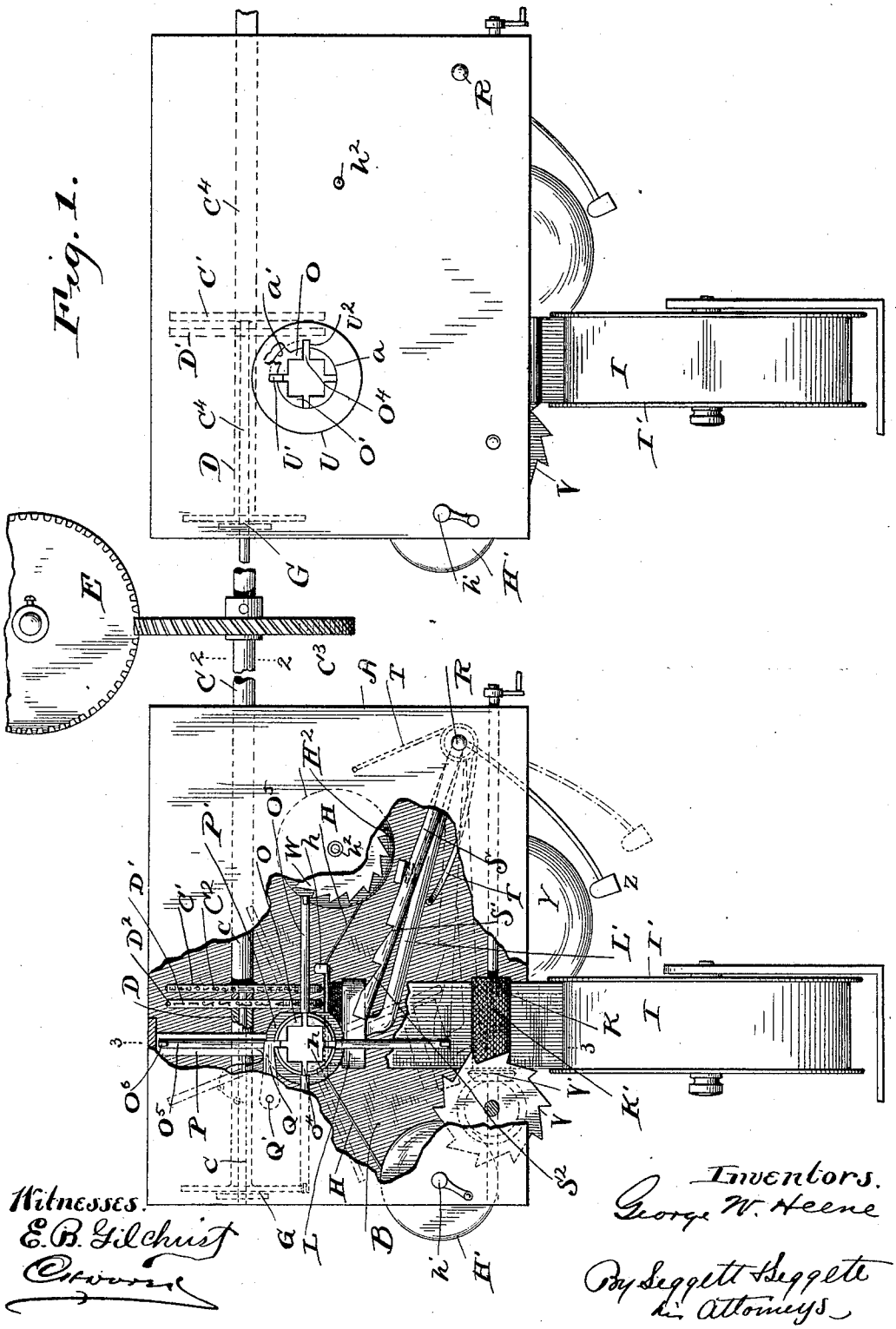
(No Model.) 2 Sheets—Sheet 1.

G. W. HEENE.

EMPLOYÉ'S TIME RECORDER.

No. 530,340. Patented Dec. 4, 1894.

Fig. 1.



Witnesses.
E. B. Gilchrist
C. Evans

Inventors.
George W. Heene
By Seggett & Seggette
their Attorneys

(No Model.) 2 Sheets—Sheet 2.

G. W. HEENE.

EMPLOYE'S TIME RECORDER.

No. 530,340. Patented Dec. 4, 1894.

Fig. 3.

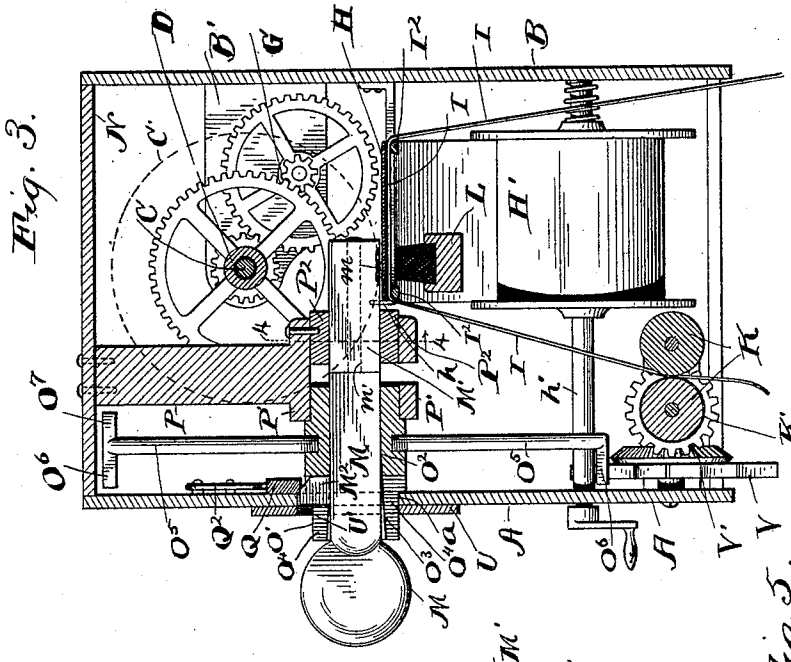


Fig. 4.

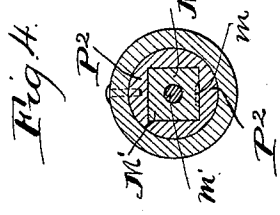


Fig. 5.

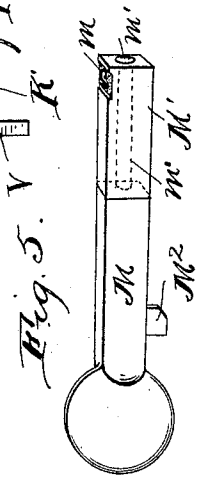
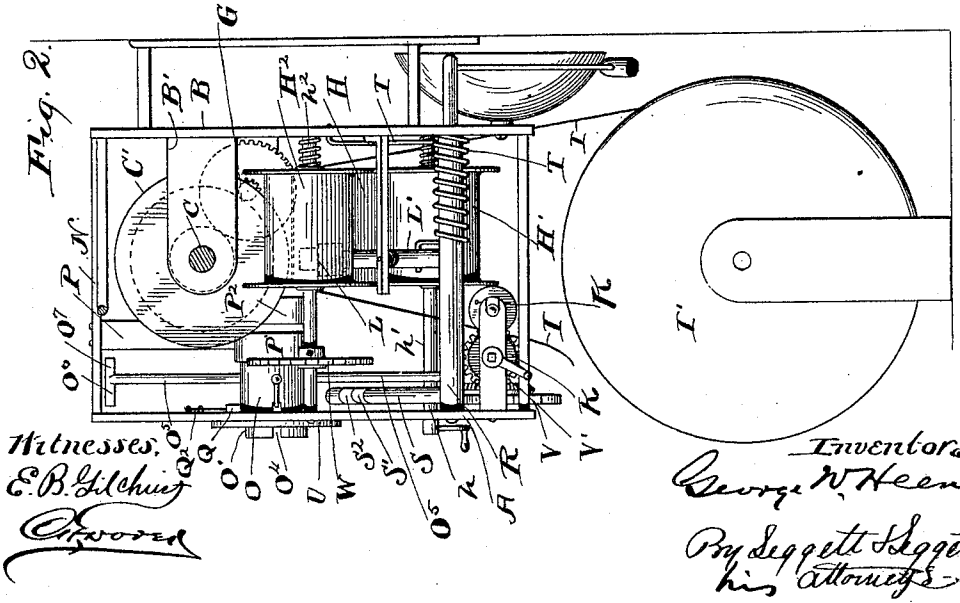


Fig. 2.



Witnesses:
E. B. Gilchrist
C. F. Wood

Inventors.
George W. Heene
By Leggett & Leggett
his Attorneys.

UNITED STATES PATENT OFFICE.

GEORGE W. HEENE, OF BROOKLYN VILLAGE, OHIO, ASSIGNOR TO THE CLEVELAND TIME REGISTER COMPANY, OF CLEVELAND, OHIO.

EMPLOYÉ'S TIME-RECORDER.

SPECIFICATION forming part of Letters Patent No. 530,340, dated December 4, 1894.

Application filed February 27, 1894. Serial No. 501,633. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. HEENE, of Brooklyn Village, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Employés' Time-Recording Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to improvements in employés' time-recorders, having hour and minute-recording-wheels operatively connected with clock-work, and whereby the time of the arrival of workmen or employés is recorded by the employés themselves; and my invention relates more especially to that variety of time-recording-mechanism by which each workman or employé will, by his own act, accurately record the time of his arrival or departure, each employé having his own key, and being known by an arbitrary number or character borne by the shank or stem of the key, the key being adapted to be inserted into the machine, and, when properly inserted, presenting the aforesaid arbitrary number or character in alignment with the type-bearing surface of the hour and minute-recording-wheels, the arrangement of parts being such that, through the agency of a hammer and ribbon and strip of record-receiving-material in proper juxtaposition, and all actuated by the key, the time of the operator or employé and number or arbitrary character borne by his key, shall be printed upon the strip of record-receiving material, the record-receiving-strip and ribbon being moved or shifted a suitable space preparatory to the printing operation, and the time of each employé being made up from the time-record-bearing strip.

The main object of my invention is to simplify the construction of machines of the variety indicated, and to operate the hour and minute recording-wheels of two or more time-recording machines from one and the same clock-work.

With this object in view, my invention consists in certain features of construction, and in combinations of parts hereinafter described and pointed out in the claims.

In the accompanying drawings, Figure 1 exhibits a front side elevation of two machines, the hour and minute-recording-wheels whereof are connected with one clock-work, portions being broken away to reduce the size of the figure, and other portions being broken away and in section to more clearly show the construction. Fig. 2 is a right hand end elevation in section on line 2—2, Fig. 1, looking in the direction of the arrow. Fig. 3 is an enlarged right hand end elevation, mostly in central vertical section on line 3—3, Fig. 1 with the operating-key inserted. Fig. 4 is a section in detail on line 4—4, Fig. 3, and Fig. 5 is a perspective of the operating-key detached.

Fig. 1 of the drawings, as already indicated, exhibits two of my improved machines.

The mechanism of my improved machine is, in the main, supported from and between two upright plates or walls A and B arranged a suitable distance apart, the one, A, at the forward side of the machine, and the other, B, at the rear side of the machine. A horizontally-arranged type-wheel-bearing-shaft C is shown supported at or near the upper and central part of the machine. Said shaft extends preferably from end to end of the machine and is preferably borne by brackets B′ rigid with the rear supporting-plate or wall B. (See Figs. 1 and 2.)

C′ designates the type-wheel upon said shaft, said type-wheel bearing, upon its peripheral surface, type C^2 for imprinting, upon the record-receiving band or strip of paper or other suitable material hereinafter referred to, characters indicative of fractions of the hours of the day, the employés being supposed to operate the machine, upon arriving at or leaving their place of work, to record upon said record-receiving band or strip the hour and fraction of the hour at which they arrive and depart.

D designates another type-wheel-bearing-shaft that is hollow and journaled upon shaft C, (see Fig. 1) said shaft D bearing its type-wheel D′ in close proximity to type-wheel C′, and said type-wheel D′ bearing, upon its peripheral surface, type D^2 indicative of the hours of the day. Shaft C is provided with a gear-wheel C^3, that meshes with a gear E of a

clock-work (the remainder whereof it is not considered necessary to show) employed for communicating the desired motion to type-bearing-wheel C′ in order to cause said type-bearing-wheel to move in unison with the minute-hand (not shown) of the clock. Shafts C and D, at one end, (in the present instance, the left-hand end of the machine) are intergeared with each other, as at G, in such a manner that shaft D and its type-bearing wheel D′ shall move in unison with the hour-hand, (not shown) of the clock. Wheels C′ and D′, therefore, constitute the minute-recording-wheel and hour-recording-wheel, respectively, of my improved machine.

I would here remark that shaft C that is directly intergeared with the clock-work, as already indicated, and as shown in Fig. 1, might be extended, as at C^4, and the type-bearing or hour and minute-recording-wheels of one or more other machines might be operatively connected with said shaft. For instance, Fig. 1 exhibits the hour and minute-recording-wheels of two machines in operative connection with a single clock-work.

H (see Fig. 1) represents the inking-ribbon, that, at opposite ends, is attached to bobbins or drums H′, H^2, respectively, said drums or bobbins being arranged transversely of the machine and a suitable distance apart. The drums or bobbins are rigid or operatively connected with shafts h' h^2, respectively, and said shafts are suitably supported from the supporting-plates or walls A and B. The inking-ribbon leads from the under side of the one drum or bobbin H^2 to and over two guiding-holders or brackets h that are located a suitable distance apart below the hour and minute-recording-wheels and project forwardly in a horizontal plane from the rear supporting-plate or wall B to which said inking-ribbon-holders or brackets are rigidly secured, and from said brackets or holders the inking-ribbon leads to and over the other bobbin or drum H′, the arrangement of parts being such that the inking-ribbon is wound upon the one drum or bobbin and paid out by the other bobbin or drum in the operation of the machine, and said ribbon is located in suitable proximity to the under side of the hour and minute-recording-wheels.

The band or strip I of record-receiving paper or material (see Figs. 1, 2 and 3) is fed from a bobbin, I′, suitably supported at the bottom of the machine, said band or strip of record-receiving paper or material leading upwardly from the rear side of the bobbin to and over a pair of guiding-bars I^2 arranged a suitable distance apart and at right angles to and rigid with the inking-ribbon supporting-brackets or holders h, the different guiding-bars I^2 being located forwardly and rearwardly, respectively, of the point at which the imprint is made. From the forward guiding-bar I^2 the record-receiving strip leads downwardly to and between a pair of feed-rollers, K K, that are suitably supported preferably from the forward supporting-plate or wall A. One of said rollers (the forward roller in the present instance), for the purpose of more positively feeding the record-receiving-band, is milled or roughened upon its periphery, as indicated by letter K′ in Figs. 1 and 3.

L designates a hammer adapted to strike the under side of the record-receiving strip or band between the inking-ribbon-supporting holders or brackets h h and between the guide-bars I^2 I^2 in under the hour and minute-recording-wheels and adapted to press the record-receiving-strip and the inking-ribbon immediately over said strip, against the adjacent type of the hour and minute-recording-wheels and against the type-bearing surface of the operating-key hereinafter referred to, resulting in the imprint, upon the record-receiving-band or strip, by said type.

The operating key M, shown detached in Fig. 5, is inserted at the front side of the machine, as shown in Fig. 3, with the type m with which the stem or shank of the key is provided presenting downwardly, the arrangement of parts being such that when the operating-key is inserted as required, the free or type-bearing or recording end thereof, M′, that is swiveled to the remainder or body of the shank, as at m', shall be in alignment with the recording-surface of the hour and minute-recording-wheels, so that by thereupon operating the striking-hammer to press the inking-ribbon and record-receiving-strip against the type-bearing or recording-surface of the hour and minute-recording-wheels, said ribbon and record-receiving-strip shall also be pressed against the recording-surface of the operating-key, resulting in the imprint upon the record-receiving-strip, not only by the hour and minute-recording-wheels, but, also, by the operating-key, and the operating-key being designed to imprint a number or character identifying the workman or operator using the key, it follows that in addition to obtaining a record of the workman or operator's arrival or departure from his work, the operator's number or identifying-mark is also recorded upon the same record-receiving-band or strip in the desired proximity to the time-record. Of course, it will be understood that in a shop, store or place of business where my improved machine is employed, each of the employés is provided with an operating-key that bears upon its shank or stem type designed to imprint a number or character identifying the respective employé.

An armed hub or sleeve, or hubbed spider, O, is suitably supported at the inner side of the forward supporting-plate or wall A. The hub or sleeve-proper is arranged in line with the path of the operating-key and is suitably journaled at its forward end in supporting-plate or wall A, and at its rear end in a box

P′ rigid with a bracket or hanger P depending from a cross-bar N connecting plates or walls A and B at the top.

Supporting-plate or wall A is of course perforated laterally, as at *a*, to afford bearing for the aforesaid hub or sleeve, and said hub extends forward or outside of the aforesaid plate or wall, as at O′. (See Figs. 2 and 3.) The bore O^2 of hub O is adapted to accommodate the reception and passage of the shank or stem of the operating-key, and said bore is gradually enlarged in size at its outer end, as at O^3, to facilitate the introduction of the operating-key. The outer portion of the hub of the spider, from a point somewhat inside of supporting-plate or wall A to the outer end of said hub, is slotted laterally at suitable intervals, as at O^4, the hub of the spider shown being provided with four lateral slots O^4 located equal distances apart. The spider is locked in its normal position against rotation by means of a dog or pawl Q that is pivoted, as at Q′, to the back or inner side of supporting-plate or wall A (see Fig. 3), and the detaining-end of said dog or pawl is adapted to enter the inner end of the lateral slot O^4 in the top of the hub of the spider and thereby lock the spider against rotation as already indicated.

A spring, Q^2, suitably secured to the back or inner side of supporting-plate or wall A, engages locking-dog or pawl Q and acts in the direction to retain said dog or pawl in its locking-position. The operating-key, upon the main or body-portion, (unswiveled portion) of its shank is provided with a laterally-projecting rib or flange M^2 that is adapted to engage lateral slots O^4 in the hub of the spider and thereby operatively connect the key with the spider. The main or body-portion of the shank or stem of the key that is provided with rib or flange M^2, is preferably square or angular in cross section and the bore in the hub of the spider has a corresponding shape and is adapted to nicely receive said portion of the stem or shank of the key so that when the key is inserted, preparatory to operating the machine, operative connection shall be established directly between said portion of the shank or stem of the key and the spider, so that no strain is brought upon rib or flange M^2 when said portions of the key and spider are turned to effect the actuation of the striking-hammer and mechanism for feeding the inking-ribbon and record-receiving-strip or band. The key is inserted with rib or flange M^2 presenting upwardly, as shown in Fig. 3, and the inner end of said rib or flange extends outwardly, flush with or somewhat beyond the peripheral surface of the hub of the spider, and the arrangement of parts is such that upon inserting the operating-key rib or flange M^2 upon said key shall engage and lift the locking-end of dog or pawl Q out of the respective slot O^4, thereby unlocking the spider and permitting the latter to be turned upon its axis. The spider, directly rearward of each slot O^4, and rigid with the hub, comprises radially-arranged or laterally-extending arms O^5, and arms O^5, at their outer extremities, are provided, respectively, with a laterally and forwardly-projecting flange or member O^6. A shaft R is arranged transversely of and suitably supported at one end of the machine, said shaft, in the machine illustrated, being shown located at the right hand end of the machine and supported from supporting-plates or walls A and B. The arm L′ of the striking-hammer is operatively connected with said shaft in any approved manner. Said shaft, at the inner side of supporting-plate or wall A, also bears a laterally and inwardly-extending bar S that, during the rotation of the spider by the operating-key, is adapted to oscillate its supporting-shaft in the direction to actuate the striking-hammer against the action of a spring T supported in any suitable manner, engaging the striking-hammer, and acting in the direction to retain the striking-surface of the striking-hammer in position pressing the inking-ribbon and record-receiving-strip against the recording surface of the hour and minute-recording-wheels and (when the operating-key is inserted) operating-key.

The arrangement of parts is preferably such that, in their normal position, two of the lateral slots O^4 in the hub of the spider shall be arranged in a vertical plane and the remaining two slots O^4 in said hub shall be arranged in a horizontal plane, and the locking-dog or pawl Q^2 shall be in engagement with the uppermost slot O^4, as shown very clearly in Fig. 1.

The operator, in working the machine, inserts the operating-key in the hub of the spider and pushes the same inwardly until rib or flange M^2 upon the key shall have lifted locking-dog or pawl Q out of engagement with the respective notch in the hub of the spider. The operator thereupon turns the spider by means of the operating-key in the direction of the striking-hammer-bearing shaft R until the laterally-projecting member O^6 of a radially-arranged arm of said spider shall engage arm S and have actuated said arm as required to actuate the striking-hammer against the action of spring T, as hereinbefore described, the arrangement of parts being preferably such that, upon turning the spider one-fourth of a rotation, the striking-hammer shall have been actuated as just described, and bar S, that actuates the striking-hammer-operating-shaft, shall have become disengaged from or released by the actuating-arm of the spider, resulting in the actuation of the striking-hammer, by the action of spring T, to press the inking-ribbon and record-receiving-band or strip against the type-bearing surface of the hour and minute recording-wheels.

A suitable bearing is provided for the swiveled recording-portion of the shank or stem of the key. Said bearing consists preferably

of a collar or box P^2 rigid with bracket or hanger P, (see Fig. 3) and the form or construction of the engaging surfaces of the bore of said collar or box and said portion of the key is such that, when the main or body-portion of the key is turned in the operation of the machine, as hereinbefore described, the recording portion shall be held stationary, that is, in position with the recording-surface in alignment with the recording-surface of the hour and minute-recording-wheels. The swiveled recording portion of the key is preferably square or angular in cross-section as shown in Figs. 4 and 5, and the bore of box or collar P^2 is correspondingly shaped, as shown in Fig. 4. The type-bearing part of the recording-portion of the key, of course, is adapted to extend rearwardly of said collar or box, in position for printing.

I would here remark that arm S of the striking-hammer-bearing-shaft, near its free end, is preferably provided, upon its upper side, with two notches S' S^2 located a suitable distance apart, with the arrangement of parts such that when the spider is rotated in the operation of the machine the arm of said spider adapted to engage said bar shall first engage notch S' that is located nearest the axis of bar S and shall thereupon swing said arm downwardly until the laterally-projecting flange or member O^6 thereof shall engage the outer notch S^2, and the arrangement of parts is such that when the laterally-projecting member O^6 of said arm of the spider has engaged notch S^2 in arm S said arm shall have been actuated into a horizontal or approximately horizontal position, in which position of parts a backward movement of the spider and operating-key is rendered impossible because the operating parts are locked in said position by the engagement of said arm of the spider with the aforesaid notch S^2. The result is that when the operator has actuated the operating-spider and effected the engagement of said spider with notch S^2 in bar S, he cannot turn the spider and consequently the operating-key backwardly, but is compelled to complete the operation before he can withdraw his key from the machine.

I would remark that the lateral rib or flange M^2 upon the stem or shank of the operating-key, in additlon to effecting the disengagement of locking-dog or pawl Q from the hub of the spider, also, and in conjunction with the inner end-wall of the lateral slot O^4 engaged by said dog or pawl in the normal or locked position of the spider, constitutes a stop to limit the inward movement of the key in the introduction of the latter, thereby preventing the key from being moved inwardly too far.

An annular plate or collar U is shown embracing the hub of the spider at the outer side of the supporting-plate or wall A, and is suitably secured to said plate or wall. Said embracing plate or collar is provided with two radially-arranged lateral slots U' U^2, located the one U' at the point of inserting the operating-key, and the other, U^2, at the point of removing or withdrawing the key. Slots U' U^2 are open at their inner ends and adapted to register with slots O^4 in the hub of the spider when the spider is in position at the commencement or completion of the operation of the machine, said slots U' U^2 being preferably just large enough to accommodate the location of rib or flange M^2 of the operating-key upon inserting and removing the key, and supporting-plate or wall A, at the rear of collar U, between slots U' U^2 in said plate, is provided, with a chamber a' that is in open relation with said slots and accommodates the turning of the key in the operation of the machine, the end-walls of said chamber a' constituting stops to limit the actuation of the key in either direction. The arrangement of parts is such that the operating-key is arrested by an end-wall of chamber a' immediately upon the completion of the printing operation. Another arm of the spider, namely, the downwardly-presenting arm, in the normal position of parts in the machine illustrated, is adapted, during the rotation of the spider, to engage the teeth of a ratchet-wheel V that is suitably supported from and at the inner side of supporting-plate or wall A, and is operatively connected, preferably by means of bevel-gearing V', with one of the feed-rollers employed to feed the record-receiving-band or strip, said ratchet-wheel being adapted to be engaged by the laterally-projecting member O^6 of said arm of the spider and actuated thereby in the direction to effect the feed of the record-receiving-strip preparatory to the actuation of the striking-hammer already described. Another arm of the spider, namely,—the upwardly-extending-arm in the machine illustrated,—is adapted to engage a ratchet-wheel W operatively connected with one of the inking-ribbon-carrying drums or bobbins, said arm of the spider, at its outer extremity, having a laterally and rearwardly-projecting flange or member O^7, (see Fig. 3,) adapted once during a complete rotation of the spider to actuate said ratchet-wheel in the direction to feed the inking-ribbon.

It should, of course, be understood that each arm of the spider is adapted to engage and actuate bar S of the striking-hammer-bearing-shaft, so that said hammer is operated with every quarter of a rotation of the spider, and it should also be understood that ratchet-wheel V, that, as already indicated, is operatively connected with the feed of the record-receiving band or strip, is adapted to be actuated by each arm of the spider, so that the record-receiving strip is fed as required in advance of the printing-operation.

A bell, Y, is preferably suitably supported at the rear of the lower portion of supporting-plate or wall B, said bell being adapted to be sounded by a hammer, Z, that is operatively connected in any approved manner with shaft R, the arrangement of parts being such that

when said shaft is caused to be oscillated against the action of spring T by the operating-key, said bell-sounding hammer shall be actuated in the direction away from the bell, so that when said shaft is returned or oscillated in the opposite direction, by the action of the aforesaid spring, the bell-sounding hammer shall sound the bell, and, therefore, inform the operator that the operation of the machine has been satisfactorily completed.

What I claim is—

1. In a machine of the variety indicated, hour and minute-recording-wheels suitably operated, a key having a typed or recording portion swiveled to the main or body-portion of the key, the typed or recording-surface of said swiveled portion of the key being brought into alignment with the recording-surface of the hour and minute-recording-wheels immediately upon the insertion of the key, a record-receiving-band or strip, an inking-ribbon, an impression-hammer, and mechanism adapted to be actuated by the body-portion of the key and adapted to operate the impression-hammer, substantially as set forth.

2. In a machine of the variety indicated, the operating-key M provided with a printing-surface at or near the free end of its shank or stem, said portion of the stem or shank being swiveled to the main or body-portion of the shank or stem, substantially as and for the purpose set forth.

3. In a machine of the variety indicated, the combination with hour and minute-recording-wheels suitably operated, an operating-key, a rotatable armed hub or spider adapted to be operatively engaged by said key, record-receiving-band or strip and inking-ribbon arranged substantially as indicated, of mechanism for pressing said strip and ribbon against the aforesaid recording-wheels and adapted to be operated by an arm of the aforesaid hub or spider, substantially as set forth.

4. In a machine of the variety indicated, the combination of hour and minute-recording-wheels suitably operated, operating-key, an armed hub or spider rotatably supported and adapted to receive and be turned by the operating-key, a record-receiving-band or strip, inking-ribbon, suitable mechanism for pressing said ribbon and record-receiving-strip against the aforesaid recording-wheels, said mechanism being adapted to be operated by an arm of the aforesaid hub or spider, suitable means for locking the hub or spider in its normal position, and suitable means connected with the operating-key for actuating said locking-means to unlock, the arrangement of parts being such that said hub or spider shall be unlocked preparatory to the turning of the key, substantially as set forth.

5. In a machine of the variety indicated, the combination with the hour and minute-recording-wheels suitably operated, record-receiving-band or strip, and inking-ribbon, of an oscillating-shaft, an impression-hammer L operatively connected with said shaft, suitable means acting to retain said hammer in position pressing the record-receiving strip and inking-ribbon against the recording-wheels, an arm or lever for oscillating the shaft in the direction to swing the hammer away from the record-receiving-strip, a rotatable armed hub or spider having an arm adapted to engage and actuate the aforesaid shaft-oscillating-arm or lever, and a key for turning said hub or spider, substantially as set forth.

6. In a machine of the variety indicated, the combination with the hour and minute-recording-wheels suitably operated, record-receiving-band or strip and inking-ribbon, of an oscillating-shaft, R, an impression-hammer L operatively connected with said shaft, suitable means acting to retain said hammer in position pressing the record-receiving-strip and inking-ribbon against the recording-wheels, an arm or lever for oscillating the shaft in the direction to swing the hammer away from the record-receiving-strip, a rotatable armed hub or spider having an arm adapted to engage and actuate the aforesaid shaft-oscillating-arm or lever, and a key for turning said hub or spider, the aforesaid shaft oscillating-arm or lever being provided with a notch adapted, during the actuation of said arm or lever, to be engaged by the aforesaid arm of the hub or spider, and the arrangement of parts being such that when said arm of the hub or spider engages said notch, the operating-key and connected hub or spider shall be locked as against being turned backwardly, substantially as set forth.

7. In a machine of the variety indicated, the combination with the hour and minute-recording-wheels suitably operated, record-receiving-band or strip and mechanism for feeding said strip, inking-ribbon and mechanism for feeding said ribbon, and an impression-hammer and mechanism for operating said hammer, of a rotatable armed hub or spider adapted to engage and actuate all of the aforesaid mechanisms, and a key for turning said hub or spider, substantially as set forth.

8. In a machine of the variety indicated, the combination with the suitably operated hour and minute-recording-wheels, an operating-key, a rotatable armed hub or spider adapted to be operatively engaged by the key, record-receiving-band or strip, and inking-ribbon, of mechanism for pressing said strip and ribbon against the aforesaid recording-wheels and adapted to be operated by the aforesaid hub or spider, and mechanism for feeding the record-receiving-strip and inking-ribbon and adapted to be operated by the aforesaid hub or spider, the arrangement of parts being such that the record-receiving-strip shall be fed in advance of the printing operation, substantially as set forth.

9. In a machine of the variety indicated, the combination with suitably operated hour

and minute-recording-wheels, an operating-key, a rotatable armed hub or spider adapted to be operatively engaged by the key, record-receiving-band or strip, and inking-ribbon, of mechanism for pressing said strip and ribbon against the aforesaid recording-wheels and adapted to be operated by the spider, mechanism for feeding the record-receiving-strip and comprising a ratchet-wheel adapted to be actuated by the aforesaid spider, mechanism for feeding the inking-ribbon and comprising a ratchet-wheel adapted to be engaged and operated by the spider, the arrangement of parts being substantially as shown, for the purpose specified.

10. In a machine of the variety indicated, the combination with suitably operated hour and minute-recording-wheels, record-receiving-strip and mechanism for feeding said strip, inking-ribbon and mechanism for feeding said ribbon and an impression-hammer and mechanism for operating said hammer, of a rotatable armed hub or spider adapted to engage and actuate all of the aforesaid mechanisms, a key for turning said hub or spider, suitable means for limiting the turning of said key in the direction to operate, and a stop to prevent the insertion of the key beyond the distance required, substantially as set forth.

11. In a machine of the variety indicated, the combination with suitably operated hour and minute-recording-wheels, record-receiving-band or strip and mechanism for feeding said strip, inking-ribbon and mechanism for feeding said ribbon, and an impression-hammer and mechanism for actuating said hammer, of a rotatable armed hub, or spider, having arms adapted to engage and actuate the aforesaid mechanisms, a key for turning said hub or spider, a dog or pawl adapted to engage and lock the spider in its normal position, a spring acting to hold said dog or pawl in its locking position, and a rib or flange on the key adapted to actuate said dog or pawl to unlock preparatory to turning the spider, substantially as set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 10th day of February, 1894.

GEORGE W. HEENE.

Witnesses:
C. H. DORER,
WARD HOOVER.