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C. L. GOUGHNOUR.

WORKMAN'S CLOCK.

APPLICATION FILED NOV. 9, 1906.

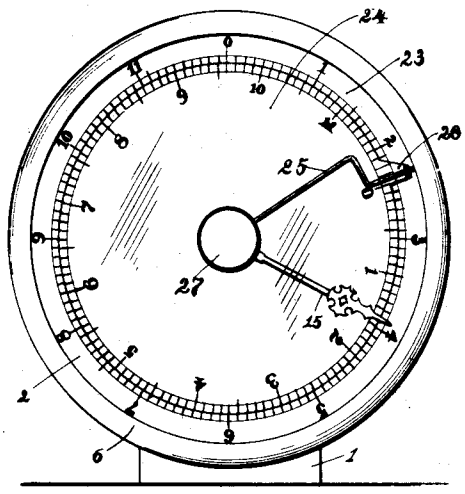


Fig. 1.

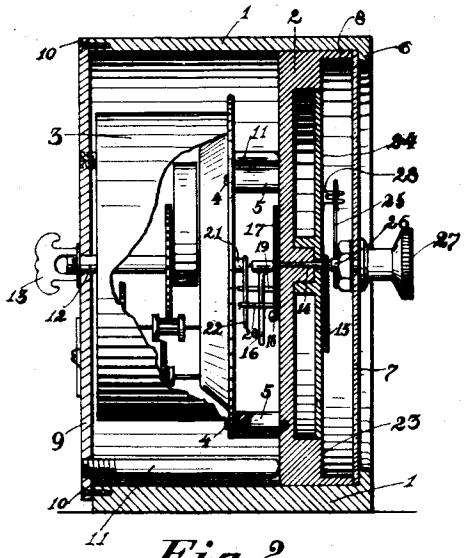


Fig. 2.

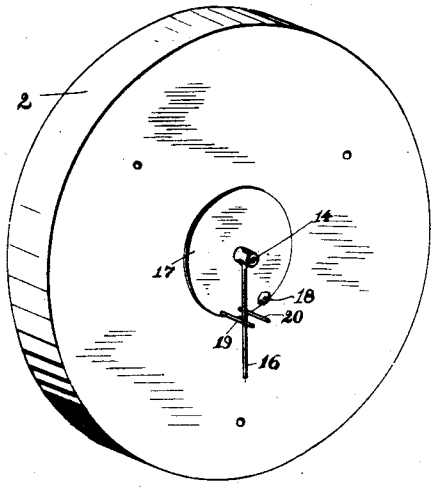


Fig. 3.

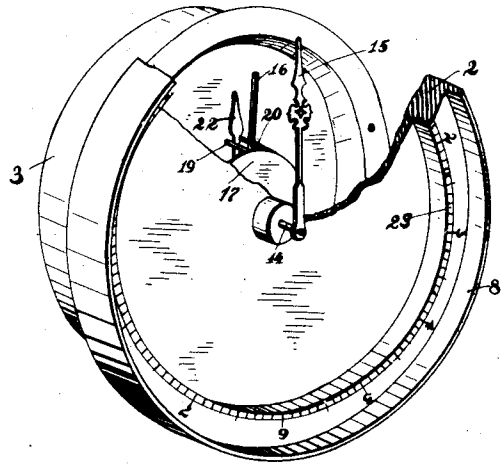


Fig. 4.

Witnesses

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WORKMAN'S CLOCK.

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To all whom it may concern:

Be it known that I, CHARLES L. GOUGHNOUR, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Workmen's Clocks; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, making a part of this specification, and to the numerals and figures of reference marked thereon, in which—

Figure 1 is a view showing the clock dials and hour hand and the inner dial arm. Fig. 2 is a vertical section showing the different parts properly arranged. Fig. 3 is a view showing the rear side of the dial head the hour hand carrying arm and the counterbalance disk. Fig. 4 is a view showing the clock case proper and illustrating the clock hour hand and the dial hand pointing at 0 in the outer or fixed dial, the dial and counterbalance disk and its pins dropped or moved to their position of rest automatically and independent of the movement of the hour hand.

The present invention has relation to workmen's clocks and it consists in the novel arrangement hereinafter described and particularly pointed out in the claims.

Similar numerals of reference indicate corresponding parts in all the figures of the drawing.

In the accompanying drawing, 1 represents the outer or main case, which in this instance is an open ended cylinder which is for the purpose of holding the dial head 2 in proper position and also holding the clock case proper 3. The clock case 3 is held to the dial head 2 by means of the bolts 4, which bolts are passed through the thimble 5, said thimble being for the purpose of holding the clock case in proper relation with reference to the dial head 2. The outer casing 1 is provided with the flange 6, which flange is for the purpose of holding the dial head against outward movement and at the same time provide a means for clamping the dial glass 7 between said flange and the flange 8 extended from the dial head 2.

For the purpose of closing the back of the case 1 the plate 9 is provided which plate is connected to the case 1 by means of screws 10 or their equivalents.

For the purpose of holding the dial head 2 against any backward movement, the plate 9 is provided with the pins 11, which pins are formed of such a length, or so adjusted that their forward ends will come in contact with the back of the dial 2 as best illustrated in Fig. 2.

It will be understood that the winding post 12 is to be provided with the usual key 13. The clock mechanism, however does not form any particular part of the present invention except, that a clock must necessarily be used to carry out the purpose and object of the invention. The dial head 2 has journaled therein the shaft 14, to which shaft is attached the dial hand 15. Upon the shaft 14 is loosely mounted the rod 16, which rod is located as hereinafter described. Directly back of the dial-head is located the counterbalance disk 17, which disk is provided with the counterweight 18 and the spaced pins 19 and 20.

For the purpose hereinafter described the rod 16 is located between the pins 19 and 20 as illustrated in Figs. 2, 3 and 4. To the hour post 21 of the clock proper is attached the hour hand 22, which hour hand is located between the pins 19 and 20 which pins are spaced from each other for the purpose hereinafter described. As the hour hand 22 is moved upward by the rotation of the hour post 21 it will impart a rotary movement to the counterbalance disk 17 and also to the shaft 14 upon which shaft said disk is securely mounted in any convenient and well known manner. As the hour hand moves upward it is in contact with the bottom or under edge of the pin 20, but when the hour hand and disk has moved in its upward path so as to bring the counterweight 18 a sufficient distance beyond a vertical line or over the center, said disk will be rotated by gravity equal to the distance between the pins 19 and 20, which movement carries the pin 20 away from and out of contact with the hour hand 22, and brings the pin 19 into contact with the hour hand 22 by which arrangement the dial hand 15 is moved automatically over a portion of the outer dial 23 and of course over a portion of the inner dial 24. It will be understood that by this automatic movement of the dial hand 15 the indicated time will be advanced equal to the distance moved by the dial hand. The pins 19 and 20 are adjusted with reference to each other so that a given period of time will be indicated it may be one-half hour or an hour or any other predetermined period. In some instances it may be desirable to have the pins so spaced that an hour will be gained and in other instances a half-hour. This is simply a question of judgment.

For the purpose of insuring proper contact as between the hour hand 22 and the pin 19 the rod 16 which is pivotally mounted upon the shaft 14 will after it has passed beyond the vertical line automatically drop upon the pin 20, thereby assisting the counterweight in moving the disk during the downward movement of the counterweight.

It will be understood that by reason of the hour hand 22 being in contact with the pin 19 the disk 17 cannot rotate except as the hour hand moves and releases the counterweight 18. When the hour hand has moved downward until the counterweight 18 and the hand 15 balance each other and the down weight is removed from the hour hand 22 the hour hand will then move away from the pin 19 and engage the pin 20 or in other words the hour hand 22 will move from one pin to the other, at which time there is no movement of the dial hand 15, which compensates for the time gained by the automatic dropping of the dial hand. The stopping of

the dial hand is for the purpose hereinafter described to occur during what is commonly termed the noon hour or half hour at which time all the workmen quit, by which arrangement the time indicated on the clock is the same after the noon recess that it was at the beginning of the noon recess regardless of the pre-determined length of the recess which pre-determined length is fixed by the distance the pins 19 and 20 are located apart.

It will be understood that the rod 16 will drop into a vertical position or hang from the shaft 14 but will be picked up and carried upward by the pin 19 and when again carried over the upper vertical point is free to drop and perform the function above described. The outer dial 23 is divided into the usual twelve or hour divisions commencing with 0 and ending with 11, instead of commencing with 1 and ending with 12, the hours or twelfths indicated upon the outer dial 23 and divided into tenths and are so divided for the purpose hereinafter described. In practice the men are supposed to start to work when the hour hand 15 is at 0 or no time worked. As the men work the hour hand 15 will of course be moved by the ordinary clock mechanism, as above described and when working upon various jobs for customers and it is desired to keep the time of each man upon each particular job the inner computing dial is rotatable independent of any of the clock mechanism and is rotated by means of the arm 25, which arm is connected to the inner end of the knob spindle 26, which knob spindle is provided with the knob 27, said knob spindle being carried by the dial glass 7.

The computing dial is divided into twelve divisions and sub-divided into tenths in the same manner as the outer dial 23 and is used as follows by workmen. Suppose that A works for B commencing in the morning at 0 time and works upon B's job two and two-tenths hours, this time is noted by A upon a slip two and two-tenths hours for B. A then quits working upon B's job and commences work upon C's job and when C's job is finished he turns the knob 27 and the dial 24 together with the arm 25 to the two and two-tenths point indicated in the outer dial and computes the time indicated between the 0 mark on the computing dial and that indicated under the dial hand 15, which is the time A has worked upon C's job, and this time is noted upon a slip. It will be seen that any desired number of men can be employed and every man can work upon different jobs for different men, and by rotating the inner or computing dial at the finishing time of any particular job, he can easily compute the exact time spent upon any particular job.

It will be understood that by providing mechanism whereby the dial hand is stopped for a pre-determined period no account need be taken by the workman in calculating the actual working time as no time is computed or measured by the dial hand during the stoppage of the hour hand, which is to be of course the usual noon hour or half-hour as the case may be. The numbers of the division and sub-divisions of the dials are preferably placed upon the dials in the ordinary manner or if desired they may be printed upon separate pieces or parts and the parts connected to the dial head and to the dial plate.

For the purpose of rotating the dial 24 by means of the knob 27 the outer end of said arm is connected to the notched plate 28 or its equivalent. The object of forming the sub-divisions in the dials into tenths is to provide a means for calculating the time by tenths rather than by minutes.

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

1. In a workman's clock, the combination of a suitable casing and a clock located within the casing, a dial head carrying a dial, a shaft journaled in the dial head and provided with a dial hand and a counterbalance disk, said disk provided with pins spaced from each other and the hour hand of the clock located between the spaced pins and an inner or computing dial, said inner and computing dial divided into divisions and sub-divisions and a dial arm connected to and rotatable with the computing dial, substantially as and for the purpose specified.

2. In a workman's clock the combination of a suitable casing, inner and outer dials, the inner dial rotatable, said inner and outer dials divided into divisions and sub-divisions each numbered from 0 to 11 respectively, a shaft provided with a dial hand, and a disk, said disk provided with pins spaced from each other, an hour hand operatively connected with the clock mechanism and located between the spaced pins, a rod loosely mounted upon the shaft carrying the dial hand and disk, and a dial arm, substantially as and for the purpose specified.

3. In a workman's clock the combination of clock mechanism and an hour hand operated by said clock mechanism, a shaft provided with a dial hand and a disk, said disk provided with pins spaced from each other and the clock hour hand located between the pins, two dials located concentrically with reference to each other, one of the dials fixed and the other rotatable, means for rotating the rotatable dial, an index arm rotatable with the rotatable dial, substantially as and for the purpose specified.

4. In a workman's clock, the combination of an outer case, and an inner clock case, said inner clock case provided with clock mechanism, an hour hand connected to the clock mechanism, a shaft provided with a dial hand, and a disk, pins spaced from each other and the clock hour hand located between the pins, a gravity rod loosely mounted upon the shaft carrying the dial and the dial hand, a fixed dial and a rotatable dial and means for rotating the dial independent of the clock mechanism, substantially as and for the purpose specified.

5. In a workman's clock of the class described, the combination of clock mechanism, an hour hand secured to the clock mechanism, a dial head, a shaft journaled in the dial head, said shaft provided with a dial hand, a counterbalance disk, said disk provided with spaced pins and the clock hour hand located between the pins carried by the disk, an inner dial rotatable independent of the clock mechanism and an outer fixed dial located concentrically with the inner dial, said inner and outer dials divided into divisions and sub-divided into decimals, substantially as and for the purpose specified.

In testimony that I claim the above, I have hereunto subscribed my name in the presence of two witnesses.

CHARLES L. GOUGHNOUR.

Witnesses:
F. W. BOND,
SYLVIA BORON.