No. 645,887. Patented Mar. 20, 1900.

H. L. BROTHERTON & G. W. LEE.

DATING STAMP.

(Application filed Aug. 19, 1899.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1

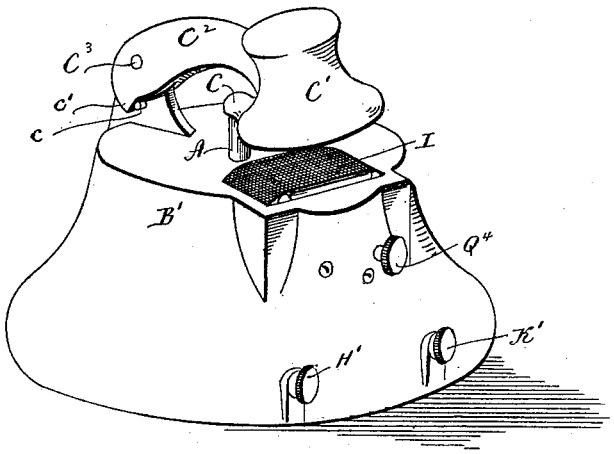
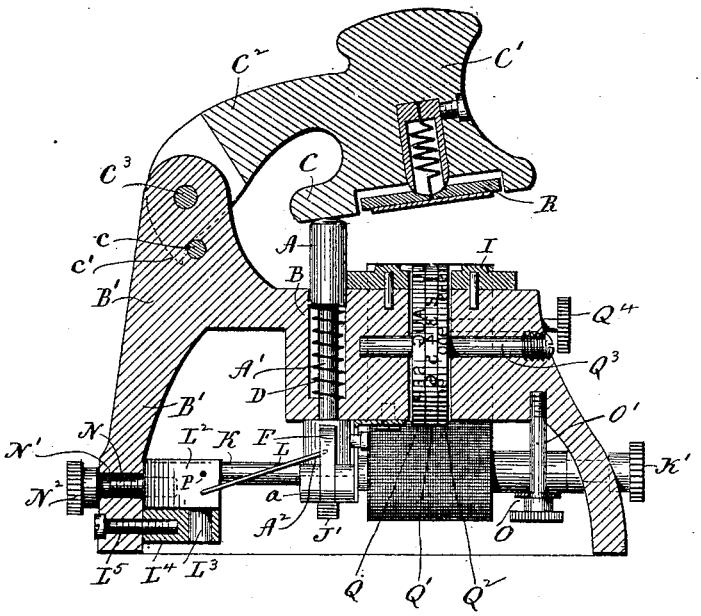


Fig. 2



Witnesses.
J. K. Shumway.
Lillian D. Kelley.

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Fig. 3

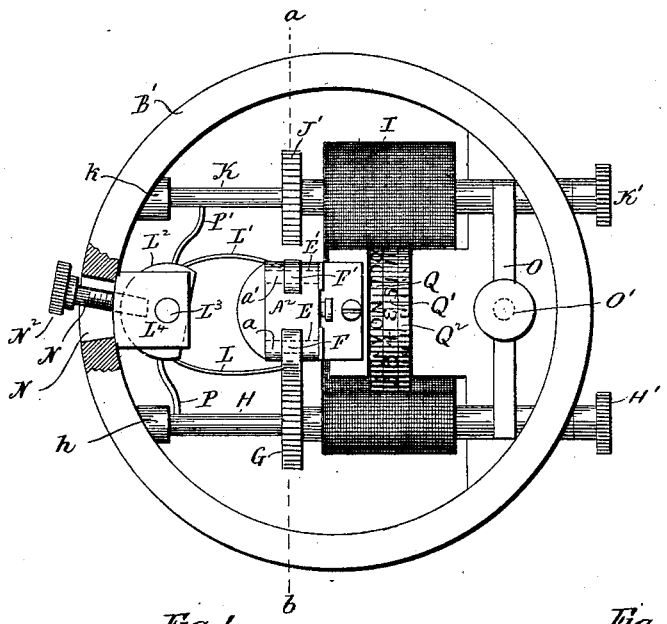


Fig. 4

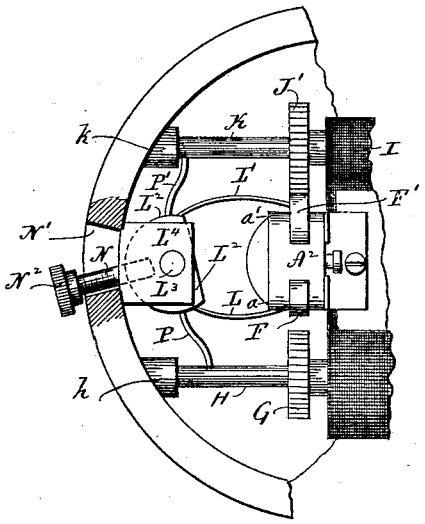


Fig. 5

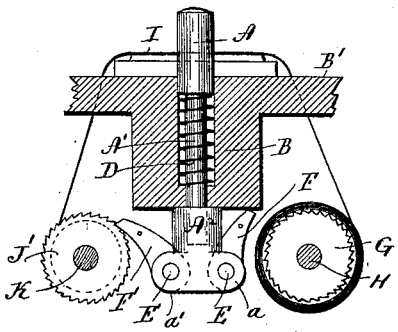
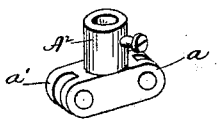


Fig. 6



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UNITED STATES PATENT OFFICE.

HAROLD L. BROTHERTON, OF NEW HAVEN, AND GEORGE W. LEE, OF WINSTED, CONNECTICUT.

DATING-STAMP.

SPECIFICATION forming part of Letters Patent No. 645,887, dated March 20, 1900.

Application filed August 19, 1899. Serial No. 727,746. (No model.)

To all whom it may concern:

Be it known that we, HAROLD L. BROTHERTON, of New Haven, in the county of New Haven, and GEORGE W. LEE, of Winsted, in the county of Litchfield, State of Connecticut, have invented a new Improvement in Dating-Stamps; and we do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a perspective view of a dating-stamp constructed in accordance with our invention; Fig. 2, a view thereof in vertical section; Fig. 3, a reverse plan view thereof; Fig. 4, a broken reverse plan view showing the spring-block rocked in the opposite direction from which it is shown in the preceding figure; Fig. 5, a broken view in vertical section on the line *a b* of Fig. 3; Fig. 6, a detached perspective view of the pawl-block.

Our invention relates to an improvement in dating-stamps of that class employing an inked ribbon which is moved step by step over the type in one direction until run out and then reversed and moved step by step over the type in the opposite direction until run out, and so on, the object of our invention being to produce a stamp having improved and simplified means for reversing the ribbon.

With these ends in view our invention consists in a stamp having certain details of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In carrying out our invention we employ a vertically-movable plunger A, mounted in a suitable cylindrical chamber B, formed to receive it in the frame B′ of the device, the upper end of this plunger being located in position to be engaged by a finger C, extending rearward from the lower edge of the head C′, formed at the forward end of an operating-lever C^2, pivotally connected at its rear end with the frame by means of a pivot C^3. A spiral spring D, located within the chamber B, exerts a constant effort to lift the plunger, which in turn lifts the operating-lever C^2, the same being prevented from being lifted out of position by means of a stop-pin *c*, engaging with a stop *c′*, formed at the extreme inner end of the lever C^2, as clearly shown in Fig. 2. The said plunger A is formed with a stem A′, which is encircled by the said spring, the upper end of which impinges against the shoulder formed between the plunger proper and the stem and the lower end of which engages with the lower end of the chamber, as shown in the figure above mentioned. At its extreme lower end the stem A′ is furnished with a removable pawl-head A^2, formed with two corresponding oppositely-extending horizontally-arranged pairs of lugs *a a′*, between which are hung on pins E E′ two oppositely-extending pawls F F′. The pawl F engages with a ratchet-wheel G on the spindle H, which has one end of the inked ribbon I connected with it, the said spindle being mounted in the frame B′ of the stamp and provided at its projecting forward end with a knurled button H′, by means of which it may be manually turned. On the other hand, the pawl F′ engages with a ratchet J, mounted upon a spindle K, to which the other end of the ribbon I is connected, the said spindle being journaled at its ends in the frame B′ and having its forwardly-projecting end furnished with a knurled button K′. These two spindles are arranged parallel with each other and located on opposite sides of the center of the frame. The pawls are alternately brought into operation by means of springs L and L′, passing transversely through them and mounted in a block L^2, formed with a depending pivot-pin L^3, adapting it to be pivotally mounted in a bracket L^4, secured within the lower edge of the frame by means of a screw L^5 or in any other manner. The block is swung in one direction or the other, according to which of the two springs L L′ it is desired to bring into operation, by means of a stem N, which passes outwardly through a horizontally-arranged slot N′, formed in the frame B′, the projecting end of the stem being threaded and furnished with a jam-nut N^2, which when turned inward engages with the frame at points above and below the slot N′. When, for instance, it is desired to re-

verse the ribbon I and cause it to be unwound from the spindle K and wound upon the spindle H, the jam-nut is loosened and the block L^2 turned, as shown in Fig. 3, whereby the spring L is caused to throw the pawl F into engagement with the ratchet-wheel G and whereby the spring L′ is caused to lift the pawl F′ out of engagement with the ratchet-wheel J′, as clearly shown in the said figure. Now when the head C′ of the operating-lever C^2 is struck by the palm or fist the plunger A is depressed and with it the head A^2, whereby both pawls are carried downward, the pawl F′ being cleared from the ratchet-wheel J′ and the pawl F "snapping over," so to speak, the teeth of the ratchet-wheel G. When the plunger is lifted under the influence of the spring D, the pawl F turns the ratchet-wheel G, and hence positively rotates the spindle H, whereby the ribbon is wound upon the said spindle and unwound from the spindle K, which is now free to rotate except as restrained by friction.

After the major part of the ribbon has been wound upon the spindle H the jam-nut is loosened again and the block L^2 swung in the opposite direction, as shown in Fig. 4, whereby the springs L and L′ operate, respectively, to lift the pawl F out of engagement with the ratchet-wheel G and force the pawl F′ into engagement with the ratchet-wheel J′. Now when the operating-lever is actuated, as before described, the action of the dating-stamp will be reversed, so far as the feeding of the ribbon is concerned.

By preference both of the spindles H and K are kept under tension by means of a tension-spring O, engaging with their forward ends and controlled in its tension by means of a tension-screw O′, formed at its lower end with a knurled button and at its upper end entering the frame B′, as shown in Fig. 2. This tension-spring O maintains a constant and uniform tension upon both of the spindles. In addition to this we prefer to employ tension devices which are automatically put into and out of operation when the stamp is set for reversing the ribbon, so that the spindle on which the ribbon is being wound may always be operated under a little more restraint than the other spindle. These supplemental devices, as shown, consist of two springs P and P′, both mounted in the block L^2 and extending in opposite directions therefrom into positions to engage directly with the inner edges of the collars *h k*, mounted upon the inner ends of the spindles H and K. These springs are constructed and arranged so that when the block L^2 is swung, as shown in Fig. 3, for bringing the pawl F into position to engage with the ratchet-wheel G the spring P will be engaged with the collar *h*, so as to impose additional friction upon the spindle H, while at the same time the spring P′ will be cleared from the collar *k* of the spindle K, which will then be free to rotate except as restrained by the friction imposed upon it by the spring O. On the other hand, when the block L^2 is swung in the opposite direction, as shown in Fig. 4, to bring the pawl F into operation for rotating the spindle H the spring P′ will be engaged with the collar *k* and the spring P disengaged from the collar *h*. We have spoken of our device as being automatic in varying the friction upon the spindles H and K, because the friction is varied by swinging the block L^2, which is required for reversing the operation of the pawls. The type-disks Q, Q′, and Q^2 may be of any suitable construction and arrangement, all of them being, as shown, mounted upon a shaft Q^3, upon which all of them are loosely mounted. As shown, the disks Q and Q^2 are designed to be moved by hand, while the central disk Q′, which is the day-of-the-month disk, is designed to be rotated by means of the knurled button Q^4. Within the head C′ we locate a small disk-shaped platen R, which is mounted upon the ball-and-socket plan, so that it will level itself when it strikes the ribbon and type; but we do not limit ourselves to any particular way of arranging and operating the type-disks nor to any way of constructing and mounting the platen R.

It will be understood from the foregoing that the reversal of the type-ribbon may in our improved dating-stamp be very readily effected by simply loosening the jam-nut N^2 and swinging the block L^2 in one direction or the other, after which the nut is tightened again and the stamp is ready for use.

It is apparent that in carrying out our invention some changes from the construction herein shown and described may be made, and we would therefore have it understood that we do not limit ourselves to this precise construction, but hold ourselves at liberty to make such changes as fairly fall within the spirit and scope of our invention.

Having fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a dating-stamp, the combination with the spindles upon which the inked ribbon is wound, of two ratchet-wheels respectively located upon the said spindles, a plunger, a pawl-head located upon the said plunger, pawls carried by the said head and respectively adapted to be engaged with the said wheels, two springs mounted independently of the said pawl-head and coacting with the pawls for alternately cutting them into and out of operation, whereby they are alternately used for positively rotating the spindles in reversing the ribbon, and means for effecting the desired operation of the said springs.

2. In a dating-stamp, the combination with the spindles upon which the inked ribbon is wound, of two ratchet-wheels respectively located upon the said spindles, a plunger, a pawl-head located upon the said plunger,

pawls carried by the said head and respectively adapted to be engaged with the said ratchet-wheel, two springs coacting with the pawls, and a spring-block in which both springs are mounted, and which is mounted independently of the said pawl-head and adapted to be shifted in position for retiring the pawls one at a time, whereby they are alternately cut into and out of operation for positively rotating the spindles in reversing the ribbon.

3. In a dating-stamp, the combination with the spindles upon which the inked ribbon is wound, of two ratchet-wheels respectively located upon the said spindles, a plunger, a pawl-head located upon the said plunger, pawls carried by the said head and respectively adapted to be engaged with the said ratchet-wheels, two springs respectively coacting with the said pawls, a spring-block in which both of the springs are mounted, and which is adapted to be shifted in position for alternately cutting the pawls into and out of operation, and supplemental tension devices carried by the said block, coacting with the spindles, and alternately cut into and out of operation in correspondence with the pawls.

4. In a dating-stamp, the combination with the spindles upon which the inked ribbon is wound, of two ratchet-wheels respectively located upon the said spindles, a plunger, a pawl-head located upon the said plunger, pawls carried by the said head and respectively adapted to be engaged with the said ratchet-wheels, two springs respectively coacting with the said pawls, a spring-block in which both of the springs are mounted, and which is adapted to be shifted in position for alternately cutting the pawls into and out of position, and two springs carried by the said block, coacting with the spindles for imposing tension upon them, and alternately cut into and out of operation in correspondence with the pawls by the shifting of the block.

5. In a dating-stamp, the combination with the spindles upon which the inked ribbon is wound, of two ratchet-wheels respectively located upon the said spindles, a plunger, a pawl-head located upon the said plunger, pawls carried by the said pawl-head and respectively adapted to be engaged with the said ratchet-wheels, two springs coacting with the pawls for alternately cutting them into and out of operation, a spring-block connected with the frame of the machine and independent of the said pawl-head, and carrying said springs, and adapted to be shifted in position for causing the springs to act in alternately cutting the pawls into and out of operation.

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

HAROLD L. BROTHERTON.
GEORGE W. LEE.

Witnesses:
FREDK. L. TIBBALS,
CARL B. HAYWOOD.