No. 794,800. PATENTED JULY 18, 1905.

B. B. HILL.

HAND STAMP.

APPLICATION FILED NOV. 2, 1903.

2 SHEETS—SHEET 1.

Fig. 1.

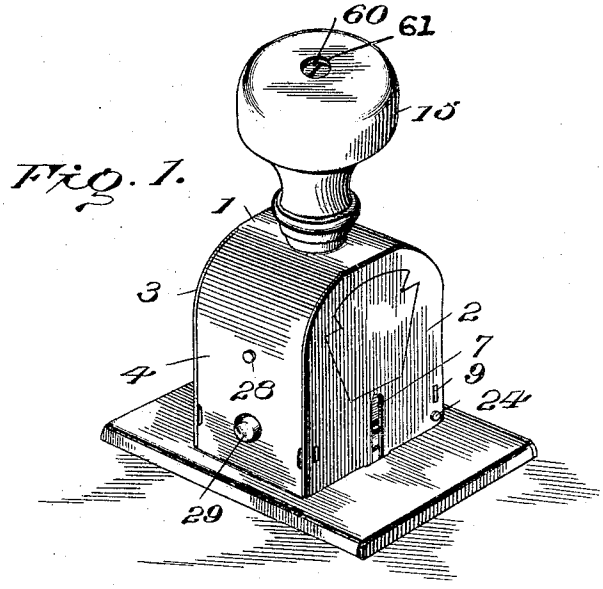


Fig. 2.

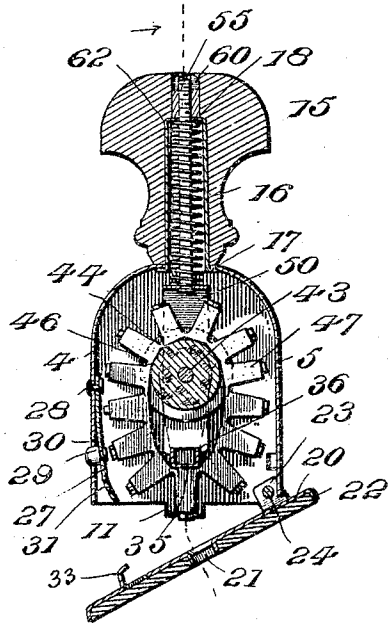
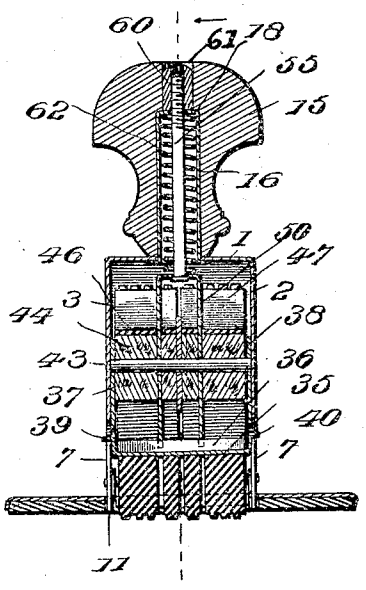


Fig. 3.



Witnesses

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Inventor

Benjamin B. Hill.

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2 SHEETS—SHEET 2.

Fig. 7.

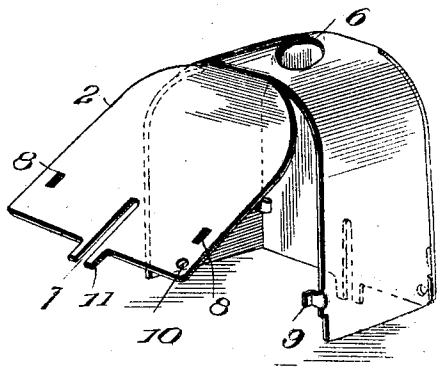

Fig. 4.

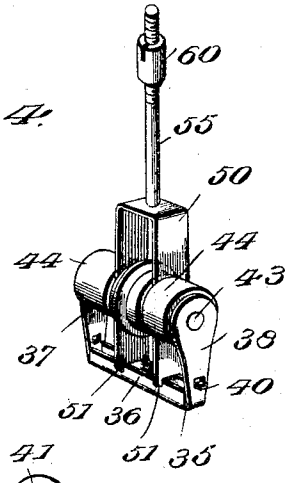

Fig. 6.

Fig. 5.

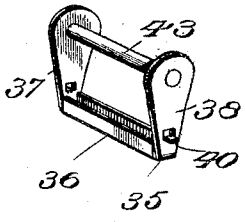

Fig. 8.

Witnesses

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No. 794,800. Patented July 18, 1905.

UNITED STATES PATENT OFFICE.

BENJAMIN B. HILL, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE B. B. HILL MANUFACTURING COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

HAND-STAMP.

SPECIFICATION forming part of Letters Patent No. 794,800, dated July 18, 1905.

Application filed November 2, 1903. Serial No. 179,586.

To all whom it may concern:

Be it known that I, BENJAMIN B. HILL, a citizen of the United States of America, and a resident of Philadelphia, Philadelphia county, Pennsylvania, have invented certain new and useful Improvements in Hand-Stamps, of which the following is a specification.

This invention relates to an improvement in that class of dating-machines shown in my Patents Nos. 344,903 and 722,707, granted July 6, 1886, and March 17, 1903, respectively, in which are provided a series of movable dates or numbers, which are arranged so that they may be adjusted day by day and month by month; and the object of the present invention is to provide a stamp which shall be practically entirely closed and at the same time one in which the casing may be opened—as, for example, by moving the die-plate—so as to make it very easy to change the printing characters as it becomes necessary.

With this object in view my invention consists of the stamp as shown in its preferable embodiment in the accompanying drawings and which will be hereinafter more particularly described and then definitely claimed.

In the drawings accompanying and forming part of this application, Figure 1 is a perspective view of my new stamp. Fig. 2 is a vertical central section of the same. Fig. 3 is a section taken at right angles to that shown in Fig. 2. Fig. 4 is a perspective view of a frame for supporting the printing characters, but with all the characters removed. Fig. 5 is a perspective view of the type base and its sides. Fig. 6 is a plan view of a blank out of which the type-base is made. Fig. 7 is a perspective view of the casing partially put together. Fig. 8 is a top plan of the blank out of which the main casing is made.

Referring now to the details of the drawings by numerals, 1 represents a sheet-metal casing, and this casing proper is stamped out of one piece of metal, as indicated by Fig. 8, and which piece is formed somewhat like a cross. The blank, as shown in said Fig. 8, comprises two parts 2 and 3, which are formed with curved edges where they join the blank proper, and these two are connected by a rectangular portion, which extends into two parts 4 and 5 on opposite sides of said side portions 2 and 3. This blank is formed with a central perforation 6, for purpose to be hereinafter described, and also with slots 7 7 and with small openings or perforations 8 8 and with offset lugs 9 9, which are adapted to enter the perforations 8, as will be described. Each of the side portions 2 and 3 is formed with a perforation at one corner, (designated by the numeral 10,) and the outer edges of these side portions 2 and 3, those portions slotted at 7, are also provided with two projecting fingers 11, for purposes to be hereinafter described. The blank as thus described is formed into a casing for containing the printing characters by bending the two parts 4 and 5 so as to make them into the substantially U shape shown in Fig. 2. Then the side portions 2 and 3 are bent at right angles to the blank proper, so as to come down on opposite sides of the edges of the portions 4 and 5. When the parts of the blank are so bent, the perforations 8 in the side parts 2 and 3 come immediately over the offset lugs 9, projecting from the bent portions 4 and 5, and these lugs are riveted after they are passed through the perforations 8.

Inasmuch as the side portions 2 and 3 are integrally secured to the other portions at their tops and have two offset lugs, one on each side of each side portion, it will take only a casual glance at the drawings to see that I have produced an extremely cheap frame which is of the greatest strength possible. In fact, the casing when made as described is wonderfully strong and has all the advantages of cast metal without any of its objections.

To the top of the casing is secured a handle 15, which is made hollow and has a tubular portion 16 therein, the lower end 17 of which is turned over, thus riveting the handle to the casing. The upper end of the tube is provided with an inward flange 18, whose purpose will be hereinafter explained.

A sheet-metal die-plate 20, provided with a central opening 21 and with flanges 22 to hold the usual sponge rubber, is pivoted to the casing by means of two lugs 23, which are riv-

eted or otherwise formed on the die-plate, and through these lugs 23 and the perforations 10, heretofore described as being formed in the corner of the side plates 2 and 3, is passed a pivotal pin or spindle 24. It follows from this construction that the die-plate can be swung on its pivot 24 and close the bottom of the casing, as shown in Fig. 1, or it can be swung open, as shown in Fig. 2, for the purpose of changing the position of the printing characters when necessary. In order to lock this die-plate in position, I provide a spring-actuated latch 27, which is riveted to the opposite sides of the casing to which the die-plate is pivoted, as indicated at 28, and the lower end of this latch is provided with a push-button 29, projecting through the opening 30 in the casing, and also with a perforation 31, which is so situated as to be engaged with a hook 33, projecting from the upper side of the die-plate 20. From this description and from Fig. 2 of the drawings it will be obvious that when the die-plate is closed the lug 33 acts upon the bent end of the latch 27 and shoves it inward until the point of the lug is in line with the perforation 31, when the spring-actuated catch closes over said hook, and thus locks the die-plate closed. It will be evident that when it is desired to open the casing the operator only needs to depress the push-button 29 until the hook 33 is disengaged from the latch 27, and the die-plate can then be swung into position, as shown in Fig. 2.

I am of course very well aware that it has been proposed to pivot a die-plate to a casing and provide a pivoted catch to lock said die-plate in position; but I regard as important the above arrangement of the spring-actuated latch, whereby it is placed on the inside of the casing, and thus, with the exception of the push-button 29, is entirely out of sight.

Within the casing I provide my printing characters, which are supported by entirely new mechanism, which will now be described.

A sheet-metal frame is provided which comprises a horizontal type-base 35, whose edges are bent up into flanges 36 and whose sides are formed into side frames 37 and 38. This type-base 35 and its side frames 37 and 38 are formed of one integral piece of sheet metal, and I regard this as quite important. Each of the side frames 37 and 38 is provided with a stamped-out lug 39 and 40, and these lugs project through the vertical slot 7 in the sides 2 and 3 of the main casing, as illustrated in Fig. 1, these lugs and said slots forming a guide for any vertical movement given to the type-base and its side frames. The upper end of the side frames 37 and 38 are perforated, as shown at 41 and 42, and through these perforations is passed a spindle 43, which connects the said frames together and on which is supported a series of rollers 44 and which are preferably made of cork. Type-bands 46 pass around these rollers and around the type-base 35, as clearly shown in Fig. 2, and while any preferred style of type-bands may be used I prefer to use those shown in the drawings and in which the printing characters are formed on rectangular-shaped blocks 47, projecting from the bands 46. It will of course be understood that each band is provided with a separate roller 44, although it would be possible to use one roller for all the bands. Passing down between the large outer bands and the two small inner bands is a sheet-metal yoke 50, the sides of which are perforated for the passage of the spindle or rod 43, hereinbefore referred to, and whose lower ends are formed with fingers 51, which project down from opposite sides of the flanges 36 of the type-base 35 and thus form a very rigid construction. From the upper part of the yoke 50 projects a spindle 55, whose upper end is screw-threaded, as shown, and which passes through the perforation 6 and passes through the tubular lining of the handle 15. Coacting with the threaded end of the spindle or rod 55 is a screw 60, which fits within the opening 61 in the upper part of the handle and when screwed to the spindle 55 draws the yoke 50 upward into the frame.

Surrounding the tube 55 is a spring 62, which bears on the yoke 50 and acts to normally press said yoke 50 and its connected parts downward into their normal positions. By adjusting the screw 50 it will be obvious that the position of the type-bands may be controlled, and it is therefore not necessary to provide the fixed inscription which is to be secured to the sponge-rubber in the die-plate of any exact thickness. If the fixed inscription is a little too thick, the nut 60 may be adjusted to permit the spring 55 to force the yoke 50 and the movable type sufficiently downward to be in the same printing plane with the fixed inscription, and, on the other hand, if the fixed inscription is not quite thick enough the nut 60 may be screwed farther onto the spindle or rod 55, and the effect will be to draw the movable type through into the casing. Of course it will be understood that after the types have been properly adjusted the hooked die-plate is swung into the closed position, when those portions of the movable type which project downward will pass through the slot 21 of the die-plate and be in proper printing position.

In addition to serving the purpose just described the spring 62 also performs another function, which I believe is entirely new in hand-stamps—to wit, that of permitting the movable characters to be forced slightly upward against the tension of the spring if it should happen that the characters are not properly adjusted. In other words, if the movable characters project a little too far from the slot 21, so that they will engage the surface to be printed before the fixed inscription does, pressure on the handle 15 will cause

the movable type to recede within the casing against the tension of the spring 62 until the fixed inscription also makes its impression. This overcomes a fault very common in stamps as now made, for the reason that as the movable type have no movement in the old form of stamps they cannot give even to the slightest extent, and if they project a little too far they print so heavy as to make an unsightly impression or else prevent the fixed inscription from properly printing.

The yoke 50, which has been described as affording a means for supporting the frame carrying the printing characters, also has an additional purpose—that of passing between the bands and acting to separate the same sufficiently to prevent one turning with the other. Between the day-bands I insert a washer or disk 70; but when the yoke is used as just described it is not necessary to also insert one of these washers between the large month and year bands and the day-bands, for the reason that the arm or yoke fulfils this purpose, as just stated.

In describing the blank for the main casing I have referred to two projecting fingers 11 on the sides 2 and 3, and these fingers are for the purpose of passing into the slot 21 of the die-plate, and thus aiding in forming a very rigid and steady connection between the die-plate and the main frame or casing.

In view of the detailed description herein given it is believed unnecessary to give any statement of the operation of my hand-stamp, as this will be perfectly familiar to those who are acquainted with the art or with the use of hand-stamps generally.

I desire it to be understood that while I have shown in the accompanying drawings the preferable embodiment of my invention I do not wish to limit my claims to the exact structure shown, as my invention is capable of considerable and various modifications; nor do I limit myself to the shape of the inclosing casing or main frame; but I refer to the appended claims to point out the novel features of my invention.

What I claim as new is—

1. In a hand-stamp, a frame for inclosing the printing characters comprising a substantially U-shaped frame and side portions integral therewith, said side portions having slots near their lower edges, means connecting the edges of the U-shaped portion with said side portions, a frame supported within said casing and having projections coacting with the slots in said side portions, and a drum and printing character supported by said frame, substantially as described.

2. In a hand-stamp, a frame for inclosing the printing characters, comprising a substantially U-shaped portion and side portions integral therewith, said side portions having slots near their lower edges, means connecting the edges of the U-shaped portion with the side portions, a frame supported within said casing and having projections coacting with the slots in said side portions, drums and printing characters supported by said frame, and a spring coacting with the main frame and said last-mentioned frame for yieldingly holding the printing characters in position, substantially as described.

3. In a hand-stamp; a casing; printing characters; a drum supporting said printing characters; a type-base; said printing characters passing around said drum and type-base; and a single spring yieldingly supporting said drum, said type-base and said printing characters in position, and forcing them outward with respect to the casing but permitting their inward movement, substantially as described.

4. In a hand-stamp; a casing; printing characters; a plurality of drums supported within said casing and carrying the aforesaid printing characters; and a single spring forcing said drum and its printing characters outward with respect to the casing and permitting them to yield inwardly, substantially as described.

5. In a hand-stamp, a frame, printing characters therein, drums also located within said frame and carrying said printing characters, a die-plate connected with said frame and having said printing characters projecting therethrough, and a single spring coacting with all of said drums to force the printing characters through the die-plate and permitting a yielding movement of all of said drums and printing characters, substantially as described.

6. In a hand-stamp, a casing, printing characters therein, a drum and a type-base supporting said printing characters, a spindle connected with said drum and a spring coacting with said spindle, drum, type-base and printing characters and forcing said characters through the casing into their proper printing position, substantially as described.

7. In a hand-stamp, a casing and printing characters supported therein, a frame or yoke, a drum and type-base carried by said frame or yoke and supporting said printing characters and a single spring located between said frame or yoke and the casing to maintain said characters in their printing position and permit said characters, frame, drum and type-base to have a yielding inward movement, substantially as described.

8. In a hand-stamp, a frame or casing, printing characters therein, a drum carrying said characters, a spring coacting with said drum and normally tending to force said characters outward with respect to the casing but permitting their inward yielding movement, a die-plate connected with said frame or casing, and means for adjusting the tension of said spring without removing said die-plate, substantially as described.

9. In a hand-stamp, a casing having printing characters supported therein, a type base or bridge for said characters, a spindle project-

ing from said printing characters and projecting through said casing and yieldingly holding said printing characters and their type base or bridge in position, and a nut or screw operative from the exterior of the casing for adjusting said spindle and thereby moving the type-base and printing characters, substantially as described.

10. In a hand-stamp, a casing, a plurality of drums supported therein, a type base or bridge, printing characters passing around said drums and said type base or bridge, a spindle projecting from said drums through said casing and yieldingly supporting the drums, printing characters and type-base in position, and a nut or screw operative from the exterior of the casing for adjusting said spindle, thereby moving the drums, type-base, and printing characters, substantially as described.

11. In a hand-stamp, a frame containing the printing characters and a suitable handle therefor, for said frame, a yoke supporting said printing characters, a spindle connected with said yoke and passing through said handle, and a screw or nut operative from the outside of the handle for adjusting said spindle and thereby moving its yoke and printing characters in their proper position, substantially as described.

12. In a hand-stamp, a casing, a frame movable therein and supporting printing characters, said frame comprising a type base or bridge, a spindle connected with said frame and a spring coacting with said spindle and frame to force said type-base and printing characters in their proper positions, substantially as described.

13. In a hand-stamp, a casing, a frame supported in said casing and carrying printing characters, said frame comprising a type base or bridge, a spindle connected with said frame and passing through the casing, a spring coacting with said frame, and means for adjusting said spindle against the tension of said spring and thereby controlling the position of said type-base and printing characters, substantially as described.

14. In a hand-stamp, a casing, a frame contained in said casing for supporting the printing characters and comprising a type base or bridge at the lower side of said casing, and a drum above said base or bridge, said printing characters being movable around said base and drum, and a single spring forcing said frame, said type-base, drum and printing characters and thereby projecting said printing characters through the bottom of the casing, substantially as described.

15. In a hand-stamp, a casing provided with a die-plate having a slot therein, a frame supported in said casing and carrying the printing characters, said frame comprising a type base or bridge movable through the slot in said die-plate and a drum above said type-base, said printing characters passing around said base and drum, and a single spring coacting with said frame said drum and said type-base and forcing the latter and its printing characters in position through said slotted die-plate, substantially as described.

16. In a hand-stamp, the combination with a casing having slots in the sides thereof, a frame situated within said casing, said frame comprising a type-base and supporting a drum and carrying the printing characters, and lugs formed integral with said frame and coacting with the aforesaid slots to hold said frame in the proper position, substantially as described.

17. In a hand-stamp, a casing having slots therein, a sheet-metal frame comprising a type base or bridge having integral thin sides projecting therefrom, projecting portions or lugs on said sides coacting with the slots in said casing, a drum supported by said sides, printing characters passing around said drum and said type base or bridge, a spindle projecting from said sheet-metal frame and coacting with said casing, and a spring also coacting with said casing and said sheet-metal frame for yieldingly holding the latter and its connected parts in position, substantially as described.

18. In a hand-stamp, a frame for supporting the printing characters comprising a type base or bridge, a yoke for supporting said frame, comprising two arms coacting with said type-bridge, and a connection between said yoke and the casing of the hand-stamp, substantially as described.

19. In a hand-stamp, a frame for supporting the printing characters comprising a type-base and side arms, and a yoke connected with said frame for holding the same in position, said yoke comprising two members acting to separate the type-bands, substantially as described.

20. In a hand-stamp, a casing, a frame for supporting the printing characters comprising a type-base and side arms, a yoke connected with said frame, a spindle connected with said yoke and coacting with the casing, a spring coacting with said casing and yoke, and means for adjusting said spindle and yoke, substantially as described.

Signed by me at the city of Philadelphia, Pennsylvania, this 30th day of October, 1903.

BENJAMIN B. HILL.

Witnesses:

J. PAUL LYET,

A. S. LONGBOTTOM.