March 22, 1932. E. P. HUNTZICKER 1,850,880

AUTOMATIC DATING MACHINE

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Fig. 1.

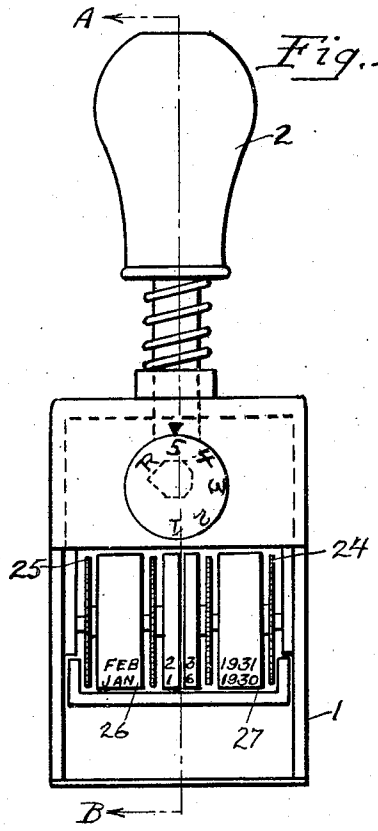


Fig. 3.

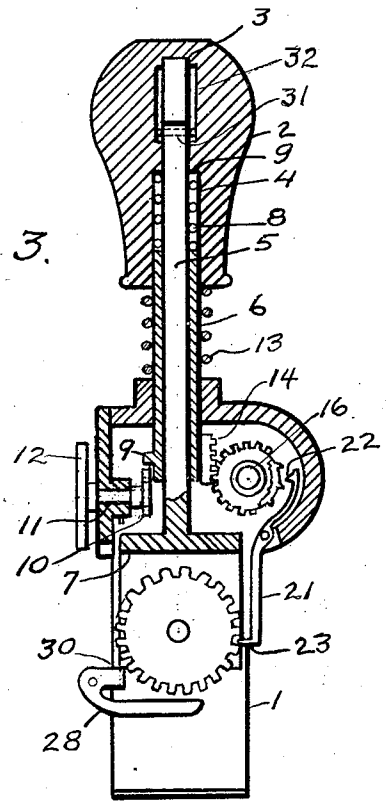


Fig. 2.

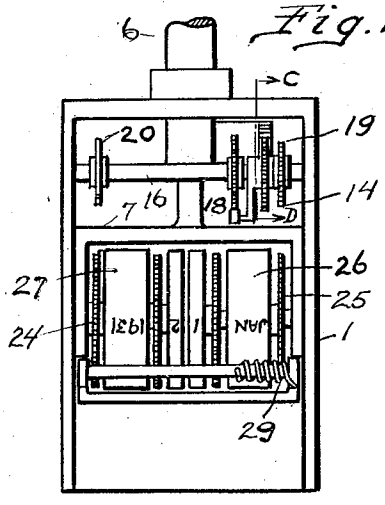
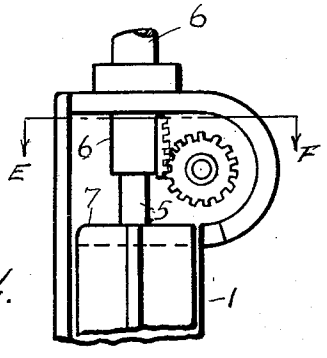


Fig. 4.



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AUTOMATIC DATING MACHINE

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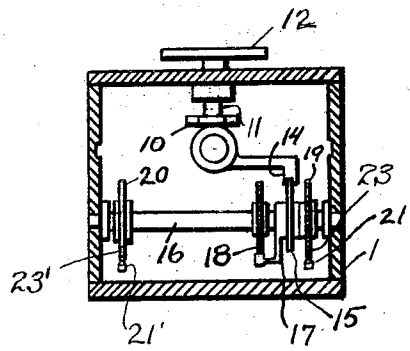


Fig. 5.

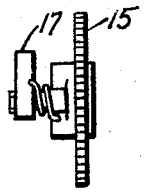


Fig. 6.

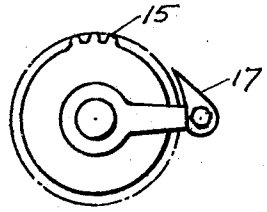


Fig. 7.

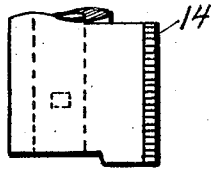


Fig. 8.

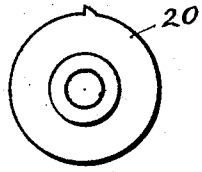


Fig. 9.

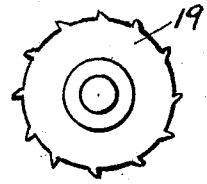


Fig. 10.

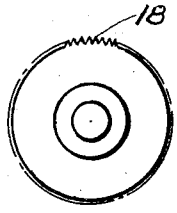


Fig. 11.

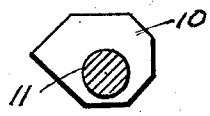


Fig. 12.

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UNITED STATES PATENT OFFICE

EMMA P. HUNTZICKER, OF MEMPHIS, TENNESSEE

AUTOMATIC DATING MACHINE

Application filed January 19, 1931. Serial No. 509,839.

This invention relates to a stamping device for printing preferably dates or numbers, either consecutively or repeatedly as desired.

The object of the invention is to provide a device of this type which may be used in the preparation of a series of notes, promissory or others, maturing monthly, where it would be necessary to perhaps print the same date several times and then advance to another date as desired and print the next date several times and so on. Or the device may be so operated that it will print the same date continuously until changed by the operator.

The particular device set forth in the specification, may be operated so that the months and years change automatically after the date has been printed the required number of times, as set on the dial by the operator.

A device of this type will be found to be indispensible in loan, real estate, or lawyers' offices, or banks where it is necessary to prepare notes and other legal papers.

Briefly stated this device consists of a reciprocating stamp having dating wheels and an oscillating ink pad, but differing from the ordinary reciprocating stamps in that it is provided with a mechanism which automatically revolves the month and year stamp wheels after a desired number of reciprocating movements of the stamp.

In order to more fully describe and illustrate the construction and operation of the device which forms the subject matter of this invention, reference is made to the accompanying drawings, in which

Figure 1 is a side elevation of the stamp showing the indicator dial.

Figure 2 is a side elevation of the lower portion of the stamp showing the opposite side to that illustrated in Figure 1.

Figure 3 is a sectional view of the entire stamping device taken along the line A—B of Figure 1, the pinion of the control shaft being partly broken away to show a portion of one of the toothed control wheels.

Figure 4 is a portion of the stamping device, with control ratchet removed showing the operation of the rack and pinion used to revolve the control shaft to which shaft the ratchet and toothed control wheels are attached. This view is taken along the line C—D of Figure 2.

Figure 5 is a plan view in section taken along the line E—F of Figure 4.

Figure 6 shows a side elevation of the pinion and pawl.

Figure 7 is a front elevation of the pinion and pawl.

Figure 8 shows a portion of the sleeve to which the rack is attached.

Figure 9 is an enlarged view of the toothed control wheel which operates in conjunction with the dating wheel pinion for changing the years.

Figure 10 is an enlarged view of the toothed control wheel which operates in conjunction with the dating wheel pinion for changing the months.

Figure 11 is an enlarged view of the variable step ratchet.

Figure 12 shows an enlarged view of the variable spacing cam.

Referring to the figures in which similar parts are represented by like numerals, 1 is the main frame of the machine, 2 represents the handle which is drilled centrally in two diameters as indicated at 3 and 4 for the accommodation of a central shaft 5 and a sleeve 6 as shown in Figure 3. The shaft 5 is attached to the upper central portion of a U shaped roller frame 7. Mounted above the sleeve 6 and surrounding the shaft 5 is a coil spring 8 which abuts against a shoulder 9 formed at the extremity of the larger drilled central opening in the handle 2.

The construction described above is designed for the purpose of allowing a movement of the sleeve 6 through a predetermined

distance independent of the amount of movement of the shaft 5. The movement of the sleeve 6 is regulated by means of a tooth 9 which abuts a cam 10 mounted on shaft 11 and rotated by means of a dial 12. The cam 10 is illustrated in detail in Figure 10 where it will be seen that the operative surfaces of the same against which the tooth 9 abuts are at right angles to radii and at various distances from the center so that upon rotating the dial to any desired setting, a cam face will present itself in the path of the tooth 9, which will allow the sleeve 6 to progress downward only a certain desired amount, or hinder its downward movement entirely.

The function of this cam and its relation to the various other mechanism will be taken up in more detail as the specification progresses.

The dating wheels 26 and 27 are normally retained in an upward position above the ink pad, and in contact therewith by the following construction. The sleeve 6 is surrounded by a coil spring 13 which abuts, at one end, the top of frame 1, and at the other the bottom of the handle 2. The upper extremity of shaft 5, to which the roller frame 7 is attached, is drilled and fitted with a pin 31 the ends of which slidably engage a slot 32 cut in the handle 2. From this construction it is seen that the shaft 5 is held up by the handle and that the roller frame can only be moved downward with a similar movement of the handle.

To the side of the sleeve opposite the tooth 9 is mounted a rack 14 which engages a pinion 15 rotatably mounted on a control shaft 16. To this pinion 15 is mounted a pawl 17 (see Figure 5), which engages a ratchet wheel 18 keyed to the control shaft 16, so that on movement of the ratchet 17 the shaft 16 will also rotate.

At the opposite ends of the shaft 16 are attached the toothed wheels 19 and 20. These wheels are keyed to the shaft 16 and have respectively 12 teeth and one tooth, being the ratio of the number of months to one year. The two wheels 19 and 20 respectively operate levers 21 and 21′ which are pivotally mounted centrally. Each of these levers is formed at its upper and lower extremities with toothed projections 22 and 23, as shown in Figure 3. Only one of these levers is shown in the drawings. However, in Figure 5 both levers are shown diagrammatically. The lower teeth of the levers 21 and 21′ engage or disengage the teeth of the type wheel pinions 24 and 25 respectively depending on the position of the levers 21 and 21′.

Thus, in the operation of the stamping device, when the handle 2 is pressed downward and a lever 21 or 21′ is in such a position that the tooth 23 engages the teeth of a type wheel pinion 24, said pinion will be rotated a given amount on its travel downward. Adjacent the pinions 24 and 25 and attached thereto are type wheels 26 and 27. Surrounding the circumference of these type wheels are the days of the months, the months, and the years, mounted preferably in metal type although other type may be used if desired, so on rotation of any of these wheels the stamped date will be changed accordingly. In the drawings four type wheels are shown only two of which change automatically, that is, the months and the years, but, however, it is to be understood that the invention is not limited to the showing herein since by the general construction as set forth it is possible to apply this automatic changing mechanism to any number of type wheels.

At this point it may be well to state that the face of the cam which is indicated by "R" (repeat) on the dial is a greater distance from the axis of the cam than any of the other faces. When this face "R" is so positioned as to intercept the path of the tooth 9, no downward movement of the sleeve 6 is permitted. Thus when the cam 10 is rotated to the "R" or repeat position a downward movement of the handle, only operates the type wheel frame, leaving the control wheels 19 and 20 idle so that the levers 21 and 21′ are not rocked to the position in which they will engage and rotate the type wheel pinions 24 and 25 on the downward movement of the type wheel frame 7. In other words, by placing the dial 12 at the "R" or repeat position, the whole control mechanism, for changing the dates automatically, is entirely thrown out of operation, but it is still possible to move the type wheels downward to printing position. The result is that the date to which the type wheels are set is repeated indefinitely.

An oscillating ink pad is represented by the numeral 28. This pad is held in an uppermost position with its inked surface against the type of the type wheels by means of a coiled spring 29, but on the downward movement of the type wheel frame the pad is rotated out of the path of said type wheels by means of shoulders 30.

It will be seen from the structure described above that the rotation of the toothed wheels 19 and 20 govern the rotation of the type wheels 26 and 27 which change the dates, and that the movement of the ratchet 18 governs the movement of the toothed wheels. The movement of the ratchet 18 is dependent on the amount that the sleeve 6 moves downward on each operation of the handle which is controlled by the cam 10. For example, suppose it is necessary to stamp July 2, 1930, three times before changing the date to August 2, 1930. In this case the dial should be set at 3, and thus with this setting it will be necessary to move the handle down three times before the ratchet 18 will be rotated by the pawl 17 sufficiently so that the toothed wheel 19 will move its corresponding lever 21 into operative position for rotating the

type wheel 26. Since the position of the cam 10 governs the amount of movement of the ratchet 18 it will take more of these small movements of the rack to rotate the ratchet the desired amount.

If it were necessary to print July 2, 1930 three, four, or five times before changing the date, then it would only be necessary to set the cam at the positions as indicated on the dial by 3, 4 and 5.

The toothed wheels as described above are set with teeth in a ratio of 1 to 12 in order that on the completion of a single rotation of the toothed wheel which caused the rotation of the months the lever governing the year printing wheel will be moved into position and said wheel rotated until another year is brought into printing position.

Although the above description sets forth the general construction of the device minor changes in details of said construction may be made without departing from the gist and spirit of the invention.

Having thus set forth and disclosed the nature of this invention, what is claimed is:

1. In a dating machine, the combination of a main supporting frame, a type wheel frame, a type wheel mounted in said frame, means consisting of a reciprocating shaft for imparting a reciprocating movement to said type wheel frame, a sleeve slidably mounted on said shaft, and means in connection with said main frame and in operative connection with said sleeve and said type wheel, to rotate the latter through a predetermined angle with a predetermined number of reciprocating movements of the aforesaid shaft.

2. In a dating machine, the combination of a main supporting frame, a type wheel frame, type wheels mounted in said frame, means consisting of a reciprocating shaft for imparting a reciprocating movement to said type wheel frame, a sleeve slidably mounted on said shaft, a rack mounted on said sleeve, one or more toothed wheels mounted on a shaft journaled in said main frame, and toothed levers pivotally mounted on said main frame in operative connection with the said toothed wheels and the aforesaid type wheels to effect the rotation of the latter through a predetermined angle with one or more reciprocating movements of the aforesaid sleeve.

3. In a dating machine, the combination of a main supporting frame, a type wheel frame, type wheels mounted in said latter frame, means consisting of a reciprocating shaft for imparting a reciprocating movement to said type wheel frame, a sleeve mounted on said shaft, a rack mounted on said sleeve and means operating in conjunction with said rack for rotating one or more type wheels in a predetermined angle for one or more reciprocating movements of the rack.

4. In a dating machine, the combination of a main supporting frame, a type wheel frame, type wheels mounted in said latter frame, means consisting of a reciprocating shaft to impart a reciprocating movement to said type wheel frame, a sleeve slidably mounted on said shaft, means to impart a reciprocating movement to said sleeve with the movement of said shaft, a rack mounted on said sleeve, one or more toothed wheels rotatably mounted within the main frame and a centrally pivoted lever operating in conjunction with the toothed wheels and the type wheels for rotating one or more type wheels through a predetermined angle for one or more reciprocating movements of the sleeve.

5. In a dating machine, the combination of a main supporting frame, type wheels mounted in said latter frame, means consisting of a reciprocating shaft for imparting reciprocating movement to the type wheel frame, a handle mounted on said shaft, a sleeve through which said shaft projects, a rack mounted on said sleeve, a pinion mounted on a rotatable shaft journaled within the main frame and meshing with said rack, a pawl attached to said pinion and rotating therewith, one or more toothed wheels mounted on said shaft, and means interposed between the toothed wheels and the type wheels for rotating the latter through a predetermined angle for one or more reciprocating movements of the aforesaid shaft.

6. In a dating machine, the combination of a main supporting frame, a type wheel frame, type wheels rotatably mounted in said latter frame, means consisting of a reciprocating shaft journaled in said main frame for imparting a reciprocating movement to the type wheel frame, a handle mounted on said shaft, a sleeve through which said shaft projects, a rack mounted on said sleeve, a pinion mounted on a rotatable shaft journaled within the main frame and meshing with said rack, a tooth projecting from the lower extremity of the aforesaid reciprocating shaft, a cam positioned adjacent said shaft in the path of said tooth to limit the amount of movement of said reciprocating shaft and means in connection with the aforesaid pinion for rotating the aforesaid type wheel for one or more movements of the reciprocating shaft.

7. In a dating machine, the combination of a main supporting frame, a type wheel frame, type wheels rotatably mounted in said latter frame, means consisting of a reciprocating shaft journaled in said main frame for imparting a reciprocating movement to said type wheel frame, a handle mounted on said shaft, a sleeve through which said shaft projects, a rack mounted on said sleeve, a pinion mounted on a rotatable shaft journaled within the main frame and meshing with said rack, a tooth projecting from the lower extremity of the aforesaid reciprocat-

ing shaft, a cam mounted on a rotatable shaft, a dial for rotating said shaft and rigidly connected thereto, cam faces on said cam at varying distances from the center thereof positioned in the path of the aforesaid tooth to limit the movement on said reciprocating shaft and means consisting of a centrally pivoted lever in connection with the aforesaid pinion for rotating the type wheel through a predetermined angle for one or more movements of the reciprocating shaft.

In testimony whereof I affix my signature.

EMMA P. HUNTZICKER.