

G. W. PHILLIPS.

REGISTRATION REGULATION FOR TIME RECORDERS.

APPLICATION FILED JAN. 23, 1906. RENEWED JUNE 19, 1909.

930,416.

Patented Aug. 10, 1909.

2 SHEETS—SHEET 1.

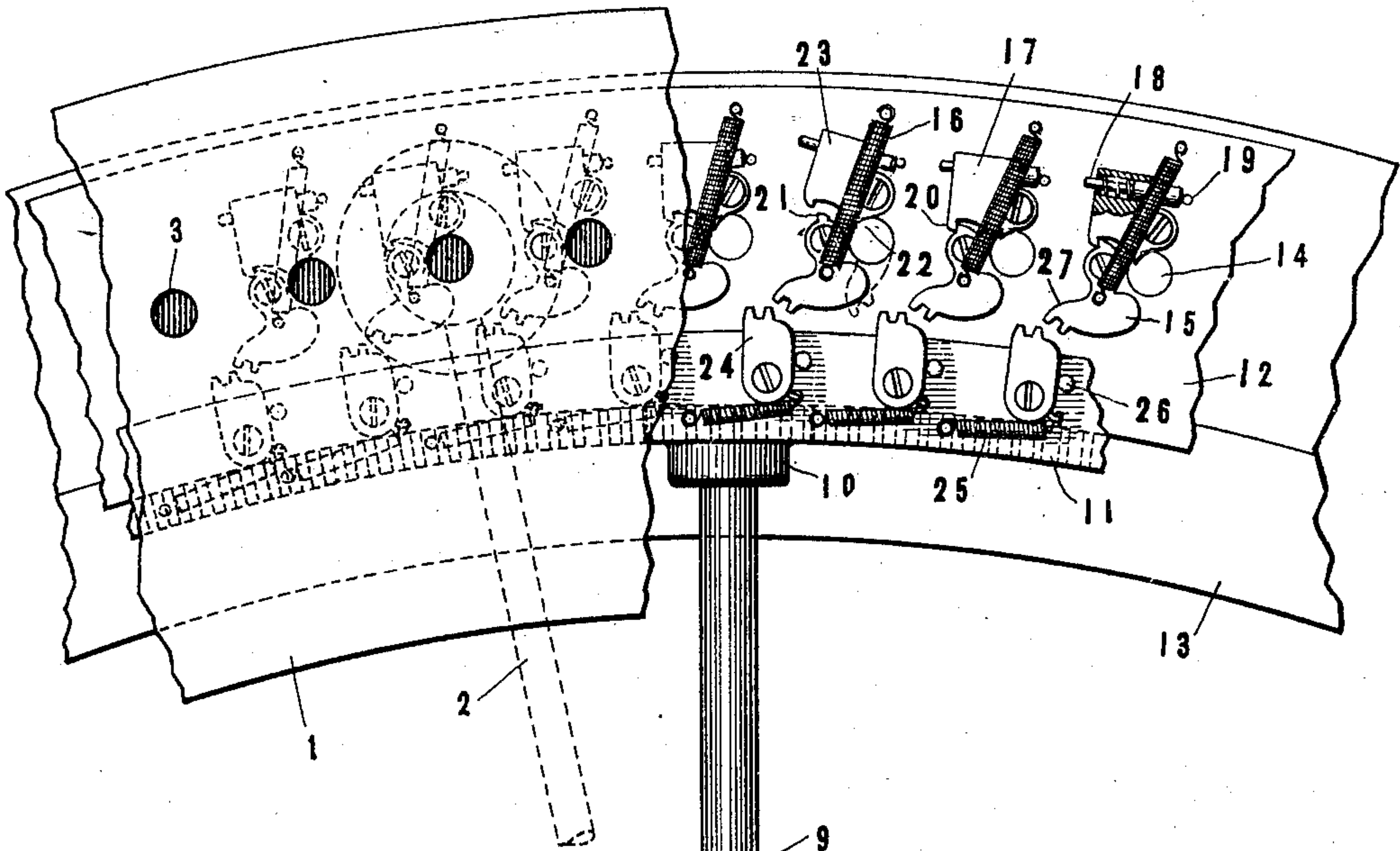
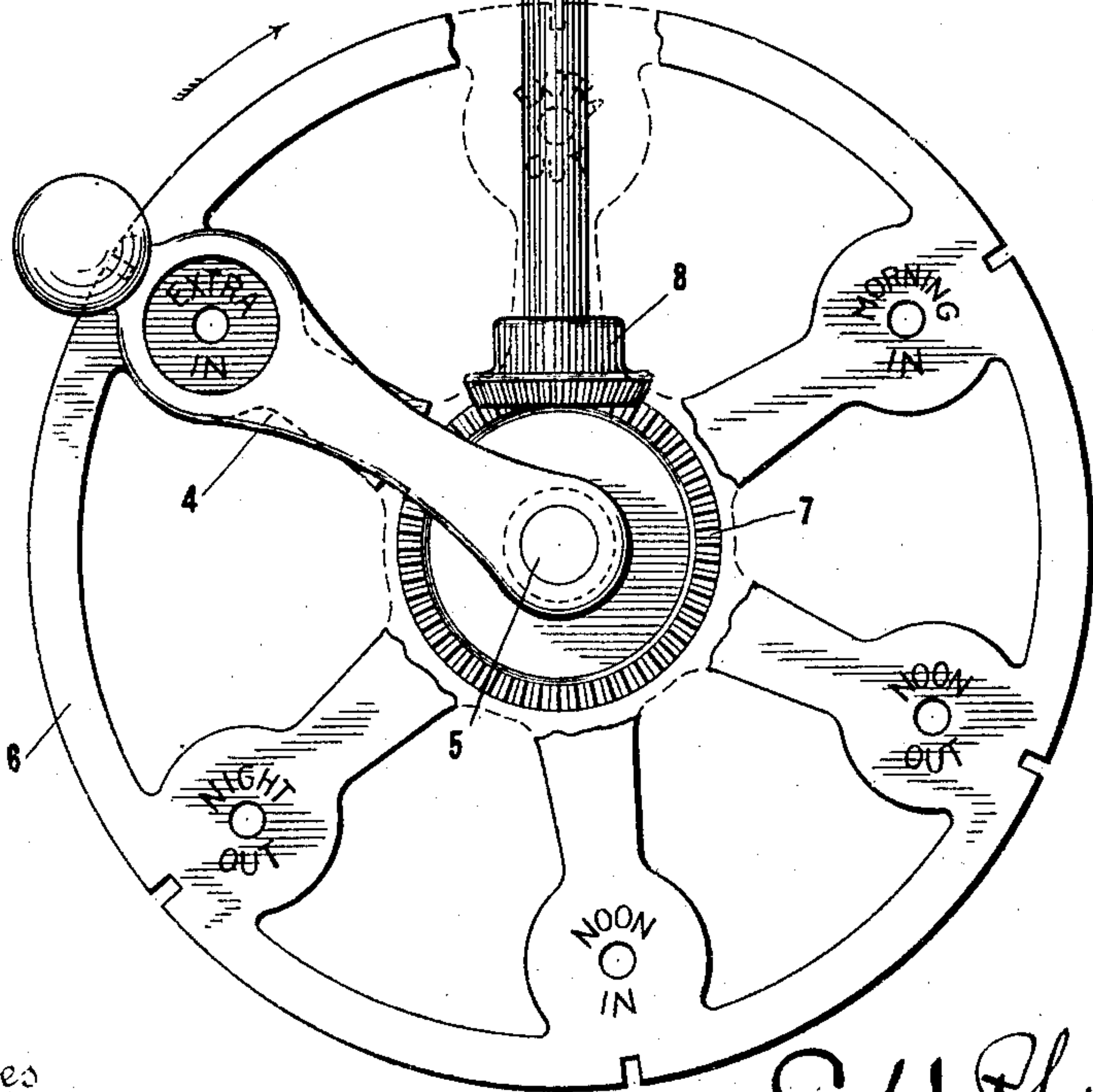


Fig 1



Witnesses  
*Chas. J. Clagett*  
*J. C. Clagett*

Inventor  
*G. W. Phillips*  
By *his Attorneys*  
*Warfield & Dues*

G. W. PHILLIPS.

REGISTRATION REGULATION FOR TIME RECORDERS.

APPLICATION FILED JAN. 23, 1906. RENEWED JUNE 19, 1909.

930,416.

Patented Aug. 10, 1909.

2 SHEETS—SHEET 2.

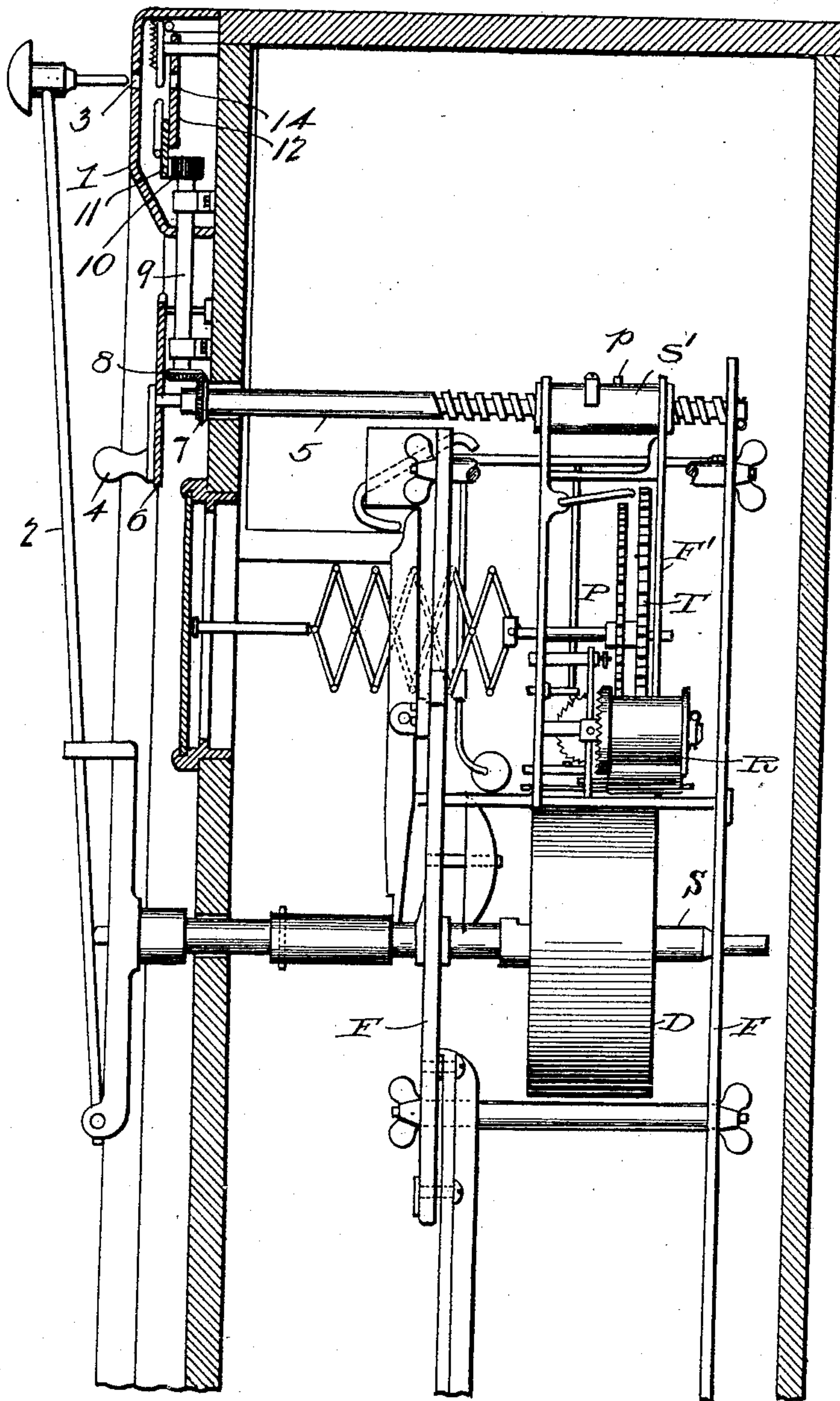


Fig. 2.

Inventor

George W. Phillips

Witnesses

J. A. Anderson  
C. E. Heylman

By

Kerr, Page & Cooper  
Attorney



# UNITED STATES PATENT OFFICE.

GEORGE W. PHILLIPS, OF SYRACUSE, NEW YORK, ASSIGNOR TO DEY TIME REGISTER COMPANY, OF SYRACUSE, N. Y., A CORPORATION OF NEW YORK.

## REGISTRATION REGULATION FOR TIME-RECORDERS.

No. 930,416.

Specification of Letters Patent.

Patented Aug. 10, 1909.

Application filed January 23, 1906, Serial No. 297,395. Renewed June 19, 1909. Serial No. 503,222.

*To all whom it may concern:*

Be it known that I, GEORGE W. PHILLIPS, residing at Syracuse, in the county of Onondaga and State of New York, have invented certain new and useful Improvements in Registration Regulation for Time-Recorders, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to time recorders.

One of the objects thereof is to provide simple and efficient mechanism adapted to prevent the confusion of records of time recorders.

Another object is to provide means of the above general type of practical construction and reliable action adapted to remain in good working condition under the most severe conditions of use.

A specific object is to provide automatic means of the above type adapted to prevent the superposition of two or more records upon the same portion of a record receiving surface.

Other objects will be in part obvious and in part pointed out hereinafter.

The invention accordingly consists in the features of construction, combinations of elements and arrangement of parts which will be exemplified in the mechanism hereinafter described and the scope of the application of which will be indicated in the following claims.

I have fully and clearly illustrated my invention in the accompanying drawings to be taken as a part of this specification, and wherein—

Figure 1, is a detailed elevation of one of the various possible embodiments of my invention, certain parts being broken away in order to show the construction more clearly. Fig. 2, is a vertical sectional view, from front to rear through a recorder casing showing a recorder of the dial type in side elevation, with my invention applied thereto.

In order that this invention be most readily grasped, it may here be noted that, in connection with time recorders and particularly those of the "dial" type, to which this invention particularly relates, there is a tendency, under certain conditions of use, to superpose the records and thus render

the same indistinct, if not unintelligible. This may arise in the dial type of machines, as an example of which attention is called to that set forth in Patent No. 621,994, March 28, 1899, to J. and A. Dey, by the accidental or intentional swinging of the actuating arm by a workman to a position corresponding to the record of another workman and operating the same, thus forming a record which is either superimposed upon the record of the workman last mentioned, or will have printed thereon the latter record upon the same being made. In order to preclude this state of affairs, I propose to provide means whereby upon a record being formed upon a predetermined position of a record receiving surface, the chance of another record being formed upon this particular portion of the surface is done away with.

Referring now to the accompanying drawings, it will be noted that the part 1 represents a portion of the dial of the well-known form of "dial" time-recorders, such as that shown in the above-mentioned patent, and with which coöperates the actuating arm to position records upon the record receiving surface. The record-forming mechanism, as well as the record-receiving surface, is, in general, of any desired type, as that shown in the above-noted patent and in Fig. 2 of the drawings, and their specific construction forms, in itself, no part of the present invention.

Briefly stated the time recording mechanism comprises a revoluble drum D upon which is carried a paper strip constituting the record receiving surface, said drum being mounted upon a horizontally journaled shaft S, mounted in bearings in the frame members F, and to the outer end of which shaft is connected the actuating arm 2, by means of which the drum may be revolved to bring the different spaces on the paper sheet into printing position. Located above this drum is a printing mechanism P, comprising a laterally movable frame F', in which are rotatably mounted time record forming type wheels T, which are vertically movable toward and away from the drum D to make an impression upon the sheet carried thereby, a suitable inking ribbon R, being interposed between the type wheels and said drum. The printing mechanism is movable



across the face of the record receiving surface to change the printing point, and in order to so move said mechanism the frame supporting the latter carries a sleeve S' having an internally projecting pin *p*, which engages a worm slot or groove formed in a shaft 5, hereinafter mentioned.

As all of the mechanism above described and the means for operating the same are well known in the art, forming the subject matter of the patent to J. and A. Dey above noted, it is not thought necessary to enter into a more elaborate description than that given. It is to be noted that, in connection with a recorder of this type, upon the arm 2 being thrown forwardly, when brought opposite one of the openings or perforations 3 within the dial, a record is formed upon the receiving surface of the recorder in a space devoted to a certain employee. Moreover, accordingly, as the crank 4, this part corresponding to the crank S' in the patent noted, is swung about the axis of shaft 5, the records are spaced in another direction so as to separate the times of entry and departure of the workmen for the different periods of the day. In the construction shown in the drawings, the position of the crank 4 may be determined as by a dial 6 in such manner as to bring the recording surface into the desired position relative to the printing mechanism.

With the above understanding of the relation in which the specific details of my invention are used, it will be seen that, upon the lever or crank 4 being set in a certain position, as, for example, for "Extra—Time—In", as shown in the drawings, and means being provided to limit the movement of the lever 2 to one actuation opposite each opening 3, the records will be properly spaced and the change of "over-registration", or superposition of records, will be done away with.

Secured to the shaft 5 is a bevel gear 7 meshing with a bevel pinion 8 upon a shaft 9 journaled in any desired manner upon the frame of the instrument. The outer end of shaft 9 is provided with a spur pinion 10 intermeshing with an annular rack 11, which preferably extends entirely about the dial. This rack is slidably mounted upon what may be termed a "locking plate" 12 rigidly fixed upon an annular casting 13 which is positioned in the rear of and substantially coincides with the dial.

Locking plate 12 is provided with openings 14 registering with the openings 3 in the dial 1. Adjacent each opening 14 is pivotally mounted a shutter 15 drawn toward the openings to cover the latter, as by a spring 16, but normally held in retracted position by a catch or trigger 17. The latter part is spring-pressed, as through pin 18 abutting the fixed stop-pin 19 in such manner as to cause a tooth 20 formed on the

catch to interlock with a co-acting tooth 21 upon the shutter. This trigger is provided with a portion 22 which normally projects slightly within the contour of the openings 3 and 14. The part 22 is thus adapted to be engaged by the pin customarily fixed within the actuating lever 2 and, upon the latter being operated, to lift the trigger into the position shown at 23, thus releasing the corresponding shutter held thereby and permitting it to swing into the obstructing position over the openings 3 and 4, as shown in dotted lines in the drawings. It will thus be seen that, upon the lever 2 being actuated opposite any given opening, it will release the corresponding shutter and thus obstruct the opening and prevent a second actuation in this position until the shutter is thrown back or set. The latter function is accomplished by pivotally mounted toothed sectors 24 upon the rack 11, the same being resiliently held, as by springs 25, in the position shown. Suitable pins 26 prevent the swinging of these sectors in a direction from left to right, having reference to the drawings, whereas their movement in an opposite direction is restricted only by the springs. These toothed sectors are adapted to mesh with teeth 27 upon the shutters 15 and to operate the same as hereinafter set forth.

The operation of the above described embodiment of my invention is substantially as follows: Assuming the parts in the position shown, the member 2 may be actuated opposite each opening and the several shutters thrown into closed position, as above-described, thus preventing further formation of records. At this stage the workmen will all have recorded their entrance to the factory, or their exit, if the crank 4 be set for such records. If now the crank 4 be moved to the next succeeding period, as "Extra—Time—Out", having reference to the drawings, the rack 11 will be moved throughout a predetermined distance, and each sector 24 will engage and swing up into retracted position the shutter which it passes. The recording surface and printing mechanism are thus moved as by mechanism of the nature of that shown in the above-noted patent, and a new series of records may be made. This series of operations is repeated with each set of records throughout the day, and when it is desired to prepare the mechanism for the work of another day, the crank 4 is rotated in a reverse direction from that indicated by the arrow in the drawings in such manner as to bring the rack 11 to its initial position. The latter movement does not affect the shutters, inasmuch as each sector 24 is permitted by the corresponding spring 25 to rotate in such manner as to snap by the shutter which it passes without changing its position.

It will thus be seen that I have provided



a simple, practical and compact construction well adapted to accomplish the several objects of my invention, and that the same is of the most reliable and efficient action.

5 As many changes could be made in the above construction and many apparently widely different embodiments of my invention could be made without departing from the scope thereof, I intend that all matter  
10 contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

I desire it also to be understood that the  
15 language used in the following claims is intended to cover all of the generic and specific features of the invention herein-described and all statements of the scope of the invention, which, as a matter of language,  
20 might be said to fall therebetween.

Having described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A time recorder for making a plurality  
25 of individual time records upon a receiving surface comprising time printing mechanism, a manually operable member therefor, for causing the recording operation, and means actuated automatically by said member  
30 to prevent the repetition of the same record.

2. A time recorder of the dial type for printing records upon a receiving surface comprising a rotary actuating member movable  
35 into a plurality of positions corresponding to the record to be made, and means actuated automatically by said member when performing the recording operation in one of the positions to prevent the  
40 subsequent operation of said member in that position.

3. A time recorder of the dial type for printing time records upon a receiving surface comprising time printing mechanism,  
45 a movable actuating member therefor operating in a plurality of positions corresponding to the record to be made, and means actuated automatically by said member when performing the recording operation in one  
50 of the positions to prevent the subsequent operation of said member in that position.

4. In a time recorder of the dial type for printing records upon a receiving surface, a movable actuating member operable in a  
55 plurality of positions corresponding to the record to be made, means actuated automatically by said member when performing the recording operation in one of the positions to prevent the subsequent operation of said  
60 member in that position, manually operable means for determining the position of the record on the receiving surface, and means controlled by said member for controlling said automatically actuated means.

65 5. A time recorder for printing time rec-

ords upon a receiving surface comprising time printing mechanism, a manually operable member therefor movable in a plurality of positions for operating the recorder according to the record to be made, and automatically operated means for rendering said  
70 member inoperative in each of said positions after a record is made corresponding to such position.

6. In a time recorder of the dial type for  
75 printing records upon a receiving surface, a dial having a plurality of openings corresponding to the records to be made, a manually movable member operable to cooperate with each of said openings for forming the  
80 records, and automatically operated means for closing each opening to prevent cooperation of said member therewith after a record corresponding to the opening is made.

7. In a time recorder, in combination,  
85 means to form a record upon a receiving surface, means to cause a relative movement of said first means and said receiving surface in a predetermined direction, means to actuate said first means, means controlled in accordance with the position of said actuating  
90 means to cause a relative movement of said first means and said receiving surface in another direction, and means adapted upon said actuating means being operated in a  
95 predetermined position to move into the path of said actuating means and prevent a second operation thereof in the same position, said last-mentioned means comprising  
100 a spring-pressed shutter.

8. In a time recorder, in combination, means to form a record upon a receiving surface, means to cause a relative movement of said first means and said receiving surface in a predetermined direction, means  
105 to actuate said first means, means controlled in accordance with the position of said actuating means to cause a relative movement of said first means and said receiving surface in another direction, means operating upon  
110 said actuating means being operated in a predetermined position to move into the path of said actuating means and prevent a second operation thereof in the same position, said last-mentioned means comprising  
115 a spring-pressed shutter, and a catch to hold said shutter in retracted position and adapted to be released by said actuating means.

9. In a time recorder, in combination, means to form a record upon a receiving surface, means to cause a relative movement of  
120 said first means and said receiving surface in a predetermined direction, means to actuate said first means, means controlled in accordance with the position of said actuating means to cause a relative movement of said  
125 first means and said receiving surface in another direction, means operating upon said actuating means being operated in a predetermined position to move into the path of  
130



said actuating means and prevent a second operation thereof in the same position, said last-mentioned means comprising a spring-pressed shutter, and means controlled by said second means to retract said shutter.

10. In a time recorder, in combination, means to form a record upon a receiving surface, means to cause a relative movement of said first means and said receiving surface in a predetermined direction, means to actuate said first means, means controlled in accordance with the position of said actuating means to cause a relative movement of said first means and said receiving surface in another direction, means operating upon said actuating means being operated in a predetermined position to move into the path of said actuating means and prevent a second operation thereof in the same position, said last-mentioned means comprising a spring-pressed shutter, a catch to hold said shutter in retracted position and adapted to be released by said actuating means, and means controlled by said second means to retract said shutter.

11. In a time recorder, in combination, means to form a record upon a receiving surface, means to cause a relative movement of said first means and said receiving surface in a predetermined direction, means to actuate said first means, means controlled in accordance with the position of said actuating means to cause a relative movement of said first means and said receiving surface in another direction, means operating upon said actuating means being operated in a predetermined position to move into the path of said actuating means and prevent a second operation thereof in the same position, said last-mentioned means comprising a spring-pressed shutter, an annular member, means mounted thereon to retract said shut-

ter, and means connecting said annular member with said second means.

12. In a time recorder, in combination, means to form a record upon a receiving surface, means to cause a relative movement of said first means and said receiving surface in a predetermined direction, means to actuate said first means, means controlled in accordance with the position of said actuating means to cause a relative movement of said first means and said receiving surface in another direction, means operating upon said actuating means being operated in a predetermined position to move into the path of said actuating means and prevent a second operation thereof in the same position, said last-mentioned means comprising a spring-pressed shutter, an annular member, and means connecting said annular member with said second means, said last-mentioned means comprising a gear upon said second means, teeth upon said annular member, and a shaft provided with pinions and connecting said gear and said teeth.

13. In a time recorder, in combination, a dial, an actuating member cooperating therewith, said dial being provided with a plurality of openings and said actuating member being provided with a member to pass therein, spring-pressed shutters to close each of said openings, means operating upon said last member entering one of said openings to release the corresponding shutter, and means operating simultaneously to retract said shutters.

In testimony whereof I affix my signature, in the presence of two witnesses.

GEORGE W. PHILLIPS.

Witnesses:

FRED W. RUSSELL,  
CHARLES B. GARLING.