Dec. 27, 1960 W. R. FOWLIE 2,966,301

RESETTING MECHANISM FOR NUMBERING MACHINES

Filed Oct. 10, 1957 3 Sheets-Sheet 1

Fig. 1.

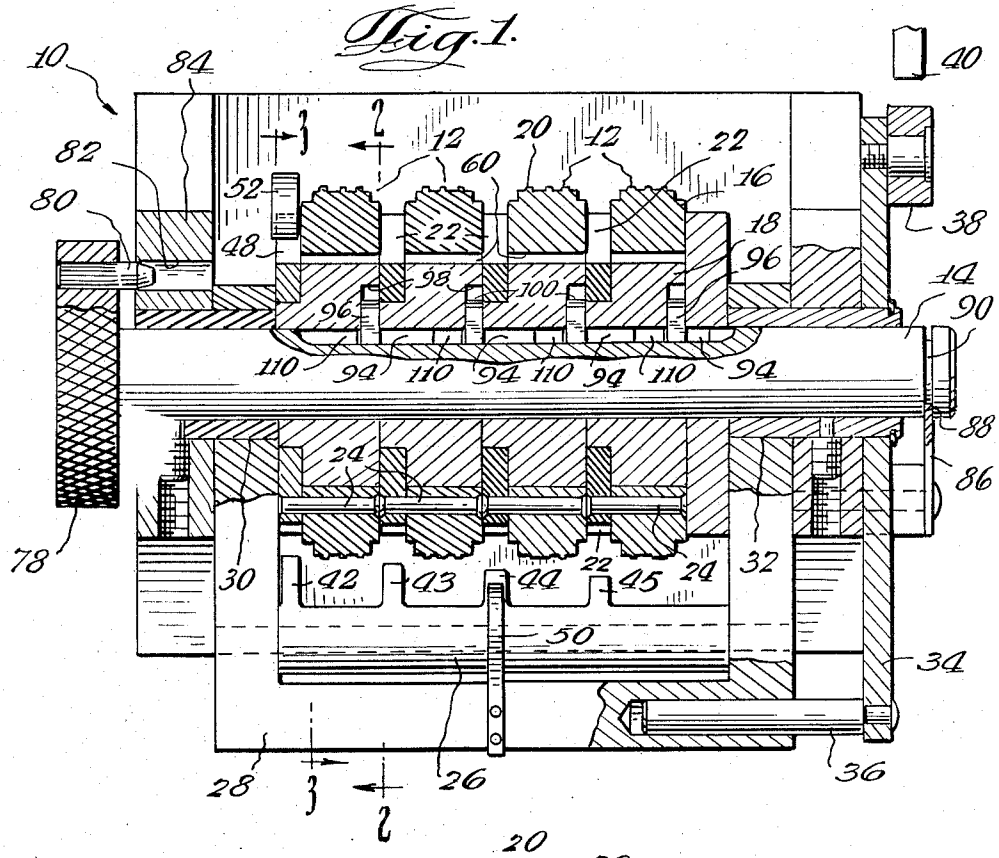
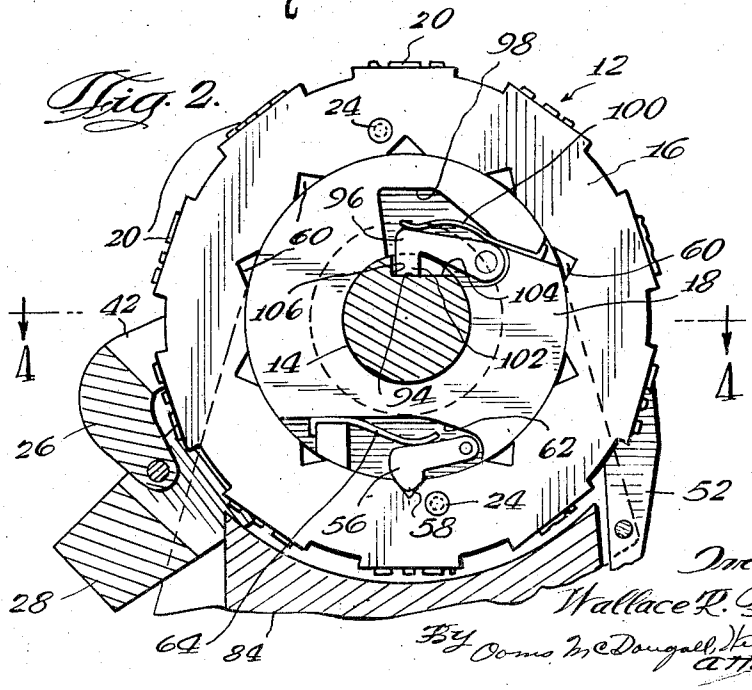


Fig. 2.



Inventor
Wallace R. Fowlie
By Toms, McDougall, Williams & Hirsh
Attorneys

Dec. 27, 1960 W. R. FOWLIE 2,966,301

RESETTING MECHANISM FOR NUMBERING MACHINES

Filed Oct. 10, 1957 3 Sheets-Sheet 2

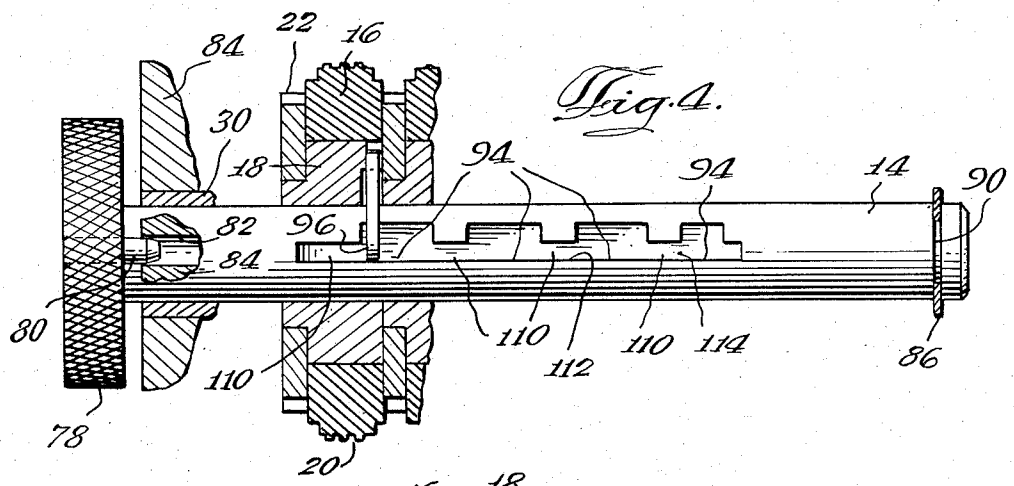


Fig. 4.

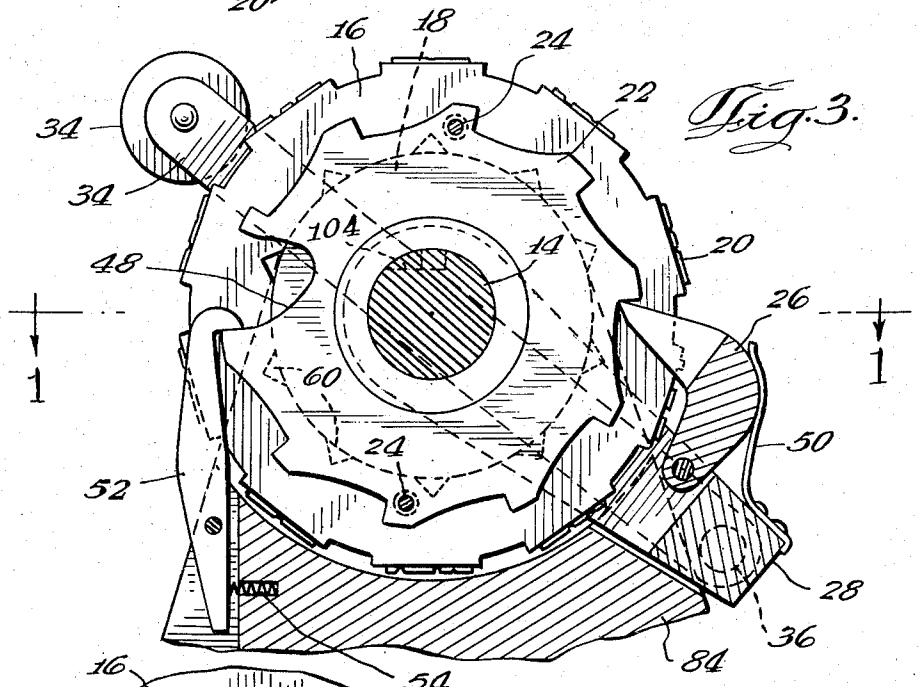


Fig. 3.

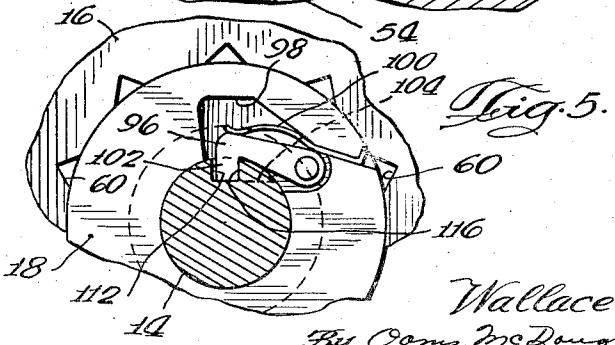


Fig. 5.

Inventor
Wallace R. Fowlie
By Coms, McDougall, Williams & Hersh
Attorneys

Dec. 27, 1960 W. R. FOWLIE 2,966,301

RESETTING MECHANISM FOR NUMBERING MACHINES

Filed Oct. 10, 1957 3 Sheets-Sheet 3

Fig. 6.

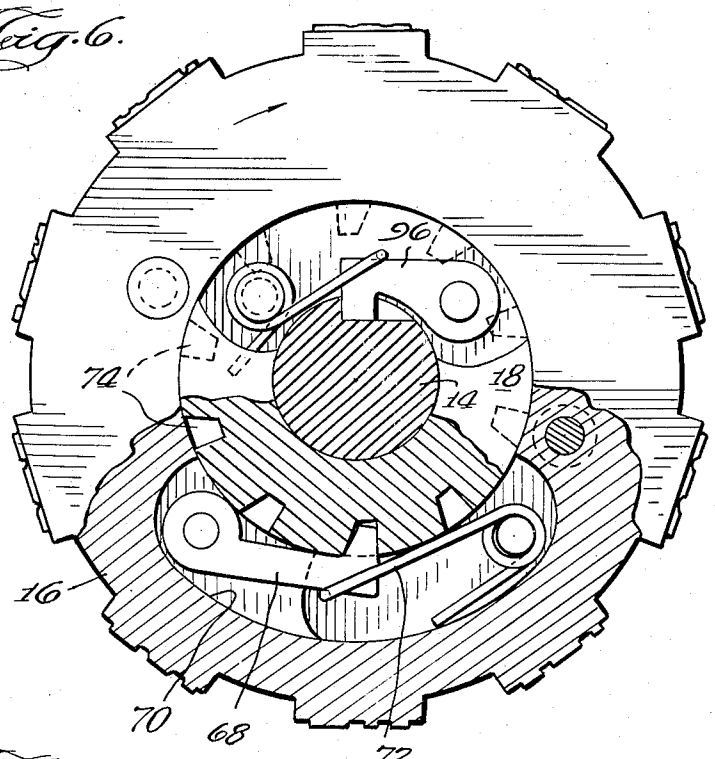
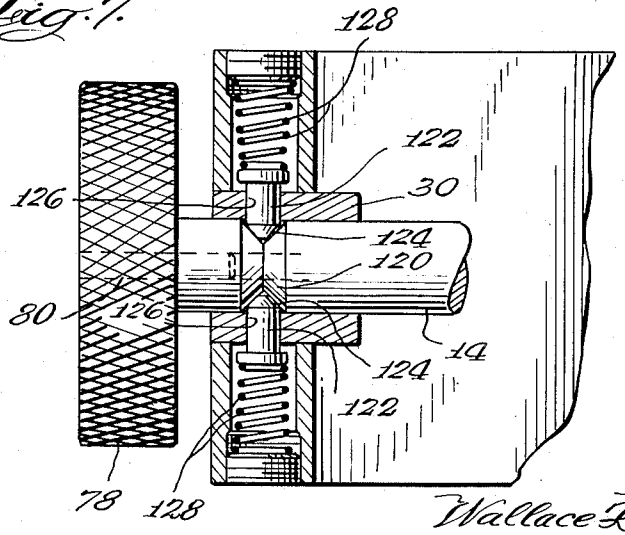


Fig. 7.



Inventor
Wallace R. Fowlie
By Coma, McDougall, Williams & Hurst
attorneys

United States Patent Office 2,966,301
Patented Dec. 27, 1960

2,966,301

RESETTING MECHANISM FOR NUMBERING MACHINES

Wallace R. Fowlie, North Riverside, Ill., assignor to A. B. Dick Company, Niles, Ill., a corporation of Illinois

Filed Oct. 10, 1957, Ser. No. 689,338

9 Claims. (Cl. 235—132)

This invention relates to numbering machines, such as may be used in connection with duplicators or other printing machines to number the printed sheets consecutively, either in ascending or descending numerical order.

One object of the present invention is to provide a new and improved numbering machine which is arranged so that it may readily be reset to an initial number.

A further object is to provide such a new and improved numbering machine in which the initial number may be changed very readily, so that the machine may be reset to any desired starting number.

Another object is to provide such a new and improved numbering machine which is easy to reset and is extremely compact and durable, yet is reasonably simple and low in cost.

Further objects and advantages of the present invention will appear from the following description, taken with the accompanying drawings, in which:

Fig. 1 is an enlarged longitudinal sectional view of a numbering machine which will be described as an illustrative embodiment of the present invention.

Fig. 2 is a transverse sectional view, taken generally along a line 2—2 in Fig. 1.

Fig. 3 is a transverse sectional view taken generally along a line 3—3 in Fig. 1.

Fig. 4 is a fragmentary longitudinal sectional view taken generally along a line 4—4 in Fig. 2, with various parts broken away.

Fig. 5 is a fragmentary sectional view similar to Fig. 2, but showing the mechanism in a changed position.

Fig. 6 is a transverse sectional view, similar to Fig. 2, but showing various modifications.

Fig. 7 is a fragmentary longitudinal sectional view, somewhat similar to Fig. 4, but showing further modifications.

It will be apparent that the drawings illustrate a numbering machine 10 which may be employed for any of the usual or appropriate applications of such machines. For example, the entire numbering machine may be mounted on a cylinder or other rotary member of a duplicator or printing machine (not shown), so as to number the printed sheets consecutively. The numbering may be in the normal order or in reverse numerical order. Such arrangements are convenient for simultaneously printing and numbering checks or other documents which are given serial numbers.

The illustrated numbering machine comprises four numbering wheels 12 which are supported by a shaft 14. All of the numbering wheels 12 are substantially the same. It will be understood that the wheels are employed to print units, tens, hundreds, and thousands, from left to right in Fig. 1.

From Fig. 2, it will be apparent that each numbering wheel 12 comprises an outer ring 16 and an inner core or hub 18. The ring 16 is rotatable about the core 18, while the core 18 is rotatable about the shaft 14. The ring 16 is adapted to do the actual printing of numbers,

and thus is formed with a series of type faces 20 running from 0 to 9.

Various transfer mechanisms may be provided to advance the numbering wheels 12 so as to register units, tens, hundreds and thousands. In this case, each of the rings 16 is fitted with a ratchet wheel 22 which is secured to the ring by means of rivets 24 or other suitable fasteners. The ratchet wheels 22 are adapted to be advanced by a multiple tooth pawl 26 which is pivoted on a swing frame 28. It will be apparent from Fig. 1 that the swing frame 28 is swingable about an axis which coincides with the axis of the shaft 14. More specifically, the swing frame 28 is swingable about left and right hand bushings 30 and 32 which serve as bearings for the shaft 14.

The swing frame 28 is adapted to be rocked by means of an arm 34 which is swingable about the outboard right hand end of the right hand bushing 32. A pin 36 is employed to connect the arm 34 to the swing frame 28. It will be seen that a roller 38 is mounted on the illustrated arm 34, for engagement with a cam 40 adapted to oscillate the arm 34.

In order to operate the numbering wheels so as to effect decimal transfer between the wheels, the illustrated pawl 26 is formed with four teeth or points 42, 43, 44 and 45 adapted to engage the ratchet wheels 22 on the numbering wheels 12. The pawl teeth 42–45 are of graduated, diminishing length. Thus, except during the actual operation of decimal transfer between the wheels 12, only the longest pawl tooth 12 is operatively engaged with the ratchet wheel 22 on the units wheel 12, which is the extreme left hand wheel in Fig. 1. The ratchet wheel 22 for each of the first three numbering wheels 12 for units, tens, and hundreds, has a notch 48 therein. After the units numbering wheel 12 has been advanced through nine steps of the ratchet wheel 22, the longest pawl tooth 42 drops into the notch 48 in the units ratchet wheel, whereupon the second longest pawl tooth 43 comes into operative engagement with the tens ratchet wheel 22. During the next step of the units wheel, the tens wheel is also advanced to one step.

Similarly, after the tens wheel has been advanced through nine steps, and after the units wheel has been advanced through nine steps so that the notches in the units and tens ratchet wheels 22 are aligned, the longest and second longest pawl teeth 42 and 43 fall into the corresponding notches 48, whereupon the third pawl tooth 44 comes into operative engagement with the hundreds ratchet wheel 22. The transfer between the hundreds and the thousands wheel is of the same character. It will be noted that the pawl 26 is resiliently biased against the ratchet wheel 22 by a spring 50. Various other types of transfer mechanisms may be employed within the scope of the present invention.

Retrograde movement of the numbering wheels 12 is prevented by a series of pawls 52 which engage the ratchet wheels 22. Each pawl 52 is biased against the corresponding ratchet wheel 22 by a spring 54.

During the normal advancing movement of the numbering wheels 12, the cores or hubs 18 are caused to rotate with the outer rings 16. It will be recalled that the ratchet wheels 22 are secured to the rings 16, so that the rings are directly driven by the four-toothed transfer pawl 26. The driving connection between each of the rings 16 and the corresponding core 18 is yieldable but is sufficiently strong to advance the cores 18 with the rings 16 during normal operation. As shown in Figs. 1–5, the yieldable driving connection between each ring 16 and its core 18 is formed by a detent pawl 56 having a rounded nose 58 adapted to engage with any of a series of ten V-shaped notches 60 formed in the inside of the ring 16. The detent pawl 56 is pivoted on the core 18 and is positioned in a recess 62 formed in the core. A

spring 64 is mounted in the recess 62 to bias the pawl 56 outwardly against the ring 16.

A somewhat modified driving connection is shown in Fig. 6. In this case, the yieldable connection between each ring 16 and its core 18 is formed by a ratchet pawl 68 which is pivoted on the ring 16 and is positioned within a recess 70 formed in the ring. A spring 72 is provided in the recess 70 to bias the pawl 68 inwardly against the core 18. Ten ratchet notches 74 are formed in the core 18 for engagement by the pawl 68.

The illustrated numbering machine 10 is adapted to be reset by rotating the shaft 14 through a single revolution. The shaft 14 may be rotated by manually turning a knob 78 which is formed on one end of the shaft. Normally, the shaft 14 is locked in a predetermined position. In the illustrated arrangement, the shaft 14 is adapted to be locked by a pin 80 which extends to the right from the knob 78 and is parallel to the shaft 14. The pin 80 is adapted to enter and interlock with a hole 82 formed in a fixed frame 84. It will be observed that the frame 84 supports the bushings 30 and 32 which in turn support the shaft 14 and the swing frame 28.

The shaft 14 may be rotated by pulling out the knob 78 so as to withdraw the pin 80 from the hole 82. Such endwise movement of the shaft 14 is resisted by a resilient centering arrangement. In the embodiment shown in Fig. 1, such endwise movement is resisted by a leaf spring 86 having a slotted end portion 88 which is engaged with an annular groove 90 formed in the right hand end of the shaft 14. When the knob 78 is pulled out, the spring 86 is flexed to the left. Thus, after the shaft 14 has been rotated through one revolution, the pin 80 will drop back into the hole 82, as the spring 86 returns the shaft 14 to its initial or neutral position.

As the shaft 14 is rotated through one revolution, it picks up any of the numbering wheels 12 which may have been advanced from their initial positions, and returns such numbering wheels to their initial position. This is done by virtue of a series of aligned ratchet notches 94 formed in the shaft 14. Each ratchet notch 94 is adapted to be engaged by a pawl 96 on one of the numbering wheels 12. It will be seen from Fig. 2 that each pawl 96 is pivoted on the core 18 of its numbering wheel and is positioned in a recess 98 formed in the core. A spring 100 is employed to bias the pawl 96 inwardly against the shaft 14. In this case, each pawl has a square nose 102 which actually engages the shaft.

It will be seen that each of the ratchet notches 94 has a flat bottom surface 104. At the right, as seen in Fig. 2, the ratchet notch 94 is open, but at the left it is closed by a square, generally radial shoulder 106. Thus, the core 18 is free to rotate clockwise during the normal advancing movement of the numbering wheel 12. If the shaft 14 is rotated clockwise, the ratchet shoulder 106 will pick up each pawl 96 and will carry it around to the initial position shown in Fig. 2. This will be true regardless of the position to which the numbering wheel may have been advanced. Since a resetting ratchet notch and pawl are provided for each of the numbering wheels 12, all of them will be reset to their initial positions by a single revolution of the shaft 14.

With the illustrated arrangement, it is possible to set the numbering wheels 12 to any initial reading. Whenever the machine is reset, the wheels will be returned to their initial readings. The selection of initial readings is brought about by locking the cores 18 and rotating the rings 16 relative to the cores. With the cores 18 locked, such rotation of the rings 16 is possible by overcoming the force of the yieldable driving connections which normally cause the cores to rotate with the rings.

As shown, the cores 18 are adapted to be locked by a series of aligned locking notches 110 formed in the shaft 14, one notch being provided for each numbering wheel 12. The locking notches 110 are aligned with the ratcnet notches 94. Thus, the square shoulders 106 of the ratchet notches actually are formed by a continuous, longitudinal, generally radial surface 112 which also forms one side of each of the locking notches 110. The flat bottom surfaces 104 of the ratchet notches 94 are also portions of a continuous surface 114 which defines the bottoms of the locking grooves 110. Each of the locking grooves 110 is substantially square in cross-section and thus is formed with a square shoulder 116 which is opposite from the surface 112.

Normally, the locking grooves 110 are displaced endwise with respect to the pawls 96, as indicated in Fig. 4. When all of the cores 18 have been reset in the manner already described, the cores may be locked by sliding the shaft 14 endwise so as to engage the locking notches 110 with the square noses 102 of the pawls 96. Such movement of the shaft is brought about by pushing inwardly on the knob 78. The endwise movement of the shaft 14 is resisted by the spring 86, so that the shaft 14 will return to its normal position when the knob is released.

With the knob 78 pushed in, the engagement of the pin 80 with the hole 82 prevents rotation of the shaft 14. The engagement of the pawls 96 with the locking grooves 110 prevents rotation of the cores 18. Each of the rings 16 may then be rotated manually with respect to the corresponding core, so as to change the initial reading of each numbering wheel. When the knob 78 is released, the shaft 14 returns to the left, whereupon the pawls 96 become disengaged from the locking notches 110. The cores 18 may then be advanced in the normal manner with the rings 16. Whenever the numbering wheels 12 are reset, they will be returned to their new initial readings.

It will be recognized that the detent pawls 56 of Fig. 2 will be cammed out of the detent notches 60 when the cores 18 are locked and the rings 16 are rotated to change the initial readings of the numbering wheels 12. In the case of the modified arrangement shown in Fig. 6, the ratchet pawls 68 are cammed out of the ratchet notches 74. In either case, the rings 16 can be rotated in only one direction, because of the non-retrograde pawls 52.

Fig. 7 illustrates a modified arrangement for resisting endwise movement of the shaft 14 and returning the shaft to its initial or neutral position. In this case, the shaft 14 is formed with a V-shaped annular groove 120 which is adapted to be engaged by one or more spring pressed detent members 122. As shown, each of the detent members 122 takes the form of a pin having a cone-shaped nose 124 which actually engages the groove 120. The pin 122 is slidable in a radial hole 126 formed in the bushing 30. A spring 128 is employed to bias the detent member 122 inwardly against the shaft 14.

If the shaft 14 is moved endwise in either direction, the detent pins 122 will be cammed outwardly by the groove 120, and thus will tend to return the shaft to its initial position.

The operation of the numbering machine may be briefly summarized by recalling that the numbering wheels 12 may be reset to their initial readings by pulling out on the knob 78 and rotating the knob through one revolution. The outward movement of the knob unlocks the shaft 14 by withdrawing the pin 80 from the hole 82. The shaft 14 is rotated clockwise, as seen in Fig. 2. Thus, the direction of rotation of the shaft 14 is the same as the direction in which the numbering wheels 12 are normally advanced by the four-toothed transfer pawl 26. During the single revolution of the shaft 14, the ratchet notches 94 pick up the pawls 96 on the cores 18 of the numbering wheels 12. The pawls 96 are returned to their initial position, as shown in Fig. 2.

A new initial reading may be selected by pushing in on the knob 78 and rotating rings 16 of the numbering wheels. The inward movement of the shaft 14 locks the cores 18 by engaging the locking notches 110 with the

square noses **102** of the pawls **96**. When the knob **78** is released, the shaft **14** returns to its normal position, whereupon the numbering wheels **12** may be advanced by the transfer pawl **26** in the normal manner.

It will be apparent that the numbering machine is very easy to reset. Moreover, it is extremely easy to change the initial reading of the numbering machine. These features are extremely advantageous when the numbering machine is employed for such operations as numbering checks to the individual order of bank depositors, or for other similar services. With the present arrangement, the numbering machine may readily be adjusted to start the numbering sequence at any desired reading within the capacity of the machine.

It will be apparent that the advantageous operation of the numbering machine is achieved in an extremely compact and rugged construction. Moreover, very little cost is involved in providing the highly advantageous operational features.

Various other modifications, alternative construction and equivalents may be employed without departing from the true spririt and scope of the invention, as exemplified in the foregoing description and defined in the following claims.

I claim:

1. In a numbering machine, the combination comprising a shaft, a plurality of numbering wheels mounted side by side on said shaft, each of said wheels comprising a core rotatable on said shaft and an outer ring rotatable on said core, detenting clutch means including a detent element and a plurality of detent-receiving elements acting between each of said rings and the corresponding core for yieldably clutching said core to said ring for rotation therewith, a plurality of longitudinally aligned ratchet notches in said shaft adjacent each of said cores, a ratchet pawl mounted on each of said cores and engageable with the corresponding ratchet notch, each ratchet notch initially being opposite the corresponding pawl, a knob on said shaft for rotating the same, a pin extending inwardly from said knob, a member with an aperture therein for disengageably receiving said pin, said knob being adapted to be pulled outwardly to withdraw said pin from said aperture and thereby release said knob and said shaft for rotation through one revolution, said ratchet notches being effective to pick up said pawls during such revolution so as to reset said numbering wheels, a plurality of locking notches disposed in said shaft and aligned longitudinally with said ratchet notches, one end of each locking notch opening into the adjacent end of the corresponding ratchet notch, each locking notch initially being offset longitudinally from the corresponding pawl, said knob being adapted to be pushed inwardly so as to slide said shaft endwise and bring said locking notches into engagement with said pawls, said cores thereby being locked to said shaft against rotation, said shaft being held against rotation by the engagement of said pin with said aperture, said outer rings of said numbering wheels being manually rotatable relative to said locked cores so as to set up a new starting number on said numbering wheels, and spring means resisting inward and outward sliding movement of said shaft so as to bias said shaft to its normal position with said pin received in said aperture and said pawls aligned with said ratchet notches.

2. In a numbering machine, the combination comprising a plurality of numbering wheels arranged side by side, each of said wheels having a hub and an outer ring rotatable about said hub, a shaft extending through and supporting said hubs for rotation with respect thereto, yieldable detenting clutch means including a detent element and a plurality of detent-receiving elements acting between each of said rings and the corresponding hub for connecting said hub to said ring for rotation therewith, ratchet means acting between said shaft and each of said hubs for resetting said wheels to an initial reading by rotating said shaft through one revolution, means for releasably locking said shaft against rotation in a predetermined angular position, said last mentioned means being releasable by sliding said shaft in one longitudinal direction, locking means adapted to act between said shaft and each of said hubs for locking said hubs to said shaft against rotation, said locking means being engageable by sliding said shaft longitudinally in the opposite direction, and yieldable means resisting longitudinal sliding movement of said shaft in either direction, said outer rings being rotatable manually with respect to said hubs against the detenting resistance of said clutch means when said hubs are locked to said shaft by said locking means.

3. In a numbering machine, the combination comprising a shaft, a plurality of numbering wheels on said shaft, each of said wheels having a core rotatable on said shaft and a numbering ring rotatable on said core, a yieldable driving connection between each of said rings and the corresponding core, said driving connection including a detent element and a plurality of detent-receiving elements, ratchet means on said shaft, a pawl on each of said cores and engageable with said ratchet means for resetting said wheels to an initial reading by rotating said shaft through one revolution, each pawl initially being opposite the corresponding ratchet means, locking means for holding said shaft against rotation in a predetermined angular position, said locking means being disengageable by moving said shaft longitudinally in one direction, locking elements disposed on said shaft and aligned with said ratchet means but displaced endwise with respect thereto, said locking elements initially being offset longitudinally relative to said pawls, said locking elements being engageable with said pawls by moving said shaft longitudinally in a direction opposite to said one direction, said locking elements being adapted to lock said cores to said shaft against rotation while said rings are rotated manually to change the initial reading of said numbering wheels, said yieldable driving connection being overcome in rotating said rings manually, and resilient means resisting endwise movement of said shaft in either directon.

4. In a registering machine, the combination comprising a plurality of registering wheels arranged side by side, each of said wheels having a hub and an outer ring rotatable about said hub, a shaft extending through and supporting said hubs for rotation with respect thereto, yieldable detenting clutch means including a detent element and a plurality of detent-receiving elements acting between each of said rings and the corresponding hub for connecting said hub to said ring for rotation therewith, ratchet means acting between said shaft and each of said hubs for resetting said wheels to an initial reading by rotating said shaft through one revolution, means for releasably locking said shaft against rotation in a predetermined angular position, and locking means adapted to act between said shaft and each of said hubs for locking said hubs to said shaft against rotation, said locking means being operable by sliding said shaft longitudinally with respect to said hubs, said outer rings being selectively rotatable manually with respect to said hubs when said hubs are locked to said shaft by said locking means, the yieldable detenting action of said clutch means being overcome in rotating said rings.

5. In a registering machine, the combination comprising a plurality of registering wheels arranged side by side, each of said wheels having a hub and an outer ring rotatable about said hub, a shaft extending through and supporting said hubs for rotation with respect thereto, yieldable detenting clutch means including a detenting element and a plurality of detent-receiving elements acting between each of said rings and the corresponding hub for connecting said hub to said ring for rotation therewith, ratchet means acting between said shaft and each of said hubs for resetting said wheels to an initial

reading by rotating said shaft, means for releasably locking said shaft against rotation in a predetermined angular position, said last mentioned means being releasable by sliding said shaft in one longitudinal direction, and locking means adapted to act between said shaft and each of said hubs for locking each hub to said shaft against rotation, said locking means being operable by sliding said shaft longitudinally in the opposite direction, said outer rings being selectively rotatable with respect to said hubs against the detenting resistance of said clutch means when said hubs are locked to said shaft by said locking means.

6. In a registering machine, the combination comprising a shaft, a plurality of registering wheels on said shaft, each of said wheels having a core rotatable on said shaft and a ring rotatable on said core, a yieldable driving connection between each of said rings and the corresponding core, said driving connection including a detent element and a plurality of detent-receiving elements, ratchet means on said shaft, a pawl on each of said cores and engageable with said ratchet means for resetting said wheels to an initial reading by rotating said shaft through one revolution, each of said pawls initially being opposite the corresponding ratchet means, locking means for holding said shaft against rotation in a predetermined angular position, said locking means being disengageable by moving said shaft longitudinally in one direction, and locking elements disposed on said shaft and aligned longitudinally with said ratchet means but displaced endwise with respect thereto, each locking element initially being offset relative to the corresponding pawl, said locking elements being engageable with said pawls by moving said shaft longitudinally in a direction opposite to said one direction, said locking elements being adapted to lock said cores to said shaft against rotation while said rings are rotated against the detenting resistance of said driving connection to change the initial reading of said wheels.

7. In a registering machine, the combination comprising a shaft, a plurality of registering wheels on said shaft, each of said wheels having a core rotatable on said shaft and a ring rotatable on said core, a yieldable driving connection between each of said rings and the corresponding core, said driving connection including a detent element and a plurality of detent-receiving elements, ratchet groove means on said shaft, a pawl on each of said cores and engageable with said ratchet groove means for resetting said wheels to an initial reading by rotating said shaft through one revolution, each of said pawls initially being opposite the corresponding ratchet groove means, locking means for holding said shaft against rotation in a predetermined angular position, said locking means being disengageable by moving said shaft longitudinally in one direction, locking groove elements disposed on said shaft and aligned longitudinally with said ratchet groove means but displaced endwise with respect thereto, said locking groove elements being engageable with said pawls by moving said shaft longitudinally in a direction opposite to said one direction, said locking groove elements being adapted to lock said cores to said shaft against rotation while said rings are rotated against the detenting resistance of said yieldable driving connection to change the initial reading of said wheels, and means for returning said shaft endwise after movement in either direction.

8. In a registering machine, the combination comprising a shaft, a plurality of registering wheels mounted side by side on said shaft, each of said wheels comprising a core rotatable on said shaft and an outer ring rotatable on said core, detent clutch means including a detent element and a plurality of detent-receiving elements acting between each of said rings and the corresponding core for yieldably clutching said core to said ring for rotation therewith, a plurality of longitudinally aligned ratchet notches in said shaft adjacent each of said cores, a pawl mounted on each of said cores and engageable with the corresponding ratchet notch, each pawl initially being opposite the corresponding ratchet notch, a knob on said shaft for rotating the same, a pair of interengageable elements for locking said shaft against rotation in a predetermined angular position, said elements being disengageable by sliding said shaft endwise in one direction, said ratchet notches being effective to pick up said pawls during rotation of said shaft through one revolution so as to reset said numbering wheels, a plurality of locking notches disposed in said shaft and aligned longitudinally with said ratchet notches, each locking notch initially being offset longitudinally relative to the corresponding pawl, said shaft being adapted to be moved endwise in the opposite direction so as to bring said locking notches into engagement with said pawls, said cores thereby being locked to said shaft against rotation, said outer rings of said numbering wheels being rotatable against the detenting resistance of said clutch means relative to said locked cores so as to set up a new starting indication on said wheels, and means for resiliently returning said shaft to its initial position after endwise movement in either direction.

9. In a numbering machine, the combination comprising a shaft, a plurality of numbering wheels mounted side by side on said shaft, each of said wheels comprising a core rotatable on said shaft and an outer ring rotatable on said core, detent clutch means including a detent element and a plurality of detent-receiving elements acting between each of said rings and the corresponding core for yieldably clutching said core to said ring for rotation therewith, a plurality of longitudinally aligned ratchet notches in said shaft adjacent each of said cores, a substantially square-nosed ratchet pawl mounted on each of said cores and engageable with the corresponding ratchet notch, each pawl initially being opposite the corresponding ratchet notch, a knob on said shaft for rotating the same, a stationary member, a pin-and-recess connection acting between said knob and said stationary member for locking said shaft in one position, said knob being adapted to be pulled outwardly to disengage said pin-and-recess connection and thereby release said knob and said shaft for rotation through one revolution, said ratchet notches being effective to pick up said pawls during such revolution so as to reset said numbering wheels, a plurality of substantially square locking notches disposed in said shaft and aligned longitudinally with said ratchet notches, each locking notch initially being offset longitudinally relative to the corresponding pawl, said knob being adapted to be pushed inwardly so as to slide said shaft endwise and bring said locking notches into engagement with said pawls, said cores thereby being locked to said shaft against rotation, said shaft being held against rotation by said pin-and-recess connection, said outer rings of said numbering wheels being manually rotatable relative to said locked cores against the detenting resistance of said clutch means so as to set up a new starting number on said numbering wheels, and spring means resisting inward and outward endwise sliding movement of said shaft so as to bias said shaft to it initial position.

References Cited in the file of this patent

UNITED STATES PATENTS

1,400,197	Wood	Dec. 13, 1921
2,099,463	Bradley	Nov. 16, 1937
2,107,705	Lang	Feb. 8, 1938