

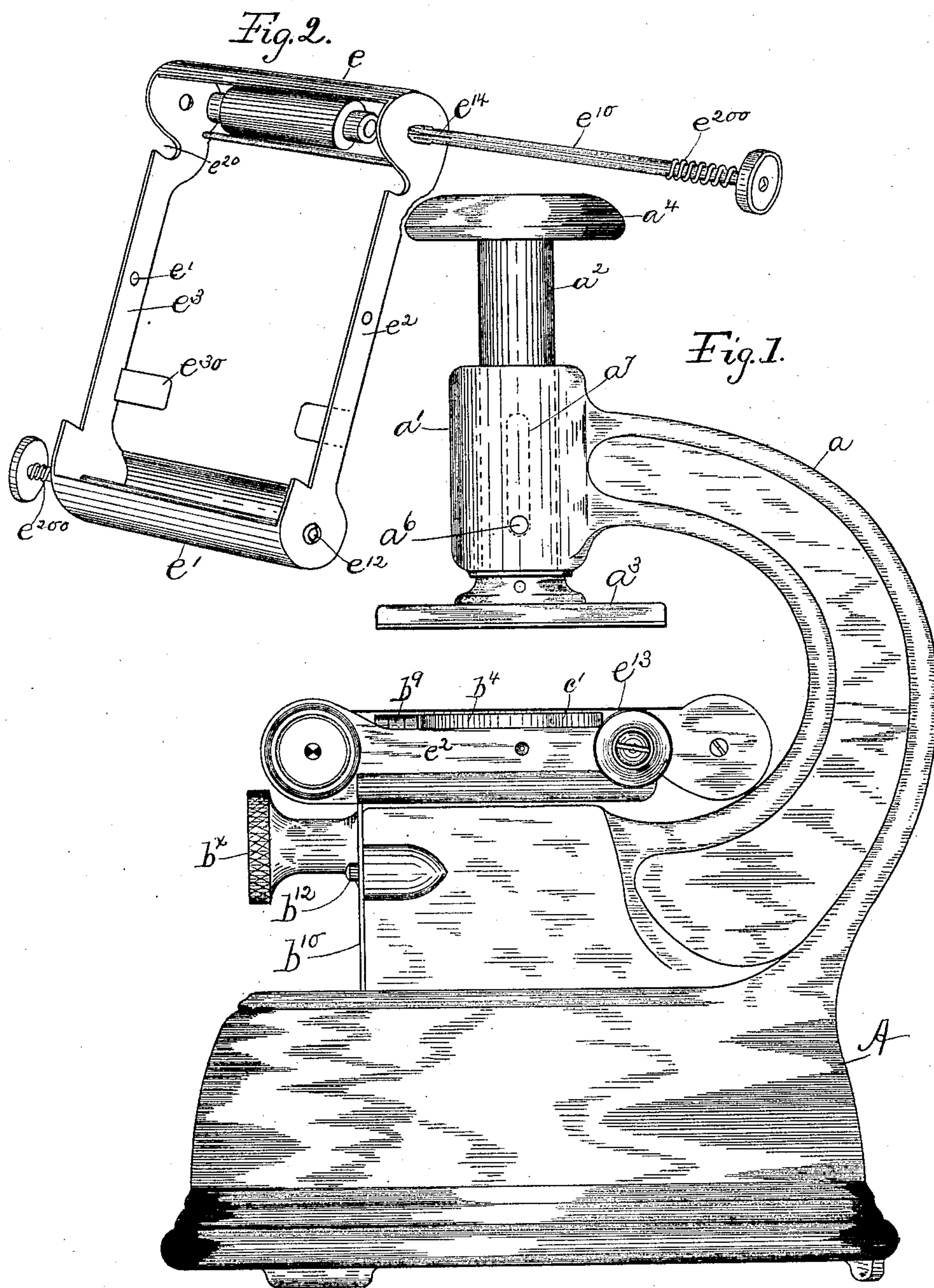
(No Model.)

2 Sheets—Sheet 1.

J. C. WILSON.
AUTOMATIC TIME STAMP.

No. 576,644.

Patented Feb. 9, 1897.



WITNESSES.
J. H. Oestendark.
S. C. Fearing.

INVENTOR.
John C. Wilson
By Jas. H. Churchill
Atty.

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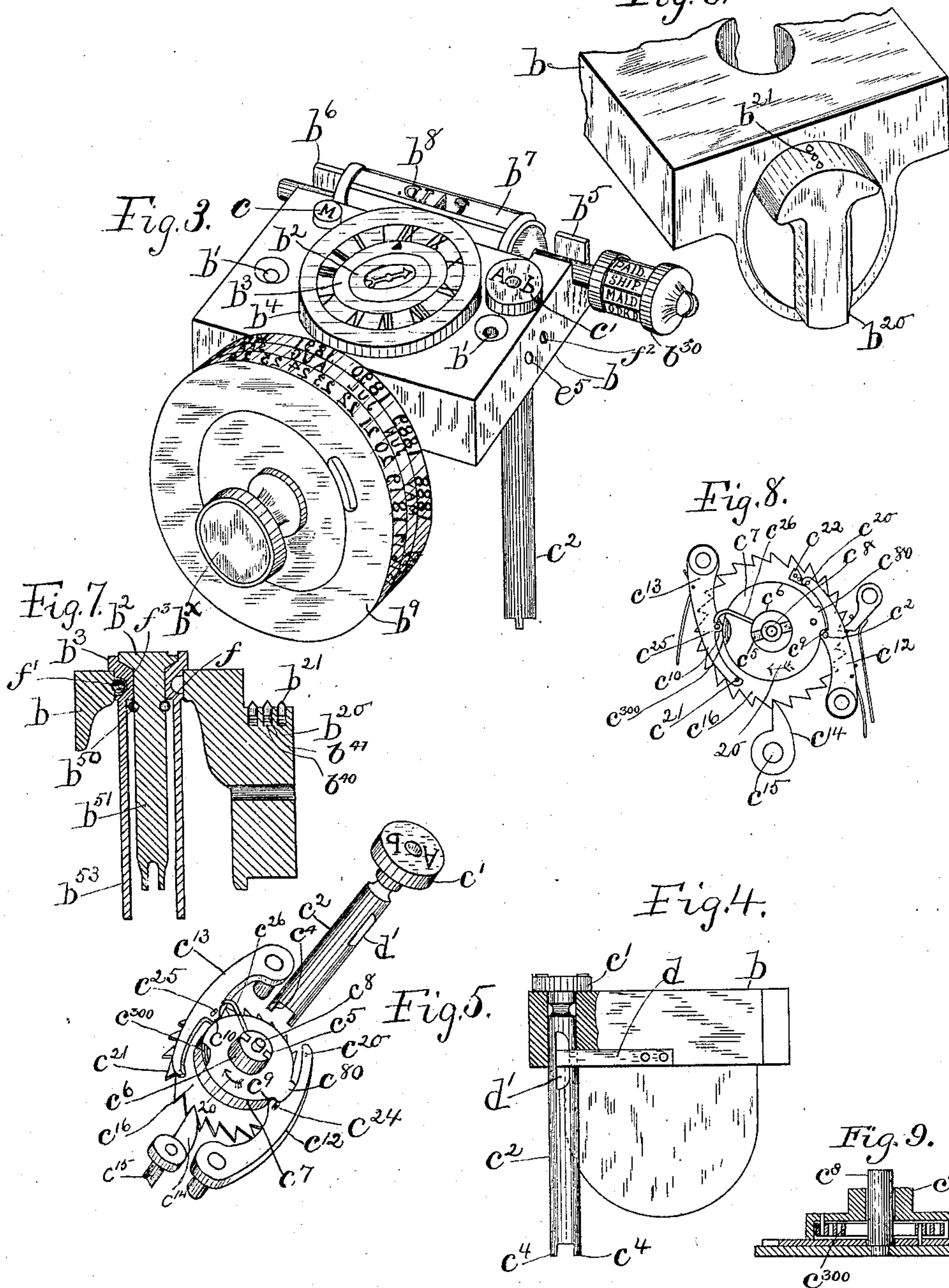
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Fig. 6.



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UNITED STATES PATENT OFFICE.

JOHN C. WILSON, OF BOSTON, MASSACHUSETTS.

AUTOMATIC TIME-STAMP.

SPECIFICATION forming part of Letters Patent No. 576,644, dated February 9, 1897.

Application filed October 19, 1891. Serial No. 409,102. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. WILSON, residing in Boston, county of Suffolk, and State of Massachusetts, have invented an Improvement in Automatic Time-Stamped, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

10 This invention relates to time-stamps of that class known as "automatic" time-stamps, and has for its object to improve, simplify, and cheapen the construction of the same, whereby a more compact and efficient instrument
15 is obtained.

In accordance with my present invention the bed-plate supporting the time-indicating dials or dies is made flat on its upper surface, and the said dials or dies are supported
20 above and rest upon the said surface, whereby boring and countersinking of the bed-plate are obviated and the cost of construction materially lessened.

Another feature of my present invention
25 consists in a novel ribbon-holder which is detachable from the instrument and secured thereon by spring-clips, as will be described.

The bed-plate has secured to it at one end date-indicating devices or disks, and at its
30 opposite end the said bed-plate supports a word-cylinder, thereby greatly economizing in space and obtaining a more compact and simple instrument.

Another feature of my invention consists
35 in providing a locking device for the die or disk marked "A." "P." to indicate "A. M." and "P. M.," whereby the said die cannot be changed by hand from outside the instrument, but is automatically changed by the clock
40 mechanism.

Other features of my invention will be pointed out in the claims at the end of this specification.

Figure 1 is a side elevation of a hand time-
45 stamp embodying my invention; Fig. 2, a perspective view of the ribbon-holder detached from the instrument and inverted; Fig. 3, a detail of the bed-plate and parts carried thereby to more clearly show the construction of
50 the same; Fig. 4, a detail of the bed-plate broken out to show the form of locking device preferred by me; Fig. 5, a modified form

of locking device to be referred to; Fig. 6, a detail of the bed-plate, partially broken out; Fig. 7, a sectional detail to be referred to, 55 and Figs. 8 and 9 details of the mechanism for moving the "A." and "P." die.

The hollow case A, containing the clock mechanism, (not shown, but which may be of any usual or well-known construction,) has
60 cast integral with it the arm *a*, provided with the tubular socket or sleeve *a'*, through which is extended the plunger or rod *a²*, provided at its lower end with the platen *a³* and at its upper end with the handle *a⁴*. The plunger
65 *a²* is guided in the sleeve *a'* by suitable screws or pins *a⁶*, extended into a slot *a⁷* in the plunger and shown by dotted lines in Fig. 1.

The case A supports the bed-plate *b*, (see Fig. 3,) which may be secured thereto by
70 screws. (Not shown, but which are inserted through suitable holes *b'* in the said bed-plate.) The bed-plate *b* is made flat on its upper surface and supports the time dials or
75 dies *b²* *b³* and the ring *b⁴*, on which may be inscribed any desired words, all of the said parts being above the bed-plate and resting thereon, thereby obviating countersinking and boring of the bed-plate to receive the said
80 dies. The time-dials *b²* *b³* are connected to the clock mechanism located within the case A, as now commonly practiced in stamps of this class.

In order to render the instrument as compact as possible, and thereby obtain a neater
85 and more desirable instrument, the bed-plate is provided at one end with extended bearing-arms *b⁵* *b⁶*, having recesses or sockets to receive the journals of a cylinder *b⁷*, provided about its circumference with any desired or
90 suitable words *b⁸*, only one of which is shown, the journals of the said cylinder being extended beyond the sides of the bed-plate and provided with a smaller or auxiliary cylinder
95 *b⁹*, having on its circumference words corresponding to the words on the cylinder *b⁷*, the cylinder *b⁹* constituting an indicating-handle by which the cylinder *b⁷* may be turned to its proper position.

The bed-plate has secured to its opposite
100 end, as by thumb-screw *b^x*, date-indicating disks *b⁹*, there being three herein shown, indicating days, months, and years, respectively. The disks *b⁹* are protected from in-

jury by means of a shield or plate b^{10} , (see Fig. 1,) secured by screws b^{12} to the case A. The bed-plate b has cast integral with it on its front side or face a supporting shoulder or lug b^{20} , having its upper surface made circular and provided with studs or projections b^{21} , fitted into suitable sockets b^{40} in the lug b^{20} and normally forced outward into suitable holes or recesses on the inner circumference of the indicating-disks b^9 by springs b^{41} , located in said sockets, (see Fig. 7,) the said studs serving to hold the said disks in their proper position until positively moved by hand to rearrange or change the indications or dates on the disk, the said disks having on their inner periphery sockets for each date. By turning the disks b^9 by hand the studs b^{21} are forced into their sockets b^{40} and are withdrawn from one set of sockets in the disks and again engaged with another set of sockets in said disks.

By locating the date-indicating disks at one end of the bed-plate and the word-cylinder at the opposite end of the said bed-plate a more compact and neater instrument is obtained.

The bed-plate has rigidly secured to it, preferably on one side of the time-dials $b^2 b^3$, a die c , (marked "M,") and on the opposite side of the time-dials the said bed-plate supports a die c' , (marked "A. P.,") the latter die being provided with a preferably hollow stem or sleeve c^2 , which is extended loosely through the bed-plate and is connected to the clock mechanism so as to be carried through half a revolution once in twelve hours. The sleeve c^2 , as herein shown, is provided at its lower end with lugs or ears c^4 , adapted to enter slots c^5 in a hub c^6 on a disk or plate c^7 , secured on a shaft c^8 , geared to the clock mechanism to make half a revolution once in twelve hours, as described.

The disk or plate c^7 is provided with a lug or projection c^{80} , adapted to engage shoulders or teeth $c^9 c^{10}$ on locking-pawls $c^{12} c^{13}$. The lug c^{80} engages the tooth c^9 on the locking-pawl c^{12} and prevents the disk c^7 being revolved to change the die c' until the said pawl is disengaged from the projection or lug c^9 . This disengagement is effected by a pawl c^{14} (see Fig. 8) on the minute shaft or arbor c^{15} of the clock mechanism, which at every complete revolution of the minute-hand engages a tooth of the ratchet-wheel c^{16} , loose on the shaft c^8 and having connected to it one end of a spring c^{300} , coiled about the shaft c^8 , and having its other end connected to the disk c^7 , as shown in Fig. 9.

The ratchet-wheel c^{16} is rotated tooth by tooth, and, the disk c^7 being held stationary by one of the locking-pawls—as, for instance, the pawl c^{12} —the spring c^{300} is wound up, so that when the locking-pawl c^{12} is disengaged from the lug c^{80} the said spring will revolve the disk c^7 with substantially great velocity until the lug c^{80} engages the tooth c^{10} on the locking-pawl c^{13} . In order that the disengage-

ment of the locking-pawls $c^{12} c^{13}$ from the lug c^{80} may be made more positive and this portion of the apparatus made more reliable in operation, the locking-pawls $c^{12} c^{13}$ are made long and curved to substantially conform to the circular shape of the ratchet-wheel c^{16} , and the said pawls have secured to them at their ends depending pins $c^{20} c^{21}$, which are engaged by a cam c^{22} , fast on the surface of the ratchet-wheel c^{16} , the teeth $c^9 c^{10}$ being located substantially near the middle of the said pawls.

The pawls $c^{12} c^{13}$ may be provided with pins $c^{24} c^{25}$ on their upper surface to be engaged by an arm or hook secured to the hub c^6 , the said arm or hook being shaped to permit it to pass by the pins $c^{24} c^{25}$ when the hub c^6 and its disk c^7 are moved in one direction, as, for instance, in the direction indicated by arrow 20, Figs. 5 and 8, but which will engage the pins when moved backward or in the direction opposite to that indicated by arrow 20.

In order that the die may not be deranged or put out of position by hand, as might occur by careless handling, I have provided a locking device for the same. The locking device preferred by me consists of a bar or pawl d , secured to the bed-plate and engaging teeth or notches d' on the sleeve or stem; but I do not desire to limit my invention in this respect, as the hook c^{26} may form the locking device.

The bed-plate b has secured to it, as will be described, a ribbon carrier or holder, (shown separately in Fig. 2,) consisting of two substantially cylindrical housings or end pieces $e e'$, connected together by side bars or pieces $e^2 e^3$. The side bars or pieces are preferably integral with the cylindrical housings and are made substantially thin to give resilience to them, so that the said side bars may form spring-clips, which fit over and embrace the sides of the bed-plate and secure the ribbon-holder in place upon the said bed-plate. The side pieces $e^2 e^3$ are preferably provided on their inner sides with locking projections e^4 , (see Fig. 2,) which enter suitable indentations or recesses e^5 in the side of the bed-plate when the said ribbon-holder is sprung over the bed-plate. The ends of the cylindrical housings form bearings for shafts $e^{10} e^{12}$, upon which the ends of the ribbon e^{13} are wound, and one or both shafts are preferably split at their ends, as at e^{14} , so that when the shafts are fitted into place they are retained against accidental displacement by the spring action of the split end of the shaft, the split portion springing apart against the sides of the hole in the end of the housing through which they are inserted. The shafts are provided with springs e^{200} , which encircle them and serve to keep the ribbon under tension. The ribbon-holder is readily detachable as one piece, and in order to permit it to be applied to the bed-plate herein shown the sides $e^2 e^3$ are provided near one end with notches or recesses e^{20} on their under sides, which embrace the journals of the cylinder b^7 , and

thereby permit the ribbon-holder to be applied to the bed-plate so that the upper surfaces or edges of each are substantially flush with the top of the bed-plate. The ribbon being wholly secured within the holder enables a considerable amount of time and work to be saved in replacing an old ribbon by a new one.

The side pieces of the holder have preferably secured to or forming part of them lugs or ears e^{30} , which act as rests or supports for the ribbon.

In order to more effectually secure the time dial or die b^2 within the dial or die b^3 and thereby avoid danger of the die b^2 becoming disconnected from the clockwork, as might happen from careless handling, in which the machine might be turned upside down, I have provided the die b^2 with a locking device consisting of a spring ring or collar b^{50} , which is forced over the stem b^{51} of the die b^2 after the said stem has been inserted into the sleeve b^{53} of the die b^3 , the said ring or collar fitting into an annular groove on the stem b^{51} , immediately below a shoulder on the sleeve b^{53} , and forming an annular shoulder on the said stem, which because of the shoulder on the sleeve b^{53} prevents the stem from dropping out of the sleeve b^{53} . The die b^3 is locked to the bed-plate by a pin f' , (see Fig. 7,) extended through a hole f^2 in the bed-plate and through a semicircular recess f^3 in the shank or stem of the said die.

I claim—

1. In a time-stamp, the combination with a hollow case, a bed-plate supported thereby, a die c secured to the bed-plate, a movable die c' having the letters "A.," "P.," means to rotate said die in one direction and consisting of a ratchet-wheel provided on its surface with a cam, a shaft on which said ratchet-wheel is loosely mounted, a disk loose on said shaft and adapted to be engaged with the stem of the movable die c' , a projection on said disk, holding-pawls to cooperate with the projection on the said disk and disengaged therefrom by the cam on the ratchet-wheel, and a spring secured to the said ratchet-wheel and to the said disk to turn the latter when released from its holding-pawl, substantially as described.

2. In a time-stamp, the combination of the case A, the arm a attached thereto, and the plunger a^2 , an attached platen movably supported by said arm, of the bed-plate b , having at its front end the disk-supporting shoulder b^{20} integral with it, and provided at its rear end with arms $b^5 b^6$, time-indicating dials

$b^2 b^3$ resting upon the upper face of the bed-plate, indicating-disks b^9 supported on the shoulder b^{20} at one end of the bed-plate, and an indicator supported by the arms $b^5 b^6$ at the opposite end of the bed-plate, substantially as described.

3. In a time-stamp, the combination with the bed-plate b provided with recesses in its sides, of a detachable ribbon-holder consisting of housings for the shafts upon which the ribbon is wound, and spring-clips or side pieces connecting said housings and provided on their inner face with projections which enter the recesses in the sides of the bed-plate, substantially as described.

4. In a time-stamp, the combination with the plate b provided at one end with arms for supporting the shaft of an indicating-cylinder, of a detachable ribbon-holder consisting of housings for the reception of shafts upon which the ribbon is wound, and spring-clips or side pieces to embrace the sides of the bed-plate and provided with notches or recesses for the reception of the journals of the said cylinder-shaft, substantially as described.

5. In a time-stamp, the combination with a bed-plate, the "A." and "P." die c' provided with a stem extended through said bed-plate, a disk c^7 to which said stem is connected, a projection c^{80} on said disk, a shaft c^8 on which said disk is mounted, a ratchet-wheel c^{16} loose on said shaft, a spring secured to said disk and ratchet-wheel, curved levers $c^{12} c^{13}$ provided substantially near their middle with teeth $c^9 c^{10}$ to engage the projection c^{80} , depending pins on the ends of the said levers, and a cam on the ratchet-wheel to engage the depending pins and release the levers from engagement with the projection c^{80} , substantially as described.

6. In a time-stamp, the combination with the bed-plate, of the indicating-dial b^3 resting on the bed-plate and provided with the sleeve b^{53} extended through the said bed-plate and having the shoulder f , and the dial b^2 having the stem b^{51} inserted into the sleeve b^{53} , of a locking device for the dial b^2 consisting of the ring fitted upon the said stem and cooperating with the shoulder f , substantially as described.

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

JOHN C. WILSON.

Witnesses:

JAS. H. CHURCHILL,
SADIE C. FEARING.