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PATENTED FEB. 18, 1908.

N. S. McNAB & J. S. LINK.
TIME RECORDING REGISTER.

APPLICATION FILED JULY 26, 1907.

2 SHEETS—SHEET 1.

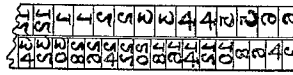
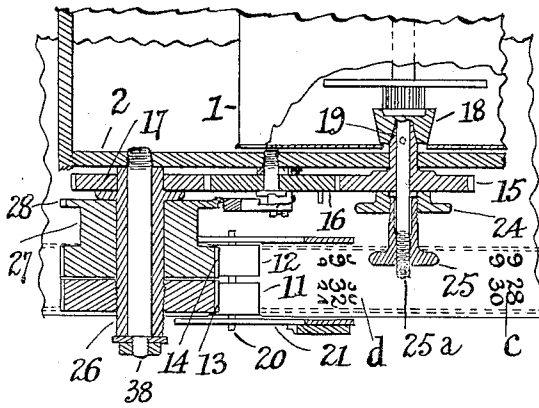


Fig 4

Fig 1.

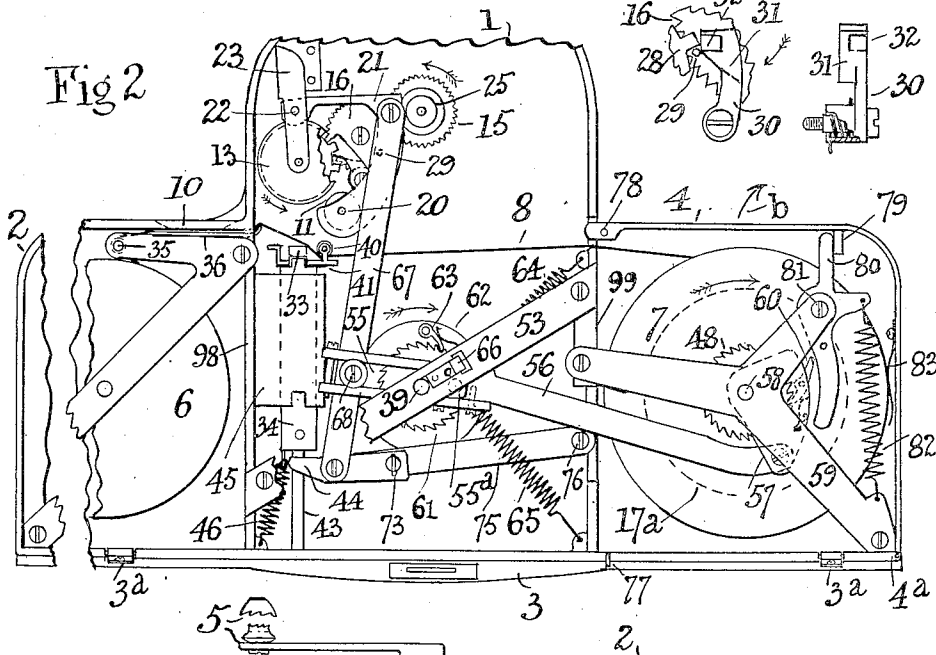


Fig 2

Fig 5

Fig 6

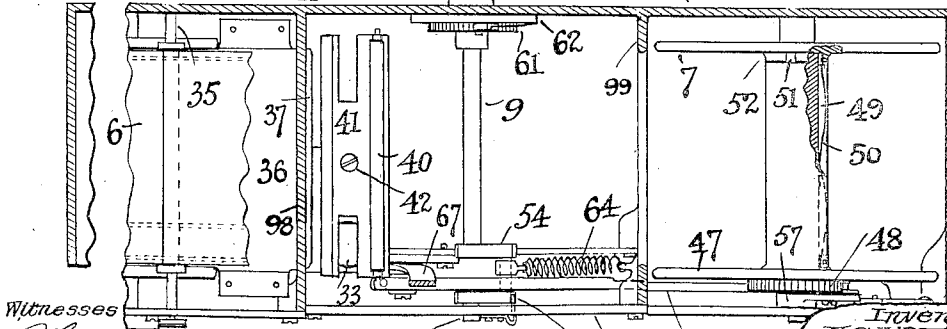


Fig 3

Witnesses
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2 SHEETS—SHEET 2.

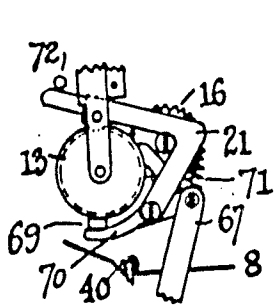
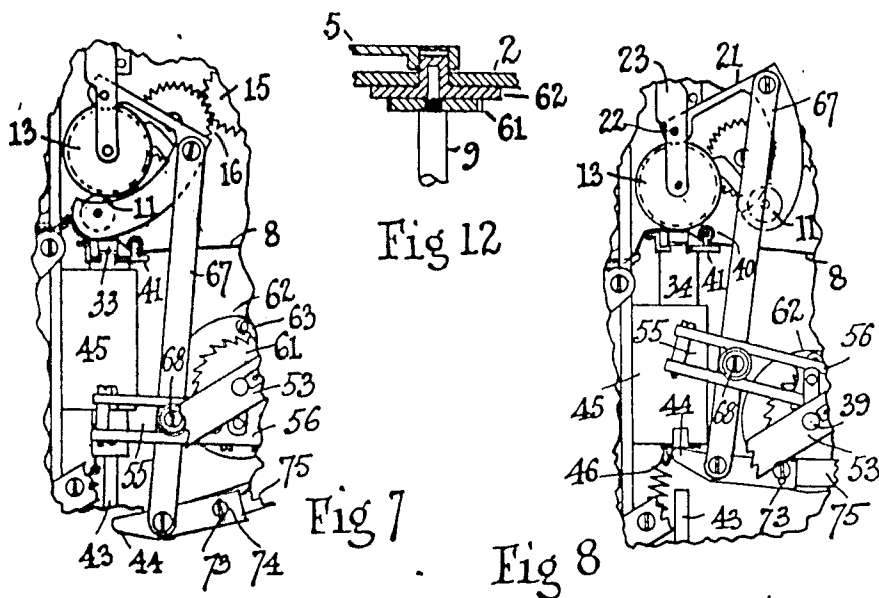


Fig 9

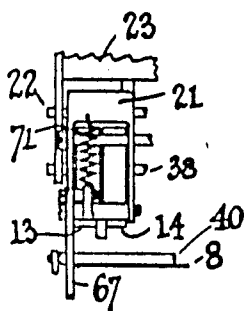


Fig 10

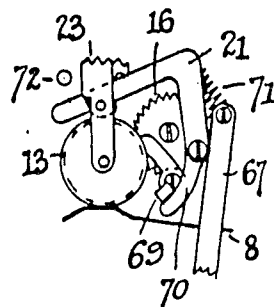


Fig 11

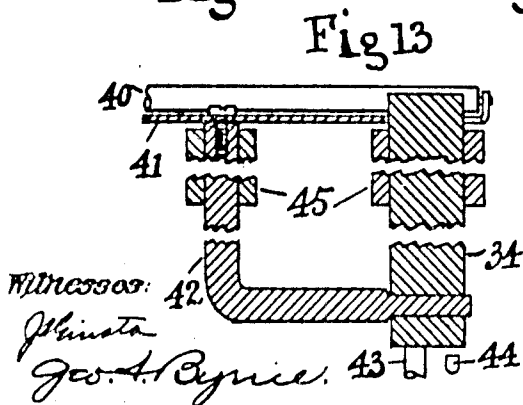


Fig 13

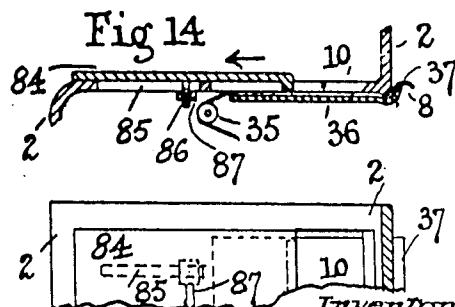


Fig 14

Fig 15

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UNITED STATES PATENT OFFICE.

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TIME-RECORDING REGISTER.

No. 879,685.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, NORMAN SINCLAIR McNAB, a subject of the King of Great Britain and Ireland, &c., residing at Caulfield, in the State of Victoria, Commonwealth of Australia, and JOSEPH SELBY LINK, a subject of the King of Great Britain and Ireland, &c., residing at Collins street, Melbourne, in the State of Victoria, Commonwealth of Australia aforesaid, have invented certain new and useful Improvements in Time-Recording Registers; and we 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 appertains to make and use the same.

This invention belongs to that class in which clock mechanism actuates type wheels, which—when required—print the time upon a paper or other band, which is transferred, in lengths as required from a feed roll to a winding—on reel, the paper being intended to receive (through an adjustable or other aperture in the casing) signatures or markings to indicate the attendances or movements of workmen or officials; or to indicate receipts and payments of cash,—or to register any other events or matters desired; the paper being either blank or ruled in predetermined manner, and having (in some cases) printing thereon suited to the entries in view.

When the machine is used as a time book substitute, the official or employee signs on the paper, and then turns a handle. This winds enough of the paper on the receiving reel to carry the signature out of sight and leave a blank for the next entry. It also actuates a plunger which presses the paper against the type face, which prior thereto is linked by a roller or other means as hereinafter explained.

The details of this invention comprises also various parts which serve other functions, the whole machine being illustrated in the accompanying drawings. Sundry modifications and additions may, however, be made, varying the construction from what is illustrated, and different features may be omitted while still retaining matter which we claim as our invention.

In these drawings Figure 1 is a plan in horizontal section through parts of the clock actuated mechanism, and showing the strip or paper band, with times marked thereon.

Fig. 2 is a rear elevation of parts of the machine, a door (which forms the back of the casing) being open and extending horizontally towards the reader. Fig. 3 is a sectional plan view showing parts in Fig. 2 omitting those above the paper band. Fig. 4 shows a strip of rubber or material adapted to be divided longitudinally for the application of one half to form the rim of the hour, and the other half the rim of the minute, printing type wheel, respectively. Figs. 5 and 6 are a rear, and an edge view, respectively, of part of the clock actuated mechanism. Fig. 7 shows parts of Fig. 2 in type inking position, and Fig. 8 the same parts in paper printing position. Figs. 9 and 10 show (from the rear and side respectively) modified inking mechanism; and Fig. 11 shows the same parts in paper printing position. Fig. 12 shows in horizontal section a plan view of details of the handle mechanism. Fig. 13 is a side elevation in vertical section of the paper shifting means. Fig. 14 is a rear elevation in vertical section of the adjustable slide for regulating the size of the aperture under which the paper is exposed to receive entries; and Fig. 15 is a plan view of the parts in Fig. 14. Some of these figures are for greater clearness drawn on a larger scale than the others.

In these drawings 1 indicates any suitable clock, its face or dial being visible or not visible, as predetermined, outside the casing 2 of the machine. The casing is given any suitable form, and is of any desired material. To allow access to the interior and to protect the same, the casing has one or more doors. Thus the rear of the casing is a door 3 (Fig. 2) having any suitable lock and with base hinges 3^a. 4 is another door with hinges at 4^a. The latter door forms in part a casing top and in part a casing side. These doors open in the directions of the arrows *a* and *b* respectively;—see Figs. 3 and 2. 5 is a handle to be turned when an entry has been made on the paper. This handle turns spindle 9 by means of a sleeve which projects from casing 2 (and usually under the clock dial).

6 is the feed roll of paper mounted on any suitable spindle or adapted to turn in any suitable bearings.

7 is the winding - on reel. It is shown empty in Fig. 3; its core or spindle may be of any desired thickness, and in some cases is of

especially large diameter as shown by dotted line 17^a Fig. 2, the reel flanges being enlarged in diameter as required.

8 shows the paper between the rolls; 10 the aperture in casing 2 for the employee's signature, or for any other registration on the paper there exposed.

13 is the minute type printing wheel, and 14 the hour type printing wheel.

15 15, 16 and 17 are a train of three equal gear wheels, the former actuated by the clock minute hand arbor, to which is connected clutch member 18 to be engaged by a clutch member 19 mounted on gear wheel 15.

15 Means are provided to apply or release the clutch, as nut 24, mounted on the screw threaded shank of a knob 25, which is affixed to a spindle 25^a (Fig. 1) by which the clock hands may be regulated at will. When desired, the clutch is disconnected. The typewheels and clock hands will then be movable independently, and without moving any other clock mechanism, as wheel 15, incloses loosely the spindle 25^a. This spindle is provided with a pin which passes through the hub of wheel 15, and which enters a slot in clutch member 18, and thereby connects and disconnects the parts as stated.

11 and 12 are separate inking rollers on a spindle 20 mounted in a hanger 21 pivoted at 22 to a suitable bracket 23.

To wheel 17 is fixed (see Fig. 1) a projecting sleeve 26, turning on a suitably fixed spindle 38, and fast to the said sleeve is wheel 13, while wheel 14 is loose on it; thus wheel 13 will rotate at the same rate as the minute handle spindle. Projecting from wheel 14 is a hub 27 part of which carries a 12-toothed wheel 28, which is adapted to be turned (by a pin 29 projecting from wheel 16) to the extent of one tooth to each revolution of wheel 16—that is one per hour when wheel 14 is an hour printing wheel. Wheel 28 (and therefore typewheel 14) is (by a spring actuated pawl 30) locked from rotating except when pin 29 comes into gear with wheel 28, see Fig. 5. In Fig. 2 parts are broken out to show the pawl locking wheel 28, but in Fig. 5 the wheel is shown released, the pawl being raised.

Pawl 30 has a recess 32 which fits over each tooth of wheel 28 in succession and during almost a whole revolution of pin 29. On pawl 30 is a cam or bearing surface which pin 29 is adapted to engage and press to lift the pawl clear of wheel 28, by the time pin 29 touches that tooth by pressing which the pin is to rotate said wheel. Wheel 28 is thus rotated by the pin one-twelfth of a revolution; then the pawl automatically locks on the next tooth of wheel 28, so that until another revolution of wheel 16 is being completed, wheel 14 will not vary the hour it prints. When the type wheels have faces of metal, a detachable pad 33 of resilient mate-

rial may be fitted on the end of plunger 34, which, as below explained, produces the impression of the type on the paper by forcing the latter upward. The type may, however, be of rubber. Typewheel 13 bears in some cases alternate numbers only, as 2, 4, 6, 8 or (1, 3, 5, 7) and so on, to record alternate minutes.

The impression face of the plunger 34 is of such size and form as to yield a predetermined range of imprint, as for example two distinct lines as shown at *c*, Fig. 1 or one distinct line, and parts of two others as at *d*. The said range allows of all minutes being indicated, directly or indirectly, even when wheel 13 prints alternate numbers only. Thus when the imprint is as at *c* Fig. 1, it will be understood the time of stamping was actually at 9.29, but if it be as at *d*, it indicates 9.32, that being the only distinct time completely printed. Wheel 14 has any suitable characters, usually showing twenty-four numbers thus, 1, 1, 2, 2, 3, 3, and so on to 12, 12. A twelfth of the typewheel prints in one impression, thus 1, 1, or 2, 2, or the like, see Fig. 4.

The paper from feed roll 6 as unrolled passes over a horizontal guide roller 35 close to the casing and suitably journaled in such position as to guide the paper to a fixed supporting plate 36, the paper over which (and under aperture 10) is exposed to receive any signature, number, entry, or other record. Plate 36 is suitably attached at its sides to casing 2 and is curved at one end 37 (inward of the edge of slot 10 of the casing) so as to leave no room to insert a blade or implement to tamper with the mechanism within the casing. The casing has interior walls 98, 99 (slotted to allow paper 8 to pass) as a further protection of the said mechanism. After passing plate end 37 the paper will be between typewheels 13, 14 on one side and plunger 34 on the other.

41 is a plate of any suitable form extending transversely (see Figs. 13 and 9) and adapted to shift the paper when required to near the face of the type. The latter will make an impression as plunger 34 (with or without a pad 33) completes its upward stroke. Then by means of a roller 40 (or a plurality of rollers) or the like, under which the paper is passed, the paper is lowered from the typewheel lower surfaces, to allow sufficient clearance for the action of inking mechanism below described. Plate 41 is mounted on arm 42 which is secured to plunger 34 which rests on a suitable support as pillar 43.

45 is a guide block through which parts 42, 34 are adapted to slide.

44 is a lug or finger for raising (as below explained) part 34 when required, and 46 Fig. 2 a spring (for lowering the said part when the time impression has been made) connecting

part 34 to the casing. The winding-on reel 7 has a flange 47 having attached on its outer side a ratchet wheel 48 by which the reel is rotated. The reel core has along it a slot 49, containing a spring or undulating bar 50. At one end the said bar is fixed in the groove pivotally or so that the bar can be swung upward, to allow of the paper end being inserted below it, and the bar then swung down into the slot to grip the paper tightly. The free end of the bar drops through a slot 51 in a rotatable collar 52, into a groove or recess extending under the said collar, which is then turned sufficiently (as seen in Fig. 3) to lock the bar down. By this construction the reel core on which the paper is to be wound is left without projections and thus the paper can be wound on it evenly. Instead of the paper being wound on a reel it may be drawn forward by and between closely set rollers into any suitable receptacle.

Connecting spindle 9, to a short shaft or pin 39 journaled in a suitable frame plate 53, is a crank 54 a projection from which enters a bearing 55^a at the end of slot 55 in a connecting rod 56, so that as handle 5 is turned rod 56 is actuated, whereupon it swings a lever or plate 57 to which it is pivoted. Mounted on lever 57 which has (see Fig. 2) a suitable pivot as 58 on framing 59, is a ratchet pawl 60 adapted to turn wheel 48 and thus wind some of the paper on each time the said pawl is drawn down. This winding takes place after the signature is written and immediately before the time is stamped. Thus the stamping is brought opposite or nearly opposite the signature or entry.

Spindle 9 is not directly attached to handle 5 but (as shown in Fig. 12) has fixed to it a ratchet wheel 61 in which gears the spring pawl 63 (Fig. 2) which is pivoted to a ring or sleeve 62. The latter rotates with the handle or crank 5, being connected to it by a hub closed at its outer end which projects from casing 2. This construction allows of the handle being turned backwards without operating spindle 9, and protects the casing interior when the handle is removed. Crank 54 is controlled by springs 64, 65 connecting it to the casing. Neither the ink rollers nor paper 8 can be left in contact with typewheels, 13, 14, because the normal position to which crank 54 is returned by springs 64, 65 (Fig. 2) after the signature or entry has been drawn out of view by turning handle 5. 66 is a spring or brake plate attached to plate 53, and shown with its end passing through a slot therein. By the friction of its end on a crank arm surface (see Fig. 3) part 66 resists the further turning of crank 54 on its return to normal position, and by reducing the crank speed bring it to rest, unless handle 5 continues to be forcibly rotated.

Referring now to the inking device,—upon cranked or curved hanger 21 being swung on

its pivot 22, it moves inked rollers 11, 12, into contact with the under surfaces of typewheels 13, 14, and rolls them across said surfaces, thus inking them, without however any pressure which could stop the revolution of either. The inking means may, however, be of any suitable form and of any suitable material. Thus a ribbon could be used; or a pad as shown in Figs. 9 to 11; but the preferred construction is as in Figs. 1 and 2, in which hanger 21 is oscillated by a connecting rod 67 to which is attached a projection or roller, 68, which is engaged in slot 55 of rod 56, which receives motion from crank 54 rotated by handle 5. On turning the latter the inking position (Fig. 7) is produced, and then the ink rollers are swung back and up to leave room for plunger 34 to be raised into the impressing position, Fig. 8, which is produced as handle 5 continues its revolution. In some cases to feed ink to rollers 11, 12 a pad (not shown) is added over which those rollers travel before reaching the type.

In Figs. 9 to 11, is shown a pad 69 attached or pivoted to a lever 70 which is pivoted to a cranked hanger 21, and connecting rod 67. 71 is a spring tending to keep lever 69 in the position of Fig. 11, that is to say out of the way of paper 8. When handle 5 is turned the inking movement—see Fig. 9, is produced; then the printing,—Fig. 11. 72 is any suitable stop located to so limit the motion of hanger 21 that, when the latter strikes the stop, pad 69 is in correct position to be pressed against the typewheels. During this pressure spring 71 is expanded; and it retracts the ink pad from the typewheels when rod 67 begins its return or upward motion. This spring may if desired be attached between the end of rod 67 and hanger 21. Any suitable joint or connection is used between rods 67 and 56 or rod 67 and crank 54 may be connected. Rod 67 (when it is actuated) depresses and then raises lever finger 44 to which it is connected. The finger thus strikes plunger 34 (raising it in guide 45) and making it press up the paper as already indicated.

The type impression on the paper may be made heavier or lighter by altering the adjustment or position of finger 44 so that it raises plunger 34 the regulated distance desired. To allow of this adjustability any suitable means is used; for example there is a slot 73 in the finger through which the set screw 74 passes into a lever 75 which is pivoted to the framing or casing as at 76—see Figs. 7, 8, and 2.

In order that rollers 11, 12 shall be unable to touch or ink the paper, they are shrouded at each side by the hanger 21, whose sides leave the rollers projecting only along an arc which will in the inking position be next to the typewheels.

Plate 41 as shown in Fig. 3 is adjustable

or reversible so that roller 40 may be on the side near the lip 37 when desired (see Fig. 2). Door 3 has a pin 77 to enter hole 78 in door 4 to hold the latter closed. Inside door 4 is a lug 79 adapted to push a lever 80 (which is pivoted at 81 to suitable framing) clear of pawl 60. The pawl then prevents the reel 7 being so turned as to unwind the paper on it. But a spring 82 is so connected to an arm of lever 80, and to any suitable framing that immediately door 4 is opened, lever 80 presses pawl 60 clear of ratchet wheel 48, allowing thus the paper on reel 7 to be unwound.

83 is a spring or brake or the like secured inside door 4 in a position to press on flange of reel 7 so as to insure the reel stopping promptly after each actuation of handle 5. As soon as door 4 is opened this brake is evidently taken off.

In Figs. 14 and 15 is an adjustable table or plate forming part of the casing top. The casing 2 has slots 85 through which pass from plate 84 screwed projections 86, on which are wing nuts or the like 87. By loosening the nuts and sliding table 84 in the direction of the arrow, Fig. 14, the aperture 10 may be enlarged as required; but it will be observed that the table cannot be moved without opening door 3. As one modification, plunger 34 may be omitted, paper 8 being lifted by any suitable substitute; for example by connecting parts 40, 41 to an arm on part 44, or lever 75, the latter parts being located as high as desired accordingly.

It is to be understood that a single typewheel may be used in some cases where typewheels are mentioned in this specification, and that the numbers of other parts may also be varied.

What we do claim as our invention and desire to secure by Letters Patent of the United States is:—

1. In a workman's time recorder, the combination of a minute recording typewheel; a sleeve on which said wheel is secured; an hour recording typewheel loose on said sleeve, and provided with a toothed wheel; a train of gears, one of the wheels of which is rigid with said sleeve; a clock mechanism; a clutch connecting the same with said train of gears; and means for locking and unlocking said toothed wheel, and for moving said wheel at intervals, substantially as described.

2. In a workman's time recorder, the combination of a minute recording typewheel; a sleeve on which said wheel is secured; a train of gear wheels, one of which is rigid with said sleeve; an hour recording typewheel provided with a toothed wheel loose on said sleeve; a clock mechanism; a clutch connection between said gears and said clock mechanism; and means for locking, unlocking and moving said toothed wheel com-

prising a pin and a recessed spring pawl, substantially as described.

3. In a workman's time recorder, the combination of a minute recording typewheel; a sleeve on which said wheel is secured; a train of gear wheels, one of which is rigid with said sleeve; an hour recording typewheel provided with a toothed wheel loose on said sleeve; a clock mechanism; a clutch connection between said gears and said clock mechanism; a pin and a recessed spring pawl for locking, unlocking and moving said toothed wheel; a hanger, inking rollers on the same; means to oscillate the hanger to ink said type wheels on their under surfaces; and a handle to actuate said means, substantially as described.

4. In a workman's time recorder, the combination of a minute recording typewheel; a sleeve on which said wheel is secured; an hour recording typewheel loose on said sleeve, and provided with a toothed wheel; a train of gears, one of the wheels of which is rigid with said sleeve; a clock mechanism; a clutch connecting the same with said train of gears; inking rollers for said typewheels; a hanger for said rollers having sides covering said rollers except where they touch the typewheels; and means for locking and unlocking said toothed wheel, and for moving said wheel at intervals, substantially as described.

5. In a workman's time recorder, the combination of a casing having outer and inner walls for the protection of the mechanism contained therein, said inner walls being slotted to permit the passage of a paper band adapted to receive a record; a minute recording typewheel; a sleeve on which said wheel is secured; an hour recording typewheel loose on said sleeve, and provided with a toothed wheel; a train of gears, one of the wheels of which is rigid with said sleeve; a clock mechanism; a clutch connecting the same with said train of gears; and means for locking and unlocking said toothed wheel, and for moving said wheel at intervals, substantially as described.

6. In a workman's time recorder, the combination of a casing having outer and inner walls for the protection of the mechanism contained therein, said inner walls being slotted to permit the passage of a paper band adapted to receive a record; a minute recording typewheel; a sleeve on which said wheel is secured; an hour recording typewheel loose on said sleeve, and provided with a toothed wheel; a train of gears, one of the wheels of which is rigid with said sleeve; a clock mechanism; a clutch connecting the same with said train of gears; inking rollers for said typewheels; a hanger for said rollers having sides covering said rollers except where they touch the typewheels; and means for locking and unlocking

said toothed wheel, and for moving said wheel at intervals, substantially as described.

7. In a workman's time recorder, the combination of a casing having outer and inner walls for the protection of the mechanism contained therein, said inner walls being slotted to permit the passage of a paper band adapted to receive a record; a feed roll for said band on the outer side of one of said inner walls; a winding roll on the outer side of another of said inner walls, both of said rolls being located within the outer walls of said casing; a minute recording typewheel; a sleeve on which said wheel is secured; an hour recording typewheel loose on said sleeve, and provided with a toothed wheel; a train of gears, one of the wheels of which is rigid with said sleeve; a clock mechanism; a clutch connecting the same with said train of gears; and means for locking and unlocking said toothed wheel, and for moving said wheel at intervals, substantially as described.

8. In a workman's time recorder, the combination of outer and inner walls of a casing; a winding roll in said casing; a rear door for the same; a second angular shaped door at one side of the casing giving access to said roll, said inner walls provided with slots to permit a paper band to pass therethrough; typewheels; means to actuate the same; means to cause said wheels to record on said band; inking rollers for inking said wheels; and a hanger for said rollers having sides covering the same, substantially as described.

9. In a workman's time recorder, the combination of a casing having a door; a winding roll contained therein; a ratchet for actuating said roll; a pawl for operating the ratchet; a pivoted lever carrying said pawl; a spring actuated lever to raise the pawl; and a lug on said door preventing said lever from raising the pawl when the door is closed, substantially as described.

10. In a workman's time recorder, the combination of a casing having a door; a winding roll contained therein; a ratchet for actuating said roll; a brake 83, controlling the motion of said roll; a pawl for operating the ratchet; a pivoted lever carrying said pawl; a spring actuated lever to raise the pawl; and a lug on said door preventing said lever from raising the pawl when the door is closed, substantially as described.

11. In a workman's time recorder, the combination of a casing provided with an angular shaped door; a roll contained in said casing and covered on two sides by said door; a ratchet for actuating said roll; a pawl for operating the ratchet; a pivoted lever carrying said pawl; a spring actuated lever to raise the pawl; and a lug on said door preventing said lever from raising the pawl

when the door is closed, substantially as described.

12. In a workman's time recorder, the combination of a casing having a door; a winding roll contained therein; a ratchet for actuating said roll; a pawl for operating the ratchet; a pivoted lever carrying said pawl; a connecting rod extending from said pivoted lever; a spindle on which said rod is mounted; a crank for actuating said rod; a spring actuated lever to raise the pawl; and a lug on said door preventing said lever from raising the pawl when the door is closed, substantially as described.

13. In a workman's time recorder, the combination of a casing having a door; a winding roll in said casing partially inclosed by said door; a ratchet for actuating said roll; a pawl for operating said ratchet; a pivoted lever carrying said pawl; a spring actuated lever to raise the pawl; a lug on said door preventing said last named lever from acting when the door is closed; a connecting rod extending from said pivoted lever; a spindle on which said rod is mounted; a ratchet also mounted on said spindle; a pawl for actuating said last mentioned ratchet; a ring provided with a hub carrying said last mentioned ratchet; and a handle external of said casing for actuating said hub and ring, substantially as described.

14. In a workman's time recorder, the combination of a casing having a door; a winding roll in said casing partially inclosed by said door; a ratchet for actuating said roll; a pawl for operating said ratchet; a pivoted lever carrying said pawl; a connecting rod extending from said pivoted lever; a spindle on which said rod is mounted; a ratchet also mounted on said spindle; a pawl for actuating said last mentioned ratchet; a ring provided with a hub carrying said last mentioned ratchet; and a handle external of said casing for actuating said hub and ring, substantially as described.

15. In a workman's time recorder employing a paper band, the combination of a casing having a door; a winding roll in said casing partially inclosed by said door; said paper band adapted to receive a record, and capable of being wound on said roll; type recording wheels; means for causing the same to make a record on said band; a ratchet for actuating said roll; a pawl for operating said ratchet; a pivoted lever carrying said pawl; a connecting rod extending from said pivoted lever; a spindle on which said rod is mounted; a ratchet also mounted on said spindle; a pawl for actuating said last mentioned ratchet; a ring provided with a hub carrying said last mentioned ratchet; and a handle external of said casing for actuating said hub and ring, substantially as described.

16. In a workman's time recorder employing a paper band, the combination of a casing having a door; an aperture for signatures, and inner and outer walls; a winding roll in said casing partially inclosed by said door; said paper band passing through said inner walls adapted to receive a record and capable of being wound on said roll; type recording wheels; means for causing the same to make a record on said band; a ratchet for actuating said roll; a pawl for operating said ratchet; a pivoted lever carrying said pawl; a connecting rod extending from said pivoted lever; a spindle on which said rod is mounted; a ratchet also mounted on said spindle; a pawl for actuating said last mentioned ratchet; a ring provided with a hub carrying said last mentioned ratchet; and a handle external of said casing for actuating said hub and ring, substantially as described.

17. In a workman's time recorder provided with a paper band, the combination of a casing having outer walls; slotted inner walls and an angular shaped door; said paper band passing through the slots in the inner walls; a roll partially inclosed by said door on which said band is adapted to be wound; a paper supporting plate curved at one end and extending from one of said slots, to prevent tampering with the mechanism; a pawl and ratchet for operating said roll; means comprising a lug on the door for controlling said pawl and ratchet; and additional means comprising a second pawl and ratchet for operating said roll, substantially as described.

18. In a workman's time recorder employing a paper band, the combination of a casing having outer walls, and slotted inner walls; means causing the said band to be fed through the slots of the inner walls; and a supporting plate for said band having a curved end and extending from one of said slots, for preventing any tampering with the mechanism, substantially as described.

19. In a workman's time recorder comprising a paper band, the combination of a casing having an aperture for signatures; outer walls, and slotted inner walls; a movable member to allow the size of the aperture to be varied; means within the casing to fasten said member in a predetermined position; means causing the said band to be fed through the slots of the inner walls; and a supporting plate for said band having a curved end and extending from one of said slots, for preventing any tampering with the mechanism, substantially as described.

20. In a workman's time recorder comprising a paper band, the combination of a casing having an aperture for signatures;

outer walls, and slotted inner walls; a movable member to allow the size of the aperture to be varied; means within the casing to fasten said member in a predetermined position; means causing the said band to be fed through the slots of the inner walls; and means for causing a record to be printed on said band; substantially as described.

21. In a workman's time recorder employing a paper band, the combination of a slotted casing having an aperture; a plate to regulate the size of said aperture; said paper band adapted to receive signatures or entries; projections extending inwardly from the plate through the slots; and fastening means on the projections, substantially as described,

22. In a workman's time recorder comprising a paper band, the combination of a casing provided with slotted inner walls; said paper band passing through the slots of said walls; typewheels; a roll; means to wind the same, including the rod 56; means connected with said rod, adapted to shift said band against said typewheels; and additional means also connected with said rod adapted to ink said typewheels, substantially as described.

23. In a workman's time recorder comprising a paper band, the combination of a casing; typewheels; means to drive said wheels; means to feed said band, comprising a rod 56; means to ink said typewheels, comprising the rod 67; connections between said rod 67 and said rod 56; means to raise said band against said typewheels and to return the same, comprising connections with said rod 67, and a clutch mechanism between said driving means and said typewheels, substantially as described.

24. In a workman's time recorder comprising a paper band, the combination of a casing; typewheels; means to drive said wheels; means to feed said band, comprising a rod 56; means to ink said typewheels, comprising the rod 67; connections between said rod 67 and said rod 56; means to raise said band against said typewheels and to return the same, comprising connections with said rod 67, and including an adjustable finger and a type impression plunger, adapted to shift said band against said typewheels, and additional means also connected with said rod adapted to ink said typewheels, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

NORMAN SINCLAIR McNAB.
JOSEPH SELBY LINK.

Witnesses:

G. G. TURRI,
B. M. LOWE.