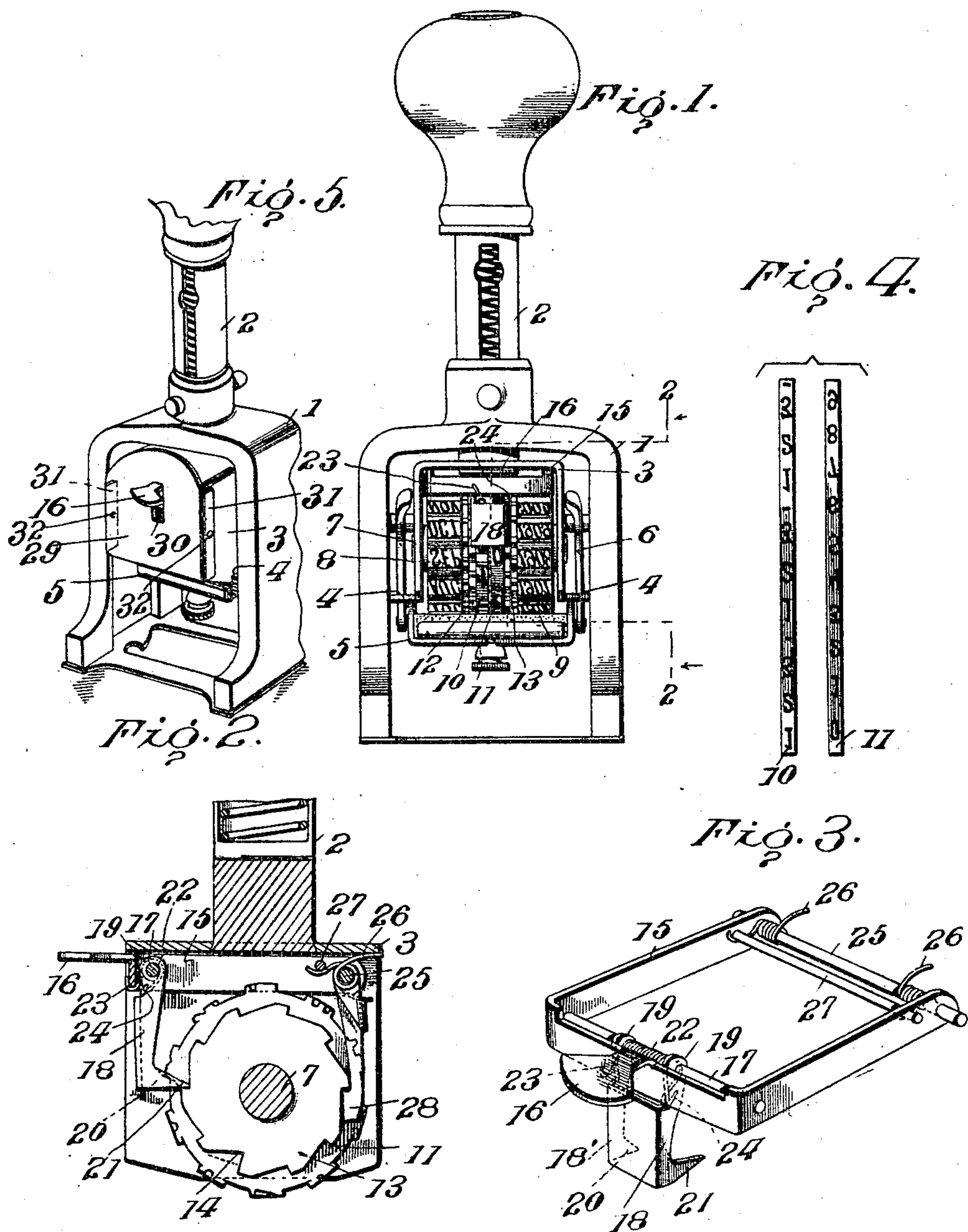


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C. SPIELMANN.
DATING MACHINE.
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DATING-MACHINE.

No. 837,514.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES SPIELMANN, of New York, N. Y., have invented a new and useful Improvement in Dating-Machines, which invention is fully set forth in the following specification.

This invention relates to dating-machines, and especially to manually-operated machines used for dating letters, papers, and the like, and has for its object simplifying the construction, reducing the cost, and increasing the efficiency of such machines.

With this object in view the invention consists in the details of construction and relation of parts hereinafter more specifically described and then pointed out in the claims.

For the purpose of illustration reference is had to the accompanying drawings, in which—

Figure 1 is a front elevation of a manually-operated dating-machine embodying the invention. Fig. 2 is a vertical transverse section on the line 2 2 of Fig. 1. Fig. 3 is a detail of the pawl-operating frame with the stepped pawl carried thereby. Fig. 4 is a developed plan view to show the arrangement of figures on the peripheries of the number-wheels, and Fig. 5 is a perspective view showing one of the face-plates in position on the printing-head.

For the purpose of supporting and guiding the working parts of the device there is provided a frame 1, in which reciprocates the printing-head 3, having lugs 4, which engage grooves in the frame 1. The printing-head is normally held in a raised position by means of the spring barrel-handle 2 and is provided with an inking-pad 5, operated by side levers 6, pivoted on the head 3, and actuated by the movement of the head as the latter lowers to throw the pad out of the path of the type. Supported by the side walls of the printing-head 2 is a shaft 7, on which is revolubly mounted a series of printing-wheels, including a month-wheel 8, a year-wheel 9, and two day-printing wheels 10 11.

The construction thus far described is common and well known except as relates to the construction of the day-printing wheels 10 11, one of which is the tens-wheels and the other the units-wheel. The tens-wheel is characterized by having on its periphery a plurality of groups of figures "1," "2," "3," with intermediate spaces between each

group, in each of which spaces may, if desired, be placed a dash, Fig. 4, and also having a ratchet-wheel fast thereto and provided with notches of uniform depth. The units-wheel is characterized by having on its periphery figures "0" to "9" and being provided with a ratchet having notches, one of which is deeper than the others.

For the purpose of rotating the dating-wheels 10 11 I provide a manually-operated pawl-carrying means which is pivotally supported eccentrically to the axis of the printing-wheels and is normally held in a raised position and keeps the pawls in a position to act when the said pawl-carrying means is depressed. As an illustration of one of the means I propose for thus supporting and operating the pawls I preferably provide two side arms or members 15, connected at their front ends by a connecting-piece integral with or separate from the side arms to form a three-sided frame, which may be, and preferably is, provided with a finger-piece 16 for depressing the frame. To effect economy in making this frame with its finger-piece, it may be struck up from a single piece of metal. The opposite ends of the arms 15 are pivotally supported within the head 3 above the axis of the printing-wheels, as by means of rod 25, supported in the side walls of the head 3. In order that the arms 15 may be automatically returned to a raised position after each downward depression, lifting means are provided, such as coiled springs 26, taking over rod 25, one end of each spring being retained by a rod 27 and the other end held from movement by abutting against the under side of the top wall of the printing-head 3. As thus arranged the pawl-supporting means is held directly over the printing-wheels and beneath the top of the printing-head, thus effecting economy of space in the printing-head. The action of the springs 26 in thus holding the pawl-supporting means against the under side of the top of the printing-head causes the machine to normally occupy its most compact position—that is to say, a position in which the parts carried by the printing-head are held closest together.

Mounted at or near the forward portion of the pawl-carrying frame is a stepped pawl 18', which is pivotally supported thereon, as by means of a supporting-rod 17, which, if desired, may also serve to support a pawl-

depressing spring 22, which has for its object the retention of the stepped pawl 18' in position to move the ratchets of the numbering-wheels 10 11 after the pawl-frame is depressed. The pawl itself may be of any approved form, but is preferably of the form shown in Fig. 3, and consists of a single blank or piece of sheet metal having when struck up a front face or wall and two side walls 18 at right angles thereto. The upper extensions of these side walls constitute supporting members 19 for the stepped pawl, and the lower portions extend into and form pawl-teeth 20 21, the latter of which is slightly longer than the former. The depressing-spring for these pawls is preferably placed between the extensions 19 for the sake of compactness of arrangement, one end 23 of which is held by the frame and the other end 24 is bent over one of the extensions 19, thereby normally holding the stepped pawl 18' depressed to engage the ratchets on the dating-wheels. It is desirable to have means for restraining the several ratchet-wheels from back rotation, and for this purpose spring-pressed pawls may be provided, such as shown in Fig. 2, and which are preferably pivotally mounted on the rod 25.

The parts of the device as above described are assembled as indicated in the drawings, and the device is operated in the following manner: The printing-head 3 is depressed, thereby throwing the pad 5 out of the path of the printing-wheels and bringing the type in contact with the paper. When it is desired to advance the date, pressure is applied to the finger-piece 16, causing the pawl-operating frame to oscillate and depress the stepped pawl 18', which engages the units-wheel ratchet by means of pawl-tooth 21, thereby forcing forward the units dating-wheel through a units-space. The release of the pressure on piece 16 permits the frame to automatically return to its original position. After the units-wheel has thus printed the successive figures from "0" to "9" the pawl-tooth 21 falls into the deep notch in the units ratchet-wheel and at the next depression of the finger-piece 16 both pawl-teeth 20 and 21 engage their respective ratchet-wheels and both number-wheels are advanced, and thereby bring the "1" of the tens-wheel and "0" of the units-wheel into printing position. After the several days of the month have been printed and it is desired to change the date from "31" to the first of the next month the pawl-frame is successively depressed through "0" to "9," when the tooth 21 drops into its deep notch, and both the tens and units wheels advance together, as above explained. Then the units-wheel is advanced from "0" to units position to repeat the cycle. It will thus be seen that by manually depressing the pawl-carrying frame the units-figures are successively

brought into printing position, and after a complete revolution of the units-wheel the tens-wheel is automatically turned to successively register figures "1," "2," "3" in the tens position and after reaching figure "3" is then shifted automatically out of printing position to permit the units-figures to register alone in the printing position.

From the foregoing it will be seen that I have provided a dating-machine with a manually-operated pawl-frame which combines in a compact structure the means for depressing the pawl-frame, the support for the spring-pressed stepped pawl for operating the day-printing wheels, lifting-springs for the return of the frame, and the spring-pressed retaining-pawls for preventing back rotation of the printing-wheels. The whole frame is tucked beneath the printing-head and enables the printing-wheels to be confined in a narrow space on an axis independent of that of the pawl-operating frame. By reason of this construction the device has been condensed, cheapened, and improved.

To protect the working parts within the printing-head, I provide two face-plates, one of which is shown in position in Fig. 5. The other is similar in construction and mode of attachment, except that it is not provided with a central slot. Therefore a description of the front plate will suffice for both. This plate 29 is provided with a central slot 30, whose length is slightly less than the width of the finger-piece and whose width just admits the vertical play of the shank of the finger-piece, as can be readily seen in Fig. 5. For retaining the plate on the printing-head side flanges 31 are provided, which receive between them the front face of the printing-head and are made fast thereto by means of pins 32. To affix the plate, the longitudinal slot 30 is brought into a horizontal position opposite the finger-piece 16, and by an angular movement of the face-plate 29 the latter is slipped over the finger-piece and when turned to bring the slot into a vertical position is made fast to the walls of the printing-head by means of pins 32. By reason of the contour of the slot and its relation to that of the finger-piece it will be seen that the plate permits of ready attachment over the finger-piece, and when once slipped over it cannot be accidentally lost in case the side pins fail to hold it to the head.

What is claimed is—

1. In a dating-machine, the combination of a printing-head, a plurality of printing-wheels revolubly supported therein, a manually-operated frame pivotally mounted in the walls of said head above the axis of said wheels, and spring-pressed stepped pawls carried by said frame and normally held in position to advance one or more of said wheels.

2. In a dating-machine, the combination

of a printing-head, a plurality of printing-wheels revolubly supported therein, a manually-operated frame pivotally mounted in the walls of said head above the axis of said wheels and provided with lifting-springs to normally hold the machine in its most compact position, and spring-pressed stepped pawls on said frame normally held in position to advance one or more of said wheels.

3. In a dating-machine the combination of a printing-head, a plurality of printing-wheels revolubly supported therein, a frame pivotally mounted in said head above the axis of said wheels, means for manually operating the frame, lifting-springs returning the frame after each depression to its original position, spring-pressed stepped pawls on said frame for advancing said wheels, and printing-wheel-retaining pawls on the axis of said frame.

4. A pawl-operating means comprising a rectangular manually-operated frame, a pawl-supporting rod on the frame, spring-pressed pawls on said rod, an axis supporting the end of the frame opposite the pawl, coiled lifting-springs on the axis and a cross-rod for engaging the inner ends of said springs.

5. In a dating-machine, a printing-head, date-printing wheels revolubly mounted in said head, one of which is provided on its periphery with figures from "0" to "9" and the other with a plurality of groups of figures "1," "2" and "3," and a blank or dash, as uniformly-notched ratchet-wheel for the second dating-wheel, and a ratchet-wheel having one of its notches deeper than the rest for the first dating-wheel, a pawl-supporting frame revolubly mounted above the axis of said wheels, spring-pressed stepped pawls engaging the ratchet on the first-named dating-wheel while the shorter pawl engages its ratchet only when the longer pawl drops into said deep notch.

6. In a dating-machine of the character described, the combination of a printing-head, a plurality of printing-wheels revolubly supported thereby, ratchets secured to said wheels, and a manually-operated pawl in operative relation with said ratchets and supported by members oscillating on an axis

arranged in the walls of the printing-head near the top thereof and eccentric to said wheels.

7. In a dating-machine of the character described, the combination of a printing-head, a plurality of printing-wheels revolubly supported thereby, ratchets secured to said wheels, a manually-operated pawl in operative relation with said ratchets, and oscillatory members therefor supported on a horizontal axis in the walls of the printing-head near the top thereof and to one side of the axis of said wheels.

8. In a dating-machine of the character described, the combination of a printing-head, a plurality of printing-wheels revolubly supported thereby, ratchets secured to said wheels, a manually-operated pawl in operative relation with said ratchets, supporting members for said pawl oscillating on an axis eccentric to said wheels, and means normally holding said members in a raised and the machine in its most compact position.

9. In a dating-machine of the character described, a printing-head, an oscillating member supported within the head to operate printing-wheels and having thereon a finger-piece, a face-plate having side flanges for attaching the plate to the head and a slot through which said finger-piece extends and in which it vertically oscillates, the longest dimension of said slot being less than the width of said finger-piece.

10. In a dating-machine, the combination of a printing-head, a plurality of printing-wheels revolubly supported therein, a manually-operated frame pivotally mounted in the walls of said head eccentric to said wheels and provided with lifting-springs to normally hold said machine in its most compact position, and spring-pressed stepped pawls on said frame normally held in position to advance one or more of said wheels.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

CHARLES SPIELMANN.

Witnesses:

JOHN J. CHATTAWAY,
JOHN SPIELMANN.