(No Model.) 5 Sheets—Sheet 1.

J. V. HULSE, Jr.

TIME STAMP.

No. 457,279. Patented Aug. 4, 1891.

Fig. I.

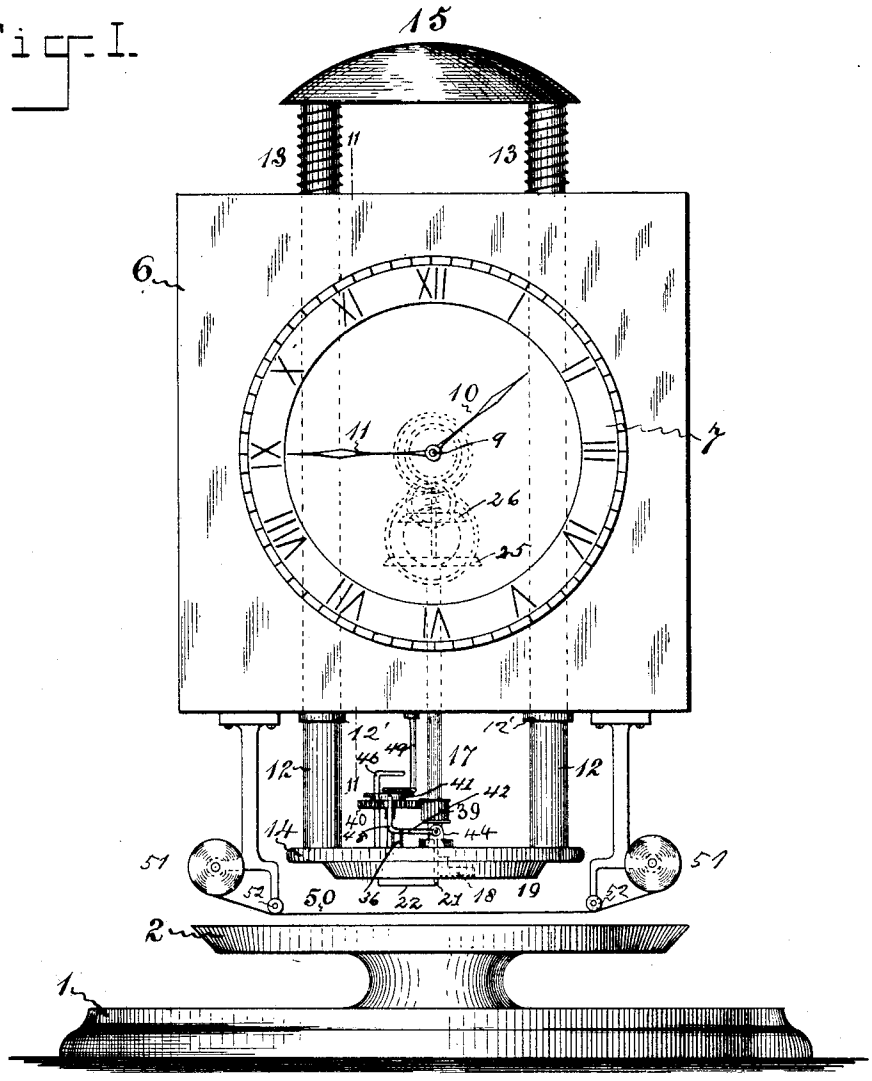
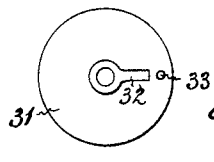


Fig. VI.



Witnesses

Lillie Hunter

Frank Guile

Inventor

Jas. V. Hulse Jr.

By Knight Bros

Attys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 5 Sheets—Sheet 2.

J. V. HULSE, Jr.

TIME STAMP.

No. 457,279. Patented Aug. 4, 1891.

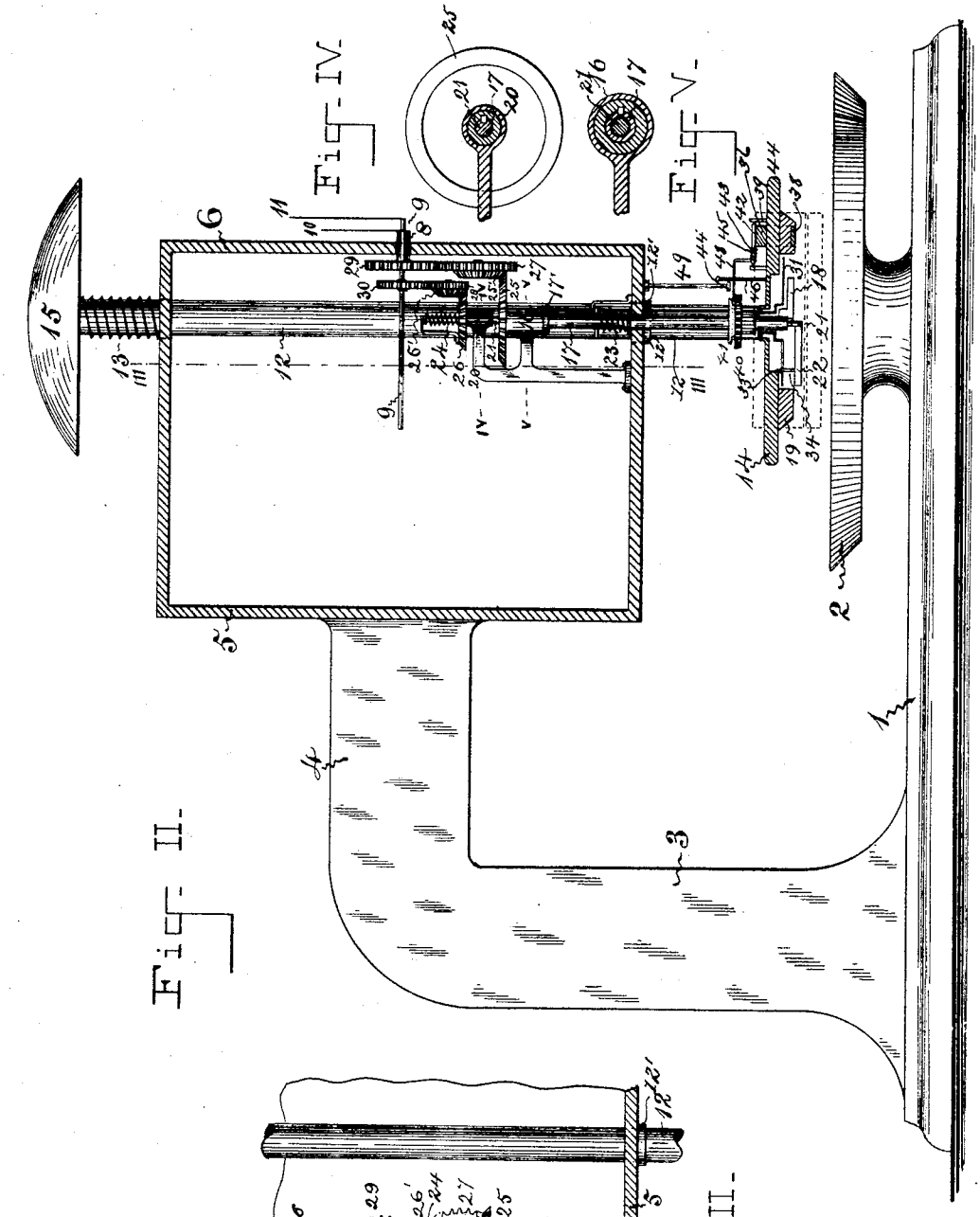


Fig. II.

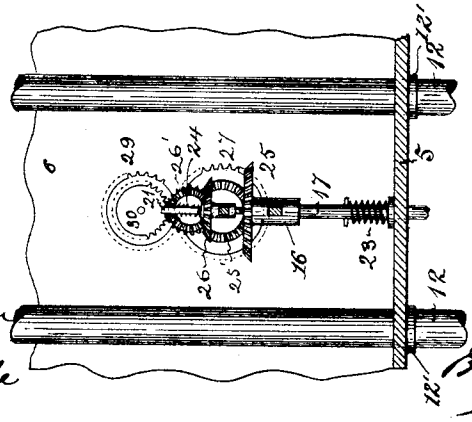


Fig. III.

Witnesses

Lillie Hanna

Frank Gude

Inventor

Jas. V. Hulse Jr.

By Knight Bros

Attys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.)

5 Sheets—Sheet 3.

J. V. HULSE, Jr.

TIME STAMP.

No. 457,279. Patented Aug. 4, 1891.

Fig. VII

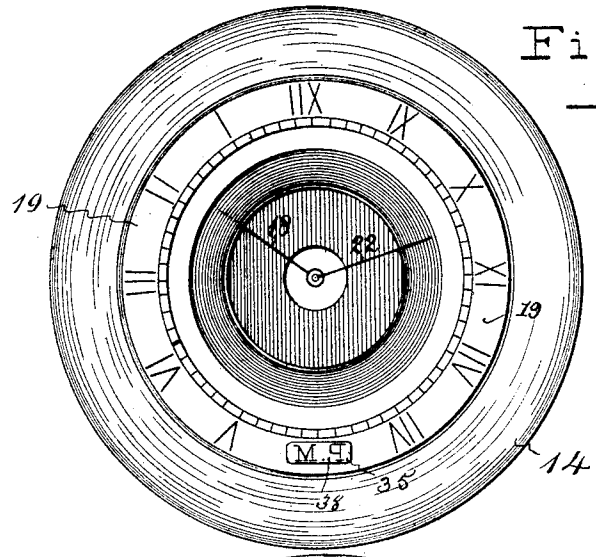


Fig. VIII.

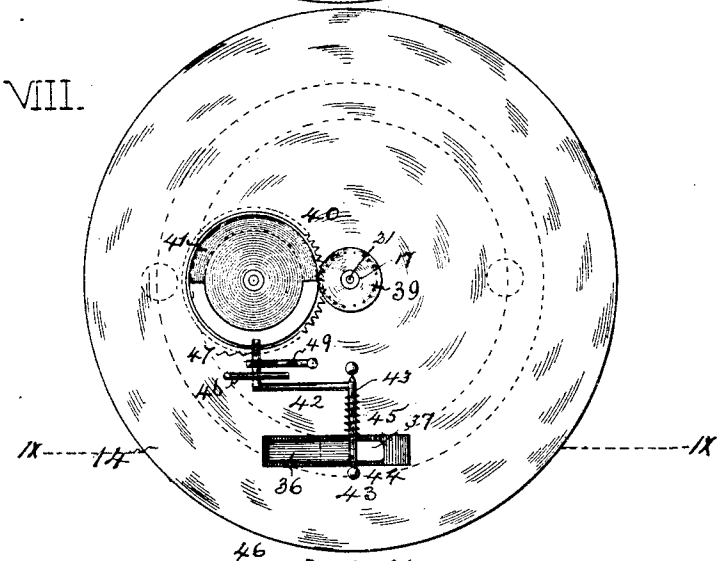


Fig. IX.

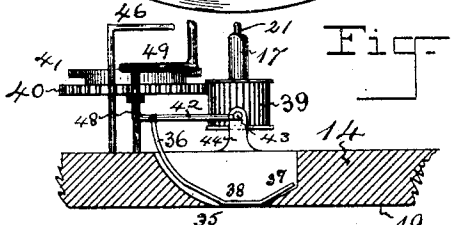
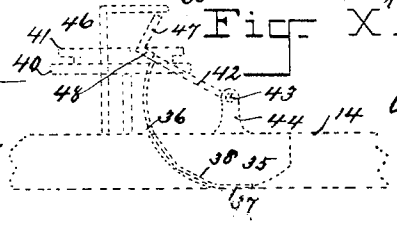


Fig. X.



Witnesses

Lillie Hanna

Frank Seule

Inventor

Jas. V. Hulse Jr.

By Wright Brown & Quinby

Attys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 5 Sheets—Sheet 4.

J. V. HULSE, Jr.

TIME STAMP.

No. 457,279. Patented Aug. 4, 1891.

Fig. XI.

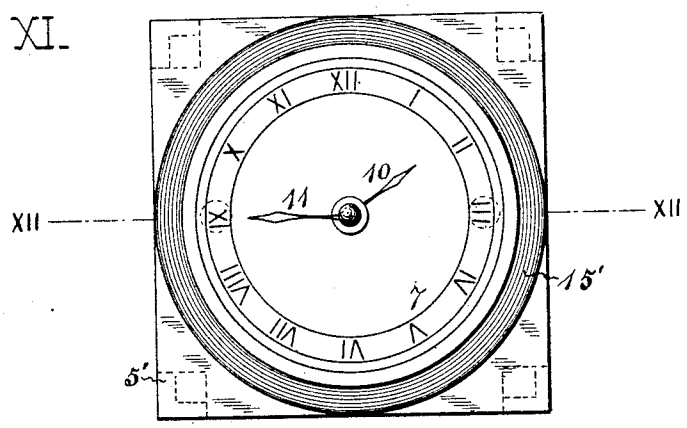
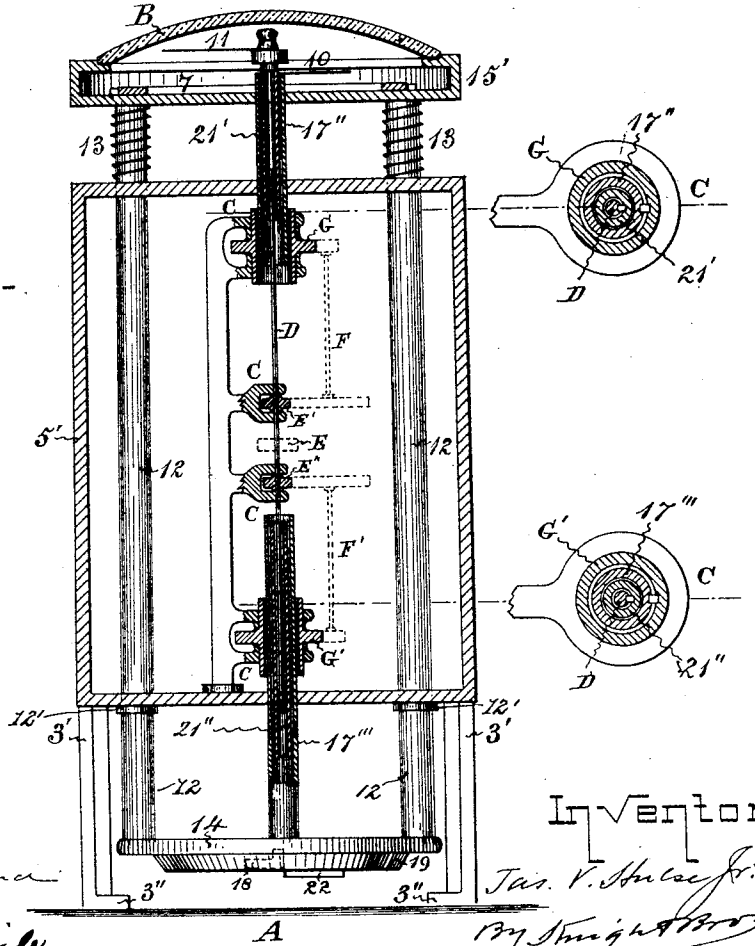


Fig. XII.



Witnesses

Lillie Hanna

Frank Smith

Inventor

Jas. V. Hulse Jr.

By Knight Bros

Attys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 5 Sheets—Sheet 5.

J. V. HULSE, Jr.

TIME STAMP.

No. 457,279. Patented Aug. 4, 1891.

Fig. XV.

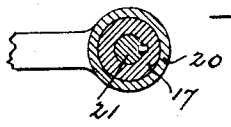


Fig. XVI.

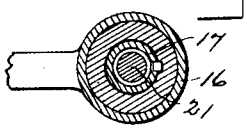


Fig. XIV.

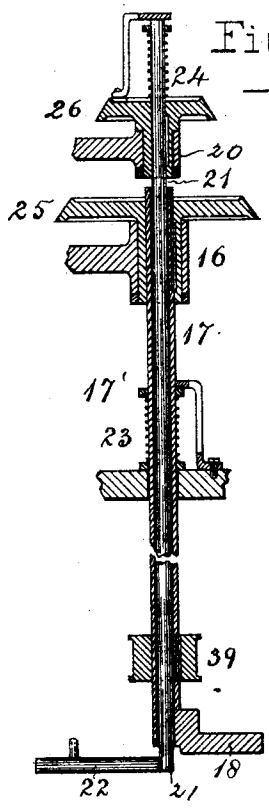


Fig. XIII.

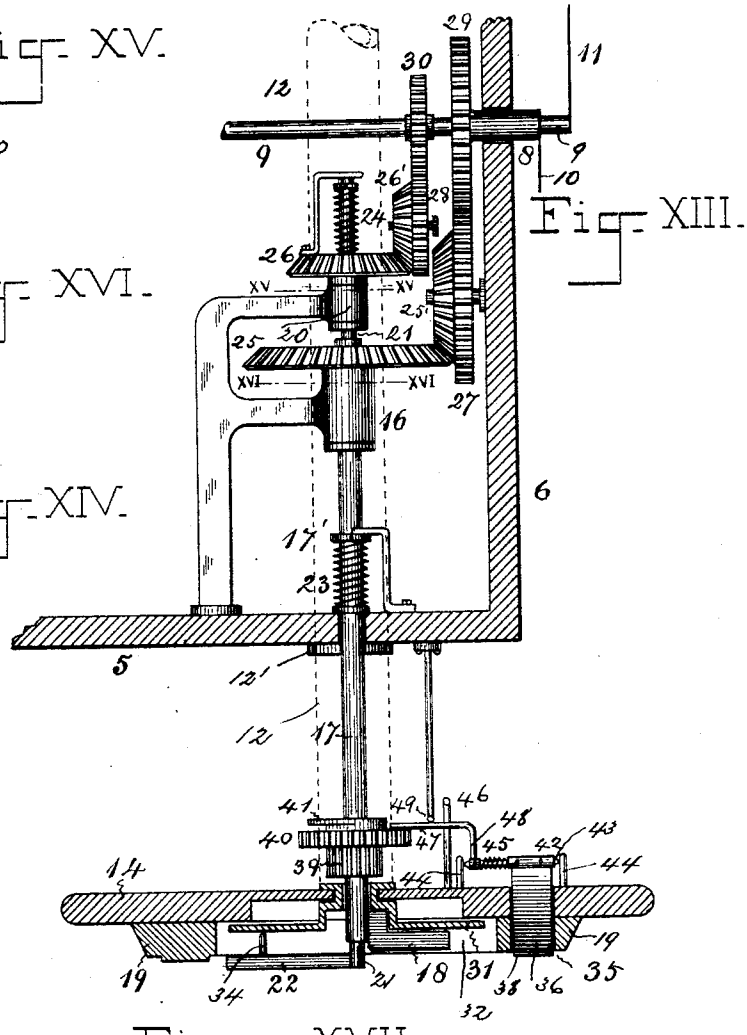
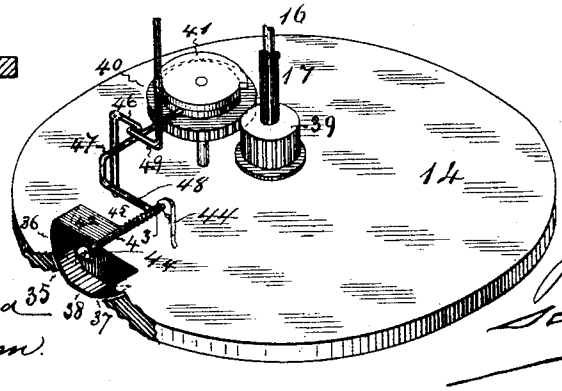


Fig. XVII.



Witnesses

Silke Hamm

Chas. Mumm.

Inventor

Jno. V. Hulse Jr.

By Munn & Co

Attys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JAMES V. HULSE, JR., OF BROOKLYN, NEW YORK.

TIME-STAMP.

SPECIFICATION forming part of Letters Patent No. 457,279, dated August 4, 1891.

Application filed March 9, 1891. Serial No. 384,305. (No model.)

To all whom it may concern:

Be it known that I, JAMES V. HULSE, Jr., a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Time-Stamps, of which the following is a specification.

My invention relates to a device for imprinting or stamping a record of the hour and minute from a special dial, which constitutes a printing-type—that is to say, one having in relief symbols or characters indicating the hours from I to XII, inclusive, but reversed, so as to imprint in the direct order on the document or paper to be so marked, and two types representing the hour and minute hand, respectively, which are caused to rotate from right to left around the face of the dial-type by bevel-gear connection with the clock-movement. The dial and each type-hand are independently upheld to their normal position by springs and are capable of being at any instant depressed, as hereinafter explained. In order to enable such depression to be made without ungearing the connection, yet without disturbing the mechanism of the time-piece, each type-shaft is feathered within the bevel-wheels, by which it is geared to the corresponding shafts of the hour and minute hands of the clock. Inasmuch as once during each sixty-five minutes the hour and minute hands, and consequently the type-hands, are coincident, I provide means whereby at this juncture the hour-hand type is made capable of yielding, so as not to interfere with the imprinting of the minute-hand type, which then does service for both. A special device is also provided whereby the type-dial is during twelve hours made to imprint "A. M.," and during the next twelve hours is made to imprint "P. M.," and so on alternately.

A suitable ribbon is provided for enabling a depression of the type members to imprint visible marks on the document.

In the accompanying drawings, Figure I is a front elevation of a clock or time-piece provided with my time-stamping device. Fig. II is a section on the line II II. Fig. III is a section on the line III III. Figs. IV and V are enlarged sections on lines IV IV and V V, respectively. Fig. VI is a plan of the radially-slotted depressing-plate. Fig. VII is an under side view of the type members and their holding plate or bed. Fig. VIII is a top view of said bed and of the A. M. and P. M. mechanism. Fig. IX is a section on the line IX IX. Fig. X is a dotted representation of the same mechanism shown in Fig. IX, the parts being in position for printing "A. M." Fig. XI is a top view of a modification of my invention. Fig. XII is a section on the line XII XII. Figs. XIII and XIV are enlarged sections in the same plane as section Fig. II. Figs. XV and XVI are sections on the lines XV and XVI, respectively, Fig. XIII. Fig. XVII is a perspective view of the bed-plate and of A. M. and P. M. mechanism.

1 is a base on which is a horizontal table or platen 2 for support of the document to be marked. Rising from the base 1 is a standard 3, having a horizontal extension 4, to which is firmly attached a case or frame 5, whose front 6 has a clock-dial 7, which has the hours I to XII marked upon it in the ordinary manner and the necessary central orifice for the customary tubular hour shaft or arbor 8 and its inclosed minute shaft or arbor 9, said shafts being driven by any suitable horological train, (clock-work.)

10 and 11 represent the ordinary hour and minute hands.

Guided vertically in the case 5 are two guiding and depressing rods 12, which are normally upheld by springs 13 to the position shown at Figs. I and II, and are stopped at their retracted position by collars 12′. These rods terminate below the case in my type-holding plate or bed 14 and above the case in a knob or push-button 15, by means of which said rods and type-bed may be depressed for the printing operation.

16 is a vertical guide for the tubular shaft 17 of the hour-type or hour-marker 18. A collar 17′ limits the retraction of the shaft 17, and through it of the shaft 21.

20 is a vertical guide for the upper end of the shaft 21 of the minute-type or minute-marker 22.

23 24 are springs which uphold to their normal or retracted positions (see Figs. III, XIII, and XVI) said shafts 17 and 21 and their at-

tached markers 18 and 22, the proportions being such that when thus fully retracted the minute-marker 22 is sufficiently lower than the hour-marker 18 to revolve clear of it.

The shafts 17 and 21 are feathered (see Figs. IV and V) within bevel-wheels 25 26, that mesh in corresponding wheels 25′ 26′ on wheels 27 28, which respectively gear to wheels 29 30 on the hour and minute shafts.

31 is a circular disk or depressing-plate, so secured to the bed 14 as, while capable of rotating within said bed, to rise and fall therewith.

32 is a radial slot in said plate, of such dimensions that the hour-marker 18 can temporarily enter it when brought in course of its rotation in alignment with said slot.

33 is a hole in said plate, which is occupied by a pin or stud 34, that extends upward from the minute-marker 22.

35 is an opening in the type-dial 19 for the protrusion of a special type-bar 36, having two facets, of which one facet 37 has type projections for printing "A. M.," and the other facet 38 has type projections for printing "P. M." In Figs. VII, VIII, IX, and XVII the mechanism is shown in position for printing "P. M." In Fig. X it is in position for printing "A. M."

A pinion 39 on the hour-marker shaft meshes in a spur-wheel 40 of twice its diameter, and which has a semi-annular flange 41.

The type-bar 36 is attached to an arm 42 of a spindle 43. Said spindle occupies journal-bearings 44 upon the bed. A spring 45 tends (when the flange 41 is withdrawn) to retract arm 42 to position shown in Fig. X, at which position it is arrested by impact against the stop 46 (attached to the bed) of wrist 47, that projects from another arm 48 of said spindle. At every retraction of the bed the said wrist encounters a positive stop 49, that extends downward from the clock-case 5, which stop thus holds the wrist in position shown in Fig. II, so that on return of flange 41 to the effective half of its revolution it engages said wrist and for twelve hours holds the bar 36 to the position indicated in Fig. VII.

50 represents an ink-carrying tape or ribbon. Said ribbon is carried on rollers 51 and is held to its proper parallelism with the platen by rollers 52.

The above-described preferred type of my invention is susceptible of various modifications. For example, I may employ an arrangement such as shown in Figs. XI and XII, in which, the horological mechanism having its axes parallel to those of the stamping mechanism, bevel-gearing is not necessary and is not used. I may also (see said figures) omit the base 1 and platen 2 of my typical form, the frame 3′ having feet 3″, by which it rests on any level surface, such as a desk or table A.

The type-marking devices 19 18 22, their holder 14, and the combined guiding and depressing rods 12 and the retractile springs 13 remain unchanged, as does also the knob or push-button, except that it takes the form of a hollow box or case 15, (for the clock-hands 10 11,) whose floor serves as the dial 7 and whose top is composed of an externally-convex "crystal" B, which serves the several uses of protecting, without hiding, the clock-hands, and of presenting a rounded surface for impact of the hand of the operator.

C represents a series of stationary bearings aligned to the common axis of the time-indicating mechanism (dial and clock-hands) in the push-button above the clock-case 5′ and to the time-marking mechanism (stamp proper) below the said clock-case. Journaled in said bearings C is a counter-shaft D, having a pinion E, which is rotated by the clock-work proper. (Not here shown.)

The counter-shaft D is feathered above to the sleeve 21′, which constitutes the shaft or arbor of the minute-hand 11, and below to a like sleeve 21″, which constitutes the shaft or arbor of the minute-marker 22. The said counter-shaft has also pinions E′ E″, of which the pinion E′ connects by reducing-gear F to a sleeved wheel G, that is feathered to the sleeved arbor 17″ of the hour-hand 10, and of which the pinion E″ connects by reducing-gear F′ to a sleeved wheel G′, that is feathered to the sleeved arbor 17‴ of the hour-marker 18. It will be seen that in this arrangement the clock-dial and the clock-hands, with their sleeved and feathered arbors, and the stamp, with its hour and minute-markers and their sleeved and feathered arbors, all descend and ascend bodily together without losing rotative connection with, yet without disturbing the counter-shaft D or the clock-work proper connected therewith.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. In a time-stamp, the combination, with hour and minute markers 18 and 22, revolved by geared and feathered connection with clock-work and held normally in different planes of rotation by springs 23 and 24, the pin 34 upon the said minute-marker, the depressible bed 14, and the depressing-plate 31, having the radial slot 32 for reception of the hour-marker and the hole 33 for reception of the pin 34 on the minute-marker, as and for the purpose set forth.

2. In a time-stamp, the combination, with depressible and self-retracting type or dial having the orifice 35, of the type-bar 36, having the facet 37 and the facet 38, the pinion 39 on the hour-marker shaft, the spur-wheel 40, which is of twice said pinion's diameter and has a semi-annular flange 41, the type-bar arm 42, the spindle 43, the retractile spring 45, the arm 48, having the wrist or projection 47, and the stops 46 and 49 upon the depressible bed and the clock-case, respectively, for the purpose designated.

3. In a time-stamp, the combination of the

following elements, to wit: a portable frame and case, clock-work within the case on vertical arbors, a combined push-button and time-indicator above the clock-case and a time-marking-stamp below the clock-case, both connected to a self-retracting and vertically-guided frame, said time-indicating and time-marking devices being independently sleeved, feathered, and geared to the clock-work, substantially as and for the purpose set forth.

JAMES V. HULSE, JR.

Witnesses:
HARRY E. KNIGHT,
GEO. H. KNIGHT.