N° 23 A.D. 1911

Date of Application, 2nd Jan., 1911

Complete Specification Left, 3rd July, 1911—Accepted, 30th Dec., 1911

PROVISIONAL SPECIFICATION.

Improvements in Workmens Time Recorders and the like.

I, WILLIAM MABERLY LLEWELLIN, 15, King Square, Bristol, Civil Engineer, do hereby declare the nature of this my invention to be as follows:—

My invention relates to an improved time recorder & has reference more particularly to that class wherein the record is made upon a card or equivalent.

The object of this my invention is to provide a machine which can be more readily manipulated by the operators & which indicates the time which will be imprinted upon the card & also the position which such imprint should occupy upon the card & also shows by an indicator if the operator will be recording early or late.

I provide a suitable clock which causes the minute type wheel to advance at each minute by any of the well known means & the minute type wheel is connected to the hour type wheel in such a manner that it causes the hour type wheel to advance one division at the end of each hour. This movement also may be made by any of the well known methods. The card rack or holder may be of any suitable type & is moved from right to left or from left to right for the purpose of recording in the distinct column appropriate for certain periods of the day, or for on and off. This movement of the card holder is obtained by means of a suitable sleeve pinion which is geared into a suitable rack attached to the card holder. The other end of the sleeve is extended through the casing of the machine & is fitted with a knurled knob or other suitable handle or lever by which it can be rotated thus altering the position of the card holders as required. Through the centre of this sleeve I pass a suitable rod which at one end (inside the machine) is provided with a suitable projection or projections which engage with the striking mechanism of the hammer. The other end of the rod (outside the case) is provided with a suitable knob or its equivalent. By giving the knob a suitable pull the hammer is caused to strike the back of the card & impress the time from the type wheels. If required this rod can be arranged so that a push is required to cause the impression in contradistinction to a pull.

Upon each of the type wheels at a convenient position at the side of each I fix a suitable band which is marked with the same numerals or characters borne by the type wheels respectively & over this band in the casing of the machine I provide a suitable window or sight hole which enables certain of the figures upon the bands to be read. I arrange the position of the figures upon the bands in such a way that the figures corresponding to those which would be impressed upon the cards are visible through the sight holes.

In a suitable position on the front or side or on all the sides of the machine as required I provide other sight holes through which figures representing the hours & minutes which will be impressed upon the card can be seen. These figures may be carried upon a band as before described or may be upon the face of suitable discs, the minute figures being shown upon one band or disc & the hour figures upon another band or disc, these bands or discs being so arranged that the figures appear in the same relative juxtaposition as they appear upon the card. The bands or discs are connected in a suitable manner to the mechanism which operates the printing type wheels & the movements from figure to figure are coincident as regards the minute type wheels & the

[*Price 8d.*]

minute indicator & the hour type wheel & the hour indicator, that is to say that whatever figures would be imprinted upon the card are shown through the sight holes.

Immediately over the sight hole & mounted in suitable framework or guides I fix a duplicate of the card which is used for taking the record, that is, a duplicate as regards size & the position of the horizontal & vertical lines. This will hereinafter be referred to as the indicator card. This card however is either a skeleton showing the horizontal & vertical lines only or is transparent, the effect being that the figures on the hour & minute indicators appear in the space upon the indicator card in exactly the same relative position they will appear when impressed upon the actual record card.

It will be understood that the portion of the card showing such data as the days of the week, a.m. or p.m. may be or may not be in skeleton or transparent, such data appearing exactly as shown upon the record cards, or it may be modified or amplified as required.

It will be seen from the foregoing that an operator before recording can see the hour & minute that will be recorded & also the position upon the card such record will occupy & can arrange the card holder accordingly if not in the required position.

Dated this 31st day of December, 1910.

W. M. LLEWELLIN, C.E.,
15, King Square, Bristol.

COMPLETE SPECIFICATION.

Improvements in Workmens Time Recorders and the like.

I, WILLIAM MABERLY LLEWELLIN, 15, King Square, Bristol, Civil Engineer, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

My invention relates to an improved time recorder & has special reference to that class wherein the record is made upon a card or equivalent.

The object of this my invention is to provide a machine which can be more readily manipulated by the operators & which indicates the time which will be imprinted upon the card & also the position which such imprint should occupy upon the card & also shows by an indicator if the operator will be recording early or late.

I provide a suitable clock which causes the minute type wheel to advance at each minute by any of the well known means and the minute type wheel is connected to the hour type wheel in such a manner that it causes the hour type wheel to advance one division at the end of each hour. This movement also may be made by any of the well known methods.

The card rack holder may be of any suitable type & is moved from right to left or from left to right for the certain periods of the day, or for "on" or "off".

I am aware that in connection with workmens time recorders giving records of time against a signature upon a web of paper it has already been proposed to have series of types which automatically display through suitable apertures the hour and minute of the time which the machines will print if operated and I make no claim thereto except combination with a machine in which the records are made upon cards as described herein.

In order that my invention may be more readily understood I annex hereto two sheets of explanatory drawings.

Fig. 1. is a front elevation of the machine showing the improved mechanism.
Fig. 2. is a side elevation and Fig. 3 a plan of the same mechanism.
Figs. 4 & 5 are enlarged side and front elevations of the chains and chain wheels with discs attached.
Fig. 6. is a plan showing figures representing the hour and minute through the sight holes.
Fig. 7. is a side view of the striking hammer & lever.
Fig. 8. is a front view of the striking hammer and lever.
Fig. 9. is a front view of the discs with figures showing through the sight hole, the skeleton card being removed.
Fig. 10. is a plan of the skeleton card.
Like letters refer to like parts in all the figures.
In Figs. 1, 2 & 3. A & A^1, are the type wheels. B & B^1 are suitable discs upon which are marked the figures corresponding to those on the type wheels A & A^1.
C is a skeleton card having the same divisions in the horizontal and vertical directions as the actual cards upon which the records are stamped.
E & E^1 are suitable chain pinions which receive motion at each impulse of the type wheels A & A^1, and transmit it through the chains F & F^1 to the wheel G & G^1 to which are attached the discs B & B^1.
H is a suitable knob which is attached to the sliding rod H^1 to which is fixed the cam-piece H^2.
J is a suitable striking piece attached to the hammer J^1 which has its fulcrum at J^2.
K is the mouthpiece for receiving the record cards & K^1 is a footstep or step upon which the cards rest.
L is a knurled knob which fits over the sliding spindle H^1 in the form of a sleeve, having at its other extremity a pinion L^1 which engages into the rack L^2 which is attached to the mouthpiece K.
M M^1 are suitable bands fitted to the type wheels A A^1 upon which are marked the same figures or characters as the type wheels to which they are attached in such a way that the same figures or characters will appear through the sight holes N N^1 as are stamped or imprinted upon the record cards.
In Fig. 6. M M^1 are the bands attached to the type wheels A A^1. N N^1 are the sight holes or windows through which the figures can be seen.
In Fig. 9. R^2 is the sight hole or window through which the figures on the discs B B^1 can be seen.
In Fig. 10. S represents the spaces of the card upon which the records are made.
T are the vertical lines U the horizontal lines.
I carry my invention into practice in manner as follows:—Upon each of the type wheel A & A^1 at a convenient position at the side of each I fix suitable bands M M^1 which are respectively marked with the numerals or characters borne by the type wheels and over these bands in the casing of the machine I provide suitable windows or sight holes N N^1 which enables certain figures upon the bands to be seen. I arrange the position of the figures upon the bands in such a way that the figures corresponding with those which would be impressed upon the record cards are visible through the sight holes.
I also provided one or more sets of chain wheels, chains and discs and upon the discs are marked the numbers or characters borne by the type wheels A A^1 the characters being so marked that they will appear side by side through a suitable sight hole in the same position as though stamped upon a card. In suitable juxtaposition to these figure discs I provide suitable frame work in which a skeleton duplicate of the record cards can slide. This skeleton card is attached to the lifting mechanism which actuates the footstep K^1 so that the position of the skeleton card will bear the same relationship to the figure discs B B^1 as the record card bears to the printing type wheels A A^1.

It is also free to move across the discs in the same way as the mouthpiece or card holder moves across the type wheels A A^1 in order to bring a required column opposite the type wheels for receiving the impression, the skeleton card being actually connected to the mouthpiece and moving with it. By this means an operator when making a record upon his card can see by looking at the indicator upon which space upon the card he is about to make his record and also the figures representing the hour and minute such record will show, as the figures upon the discs B B^1 will show through the appropriate space S upon the indicator card C and the actual record will be made upon the corresponding space upon the record card.

By turning the knurled knob L the card holder K can be moved across the type wheels to any required column or space by means of the pinion and rack L^1 L^2 and by pulling or pushing the knob H as the case may be the hammer J^1 is caused to strike the card by means of the cam x^2 actuating the lever J thus making an impression from the type wheels upon the card.

The indicator card instead of being skeleton as described may be transparent with horizontal and vertical lines ruled or otherwise indicated upon it.

It will be understood that the figures representing the day of the weeks and the headings of the card are shown upon the indicator card, the portion used for stamping records upon being only skeleton or transparent.

Having now particularly described & ascertained the nature of my invention and in what manner the same is to be performed, I declare that what I claim is:—

1. In time recorders for workmen & the like of the class in which the record is made upon a card carried in a moveable card holder the use of an indicator showing the figures representing the appropriate hour & minute through one or more suitable sight holes as herein set forth and described.

2. In time recorders for workmen & the like of the class indicated in Claim 1 the use of an indicator showing the figures representing the appropriate hour & minute through one or more suitable sight holes in combination with a skeleton or transparent card indicating the position the record will occupy upon the record card.

3. In time recorders for workmen & the like of the class indicated in Claim 1 the arrangement & combination of parts for indicating through one or more suitable sight holes figures representing the appropriate hour & minute & the position upon a skeleton or transparent card the record will occupy upon the record card, substantially as set forth and shewn.

4. In time recorders for workmen & the like of the class indicated in Claim 1 the method of moving the card holder transversely to the type wheels by means of a rack & pinion & a suitable knob or its equivalent such pinion & knob being in the form of a sleeve through which is passed a suitable rod for actuating the printing hammer substantially as hereinbefore set forth & described.

Dated this 1st day of July, 1911.

W. M. LLEWELLIN,
15, King Square, Bristol.

Redhill:- Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1912.

A.D. 1911. JAN. 2. No 23.
LLEWELLIN'S COMPLETE SPECIFICATION.

SHEET 1.

Fig 1

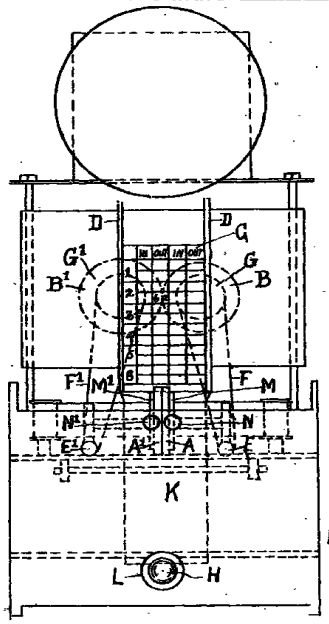


Fig 2

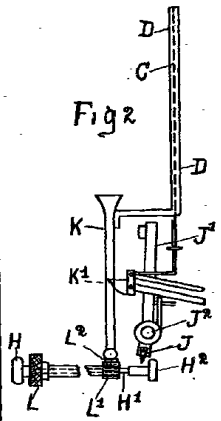
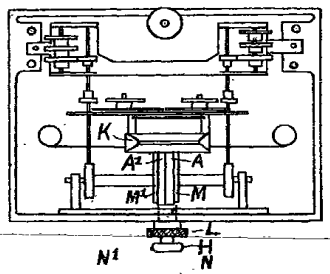


Fig 3



SHEET 2.

Fig 4

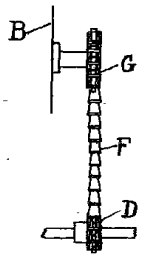


Fig 5

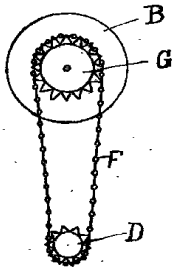
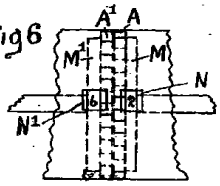


Fig 6



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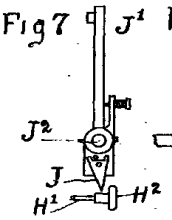


Fig 8

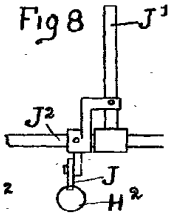


Fig 9

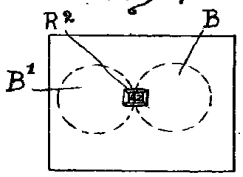
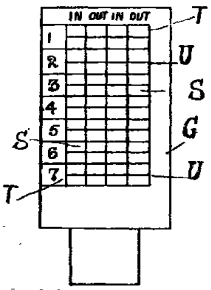


Fig 10



Malby & Sons, Photo-Litho

Fig 1

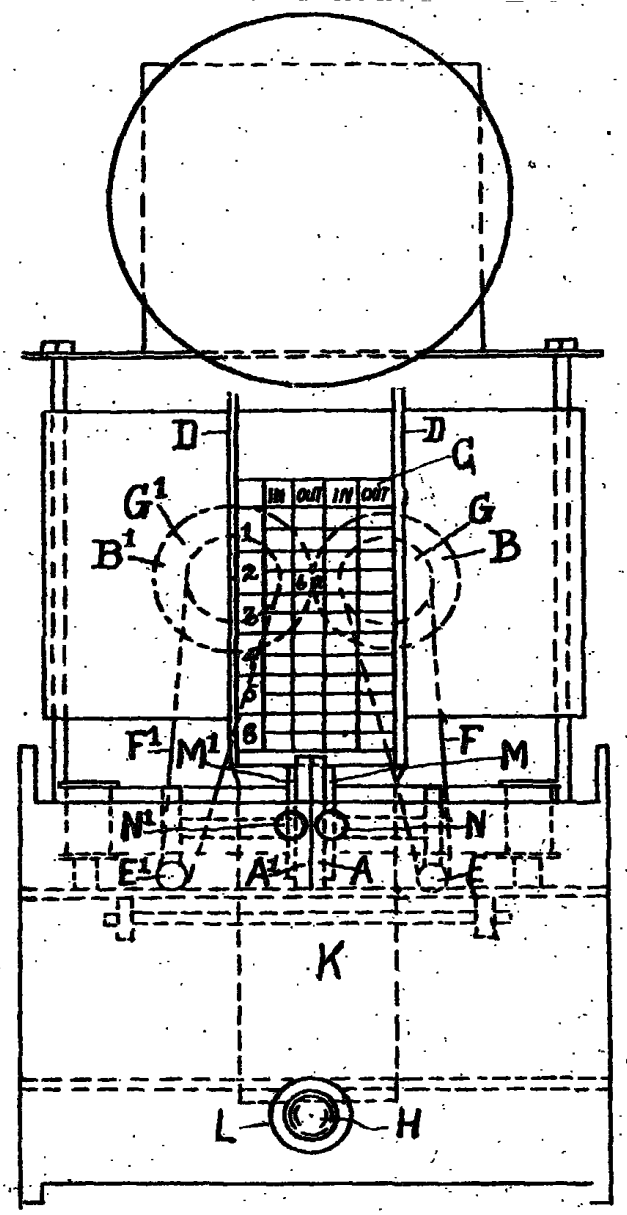


Fig 2

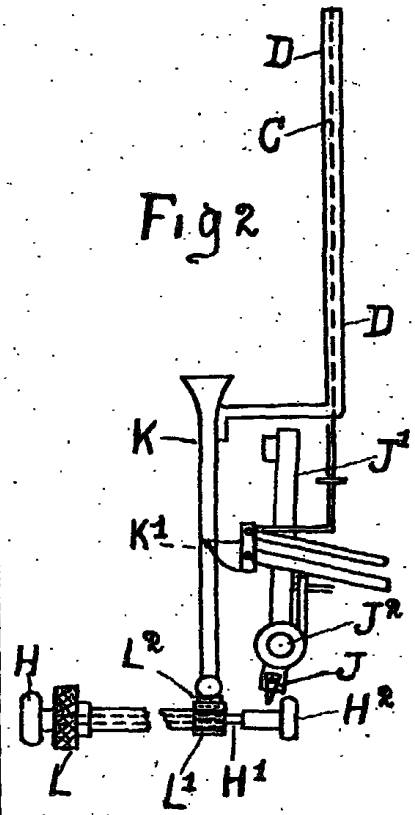
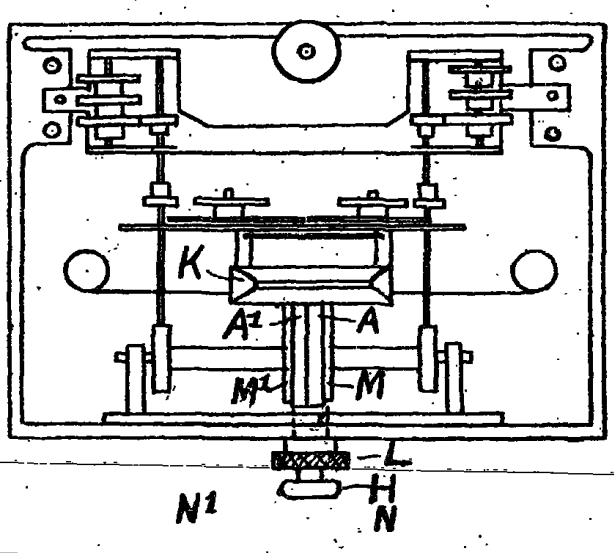


Fig 3



[This Drawing is a reproduction of the Original on a reduced scale.]

Fig 4

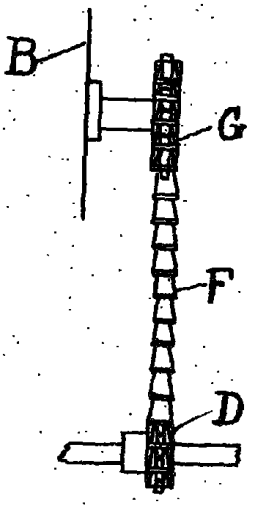


Fig 5

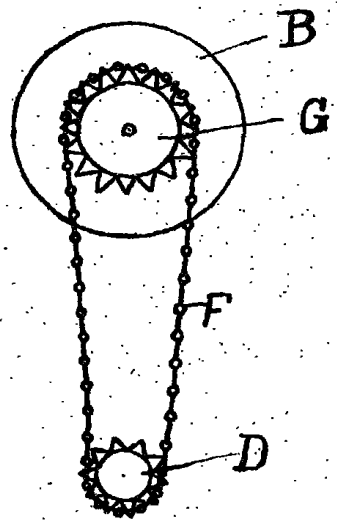


Fig 6

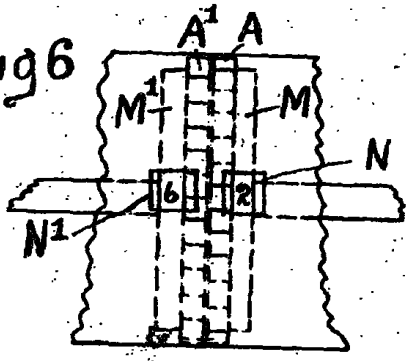


Fig 7

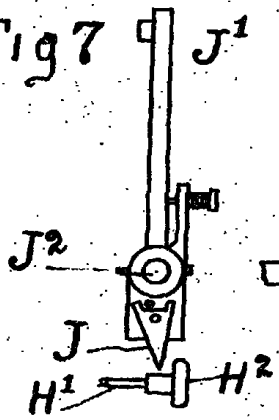


Fig 8

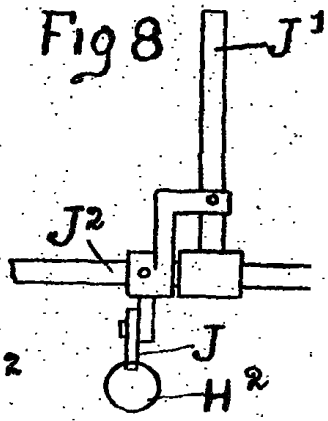
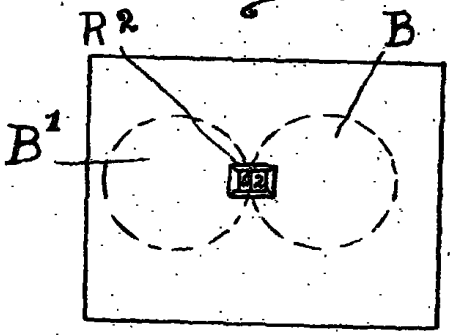


Fig 9



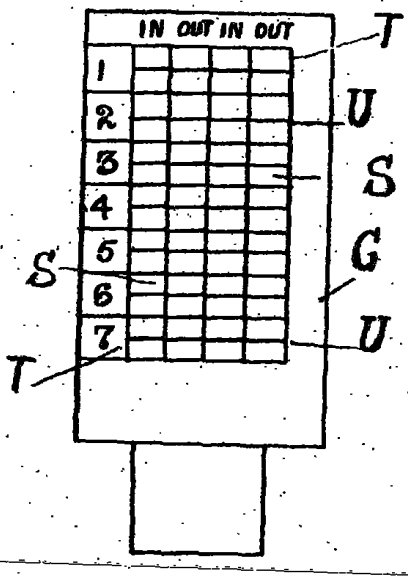


Fig 10

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