

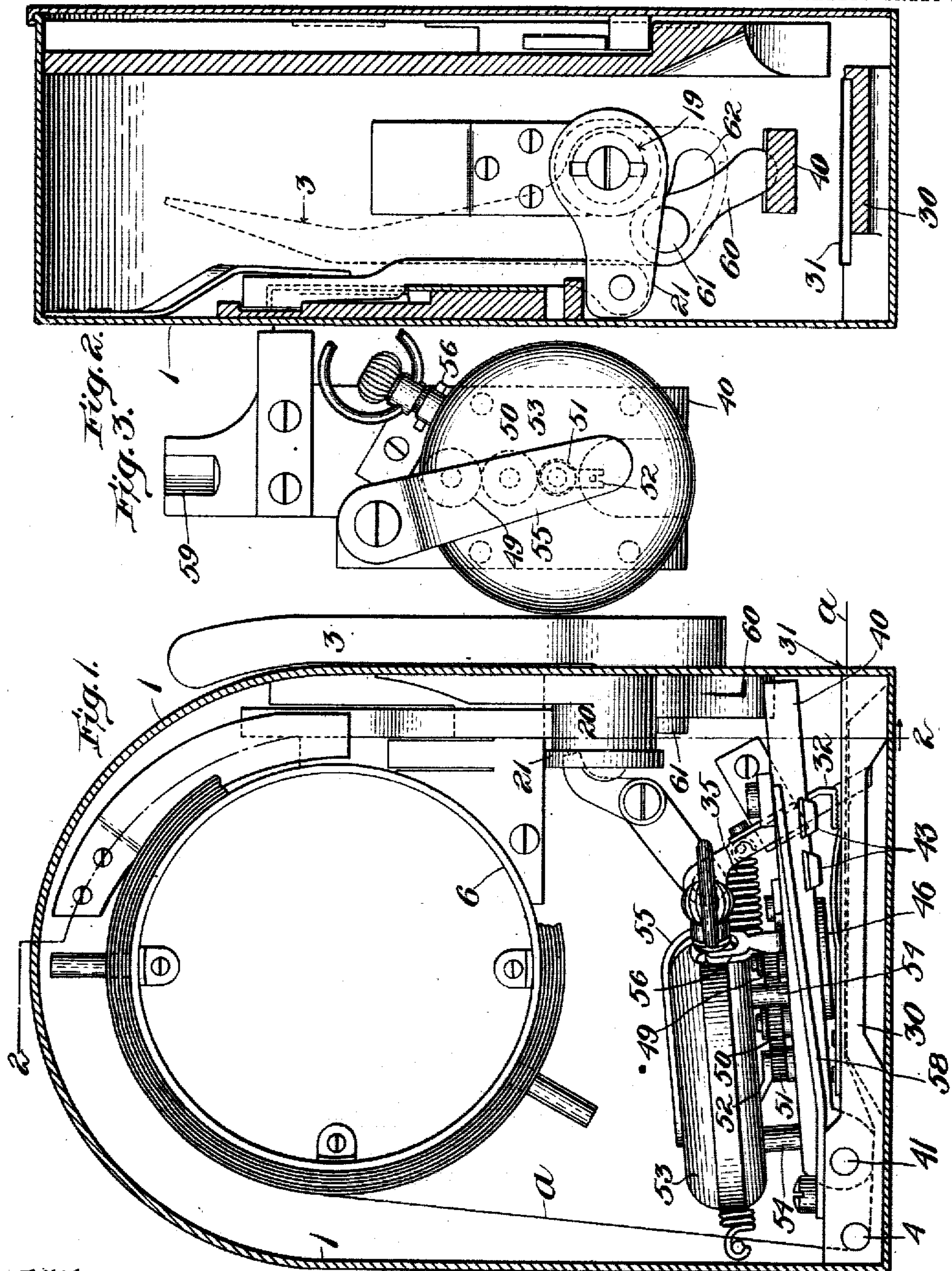
No. 822,856.

PATENTED JUNE 5, 1906.

H. H. CUMMINGS.
TICKET STAMPING AND DELIVERING MACHINE.

APPLICATION FILED APR. 15, 1905.

2 SHEETS—SHEET 1.



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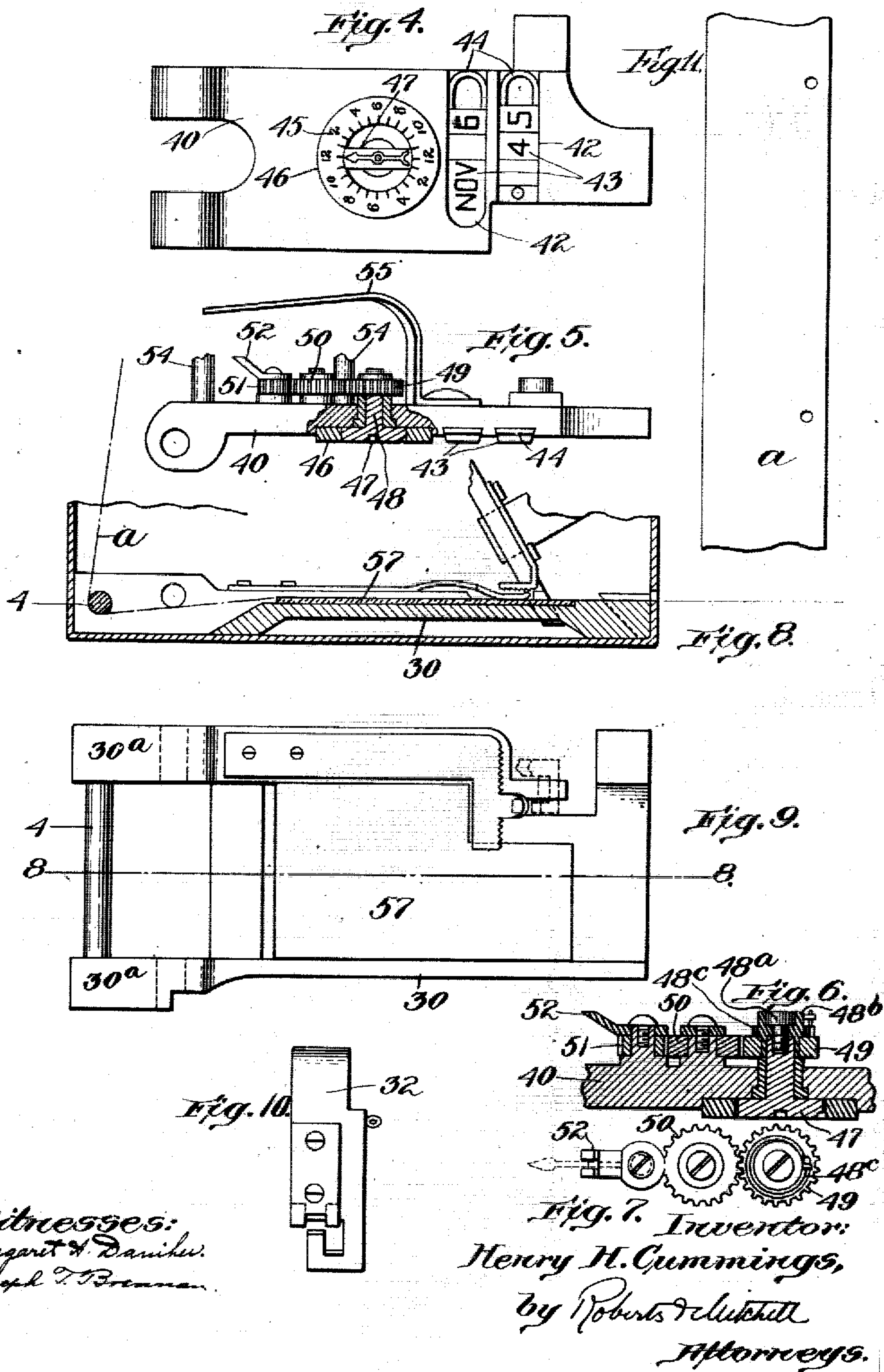
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UNITED STATES PATENT OFFICE.

HENRY H. CUMMINGS, OF NEWTON, MASSACHUSETTS, ASSIGNOR TO
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TICKET STAMPING AND DELIVERING MACHINE.

No. 822,856.

Specification of Letters Patent.

Patented June 5, 1906.

Original application filed February 19, 1904, Serial No. 194,334. Divided and this application filed April 15, 1905. Serial No. 255,697

To all whom it may concern:

Be it known that I, HENRY H. CUMMINGS, a citizen of the United States, and a resident of Newton, in the county of Middlesex and State of Massachusetts, have invented new and useful Improvements in Ticket Stamping and Delivering Machines, of which the following is a specification.

My invention relates to stamping devices, particularly time-stamps; and the object of my invention is to provide an improved device of this kind.

My improved time-stamp comprises a type-carrier and means to operate it. On the type-carrier is a movable type and clockwork for operating the same, said clockwork being connected with the movable type through a yielding power-transmitting connection, so that the operation of the clockwork is not interfered with while the movable type is in engagement with the ticket or other object being stamped—that is, the clockwork operates the movable type through the yielding power-transmitting connection, but the latter permits the clockwork to continue in operation while the type is held against movement by its engagement with the ticket or other object being stamped.

In the best form of my invention the clockwork is an ordinary pocket time piece, and the type-carrier is provided with means to hold said timepiece detachably thereon with the axis of the time-piece substantially in line with the axis of a rotatable member mounted on the type-carrier and connected with the movable type, preferably through the yielding power-transmitting connection above described.

Other features of my invention are hereinafter pointed out.

In the accompanying drawings, Figure 1 is a front elevation, partly in section, of a time-stamp embodying one form of my invention. Fig. 2 is a section on line 2 2 of Fig. 1. Fig. 3 is a plan view of the top side of the type-carrier hereinafter described. Fig. 4 is a view of the under side of the type-carrier shown in Fig. 3. Fig. 5 is a side view, partly in section, of the type-carrier shown in Figs. 3 and 4. Figs. 6 and 7 are enlarged details of the type-carrier shown in Figs. 3, 4, and 5 and

are hereinafter described. Fig. 8 is a section on line 8 8 of Fig. 9. Fig. 9 is a plan view of the platen hereinafter referred to. Fig. 10 is an elevation of the strip-feeder hereinafter referred to. Fig. 11 shows a length of the ticket-strip used in the machine herein shown.

As herein shown, I have embodied my invention in a machine intended to be used particularly by car conductors to stamp and deliver tickets to passengers; but it will be understood that my invention is adapted to time-stamps of various sorts.

The machine I have shown has an operating member 3, controlled by coin-operated mechanism, so that it is normally locked against movement; but by depositing in the machine a coin of the proper denomination the operating member can be freed and used to stamp and deliver a ticket. For an understanding of the construction and operation of this coin-operated mechanism, however, reference may be had to the application for patent, Serial No. 194,334, filed by me February 19, 1904, of which it forms the subject-matter and from which the present application has been divided.

The tickets used with this machine are in the form of a strip *a*, coiled loosely upon a cylindrical drum 6, fixed within casing 1. Strip *a* extends from drum 6 under a guide-rod 4, and thence over a platen 30 to an exit-slot 31, provided through the wall of casing 1 at one end of the platen. The operating member 3 is fixed to a short shaft 19, journaled in a bearing 20, forming part of casing 1, and to the inner end of shaft 19 is fixed an arm 21, through which the strip-feeder 32 is moved in one direction, a spring 35 serving to move said strip-feeder 32 in the opposite direction.

The strip stamping or impressing means comprises besides platen 30 a type-carrier 40, pivotally supported at one end by a removable pin 41, mounted at its ends in extension 30^a of platen 30, and at its opposite end the type-carrier is yieldingly supported by a spring 58, fixed to one of the extensions of platen 30. The distance between the two extensions 30^a is about the same as the width of strip *a*, so that the latter can be passed around guide-rod 4 and then over platen 30 to exit 31. Type-carrier 40 is made with

pockets 42 upon its under face adapted to receive types 43; bearing desired characters. These types 43 are held within pockets 42 by staple-like detents 44, forced or sprung into said pockets behind the types and which can be removed when different types are to be substituted for those already in place. Alongside the pockets 42 is a series of characters 45, arranged in a circle and herein shown as provided upon the outer face of a ring 46, driven into a recess provided in type-carrier 40 to receive it. These characters 45 are twelve in number and arranged in two semi-circular groups each including the characters "2," "4," "6," "8," "10," and "12," one of said groups representing "A. M." and the other "P. M."

Within the ring 46 is a movable type-block 47, having for its character an arrow. This type-block 47 is integral with a spindle 48, journaled in a bearing on type-carrier 40 and carrying at its upper end a gear 49, driven through an idler 50 by a pinion 51, having one-half the number of teeth of gear 49. Fixed to pinion 51 is a crank-arm 52, forked at its outer end to adapt it to be connected with a clockwork 53, herein shown as an ordinary watch with its minute-hand and crystal removed, and held in place upon four posts 54 concentrically with relation to pinion 51 and the axis of arm 52 by a spring-arm 55, fastened to the type-carrier 40. The forked end of arm 52 straddles the hour-hand of watch 53, as indicated in Fig. 7, and said arm and its pinion 51 thereby are caused to rotate with said hand. This rotation of pinion 51 acts through idler 50 and gear 49 to rotate the type-block 47, which, as will be obvious, moves at half the speed of the hour-hand of the watch 53. The purpose of this speed-reducing train of gears is to reduce the strain on the delicate hour-hand of the watch 53 and, secondarily, to provide for the arrangement of twenty-four hour-spaces in the single ring of characters 46.

By reference to Figs. 6 and 7 it will be seen that spindle 48 at its upper end has fixed rigidly to it by means of a screw 48^a a head 48^b on which the gear 49 is loosely journaled, and said gear is connected with the head 48^b by means of a spring 48^c, fastened at one end to gear 49 and at its other end to the head 48^b. This construction is used to prevent strain on the delicate mechanism of the watch 53, while type-block 47 is in engagement with strip *a*, during which time said block is prevented from turning, as well as to prevent watch 53 from being stopped by a prolonged engagement of block 47 with strip *a*. In other words, the spring 48^c provides a yielding connection between gear 49 and spindle 48, through which watch 53 drives said spindle. In order to hold watch 53 against ro-

tary movement on its supporting-posts, a yoke 56 is provided extending upwardly from the type-carrier 40 and through which the stem of said watch extends. At one end the type-carrier 40 is made with an open socket 59 in engagement with one end of a toggle member 60. At its other end the toggle member 60 is pivotally mounted upon a stud 61, fast to operating member 3 and extending through a slot 62, provided in casing 1. That part of operating member 3 between stud 61 and shaft 19 constitutes the other member of the toggle. By removing pin 41 type-carrier 40 can be quickly disconnected from toggle 60 and removed when changes are to be made in the type and as easily returned to place. To operate the type-carrier, member 3 is swung from its normal position in a direction opposite to that in which it is swung to operate the feeder 32—i. e., to the left in Fig. 2. The top face of the platen 30 is covered by a pad 57, of tough but more or less yielding material, such as leather, so that when type-carrier 40 is lowered and the type carried thereby are forced down upon the paper strip *a* the characters of the type are embossed upon the strip.

By the above-described construction I have provided a compact, light, and portable time-stamp especially adapted to be embodied in a ticket stamping and delivering machine for use by car conductors to stamp and deliver transfer-tickets to passengers wherein few parts are employed, and they are so organized and arranged that they cannot be effected by rough handling of the instrument and occupy but a small amount of space.

What I claim is—

1. In a ticket stamping and delivering machine, the combination of a stamping device provided with rotatable type; a watch-holder on the stamping device and means thereon to detachably secure a watch, and means, connected with the rotatable type, to engage the hand of the watch, whereby the driving-train between the watch mechanism and type is established.

2. In a ticket stamping and delivering machine, the combination of a stamping device provided with rotatable type, a watch-holder on the stamping device, and a spring-slip to detachably secure the watch upon the stamping device, and a crank-arm, yieldingly connected with the rotatable type, adapted to engage the hand of the watch, whereby the driving-train between the watch mechanism and type is established.

3. In a ticket stamping and delivering machine, the combination of the manually-operable lever, a platen and type-carriers pivotally connected, and operated by the said lever, a strip-holder, strip-feeder, connections

between the strip-feeder and manually-operable lever, the strip-feeder and type-stamping connections being alternately operable by said lever, type-wheels, rotatably mounted
5 on the type-carrier, a watch-holder on said carrier and means detachably to engage a watch-hand with the type-wheels.

Signed by me at Boston, Massachusetts,
this 13th day of April, 1905.

HENRY H. CUMMINGS.

Witnesses:

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