

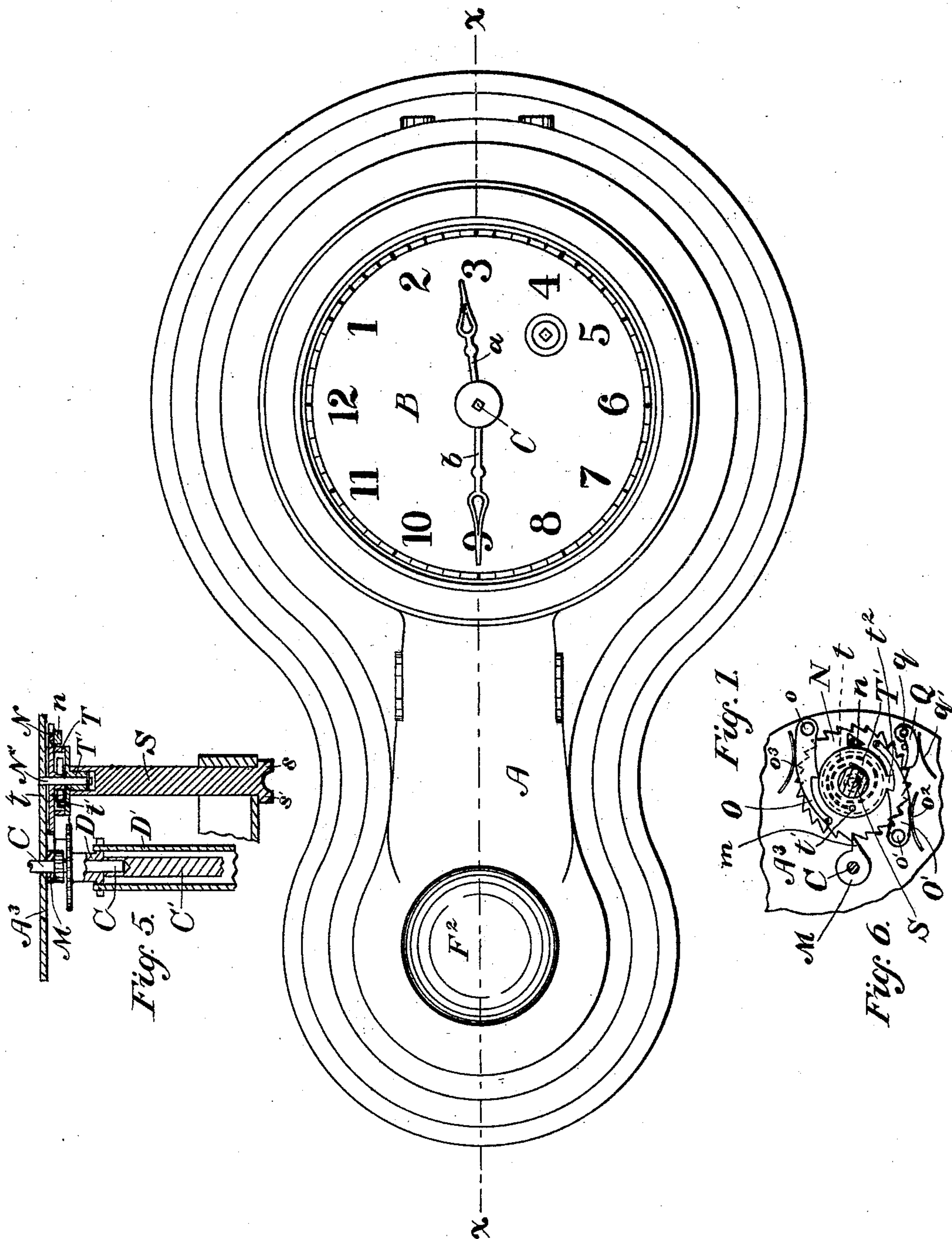
(No Model.)

3 Sheets—Sheet 1.

J. C. WILSON.
TIME STAMP.

No. 527,918.

Patented Oct. 23, 1894.



Witnesses

Albert E. Leach
E. H. Gilman.

Inventor

John C. Wilson
by W. B. H. Dows,
Atty.

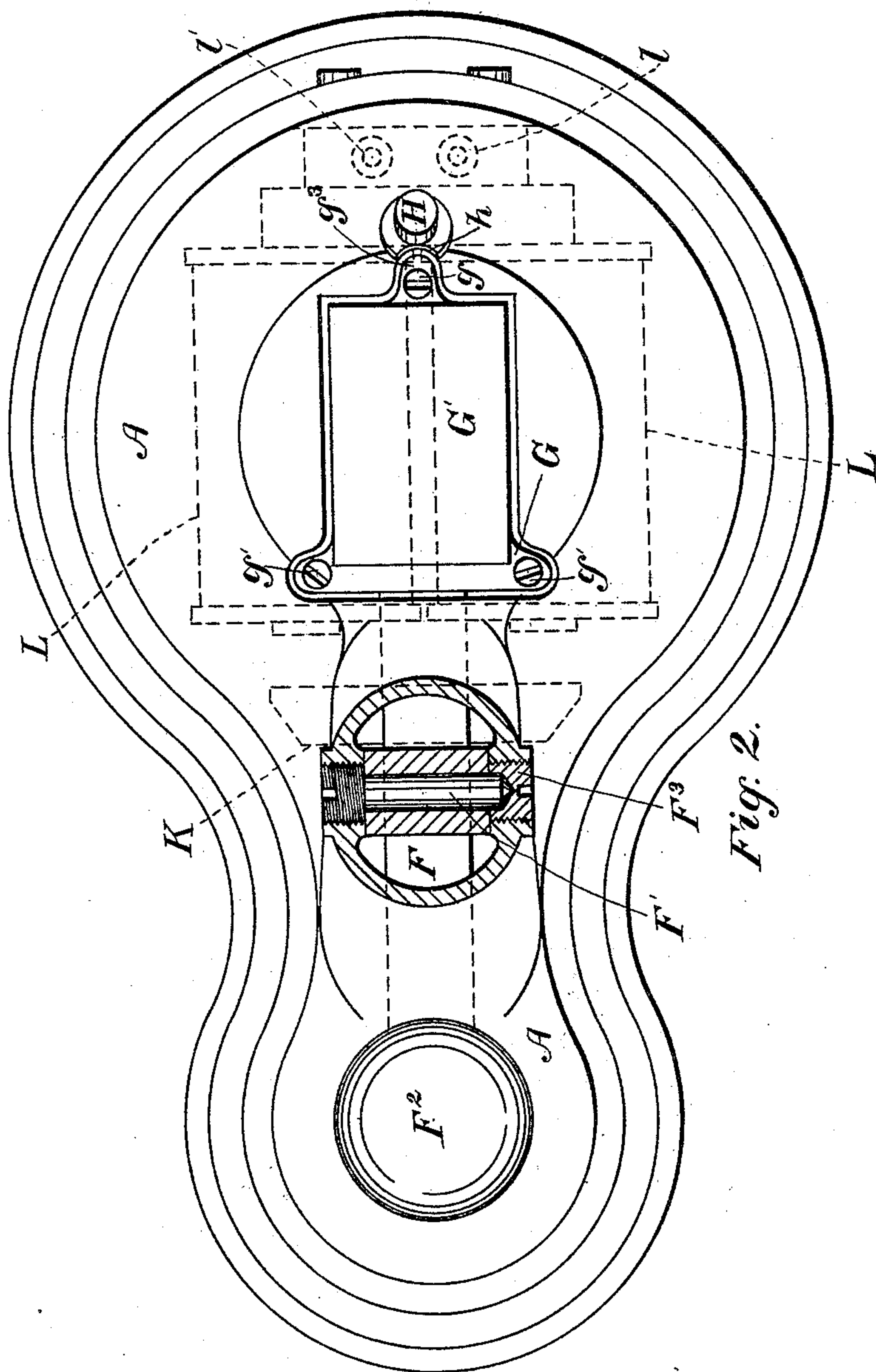
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O. N. Gilman

Inventor
John C. Wilson
by Mrs. N. D. Dows
Atty.

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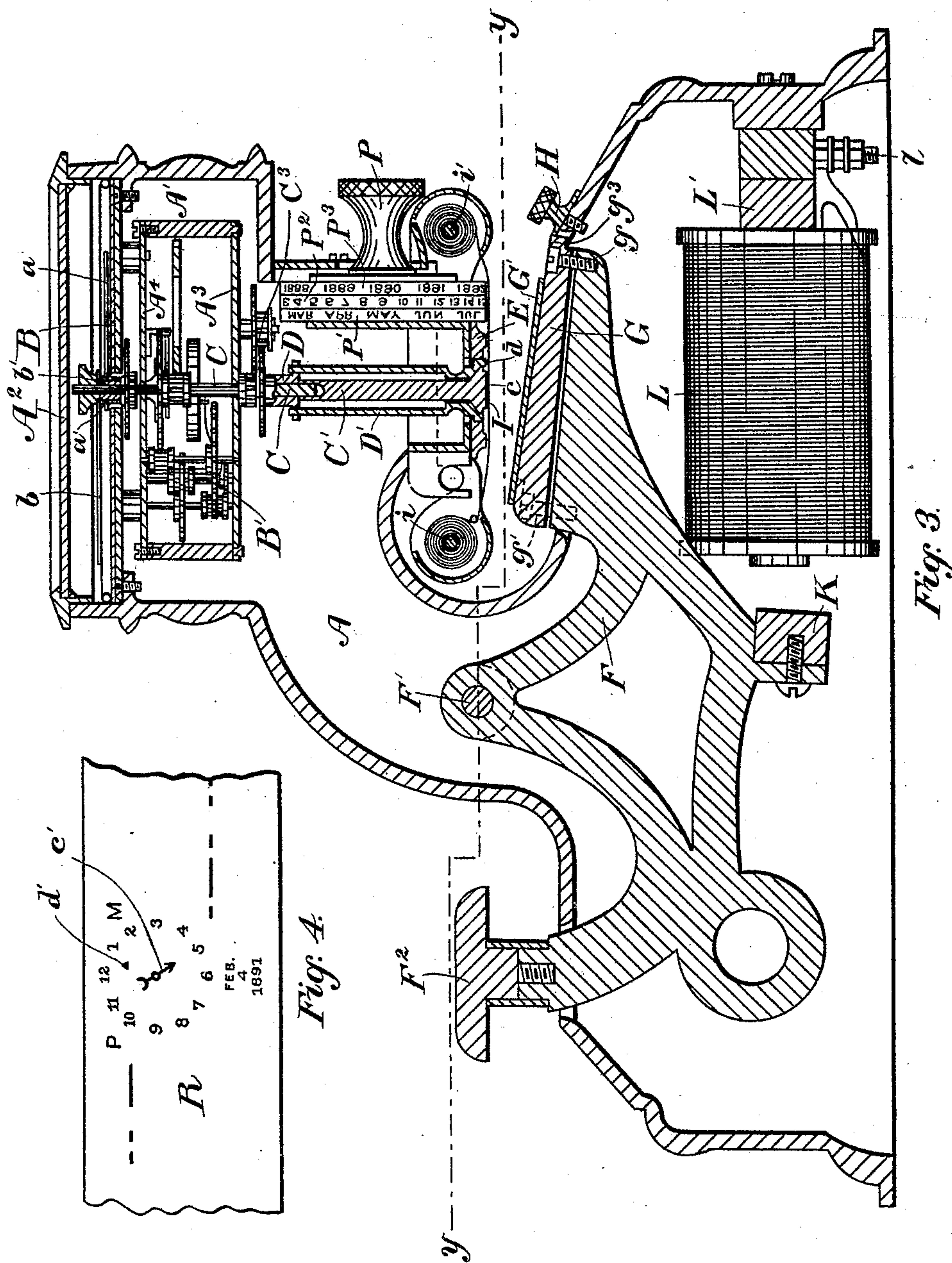


Fig. 3.

Fig. 4.

Witnesses

Albert E. Leach
E H Gilman

Inventor

John C. Wilson
by ~~Wm. A. Brown~~
Atty:

UNITED STATES PATENT OFFICE,

JOHN C. WILSON, OF BOSTON, MASSACHUSETTS.

TIME-STAMP.

SPECIFICATION forming part of Letters Patent No. 527,918, dated October 23, 1894.

Application filed June 17, 1891. Renewed March 24, 1894. Serial No. 505,015. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. WILSON, a citizen of the United States, residing at Boston, in the county of Suffolk and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Time-Stamped, of which the following is a full specification.

My invention consists of certain improvements in apparatus for registering automatically upon a paper or document the exact time at which any transaction occurs, as, for instance, the arrival, delivery, or sending away of a message, telegraph or signal, the arrival or departure of an employé, the signing of a paper, &c.

My object is to produce a timestamp which prints a fac-simile of the clock dial showing both the hour and the minute at which the stamping was done, and moreover, to so arrange the mechanism as to present a continuously visible time indicating clock dial and hands at the top of the apparatus, the hands moving in unison with the printing dies, whereby the operator or an attendant can at any time see at a glance the exact time both as to the hour and the minute at which the stamping takes place.

My improved apparatus is so constructed that the stamping may either be done by hand or automatically through the agency of an electro magnet and connecting circuit whereby a telegraphic message or signal transmitted from a distance may be automatically stamped to show the time it was received.

The clock work which moves the hour and minute hands of the clock dial exposed to view at the top of the apparatus also moves the printing dies for the hour and minute hands in the plane of the opposite or printing dial which points downward, the whole arrangement being such that the position of the hour and minute printing dies with relation to the printing dial must, at all times coincide absolutely with the position of the hour and minute hands with relation to the exposed clock dial at the top of the apparatus. The position of the printing dial and hour and minute printing dies is such that in stamping, the impression is made on the top surface of the document, paper or card inserted in the machine, so that the said impression is readily visible without reversing

the document paper or card afterward. I, moreover, employ dies for printing "A. M." or "P. M." at the same impression that prints the hour and minute, showing thus the period of the day at which the impression is made. At twelve o'clock, "A. M." changes automatically to "P. M." or vice versa, as the case may be.

Any desired words may be printed in addition to the clock dial and time indicator as for example, the day of the month, the month and the year, "Received" "Forwarded," &c.

Referring to the accompanying drawings, Figure 1 is a top plan view of my improved apparatus. Fig. 2 is a sectional view on *yy*, Fig. 3. Fig. 3 is a section taken in the plane of *xx*, Fig. 1. Fig. 4 shows the impression made by the stamp. Fig. 5 is a sectional view showing in detail the mechanism for changing "A. M." to "P. M." and vice versa, and Fig. 6 is a plan view partly in section of the parts shown in Fig. 5.

A is the case which incloses the working parts of my apparatus, this case being preferably cast in one piece consisting of a large base portion which contains the platen-actuating mechanism, a curved neck supporting the head A' of the case, which head contains the clock movement, and a part depending from said head in which are contained the time printing dies, &c.

The frame containing and supporting the clock movement is fastened in any desired manner within the head A' of the case. A³ and A⁴ are the bottom and top plates of this frame and B' represents part of the clock train which gives motion in the ordinary manner to the hour and minute hands *a b* respectively.

B is the clock dial which with the hands *a* and *b* is continuously exposed to view at the top of the apparatus, the cover containing the glass plate A² being preferably removable so as to allow the clock to be wound and the hands to be set.

C is the minute shaft of the clock movement which has frictionally held thereon the upper knob which bears the minute hand *b*. This shaft C extends downward below the plate A³, and to its lower end is attached the shank C' of the minute printing die *c*, which turns with the shaft C.

C^3 is a train which conveys motion from a gear on the minute shaft C to a gear on a sleeve D embracing the minuteshaft, so that the sleeve D revolves in unison with the hour hand. This hour hand a is supported on a removable sleeve a' which is frictionally held on the sleeve b' in the usual manner.

D' is the shank of the hour printing die d , the said shank being a sleeve attached to the sleeve D so as to turn therewith outside of the minute printing die c .

E is the printing dial pointing downward through the center of which protrudes the hour printing die d , in which is centrally held the minute printing die c these two dies being properly supported against anything tending to displace them laterally. The construction and arrangement are such that both the hour and minute printing dies revolve in unison with the hour and minute hands respectively, these dies and printing dial being in such a position as to give an even impression upon a platen which strikes against them.

P' P^2 P^3 are word cylinders which as herein shown contain the names of the months, the days of the month and the years respectively thereon which cylinders by means of the operating handle P may be set at any date to print said date at the same impression with the time.

I is an inking ribbon held upon the spools i i' in such a manner that it passes under the printing dial, hour and minute dies and word cylinders.

The impression c' made by the minute printing die c is preferably in the form of a pointer turning around a pivot which is coincident with the center of the printing dial.

The impression d' made by the hour printing die d is preferably a dot or spot which as here shown is triangular. The relative position of the marks c' and d' to the dial figures on the printed impression readily indicate the time at which the stamping was done.

The dies printing the "A. M." and "P. M." will next be explained.

The die containing the letter "M" is stationary and is not shown.

S (see Figs. 5 and 6) is an arbor containing at its lower end a die s s' containing the letters "A" and "P." This arbor is secured to the bottom T' of a drum T which turns on the stationary pin N' fixed in the plate A^3 .

N is a ratchet wheel containing twenty-four teeth mounted to turn loosely on the pin N' and connected by means of the spring t with a pin t' fixed to the drum T T' , so that as the ratchet N turns it has a tendency to drag with it the said drum.

M is a cam wheel fixed on the minute shaft C the projection m of which cam wheel at each revolution of the minute shaft engages with a tooth on the ratchet wheel N and moves it a distance of one tooth. The bottom T' of the drum T has a projection t^2 which is normally locked against a seat on

one of the pawls O O', the said pawls being pivoted at o and o' respectively and pressed constantly inward by means of the springs o^3 o^2 respectively. As the ratchet N turns a tooth at a time, it winds up the spring t more and more, the ratchet being prevented from turning backward by means of the detent Q pivoted at q and pressed inward by means of the spring q' .

n is a projection on the outer face of the ratchet wheel N so placed as to engage with the end of each pawl O O' when it comes opposite the same.

The parts are so arranged that when the clock indicates the hour of twelve, the projection n will engage with the end of one or the other of the pawls O O', being the one which at the time holds the projection t^2 on the drum T T' . When the projection n engages, say with the pawl O' it presses the pawl outward releasing the drum T T' which under the influence of the spring t moves the said drum half around until the projection t^2 engages with and is held by the seat on the opposite pawl O, where it remains until the projection n on the intermittently moving ratchet N comes in contact with the end of the pawl O, when the drum T T' is again released, making a half revolution back to the pawl O' as before and so on. As the drum T T' revolves half round it carries with it the arbor S and the die s s' , so that each time the clock reaches the hour of twelve the said die turns automatically presenting the letter "P" instead of the letter "A," or vice versa. The letters "A" and "P" are so arranged on the die that but one of them is covered by the printing ribbon at a time, viz:—the one that at the time is nearest the printing dial E.

G is the platen preferably bearing on its top surface the pad G' on which is placed the document, card or paper to be printed.

g g' are regulating screws by means of which the platen may be "trued up."

The platen G is borne on the forward arm of a single lever F pivoted at F' to the casing A, the end of the other arm of the lever F passing outside of the casing A and being furnished with a knob F^2 whereby the platen may be moved upward against the printing dies by a blow of the hand.

L L' is an electro magnet which forms part of an electric circuit. K is the armature of this magnet fixed to the lever F in such a position that when the circuit is closed the platen is moved quickly upward against the printing dies by the attraction of the armature K to the poles of the magnet. The lever F is so balanced that when the electric circuit is open, or when the hand is off the knob F^2 the platen G is at a proper distance from the printing dies. It will thus be seen that the stamping may either be done by hand or automatically through the electric circuit at any distance from the apparatus.

The forward end of the platen has the projection g^3 , the case being provided with the

thumb stop H, the disk of which has a recess h corresponding to the projection g^3 so arranged that when the recess h is opposite the projection g^3 , the platen may be moved freely up or down, but when the platen is lowered below the opening in the case A and the stop H is so turned that the recess is not opposite the projection g^3 the platen cannot be raised, but is kept at some distance from the printing dies. This is to prevent the platen from accidentally being brought up against the inking ribbon, which would soil the pad or back G', if no card or paper is thereon to be printed.

15 R, Fig. 4, represents a telegraphic signal message stamped by my improved apparatus showing it to be received at 12.25 p. m.

I claim—

1. In a time stamp a continuously visible time indicating clock dial in combination with a printing dial directly opposed thereto, a revoluble shaft at right angles to said dials provided with time indicating hands and time printing dies traversing respectively said clock and printing dials and suitable actuating mechanism, substantially as described.

2. In a time indicating and time printing clock mechanism, the combination with the minute shaft of two hour sleeves concentric therewith and arranged one on each end of said shaft the said minute shaft and the said hour sleeves co-operating with and controlling minute and hour printing dies at or near one of its ends, and minute and hour indicating hands at or near its other end, substantially as described.

3. In a time printing and time indicating mechanism, a time train and separate concentric hour and minute time indicators or hands situated on one side of the said time train and moved and controlled thereby, in combination with separate concentric hour and minute time printing dies situated on the other side of the said time train and

moved and controlled thereby in unison with said hour and minute indicators or hands, and directly opposed thereto, substantially as described.

4. In a time indicating and time printing clock mechanism a continuously visible clock dial, hands traversing said clock dial, a printing dial and hour and minute printing dies in combination with mechanism for actuating said hands and dies, the cam wheel M movable in unison with the minute printing die and provided with the projection m , the ratchet wheel N actuated by the said cam and provided with the projection n , the drum T T' concentric with said ratchet wheel, said drum being provided with the projection t^2 , spring connection t spring pawls O O' engaging with said projection t^2 , the detent Q, and a movable die connected with the drum T T' and provided with the letters "A" and "P" all arranged and operating, substantially as and for the purposes described.

5. In a time stamp the combination with time printing dial and dies of a simple lever fulcrumed in the casing of the apparatus bearing at one end a platen movable against said dial and dies, and provided at the other end with a knob, an electro magnet and circuit, and an armature secured to said lever, substantially as described.

6. In a time stamp a continuously visible time indicating clock dial in combination with a printing dial lying in a plane parallel to that of said clock dial, but opposed thereto, time indicating hands and time printing dies traversing respectively said clock and printing dials and suitable actuating mechanism, substantially as described.

In witness whereof I have hereunto set my hand.

JOHN C. WILSON.

Witnesses:

WM. B. H. DOWSE,
ALBERT E. LEACH.