United States Patent

[11] 3,529,543

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[54] **SHIFTABLE PLATE MEANS FOR LIMITING MOVEMENT OF ACTUATING LEVERS IN CHECK WRITERS**
12 Claims, 9 Drawing Figs.

[52] **U.S. Cl.** **101/20,** 101/95
[51] **Int. Cl.** **B41j 7/04**
[50] **Field of Search** 101/95, 20, 19, 96, 97, 93

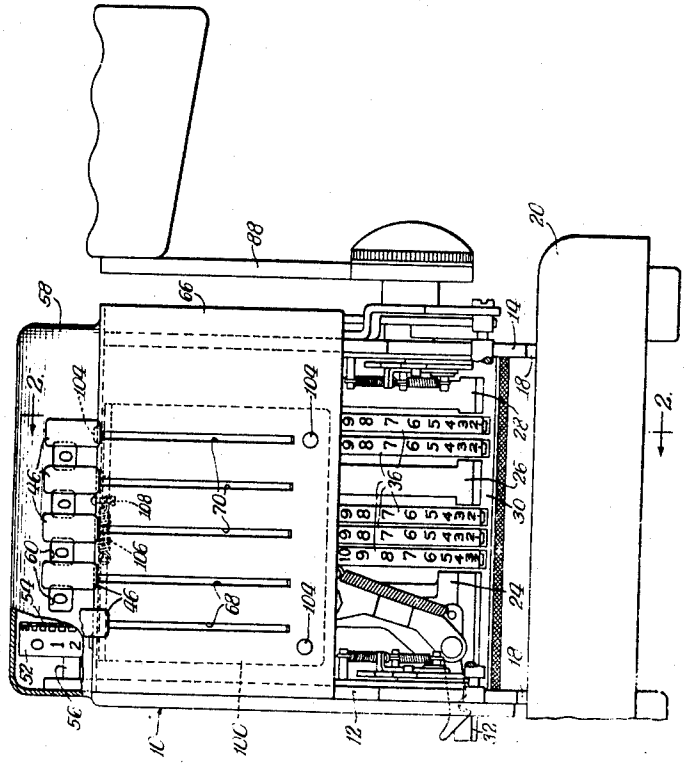
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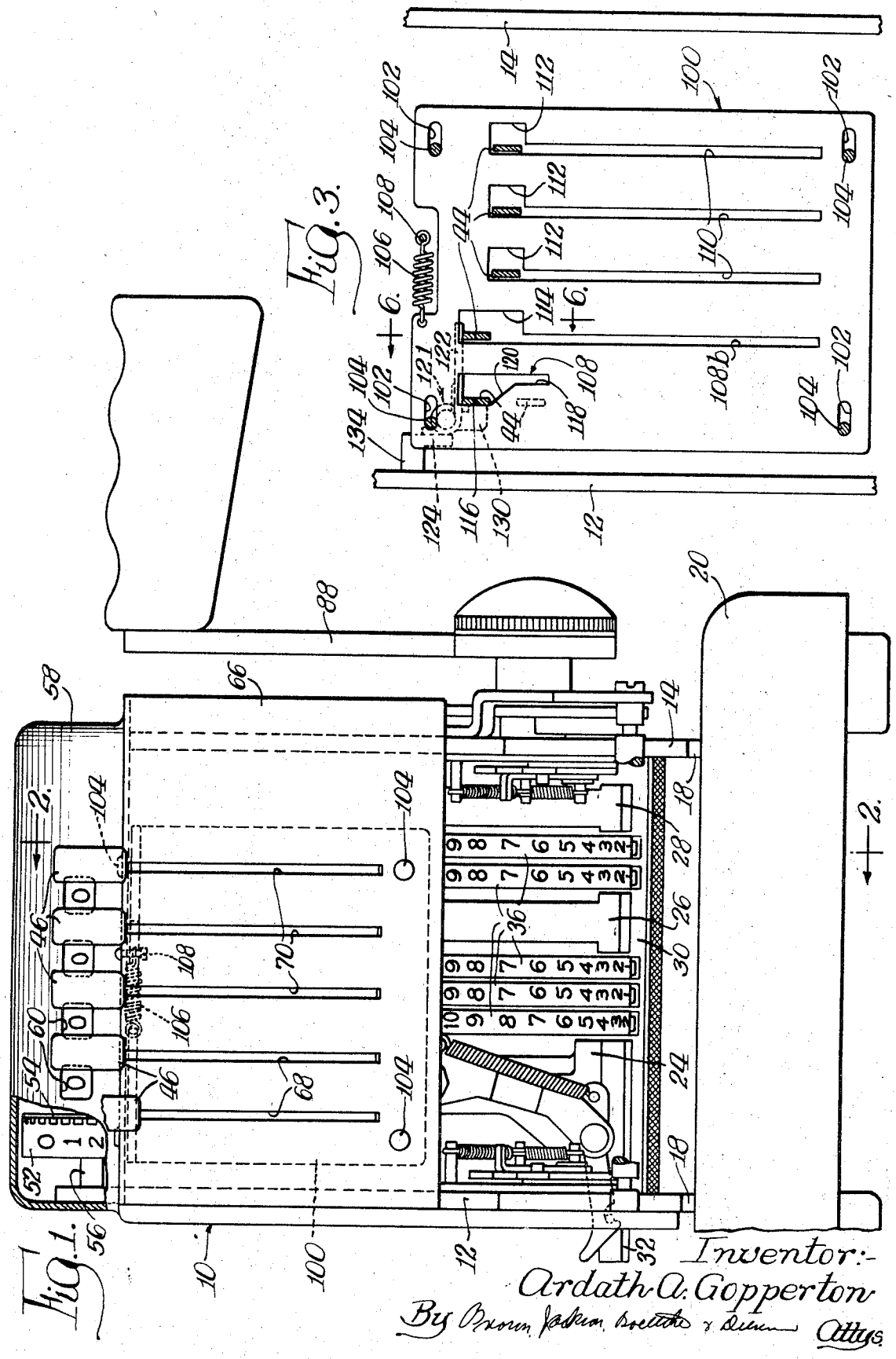
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Attorney—Johnson, Dienner, Emrich, Verbeck and Wagner

ABSTRACT: A device for selectively limiting movement of a plurality of actuating levers associated with individually adjustable printing members having printing characters thereon as in check writing and money order printing machines, including a plate supported for movement between first and second positions and having a plurality of slots therein each adapted to receive one of the actuating levers therethrough. Certain of the slots have configurations to allow movement of the corresponding levers to position printing characters in printing position when the plate is in the first position, with these slots being adapted to prevent movement of the plate to the second position until the corresponding actuating levers are moved to zero printing positions. At least one of the remaining slots has a configuration preventing movement of its corresponding actuating lever when the plate is in the first position and is adapted to allow movement of the corresponding actuating lever to a selected printing position upon movement of the plate to the second position.



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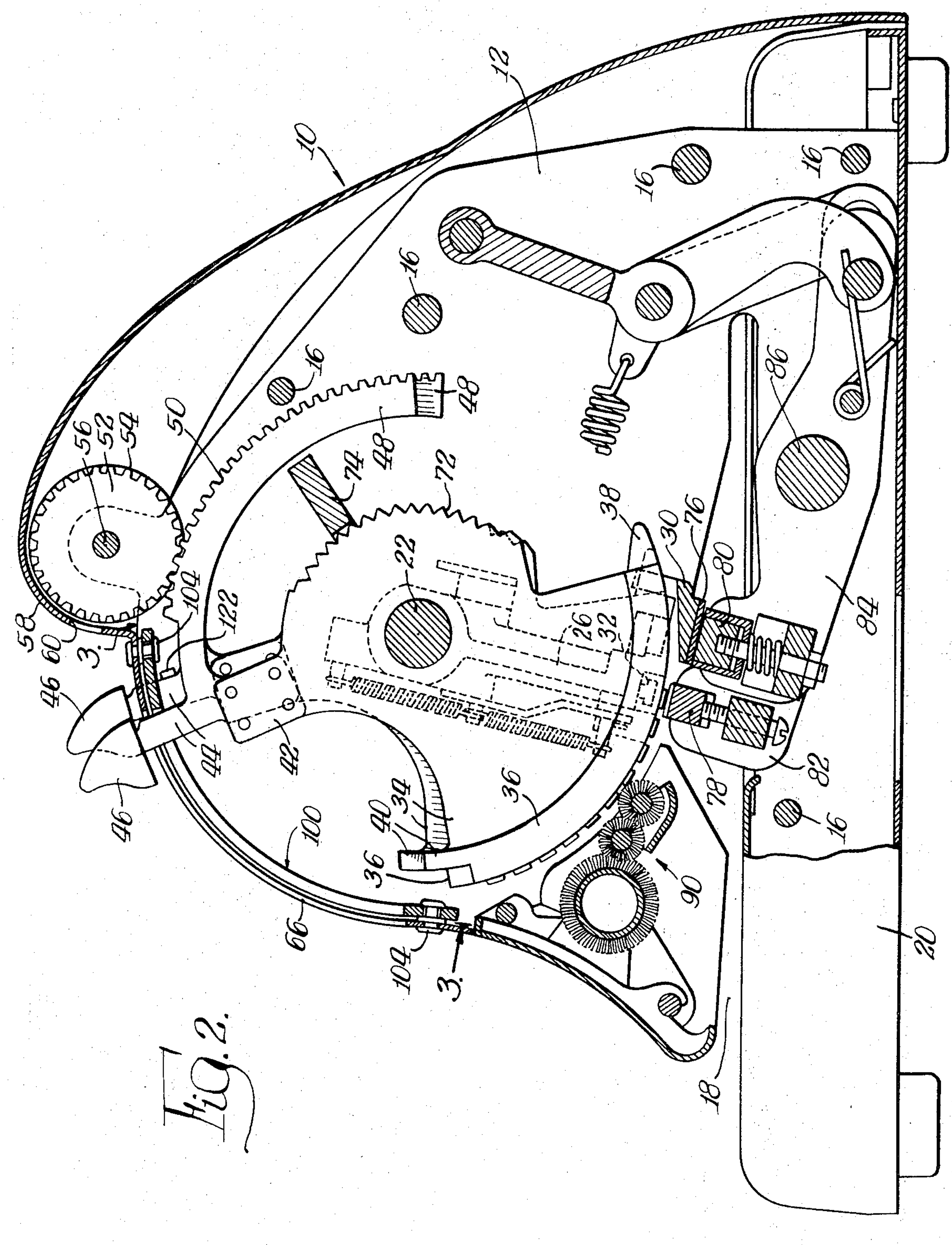


Fig. 2.

Fig. 4.

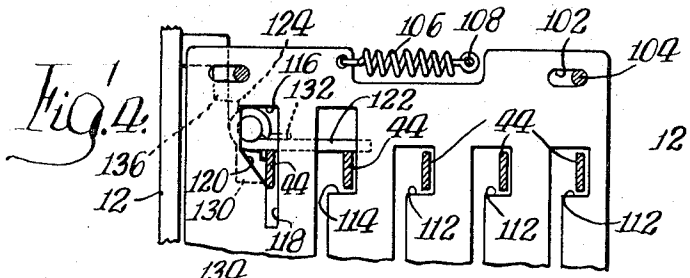


Fig. 5.

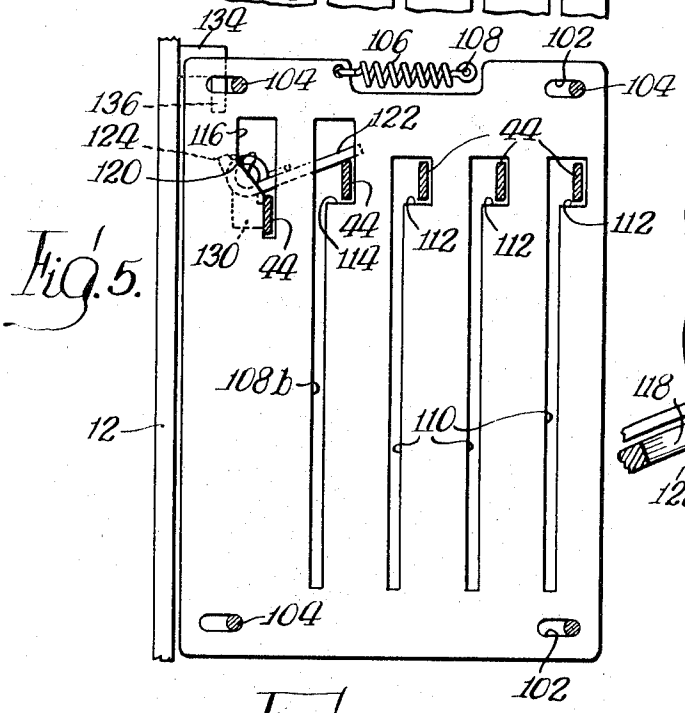


Fig. 7.

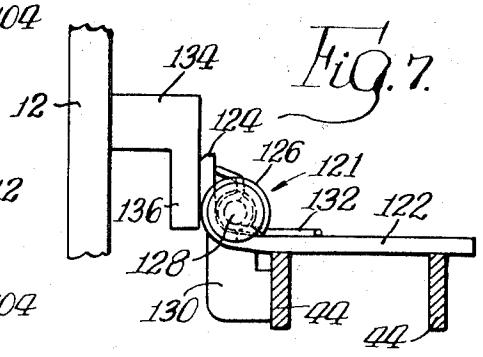


Fig. 6.

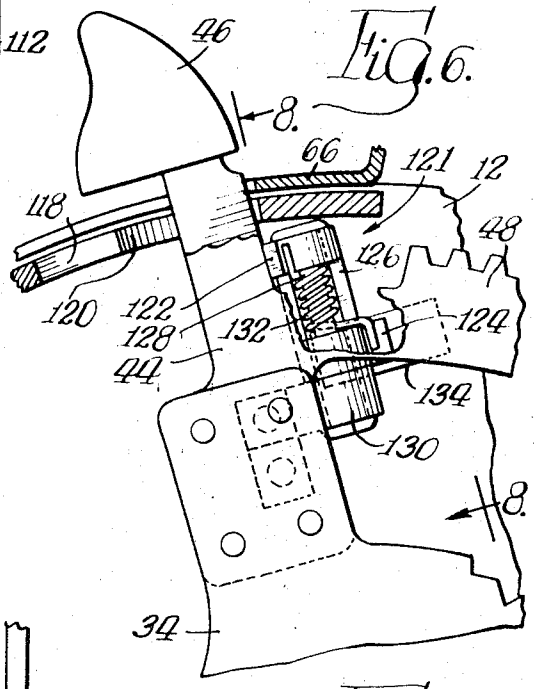


Fig. 9.

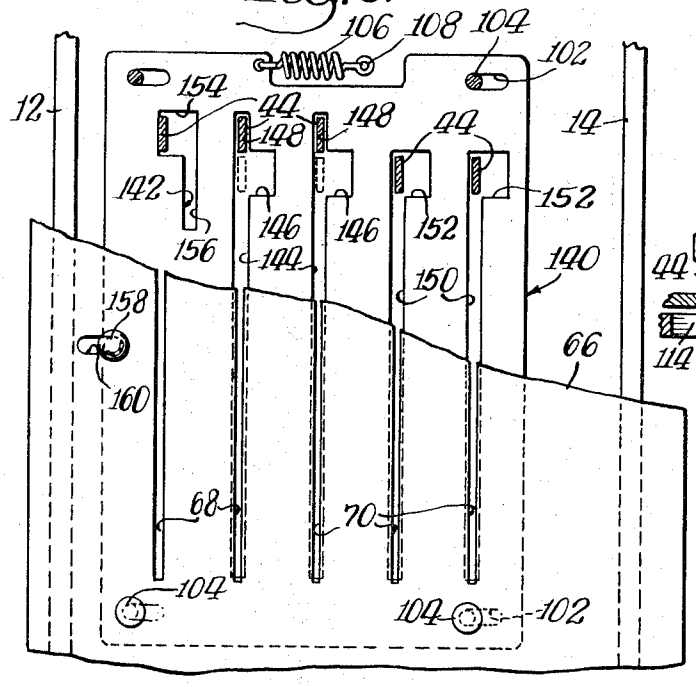
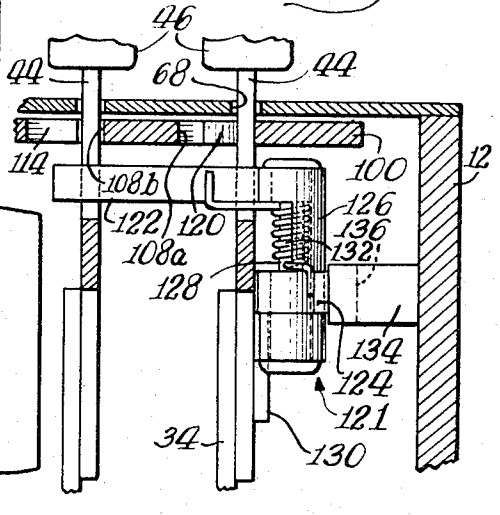


Fig. 8.



SHIFTABLE PLATE MEANS FOR LIMITING MOVEMENT OF ACTUATING LEVERS IN CHECK WRITERS

BACKGROUND OF THE INVENTION

The present invention relates to a device for limiting movement of a plurality of actuating levers associated with printing members as utilized in check writing and money order printing machines and the like, and more particularly to such a device adapted to limit the maximum amount for which a check or similar instrument may be printed.

Known check writers and money order printing machines employ printing members having printing characters thereon. The printing members are independently movable to selectively dispose any of the printing characters in effective printing positions. The printing members of many of the known check writers and money order printing machines includes printing characters ranging from numerals zero to nine and may be individually adjusted in combination to effect printing of generally any amount within the limitations of the machine.

It is often desirable in check writers and money order printing machines to provide means for limiting the maximum amount for which a check or money order may be printed. For example, it is often desirable that such check writers and printing machines be limited to printing checks in the maximum amount of $100. In the prior art devices of this type, the operator was required to manually move all of the printing members other than the hundredth digit printing member to zero printing positions. Many times the operator would fail to return certain of the printing members to their zero printing positions and cause the check to be printed in an amount above the maximum desired amount, thereby necessitating the printing of another check. This is time consuming and wasteful of check blanks. There thus exists a need for a simple efficient device for use with such check writing and money order printing machines which is adjustable to limit the maximum amount for which checks may be printed and insures that all of the printing members other than the maximum dollar printing member be disposed in the zero printing position, thereby precluding blanks or printing characters other than zero from erroneously appearing on the printed checks.

SUMMARY OF THE INVENTION

One of the primary objects of the present invention is to provide a device for selectively limiting movement of the printing members in check writing and money order printing machines and the like, which device may be readily adapted to existing machines and provides a means for selectively limiting the maximum amount for which a check or similar instrument may be printed.

Another object of the present invention is to provide a device for use with a check writer and money order printing machine and the like, which device is selectively operable to limit the maximum amount for which a check may be printed and which does not interfere with adjustment of any of the printing members other than the hundredth digit printing member when the device is in a first position.

Another object of the present invention is to provide a device for limiting the maximum dollar amount for which checks may be printed in check writers and money order printing machines and the like, which device includes a plate member readily adaptable to conventional check writers and printing machines having printing members with actuating levers associated therewith, and which plate is movable between first and second positions and includes means to selectively limit movement of the actuating levers and thereby the printing members.

Another object of the present invention is to provide a limiting device as described wherein the plate has a plurality of slots therein each adapted to receive a corresponding actuating lever therethrough with all of the slots except the slot corresponding to the hundredth digit printing member having recesses therein to retain the associated actuating levers in zero printing positions when the hundredth digit actuating lever is moved to effect printing of a selected dollar amount.

A further object of the present invention is to provide a device as described wherein the slot corresponding to the hundredth digit printing member is adapted to prevent movement of such member prior to the remaining printing members being moved to zero printing positions.

Another object of the present invention is to provide a limiting device as described including means associated with the $100 and $10 digit printing members to effect automatic movement of the $10 printing member to its zero printing position when the $100 printing member is moved to a selected printing position.

In furtherance of the above objects of the present invention, I provide a plate member adapted to be slidably supported by a check writer or money order printing machine having a plurality of printing members movable through actuating levers to selectively dispose printing characters in printing positions. The plate member is supported for movement between first and second positions and has slots therein each adapted to receive a corresponding one of the actuating levers therethrough. The slot corresponding to the actuating lever associated with the hundredth digit printing member is adapted to retain such actuating lever in an initial non-printing position when the plate is in its first position, while the remaining slots allow their corresponding actuating levers to be independently moved to selectively dispose any one of a plurality of printing characters in effective printing positions. In one embodiment, slots corresponding to all of the printing members except the hundredth digit printing member have recesses to receive and retain the associated actuating levers therein with the corresponding printing members disposed in their zero printing positions when the plate is moved to its second position. A cam surface is provided in the slot associated with the hundredth digit actuating lever to engage the lever and urge the plate member to its second position upon movement of the lever toward a selected printing position when the remaining actuating levers have been moved to their zero printing positions. Upon movement of the plate member to its second position, the hundredth digit printing member may be moved to the selected printing position thereby allowing printing of a check in a maximum hundred dollar round number amount. One embodiment of my invention allows the $100 and $10 digit printing members to be moved to non-printing positions and employs means associated with the actuating levers of the $100 and $10 digit printing members for effecting automatic movement of the $10 digit printing member to its zero printing position from the non-printing position upon movement of the $100 digit printing member to the selected printing position, thereby precluding the possibility of blank spaces in the printed checks.

Further objects and advantages of my invention, together with the organization and manner of operation thereof may best be understood by reference to the following description taken in conjunction with the accompanying drawings, in which like reference numerals designate like parts throughout the several views.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a front view of a check writer embodying my invention, with the lower frontal portion and the right hand side plate of the enclosing casing removed;

FIG. 2 is a longitudinal sectional view taken substantially along the line 2—2 of FIG. 1 with the $100 digit printing member in a non-printing position and the remaining printing members in zero printing positions;

FIG. 3 is a view taken along the line 3—3 of FIG. 2, showing the limiting plate member embodied in the check writer of FIGS. 1 and 2 in a first position wherein the $100 and $10 printing member actuating levers are in non-printing positions and the remaining printing member actuating levers are in zero printing positions;

FIG. 4 is a partial view of the limiting plate member illustrated in FIG. 3 with the plate being shown in a second position retaining certain of the actuating levers in zero printing

positions and with the hundredth digit printing member actuating lever being moved to a printing position;

FIG. 5 is a view generally similar to FIG. 3 illustrating the limiting plate in the second position with the hundredth digit printing member actuating lever in a selected printing position and the remaining actuating levers in a zero printing position;

FIG. 6 is an enlarged partial vertical sectional view taken substantially along the line 6—6 of FIG. 3 but with portions of the casing and printing members being included;

FIG. 7 is an enlarged top view of the means associated with the $100 and $10 digit actuating levers to effect automatic movement of the $10 digit actuating lever to zero printing position upon movement of the $100 digit actuating lever to a printing position;

FIG. 8 is a view taken substantially along the line 8—8 of FIG. 6; and

FIG. 9 is a view generally similar to FIG. 3 but illustrating an alternative embodiment of a limiting plate in accordance with the present invention.

DESCRIPTION OF PREFERRED EMBODIMENTS

Referring now to the drawings, and in particular to FIGS. 1 and 2, I have illustrated my invention, by way of example, as embodied in a check writer generally similar to that disclosed in U.S. Pat. No. 2,697,981 to A.G. Rindfleisch, except as to the clearing yoke mechanism, the orientation of the printing characters on the printing members, and the means for observing which printing characters are disposed upon the printing line of the machine. As will be understood, in its broader aspects my invention may be applied to any suitable check writer, money order printing machine or analogous machine.

The check writer illustrated includes a casing or housing, indicated generally at 10, enclosing a main frame comprising vertical side plates 12 and 14 secured together in fixed spaced relation by spacing cross rods 16. Each of the side plates 12 and 14 is provided with a forwardly extending base element defining with the upper portion of the plate a rearwardly extending opening or slot 18 for insertion of a check blank or analogous instrument to be printed upon, as is known. A support platform 20 is removably supported by and secured to the forwardly extending base element portions of the side plates 12 and 14 in a conventional manner and forms a platform or work surface along which the checks or analogous instruments are moved during insertion into the slot 18 for imprinting.

A cross shaft 22 is mounted on and between side plates 12 and 14 by means of reduced studs (not shown) at its ends providing shoulders abutting the inner faces of the side plates and restraining the shaft against endwise movement. A "sum" bar 24, a "dollar" bar 26 and a "cents" bar 28 are mounted at their upper ends upon shaft 22, each being provided with a sleeve fitting snugly about the shaft. The bars 24, 26, and 28 are secured at their lower ends to a guide bar 30 extending transversely of the main frame and suitably secured at its ends to the spaced side plates 12 and 14. A prefix plate 32 is slidably mounted on the lower end of the sum bar 24 and bears on its lower or printing face a suitable legend, such as "The Sum". During the printing operation plate 32 is moved inwardly to a position abutting the first or nearer one of the dollar printing members then in printing position. The means for operating the plate 32 is the same as that in the above identified Rindfleisch patent and is not essential to my present invention, it being understood that any suitable means may be provided for operating the prefix plate.

A plurality of printing members or type segments 34 are mounted upon the shaft 22 for rotational or turning movement thereon and are maintained in spaced relation on the shaft by intervening spacing collars (not shown) in a manner as described in the above referenced Rindfleisch patent. The printing members are restrained against endwise movement on the shaft 22 by the spacing collars and the sleeves at the upper ends of the bars 24, 26 and 28. I have shown, by way of example, $3 digit printing members 34 between the sum bar 24 and the dollars bar 26, and 2 cent digit printing members 34 between the dollars bar 26 and the cents bar 28. As will become more apparent hereinbelow, any desired number of dollar digit printing members may be provided with my invention being readily adapted for use with the number of dollar digit printing members selected. Each of the printing members 34 includes an arcuate type bar 36 for movement therewith. Each type bar 36 is provided upon its printing face with a series of printing characters or numerals ranging from zero to nine and arranged in reverse seriatim order from the leading end of the bar to the rearward end thereof. Each of the type bars 36 is of reduced thickness or radial extent at each end providing a rearwardly extending element 38 and a forwardly extending element 40 with a cutout or notch contiguous to each of such elements. Each type bar is relieved rearwardly of the zero printing character thereon to provide a blank or non-printing position for the associated printing member 34, thereby allowing selected of the printing members to be moved to non-printing position as described below. The guide bar 30 is provided with transverse slots to receive the type bars 36 of the printing members 34 and restrain them against transverse movement as described in the above identified Rindfleisch patent. The printing line of the check writer machine is the line defined by the bars 24, 26 and 28, and the printing members or type segments 34 are individually adjustable to selectively align the printing characters on the printing line.

Each of the printing members 34 includes a forwardly projecting finger portion 42 to which is suitably secured an actuating lever 44 provided at its outer end with a finger grip or cap 46 having a friction fit thereon. An arcuate shaped segment 48 is formed integral with or otherwise suitably secured to each of the actuating levers 44 and is generally concentric with the shaft 22 and movable with the corresponding printing member 34. Each of the arcuate segments 48 has a toothed outer peripheral edge or rack portion 50 adapted for cooperative engagement with an associated cylindrical index roller 52, the toothed edge portion 50 of the arcuate segment matingly engaging an annular toothed portion 54 on the associated index roller. The index rollers 52 are rotatably supported in spaced relation on a cross shaft 56 suitably supported between the vertical side plates 12 and 14. The index rollers 52 underlie a curved portion 58 of the casing 10 and each has a series of characters disposed about the peripheral surface thereof which correspond to the printing characters of the respective corresponding printing members 34. The index rollers 52 are each associated with an arcuate segment 48 on the corresponding actuating lever 44 such that when the printing members 34 are positioned to dispose printing characters on the printing line, characters on the index rollers corresponding to the printing characters disposed on the printing line will be visible through associated viewing openings or windows 60 provided in the curved portion 58 of the casing.

A generally curved frontal portion 66 of the casing 10 is provided with a first series of lengthwise slots 68 and a second series of lengthwise slots 70. Each slot of the series of lengthwise slots 68, 70 receives a corresponding actuating lever 44 therethrough, which actuating levers are conventionally movable lengthwise in the slots for effecting selective individual adjustment of the printing characters on the associated printing members 34 to positions on the printing line. The first two slots 68, considered from the left when viewing FIG. 1, correspond to the $100 and $10 digit printing members, respectively, during imprinting of a check or money order. The slots 68 extend upwardly to an extent that either of the actuating levers 44 corresponding to the $100 and $10 digit printing members may be moved to a position wherein the portion of the corresponding arcuate type bar 36 rearwardly of the zero printing character overlies the printing line of the machine, thereby establishing a non-printing or blank position ineffective for imprinting indicia on a check. Such a non-printing or blank position is indicated by a blank portion of the corresponding index roller 52 being visible through the corresponding opening or viewing window 60. The slots 70

correspond to the first dollar digit and the cents digits printing members and have their upper ends spaced below the upper ends of the slots **68** a distance such that when the actuating levers **44** corresponding to the slots **70** are positioned at the upper ends of the slots, the zero printing characters of the associated printing members **34** are disposed on the printing line of the check writer. In this manner, the $100 and $10 digit printing members can be positioned in blank or non-printing positions, and the first dollar digit and cents digits printing members can be turned to zero printing positions by movement of the associated actuating levers **44** upwardly to the maximum extent provided by the corresponding slots **68, 70**. The lower ends of the slots **68** and **70** preferably are disposed in a common horizontal plane such that maximum downward movement of any one of the actuating levers **44** disposes the printing character "9" on the printing line.

Each of the printing members or type segments **34** includes a two-way rack portion **72** concentric with the shaft **22** and adapted for cooperation with a spring pressed ball detent mounted in an index bar **74** extending between the side plates **12** and **14** in overlying relation to the rack portions **72**. The spring pressed ball detents provide means for holding the printing members **34** in their selected positions in a known manner.

A perforator plate **76** is suitably secured to the under surface of guide bar **30** and serves a known purpose. The printing members **34** and the perforator plate **76** cooperate with platens **78** and **80**, respectively, for printing the desired amount of the check and perforating the payee and the amount areas thereof. The platen **78** is mounted on the forward end of two outer platen arms **82** and the platen **80** is mounted on the forward ends of two inner platen arms **84**. The arms **82** and **84** are rockably mounted on a cross shaft **86** and operable through an operating lever **88** to effect the printing operation in a manner described more fully in the above referenced Rindfleisch patent. Inking means, indicating generally at **90**, are provided for applying ink to the printing characters on the printing line preparatory to a printing operation, such inking means being actuated incident to movement of the operating lever **88** in a manner similar to that disclosed in the above identified Rindfleisch patent. It will be understood that within the broader aspects of my invention, any suitable operating and inking means may be provided.

The check writer so far described is, in general, similar to that of the above identified Rindfleisch patent. In its operation, the check writer described above allows a blank check or analogous instrument to be inserted into the slot **18** and the printing members **34** selectively adjusted through finger grips **46** to position printing characters on the printing line whereby to effect printing of a desired dollar amount upon the check. With the check writer as described, a check may be printed for an amount between 1 cent and $999.99. If it is desired to limit the maximum amount for which a check may be printed, the operator must manually adjust each of the printing members **34** to insure that the selected maximum amount is not exceeded. As noted above, my invention is concerned with means which may be readily adapted to a check writer of the above described type and similar machines to limit the maximum amount for which a check may be written. My invention assures adjustment of all of the printing members, other than that associated with the $100 digit printing member, to zero printing positions while also guarding against blank spaces in the printed check.

To the above end, and in accordance with one embodiment of my invention, I provide a limiting plate, indicated generally at **100**, adapted to be supported by the casing **10** of the check writer for movement between first and second positions. Noting FIG. **3**, taken in conjunction with FIGS. **1** and **2**, the limiting plate **100** is generally rectangular in plan view and is curved, when considered in longitudinal cross section, to conform with the curved frontal portion **66** of the casing **10** so as to allow the plate to be supported in close relation to the casing. The limiting plate **100** has an elongated slot **102** in each of the corners thereof to receive a support stud **104** therethrough for securing the plate to the check writer casing. The support studs **104** have enlarged head portions to retain the plate **100** in supported relation adjacent the curved frontal portion **66** of the casing while allowing movement of the limiting plate in a direction generally normal to the spaced side plates **12** and **14** between a first position as illustrated in FIG. **3**, and a second position as illustrated in FIGS. **4** and **5** to be explained more fully hereinbelow. A tension spring **106** has one end secured to the casing **10** through a support screw or bolt **108** and has its opposite end secured to the limiting plate member **100** by a looped portion being received through a hole in the plate. The tension spring **106** serves to urge the limiting plate **100** toward its first position wherein the left-most ends of the elongated slots **102** engage the support studs **104** as illustrated in FIG. **3**.

The limiting plate member **100** may be made of any suitable generally rigid sheet material and has a plurality of lengthwise slots therein comprising a first series of slots **108*a*** and **108*b***, and a second series of slots **110**. The slots **108*a*** and **108*b*** correspond to the slots **68**, and the slots **110** correspond to the slots **70** in the frontal face **66** of the casing **10** when the limiting plate **100** is disposed in its first position as shown in FIG. **1**, each of the slots **108*a*, 108*b*** and **110** is adapted to receive a corresponding actuating lever **44** therethrough. The slots **110** have transverse widths slightly greater than the thicknesses of the corresponding actuating levers **44** and extend from a position generally adjacent the lower ends of the corresponding slots **70** upwardly to a position adjacent the upper limits of the slots **70**. Slots **110** allow the corresponding actuating levers **44** to be readily moved between zero printing positions when the actuating levers are disposed in their uppermost positions within the slots **110** to any other printing positions disposing a selected printing character on the printing line of the check writer when the limiting plate **100** is positioned in its first position. Each of the slots **110** has a recess **112** associated therewith of a longitudinal length slightly greater than the width of the corresponding actuating lever **44**, considered in the longitudinal direction of the limiting plate **100**, and of a transverse extent sufficient to allow the limiting plate to be moved to its second position when the corresponding actuating levers **44** are disposed in their zero printing positions.

The lengthwise slot **108*b*** extends from a position adjacent the lower end of the corresponding lengthwise slot **68** in the frontal face **66** of the casing **10** upwardly to a position corresponding to the blank position of the associated actuating lever **44**, thereby allowing the actuating lever to be selectively moved between the blank position and a position disposing a printing character from zero to nine on the printing line when the limiting plate **100** is disposed in its first position as shown in FIG. **3**. The slot **108*b*** includes a recess **114** of a transverse extent or width, considered in a direction transverse to the longitudinal axis of the plate **100**, sufficient to allow the plate to be moved to its second position when the corresponding actuating lever **44** is in either its blank non-printing position or its zero printing position and when the actuating levers corresponding to the slots **110** are also disposed in their zero printing positions.

The slot **108*a*** receives the actuating lever **44** corresponding to the hundred dollar digit printing member **34** therethrough and has a configuration adapted to prevent movement of the corresponding actuating lever when the limiting plate **100** is in its first position as shown in FIG. **3**. Slot **108*a*** is further adapted to allow movement of the corresponding actuating lever **44** to a selected printing position upon movement of the limiting plate to its second position. To this end, the slot **108*a*** includes an upper recess portion **116** disposed adjacent the upper end of the corresponding lengthwise slot **68** in the casing **10** and adapted to retain the actuating lever **44** in its uppermost position wherein the corresponding printing member **34** is disposed in its blank or non-printing position when the limiting plate **100** is positioned in its first position. The upper portion **116** of the slot **108*a*** is of a transverse width generally equal to the transverse widths of the recesses **112** and **114** in

the slots **110** and **108***b*, respectively, so as to allow movement of the limiting plate **100** to its second position as shown in FIG. **4** when the actuating levers corresponding to the slots **108***b* and **110** are in upper positions within their associated recesses **114** and **112**. Considering the limiting plate **100** disposed in its second position as shown in FIGS. **4** and **5**, the slot **108***a* includes a downwardly longitudinally extending portion **118** extending from the upper portion **116** thereof to a predetermined extent, such predetermined extent being to selectively limit the downward movement of the corresponding actuating lever **44** and thereby limit the amount of rotation which may be imparted to the corresponding printing member **34**. By limiting downward movement of the actuating lever **44** corresponding to the slot **108***a*, a predetermined printing character on the associated printing member **34** may be selectively positioned on the printing line of the check writer through movement of the actuating lever **44** to a downward position abutting the lower end of the slot portion **108***a*.

The plate **100** includes means associated therewith for effecting movement of the plate from its first to its second position upon movement of the actuating lever **44** corresponding to slot **108***a* toward its selected printing position downwardly within the slot portion **118** when the actuating levers **44** corresponding to slots **108***b* and **110** are disposed within their corresponding recesses **114** and **112**. Such means comprises a cam surface **120** formed in the slot **108***a* between the upper portion **116** thereof and the offset lower downwardly extending portion **118**. When the actuating levers **44** corresponding to slots **108***b* and **110** are disposed in positions within their associated recesses **114** and **112**, downward movement of the actuating lever **44** associated with the slot **108***a* will cause the actuating lever to engage the cam surface **120** and move the limiting plate **100** to the left, when viewing FIG. **3**, such that when the actuating lever is disposed within the lower portion **118** of slot **108***a*, the limiting plate will have been moved to its second position as shown in FIGS. **4** and **5**.

As noted above, the downward extent of the slot portion **118** may be selectively predetermined to limit the maximum $100 digit printing character on the associated printing member **34** which can be positioned on the printing line of the check writer. To establish this preselected $100 digit printing character as the maximum amount for which a check blank disposed in the slot **18** of the check writer may be printed, it is necessary that the actuating levers **44** corresponding to slots **108***b* and **110** be disposed in their zero printing positions to prevent a printing character greater than zero from being positioned on the printing line portion corresponding to all but the $100 digit. To prevent the actuating lever **44** disposed within slot **108***b* and corresponding to the $10 digit printing member from remaining in its blank or non-printing position within recess **114** during printing of a check for an amount of at least $100, means indicated generally at **121**, are provided which are operatively associated with the actuating levers **44** corresponding to slots **108***a* and **108***b* to effect movement of the actuating lever within slot **108***b* to its zero printing position when the actuating lever corresponding to the $100 digit printing member is moved to its selected printing position within the lower portion **118** of slot **108***a*.

Referring to FIGS. **6**—**8** taken in conjunction with FIGS. **3**—**5**, the means **121** associated with the actuating levers **44** corresponding to the $100 digit printing member and $10 digit printing member for effecting movement of the $10 digit printing member to its zero printing position upon movement of the $100 printing member to a selected printing position includes an actuating lever having extending arm portions **122** and **124**. The arm portions **122** and **124** of the actuating lever are formed integral with or otherwise suitably secured to opposite ends of a hollow barrel member **126** which is supported by a support pin or shaft **128** for pivotal movement thereabout. The support pin **128** is fixably secured in upstanding relation to the actuating lever **44** corresponding to the $100 digit printing member **34** through a bracket **130** suitably secured to the actuating lever. The support pin **128** has enlarged head portions adjacent the upper and lower ends of the barrel member **126** to retain the barrel member and its associated arm portions **122** and **124** in pivotal relation on the support pin in a conventional manner. The arm portions **122** and **124** form a 90° angle therebetween and are urged in a clockwise pivotal direction about the support pin **128** (FIG. **7**) by a torsion spring **132** coiled about the support pin **128** within the hollow barrel **126** and having end portions engaging the arms **122** and **124** in a known manner.

The longitudinal extent or length of the actuating arm portion **122** is such that when the actuating levers **44** corresponding to the slots **108***a* and **108***b* in the limiting plate **100** are in their uppermost non-printing positions, the arm **122** will extend from the bracket **130** transversely into engagement with the uppermost edge of the actuating lever **44** corresponding to slot **108***b*. With the actuating levers **44** corresponding to slots **108***a* and **108***b* disposed in their uppermost non-printing positions, the arm **122** is maintained in the position shown in FIGS. **3** and **7** through a plate member **134** which is secured to the side plate **12**. The plate member **134** has a leg portion **136** adapted to slidably abut the arm portion **124** and selectively prevent counterclockwise pivotal movement of the arms **122** and **124**. The leg portion **136** of the plate member **134** is of a length, considered in the downward direction of movement of the actuating lever **44** carrying the arms **122** and **124**, such that when the actuating levers **44** corresponding to slots **108***a* and **108***b* are moved downwardly to a position wherein the actuating lever corresponding to slot **108***b* is disposed in its zero printing position, the arm portion **124** will no longer be in sliding contact with the leg **136** as shown in FIG. **4**. At this point, the actuating lever **44** corresponding to the slot **108***a* will have moved the limiting plate **100** to its second position through engagement with the cam surface **120**, providing the levers **44** within slots **110** are positioned in their zero printing position. Further downward movement of the actuating lever **44** corresponding to slot **108***b* is thereafter prevented through engagement of the actuating lever with the lower edge portion of recess **114**. Further downward movement of the actuating lever **44** disposed within the lower portion **118** of slot **108***a* to position a printing character on the printing line can be effected as the arm portion **124** of the actuating lever will no longer be in contact with the leg **136** of plate **134**, thereby allowing counterclockwise rotation of the arm portion **122** of the actuating lever.

When the actuating lever **44** disposed within the slot **108***a* of the limiting plate **100** has been moved to its selected printing position downwardly within the lower portion **118** of slot **108***a*, the limiting plate is maintained in its second or left-most position through engagement of the lengthwise edge of the lower portion of the slot with the actuating lever projecting therethrough. Return of the limiting plate **100** to its first position can thereafter be accomplished only after the actuating lever **44** corresponding to slot **108***a* is moved upwardly to its non-printing position as above described. Such movement of the actuating lever within slot **108***a* to its non-printing position allows spring **106** to return the limiting plate to its first position.

FIG. **9** illustrates an alternative embodiment of means in accordance with my invention for limiting the maximum amount for which a check or analogous instrument can be printed with the above described check writer. The embodiment illustrated in FIG. **9** is generally similar to that described above with respect to FIGS. **1**—**8** and includes a limiting plate member indicated generally at **140**. The limiting plate **140** is generally rectangular in plan view and has elongated slots **102** provided adjacent the corners thereof to receive the support pins **104** therethrough such that the plate may be supported by the casing **10** for movement between a first position relative to the spaced side plates **12** and **14** as shown in FIG. **9** and a second position wherein the support pins **104** engage the right-hand ends of the elongated slots **102**. A tension spring **106** is operatively associated with the plate **140** and the casing **10** through the support pin **108** and serves to urge the limiting plate to its

first position as shown in FIG. 9. The frontal face portion 66 of the casing 10 is partially shown in FIG. 9 and includes first and second series of lengthwise slots 68 and 70 as above described.

The limiting plate 140 has a plurality of laterally spaced parallel lengthwise slots therein including a first slot 142 corresponding to the lengthwise slot 68 and adapted to receive the actuating lever 44 corresponding to the $100 digit printing member therethrough. A second series of slots 144 are provided in the limiting plate 140 which correspond to the $10 digit and dollar digit printing members 34 and are adapted to receive the corresponding actuating levers 44 therethrough. The lengthwise slots 144 extend from lower positions adjacent the lower-most ends of the corresponding lengthwise slots 68 and 70 in the casing frontal face 66 upwardly to positions corresponding to the blank or non-printing positions of the associated actuating levers 44. For this purpose, the slot 70 in the casing portion 66 corresponding to the actuating lever associated with the first dollar digit printing member 34 is extended upwardly to allow movement of the corresponding actuating lever to a non-printing position. Each of the lengthwise slots 144 has a recess 146 therein adjacent the zero printing position of the associated actuating lever 44. The recesses 146 are similar to the above described recesses 112 and are adapted to receive the corresponding actuating levers therein and prevent movement thereof from their zero printing positions when the limiting plate 140 is moved to its second position as described below. Longtudinal edges of upper portions 148 of the lengthwise slots 144 and the portions below the recesses 146 prevent movement of the actuating plate from its initial or first position as shown in FIG. 9 to its second position when the corresponding actuating levers 44 are not in their zero printing positions.

A third series of lengthwise slots 150 are provided in the limiting plate 140 and underlie the lengthwise slots 70 corresponding to the acutating levers 44 associated with the cents printing members 34 when the limiting plate is disposed in its first position. The slots 150 are similar to the above described cents digit slots 110 and each includes a recess 152 having an upper edge serving to limit upward movement of the corresponding actuating lever 44 to its zero printing positions and being adapted to receive the actuating lever therein in similar fashion to the above described recesses 112 when the actuating levers are disposed in their zero printing positions.

The slot 142 in the limiting plate 140 corresponding to the actuating lever 44 associated with the $100 digit printing member 34 includes an upper recess portion 154 adapted to prevent movement of the corresponding actuating lever when the limiting plate 140 is in its first position as shown in FIG. 9. The slot 142 is adapted to allow movement of the corresponding actuating lever to a selected printing position upon movement of the limiting plate to its second position when the remaining actuating levers are disposed in their zero printing positions. The recess 154 is generally similar to the above described recess 116 in that it prevents movement of the corresponding actuating lever from a non-printing position when any of the remaining actuating levers corresponding to the slots 144 and 150 are disposed in positions other than zero printing positions. The slot 142 includes a lower portion 156 having a transverse width slightly greater than the thickness of the associated actuating lever 44 and a length, considered longitudinally of the limiting plate 140, sufficient to allow the actuating lever to be moved to a predetermined printing position when the limiting plate 140 is moved to its second position. For example, the length of the lower portion 156 of slot 142 may be such as to limit downward movement of the associated actuating lever 44 to a position wherein the number 1 printing character on the associated printing member 34 is disposed on the printing line of the machine. This would limit the amount for which a check may be printed in a check writer utilizing the limiting plate 140 to an amount less than $100.

The limiting plate 140 includes means for effecting movement thereof to the second position when the actuating levers 44 corresponding to the slots 144 and 150 are moved to their zero positions. Such means comprises an actuating shaft 158 suitably secured in upstanding relation to the plate 140 and adapted to project outwardly through an elongated slot 160 in the frontal face portion 66 of the check writer casing 10. With the actuating levers 44 corresponding to the slots 144 and 150 in the limiting plate 140 disposed in their zero printing positions, movement of the upstanding shaft 158 to the left, as viewed in FIG. 9, effects movement of the limiting plate 140 to the second position wherein the recesses 146 and 152 receive the associated actuating levers therein and prevent their movement to non-printing positions or printing positions other than zero. With the actuating plate 140 disposed in its second position, the actuating lever 44 corresponding to the slot 142 and associated with the $100 digit printing member may be moved to the aforedescribed predetermined printing position. Thereafter, release of the actuating shaft 158 will not cause the limiting plate 140 to be returned to its first position through the tension spring 106 due to the longitudinal edge of the lower portion 156 of slot 142 engaging the associated actuating lever 44. With the limiting plate 140 moved to its second position as described, a check in the maximum amount of $100 or other predetermined maximum amount may be imprinted, with blank spaces on the check being precluded. Return of the actuating lever 44 corresponding to the slot 142 to its non-printing positon within the recess 154 allows the tension spring 106 to return the limiting plate 140 to its first or initial position whereupon the actuating levers 44 associated with the slots 144 and 150 may be moved to selective printing positions, the actuating levers being associated with the slots 144 being also selectively movable to non-printing positions.

While preferred embodiments of my invention have been shown and described, it will be obvious to those skilled in the art that changes and modifications may be made therein without departing from the invention in its broader aspects. For example, while the limiting plates 100 and 140 are described as being generally curved to be supported in adjacent relationship to the curved frontal face portion 66 of the check writer casing 10, the limiting plates may find ready application in check writing and money order printing machines wherein the casing adjacent the operating or actuating levers 44 is flat, thereby making it desirable that the limiting plate be of generally planar configuration. In addition, it will be understood that the configurations of the above described lengthwise slots in the limiting plates 100 and 140 may be reversed to accommodate check writers wherein the actuating levers are disposed in their zero printing positions when positioned at the lower ends of the corresponding slots 68 and 70 in the casing 10.

I claim:

1. A device for selectively limiting movement of a plurality of normally individually adjustable printing members as in check writing and money order printing machines and the like, each of the printing members having an actuating lever associated therewith, the actuating lever associated therewith, the actuating levers projecting outwardly of a casing and being operative to adjust the corresponding printing members for selective positioning of indicia thereon preparatory to printing, said device comprising a plate supported by the casing for movement between first and second positions, said plate having a plurality of slots therein each adapted to receive one of the actuating levers therethrough, certain of said slots having configurations to allow movement of the corresponding levers and printing members to selectively position printing indicia when said plate is in said first position, said plate having means associated with said certain of said slots to prevent movement of said plate to said second position until the actuating levers corresponding to said certain of said slots are moved to predetermined positions, at least one of the remaining slots having a configuration preventing movement of its corresponding actuating lever when said plate is in said first position and being adapted to allow movement of the corresponding actuating lever to a selected printing position upon movement of said plate to said second position.

2. A device as defined in claim 1 including means associated with said plate for effecting movement thereof to said second position upon movement of said actuating lever corresponding to said one of said remaining slots toward said selected printing position when said levers corresponding to said certain of said slots are moved to said predetermined positions.

3. A device as defined in claim 1 including means associated with said casing and said plate for urging said plate to said first position.

4. A device as defined in claim 1 wherein said plate includes means to prevent movement of the actuating levers associated with said certain of said slots after said plate has been moved to said second position.

5. A device as defined in claim 1 wherein said plate includes means associated with said one of said remaining slots to prevent movement of said plate from said second position to said first position after the actuating lever associated with said one of said remaining slots has been moved to said selected position.

6. A device as defined in claim 1 wherein said plate includes means associated with said one of said remaining slots for effecting movement of said plate from said first to said second position upon movement of the corresponding actuating lever to said selected printing position when the actuating levers corresponding to said certain of said slots have been moved to their predetermined positions.

7. In a machine for printing money orders and like instruments, the combination comprising, a casing, a plurality of individually adjustable printing members including a first member and a second member and a plurality of other members, said first member having a plurality of effective number printing characters and being movable to an initial position ineffective for printing and a second position effective for printing, said second and other members each having number printing characters ranging from zero to nine and being normally independently movable to selectively dispose any one of said characters in effective printing position when said first member is in its initial position, said second member further having an initial position ineffective for printing, an actuating lever associated with each of said printing members for effecting adjustment thereof, plate means supported by said casing

for movement between first and second positions, said plate means having a plurality of slots therein each adapted to receive one of said actuating levers therethrough, said slots corresponding to the actuating levers associated with said second and other printing members having configurations to allow said independent selective movement of said second and other printing members to any one of said effective printing positions when said plate is in said first position and preventing movement of said other printing members from the zero printing positions when said plate is in said second position, said slot corresponding to the actuating lever associated with said first printing member being of a configuration to prevent movement of said first printing member from said initial position when said plate is in said first position and being adapted to allow movement of said printing member to said second position effective for printing when said plate is in said second position, and means for moving said plate from said first to said second positions when said other printing members are in their zero printing positions.

8. The combination of claim 7 wherein said slot corresponding to the actuating lever associated with said second printing member has a configuration to allow movement of said second printing member to said initial position ineffective for printing.

9. The combination of claim 8 including means operatively associated with said actuating levers associated with said first and second printing members to effect movement of said second printing member to zero printing position upon movement of said first printing member to said second position effective for printing.

10. The combination of claim 7 wherein said plate includes means associated with said slot corresponding to said first printing member for effecting movement of said plate to said second position upon movement of said first printing member to said second position effective for printing when said other of said printing members are in zero printing positions.

11. The combination of claim 7 including means urging said plate to said first position.

12. The combination of claim 8 wherein said slot corresponding to the actuating lever associated with said second printing member has a configuration to prevent movement of said plate to said second position unless said second printing member is in zero printing position.

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UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,529,543 Dated September 22, 1970

Inventor(s) Ardath A. Gopperton

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Column 10, line 55, after "associated therewith,"
delete -- the actuating lever
associated therewith, --.

SIGNED AND
SEALED

FEB 23 1971

(SEAL)
Attest:

Edward M. Fletcher, Jr.
Attesting Officer

WILLIAM E. SCHUYLER, JR.
Commissioner of Patents