March 10, 1931. C. G. HARTSOOK 1,796,099

ATTACHMENT FOR NUMBERING MACHINES

Filed March 3, 1930 2 Sheets-Sheet 1

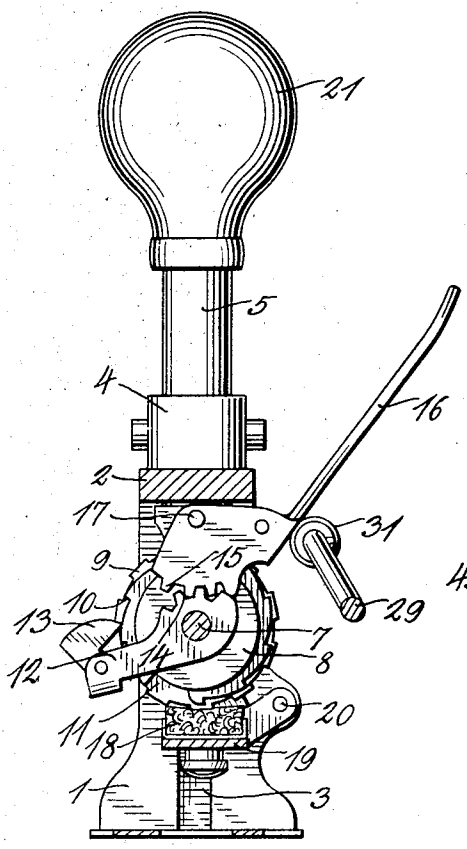


Fig. 2.

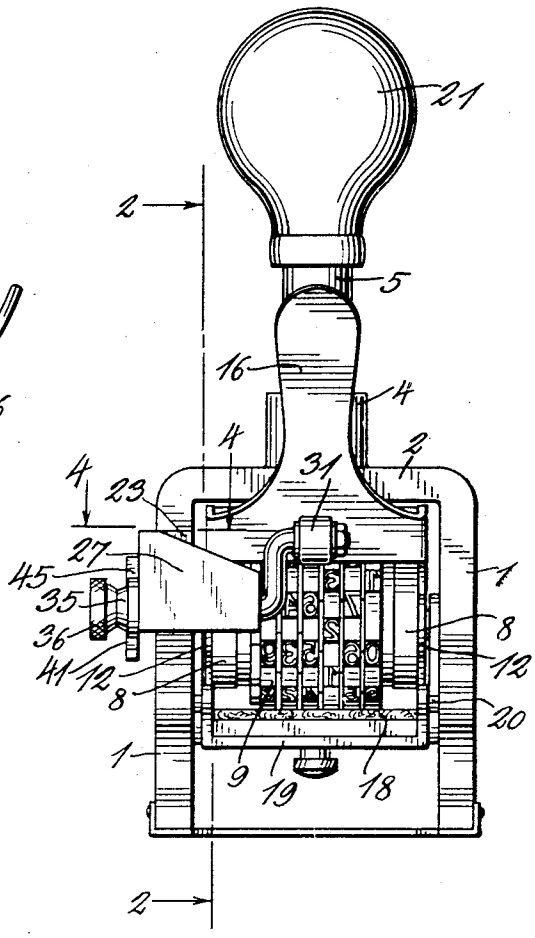


Fig. 1.

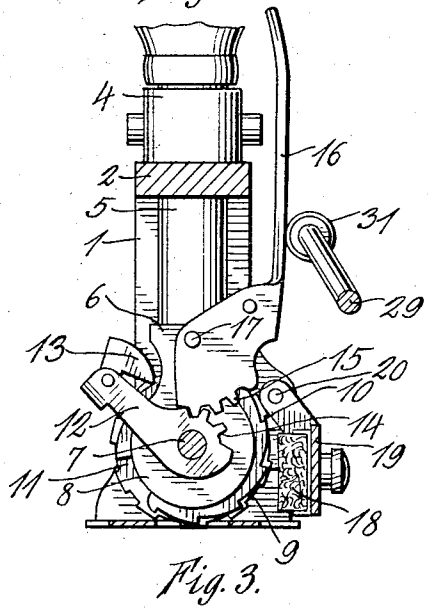


Fig. 3.

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ATTACHMENT FOR NUMBERING MACHINES

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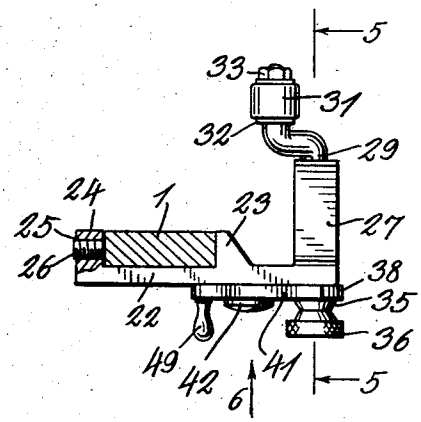


Fig. 4.

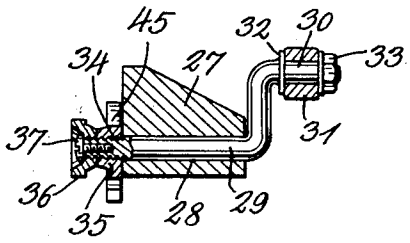


Fig. 5.

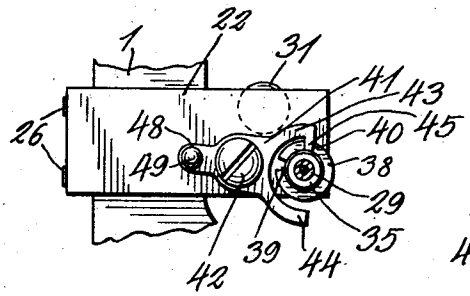


Fig. 6.

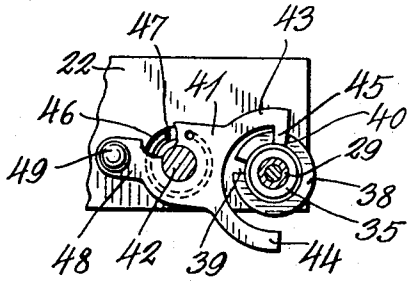


Fig. 7.

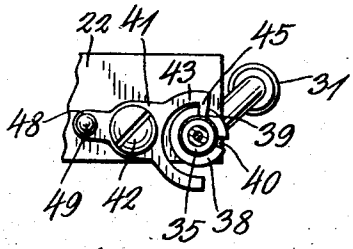


Fig. 8.

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UNITED STATES PATENT OFFICE

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ATTACHMENT FOR NUMBERING MACHINES

Application filed March 3, 1930. Serial No. 432,668.

This invention relates to improvements in numbering machines of the type employed for either duplicating or numbering consecutively and has reference more particularly to an attachment by means of which a manually operated numbering machine can be changed to an automatic machine that will number consecutively.

In large business establishments as, for example, in banks and in post offices, it is often necessary to affix numbers to receipts and other papers and sometimes these numbers must be duplicated or triplicated while at other times the numbering is consecutive.

Numbering machines of different types have already been invented and are largely employed and some of these are provided with mechanism that controls the numbering in such a way that the numbers can be duplicated or triplicated, as may be required. Other machines are provided with a handle or lever that is manually operated whenever the number is to be changed, and the latter type is quite extensively employed for the reason that it is of rugged construction and much less liable to get out of order than the machines that are provided with automatic means for changing the numbers and are also sold at a much lower price.

It is the object of this invention to produce an attachment that can be applied to an ordinary hand operated numbering machine and which when properly adjusted will convert the machine into an automatic machine for numbering consecutively. This invention can be most clearly described and will be most readily understood when reference is had to the accompanying drawings in which the preferred embodiment thereof has been illustrated, and in which:

Fig. 1 is a side elevation of a manual numbering machine showing my attachment in place thereon;

Fig. 2 is a section taken on line 2—2, Fig. 1; and shows the parts in inoperative position;

Fig. 3 is a section also taken on line 2—2, Fig. 1, and shows the parts in printing position;

Fig. 4 is a section taken on line 4—4, Fig. 1, and shows my improved attachment in top plan view;

Fig. 5 is a section taken on line 5—5, Fig. 4.

Fig. 6 is a side elevation of the attachment looking in the direction of arrow 6, Fig. 4;

Fig. 7 is a fragmentary view similar to that shown in Fig. 6 but drawn to a larger scale and having parts broken away to better disclose the construction; and

Fig. 8 is a fragmentary side elevation showing the position of the parts when they are in inoperative position.

In the drawing reference numerals 1 represent the two parallel side members of the stationary U-shaped frame and 2 represents the base of the frame. Side members 1 are provided with grooves 3 on their inner surfaces and the base member 2 has an opening and carries a tubular hub 4 through which the cylindrical rod 5 passes. Secured to the lower end of rod 5 is a frame 6 which is also U-shaped and carries a shaft 7 that connects the two parallel side members 8. Rotatably mounted on shaft 7 are a number of disks 9 that have numbers on their peripheries in the manner shown in the drawing. Each of the numbering disks is provided with ratchet teeth 10 and is also provided with a notch 11 of greater depth than the teeth 10. Secured to the shaft 7 are two arms 12 that carry a multiple pawl 13 pivotally attached to their outer ends. Arms 12 are provided with a toothed segment 14 with which the teeth 15 on the lower end of handle 16 cooperate. This handle is pivoted to the frame 6 by means of screws or rivets 17 and when the handle is moved from the position shown in Fig. 2 to the position shown in Fig. 3, the pawls will function to move the numbering disks so as to increase the number by one unit. Since the numbering machine illustrated in the drawing is an old and well known type of machine, no necessity is seen for a detailed description of the mechanism by means of which the numbering disks are rotated and the description will therefore be limited to the features that must be described in order to properly explain the construction and the functioning of the at-

tachment. An ink pad 18 is secured to an arm 19 that is pivoted at 20 and this ink pad can be moved from the position shown in Fig. 2 to the position shown in Fig. 3, and is held in the position shown in Fig. 2 by means of a spring or other means that has not been shown on the drawing.

The machine with which my attachment has been connected is of the manually operated type and when the number is to be printed, the operator exerts pressure on the handle 21, thereby moving the parts downwardly to the position shown in Fig. 3. A spring, not shown, returns the parts to the position shown in Fig. 2. Unless the handle 16 is moved from the position shown in Fig. 2 to the position shown in Fig. 3, the number will remain the same and can be duplicated as often as desired. If it is desired to change a number, the operator moves handle 16 inwardly towards the handle 21 thereby increasing the number one unit. Where a large number of pages or other things are to be numbered consecutively, it is necessary for the operator to move handle 16 every time a number is printed, and if he should forget to do so an error would result.

It is the object of this invention, as above stated, to produce an attachment that can be applied to an ordinary manual numbering machine like the one shown and described, and which, when it is moved to operative position, will manipulate the handle 16 so as to change the number every time the numbering machine is operated for printing, and in this manner consecutive numbering can be effected without the necessity of the operator manually changing the numbers each time.

The attachment which will now be described in detail, has been illustrated in Figs. 4 to 8 and consists of a rigid body member 22 that is provided on one side with two projections 23 and 24 that are spaced apart a distance equal to the width of one of the side members 1. The projection 24 is provided with two threaded openings 25 in which set screws 26 are secured. The set screws serve to hold the member 22 in place. One end of member 22 is provided with a transversely extending lug 27 that has an opening 28 through which the straight portion 29 of the Z-shaped lever extends. This lever has an offset end 30 that carries a roller 31. This roller is held against endwise movement by flange 32 and nut 33. The other end of the straight portion 29 is threaded as indicated by reference numeral 34 and has secured to it a nut consisting of two parts 35 and 36. The part designated by numeral 36 performs the function of a locknut, and this in turn is held against accidental movement by means of the screw 37. Nut 35 has a radial flange 38 that is provided with two notches 39 and 40. A pawl 41 is pivoted to member 22 by means of a screw 42 and is provided at one end with two arms 43 and 44. Arm 43 has an inwardly extending lug 45 that is adapted to engage the notches 39 and 40. Arm 44 functions as a stop to limit the upward movement of the pawl. A spring 46 is located in a groove 47 in the outer surface of member 22 and has one end attached to member 22 and the other attached to the pawl. This spring is tensioned so as to hold the lug 45 against the outer surface of flange 38 and therefore tends to move this lug into the notches when member 29 is rotated. The end 48 of the pawl extends to the opposite side of the pivot from that occupied by arms 43 and 44 and has secured to it a handle 49. The Z-shaped member is held in either of two positions by the pawl 45 and the teeth 39 and 40. When the lug 45 is in engagement with notch 40, roller 31 will be held in the position shown in Figs. 2 and 3, and this position has been so adjusted that when the parts are moved from the position shown in Fig. 2 to that shown in Fig. 3, handle 16 will be rotated about its pivot to such an extent that the unit numbering disk is moved one space and therefore whenever the numbering machine is operated, it will increase the valve of the number by one unit at each operation. If, for any reason, the automatic feature is not desired, the roller 31 can be moved to the position shown in Fig. 8, in which position, lug 45 engages the notch 39. When the parts are in the position shown in Fig. 8, the numbering machine does not automatically change, but functions exactly as if the attachment were not present, and therefore it can be used either as a manually operated machine or, as an automatic one, as may be desired.

I want to call attention to the fact that this attachment does not require any changes whatever to be made in the numbering machine to which it is attached, and therefore it can be applied to any machine of this construction that can be bought in the open market. The attachment is held in place by means of set screws 26 as shown in Fig. 4 and can therefore be very quickly attached to the machine, and can also be readily removed if this should be desired. Since the attachment can be easily moved to inoperative position, there is no necessity of removing it from the machine after it has once been applied to it. By means of the pawl 41 the roller 31 can easily be moved to inoperative position and can be moved to operative position by merely applying pressure to the roller tending to force it inwardly as the pawl is so constructed that it will not resist a force tending to move the roller in this direction.

From the above it is apparent that I have produced a very simple and inexpensive attachment that can quickly be applied to a well known type of numbering machines and which, when in place on the machine, con-

verts a manually operated machine into an automatically operated machine, and it is therefore possible for any one who has a manually operated machine to provide the same with my attachment at a small cost and in this way convert it into an automatic machine which will give the same service as the more expensive type of automatic machines now on the market.

Having described the invention what is claimed as new is:

1. An attachment for numbering machines, comprising, in combination, a body member, means for securing the body member to a numbering machine, a rod rotatably secured to the body member, one end of the rod having a cam surface located to one side of its center, and means for holding the rod in either of two rotary positions.

2. An attachment for numbering machines comprising, in combination, a body member, means for securing the same to the frame of a numbering machine, one end of the body member having a lug extending laterally therefrom, an opening extending through the lug, a rod rotatably mounted in said opening, one end of the rod having an offset portion, the other end of the rod having secured to it means for holding it against longitudinal movement and means for latching the rod against rotary movement in two positions.

3. An attachment for numbering machines comprising, in combination, a body member, means for securing the same to the frame of a numbering machine, one end of the body member having a lug extending laterally therefrom, an opening extending through the lug, a rod rotatably mounted in said opening, one end of the rod having an offset portion, the other end of the rod being threaded, a nut secured to the threaded end, means for clamping the nut against rotation, said nut having two notches in its periphery, and a pawl secured to the body member, said pawl having a portion adapted to engage the notches for holding the bar against rotation.

4. An attachment for converting a manually operated numbering machine into a machine that operates automatically comprising, in combination, an elongated body member having a transversely extending recess in one side, for the reception of a portion of the frame of a numbering machine, one end of said member having a lug extending laterally therefrom, said lug having an opening extending therethrough, a bar rotatably mounted in the opening, one end of the bar having an offset portion forming a crank, a roller on the crank portion, the other end of the bar having a threaded portion, a nut on the threaded portion, means for clamping the nut against rotation, the periphery of the nut having two angularly spaced notches, a pawl pivotally secured to body member, said pawl having one end provided with two spaced arms adapted to embrace the nut, one arm having a lug adapted to engage the notches in the nut, and resilient means for urging the lug towards the nut.

In testimony whereof I affix my signature.

CLARENCE G. HARTSOOK.