly maintained in this position by the action of a suitable coiled spring 155. The spring 155, which is connected to a suitable screw 156 on the back of the clutch disc 146, continuously urges the clutch disc in a clockwise direction as viewed in Figure 5, thereby tending to hold the clutch disc in what may be termed a normally retracted position. At this retracted position a stop pin 157 extending radially from the periphery of the clutch disc 146 abuts the lower edge of the adjacent transverse channel member 48 of the inner frame 31. As may be seen in Figure 5, the U-shaped arm 24 may be rotated from the position shown in solid lines to the position shown in dash-dot lines without responsive movement of the clutch disc 146, since over that range of angular movement the pin 148 on the driven shaft 102 will move freely in the recess 149 from the shoulder 151 to the shoulder 152. Continued movement of the U-shaped arm 24 counter-clockwise beyond the position shown in dash-dot lines in Figure 5 will cause the shaft pin 148 to engage the shoulder 152 to force counter-clockwise rotation of the clutch disc 146 in opposition to the tension of the spring 155 as may be seen in Figure 7.

A second friction clutch disc 160 freely rotatable on the shaft 102 is pressed into frictional contact with the first clutch disc 146 by a suitable coiled spring 161 in compression between the clutch disc 160 and a suitable collar 162 that is fixedly mounted on a shaft 102. The previously mentioned long arm 137 that operates the counter 26 is carried by and integral with a ring 163 that is fixedly secured to the clutch disc 160 by suitable screws 164. Thus, the counter 26 will respond to rotation of the first clutch disc 146, but since the counter is connected to the second clutch disc 160 and the second disc can slip relative to the first disc, the freedom of movement of the marker 23 carried by the U-shaped arm 24 is not limited by the relatively short range of movement of the arm 130 on the counter 26.

Operation

The operation of the device may be readily understood from the foregoing description. A patron paying for admission and standing in front of the device inserts his right hand through the front opening of the transparent housing 32 and places his hand on the plate 20 in the position indicated by the outline 56, with the vertex formed by the thumb and first finger occupied by the guide means or triangular stop 57.

The operator standing at the back of the machine grasps the handle 22 with the operating lever 21 in the forward position shown in Figure 1 and swings the operating lever 21 rearward to the position shown in dash-dot lines in Figure 3 thereby causing the marker 23 to swing along its predetermined path into printing contact with the patron's hand, the marker then being in its second position shown in dash-dot lines in Figure 3. The operator then returns the operating lever 21 to its original forward position, thus completing one reciprocation of the operating lever and a corresponding reciprocation of the marker 23.

It will be noted from an inspection of the drawings that the movement of the operating lever 21 to bring the marker into contact with the patron's hand, carries the operating lever rearward out of the line of sight between the operator and the patron's hand for full visibility of the printing operation. It will also be noted that the transparent housing 32 serves as a guard to keep a patron from inadvertently placing his hand across the path of the advancing marker. The housing 32 also limits the approaches to the printing region on the part of a patron's hand and makes it difficult and awkward for a patron

to insert his hand into the housing beyond the desired printing position for the hand.

It is readily apparent that the described construction for the device makes it difficult to use or manipulate the marker 23 for any fraudulent or unauthorized purpose. A conspicuous and extensive movement of the operating lever 21 and the marker 23 is required for a normal printing operation so that any departure from the usual cycle of operation would tend to attract attention, as would any attempt to insert a hand into the interior of the housing for printing contact with the marker without corresponding printing movement on the part of the mechanism. Thus it would be extremely difficult for anyone to move his hand through the forward opening of the guard member formed by the housing 32 far enough to take advantage of the fact that the marker 23 may be moved independently of the counter when the marker is in the region of the inking pad 60. Any attempt to insert the hand from the rear of the housing for printing contact with the retracted marker 23 would be defeated by the fact that the admission symbol or indicia would be printed upside down on the hand.

In the first part of the forward movement of the marker 23, the pin 148 moves freely counter-clockwise in the recess 149, as indicated in Figure 5, without affecting the counter 26. Only very slight additional counter-clockwise rotation of the U-shaped arm 24 with the pin 148 moving the clutch member 146 is sufficient to operate the counter arm 130 fully in one direction. Thus the full range of movement of the counter arm 130 corresponds to only a small fractional movement of the marker 23. Continued counter-clockwise rotation of the U-shaped arm 24 beyond the short range of operation of the counter lever 130 towards the extreme printing position shown in Figure 7, merely results in the friction disc 146 continuing to rotate against the frictional resistance of the second friction disc 160, the second friction disc being restrained by its operative connection with the counter arm 130.

This slippage between the two friction discs with the advancement of the marker 23 continues normally until the U-shaped arm 24 reaches its limit printing position shown in Figure 7. Only a slight return clockwise movement of the U-shaped arm 24 from the position shown in Figure 7 is required to complete the reciprocation of the counter arm 130 necessary to advance the totalizing numerals by one unit.

This return movement of the counter arm 130 is actuated by the spring 155 which causes the clutch disc 146 to follow the return or clockwise rotation of the shaft pin 148 up to the point where the stop pin 157 on the clutch disc reaches the limit position shown in Figure 5. Beyond that point, the returning U-shaped arm 24 enters its range of movement in the region of the inking pad 60 in which range it is completely independent of the counter 26 by virtue of the recess 149 in the hub 147.

From the described mode of operation, it is apparent that the operating handle 22 may be manipulated to cause short inking movements of the marker 23 against the inking pad 60 without operation of the counter 26, but as soon as the operating handle 22 is drawn rearwardly far enough to bring the U-shaped arm 24 to the position shown in dash-dot lines in Figure 5, the counter 26 becomes operatively sensitive to the printing mechanism. Since only a slight reciprocation of the printing mechanism will cause a complete operation of the counter 26 when the marker 23 is forward from the inking pad 60, the possibility of a miscount by failure to register an admission is reduced to a minimum. For example, merely retracting the marker 23 from its printing position sufficiently to make it barely possible for one patron to remove his hand from the printing position and a second patron to insert his hand, even such slight reciprocation of the marker would be registered as one admission by the counter 26. This sensitivity of the counter and the fact that the counter numerals are normally concealed from the operator by the mask 132, discourages any attempt to manipulate the device in a fraudulent manner.

The lock 85 prevents removal of the marker 23 from the mechanism for printing use independent of the counter, and as heretofore described the lock 124 locks the mechanism with the printing surface or printing face of the marker 23 held against the inking pad 60 in an inaccessible position.

Although the now preferred embodiment of the present invention has been shown and described herein, it is to be understood that the invention is not limited thereto, for it is susceptible to changes in form and detail within the scope of the appended claims.

I claim:

1. In a device of the character described for marking the human hand, the combination of: a marker for placing a symbol on a human hand; a mechanism to move said marker along a predetermined path from a retracted position to a marking position and return; a counter operating with reciprocating movement of a given magnitude; connecting means between said mechanism and said counter for reciprocation of the counter in response to reciprocation of the marker; a friction clutch included in said connecting means, said friction clutch having a lost-motion connection with said mechanism to permit movement of said marker in the region of said retracted position independently of the counter; and a motion-multiplying means included in said connecting means to cause operation of said counter in response to relatively small movement of the marker.

2. In a device of the character described for marking the human hand, the combination of: a marker for placing a symbol on a human hand; a mechanism to move said marker along a predetermined path from a retracted position to a marking position and return; a counter operating with reciprocating movement of a given magnitude; connecting means between said mechanism and said counter for reciprocation of the counter in response to reciprocation of the marker; a first clutch member included in said connecting means, said clutch member having a lost-motion connection with said mechanism; yielding means to urge said clutch member to a limit position; and a second clutch member included in said connecting means in frictional contact with said first clutch member for actuation thereby, said second clutch member being operatively connected with said counter for operation thereof.

3. A device as set forth in claim 2 in which motion-multiplying means is included in said connecting means to cause operation of said counter in response to relatively small movement of the marker.

4. In a device of the character described for marking the human hand, the combination of: a support providing an area to receive a human hand; a marker for placing a symbol on the hand; a mechanism including parallel arms movably supporting said marker for travel along a predetermined path from a retracted position to a position for marking a hand on said support and return; means to actuate said mechanism; a counter operating with reciprocating movement of a given magnitude; connecting means between said mechanism and said counter for reciprocation of the counter in response to reciprocation of the marker; a first clutch member included in said connecting means, said clutch member having a lost-motion connection with said mechanism; yielding means to urge said clutch member to a limit position; and a second clutch member included in said connecting means in frictional contact with said first clutch member for actuation thereby, said second clutch member being operatively connected with said counter.

5. In a device of the character described for marking the human hand, the combination of: a support for the human hand; a stop means on said support for guiding and properly positioning a hand thereon; a marker for placing a symbol on the hand; mechanism to move said marker along a predetermined path from a retracted position to a position for marking a hand on said support; a counter; connecting means between said mechanism and said counter for operation of the counter in response to operation of the marker; a first clutch member included in said connecting means, said clutch member having a lost-motion connection with said mechanism; yielding means to urge said first clutch member to a limit position; a second clutch member included in said connecting means in frictional contact with said first clutch member for actuation thereby, said second clutch member being operatively connected with said counter; and motion-multiplying means included in said connecting means to cause operation of said counter in response to relatively small movement of the marker.

6. A device as set forth in claim 5 which includes a housing overlying said path to limit the direction of approach of a hand to the region of the path, at least a

portion of said housing being transparent to make a hand on said support visible from above.

7. A device as set forth in claim 5 which includes inking means for said marker adjacent the retracted position of the marker and includes means to lock the marker in retracted position against the inking means to make the marker inaccessible for marking operation when the device is out of service.

8. In a device of the character described for marking the human hand, the combination of: a marker for placing a symbol on a human hand; a reciprocative mechanism movable in one direction to move said marker along a predetermined path from a retracted position of the marker to a marking position and movable in the reverse direction to return said marker to its retracted position; 15 a pair of movable friction members in mutual pressure contact whereby movement of one friction member tends frictionally to move the other; means operatively connecting said reciprocative mechanism with one of said friction members for reciprocation thereof, said connecting means providing lost motion to permit the mechanism to actuate said marker in the region of the retracted position of the marker without actuation of said one friction member; and a counter operating with re-

ciprocating movement, said counter being operatively connected with the other of said friction members for operation thereby in response to substantially less than the movement of said one friction member by said mechanism, whereby said counter makes one of its movements in response to initial movement of said other friction member in one direction and makes its return movement in response to initial movement of said one friction member in the other direction.

References Cited in the file of this patent

UNITED STATES PATENTS

336,162	Roberts	Feb. 16, 1886
626,084	Ohmer et al.	May 30, 1899
874,790	Patterson	Dec. 24, 1907
1,090,543	Jung	Mar. 17, 1914
1,263,026	Boast	Apr. 16, 1918
1,411,984	Veeder	Apr. 4, 1922
1,592,215	McGowan	July 13, 1926
1,984,706	Slettevold	Dec. 18, 1934
2,071,003	Scholz	Feb. 16, 1937
2,269,691	Rix	Jan. 13, 1942
2,521,724	Huntar	Sept. 12, 1950