C. C. HARRIS.

TIME KEEPING DEVICE.

APPLICATION FILED NOV. 10, 1911.

1,067,025.

Patented July 8, 1913.

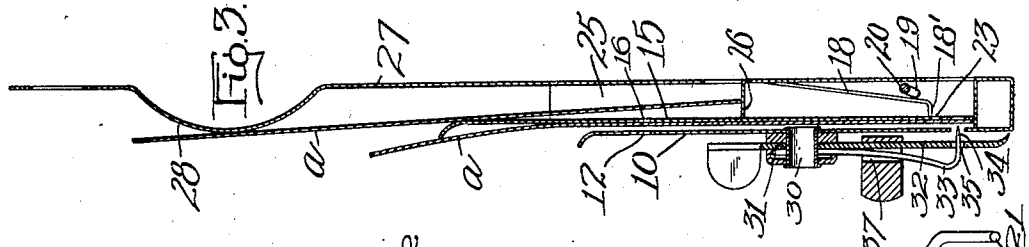


Fig. 3.

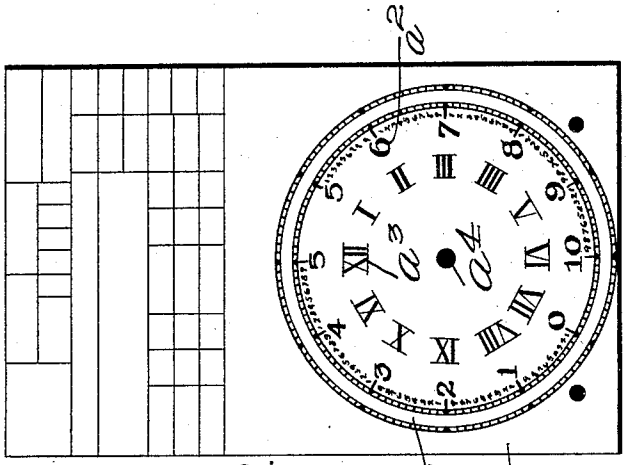


Fig. 2.

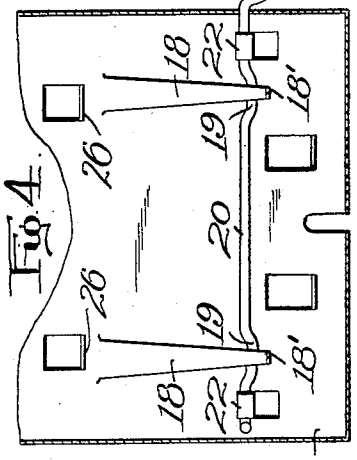


Fig. 4.

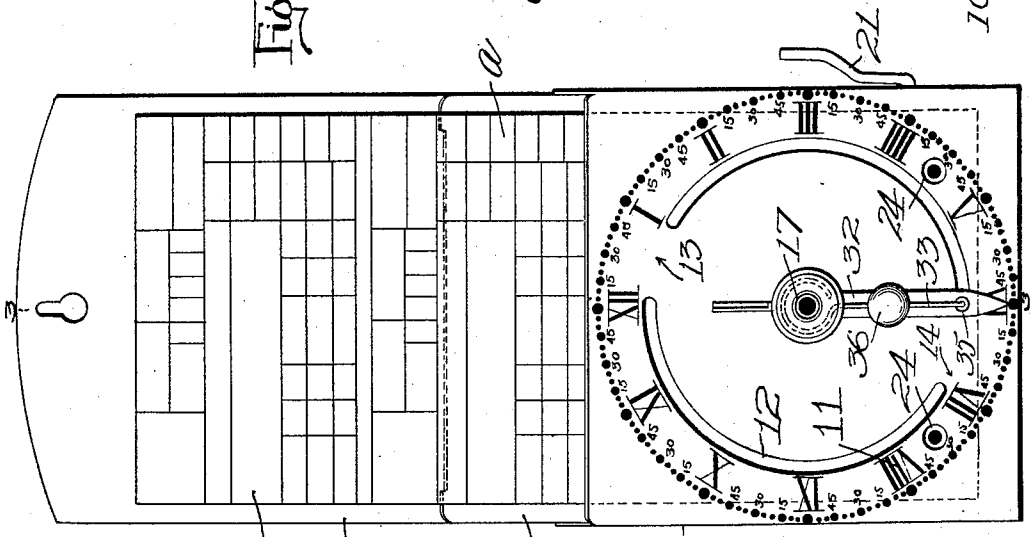


Fig. 1.

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TIME-KEEPING DEVICE.

1,067,025. Specification of Letters Patent. Patented July 8, 1913.

Application filed November 10, 1911. Serial No. 659,491.

To all whom it may concern:

Be it known that I, CARL C. HARRIS, a citizen of the United States, residing at Orange, in the county of Franklin and State of Massachusetts, have invented a new and useful Time-Keeping Device, of which the following is a specification.

The principal objects of this invention are to meet the demand for a time keeper which can be used readily by workmen in place of the expensive clock operated instruments now largely employed; also to provide simple means whereby a workman can quickly and easily make a permanent record of the time of beginning and finishing any work, and which shall take away from the workmen the privilege of recording their time at will.

The invention also has for its objects to provide a device of this character in which no mental effort will be required on the part of the workmen to record the beginning and stopping time on any particular piece of work; to provide a construction in which the workmen shall not be required to leave the usual place of work at bench or machine in order to record their time; to provide a construction in which thin paper or cardboard time slips can be used practically and can be kept in such a way that they are always ready for immediate inspection by the foreman in charge; to provide a device of this character with a visible and constant check for the foreman always showing the time that any particular job was started or the time at which the workman commenced work; to provide time slips or tickets which are unchangeable and cannot be altered readily by the workmen; to provide a construction which also allows more accurate data in connection with piece-work and day-work by reason of the fact that it is practical to have additional time slips on which to record special operations if required; to provide a construction of time keeper particularly valuable when several of them are used for several different machines operated by the same man, so that in such a case each man may record on each time keeper separately and independently of the others thereby keeping definite records of the work on each separate machine or job under his charge; to provide a construction which shall be entirely flexible as regards use, that is, one which can be used by a few men in a department or as many as may be desired; to provide a construction in which a single time slip or ticket can be used, or as many duplicates as required; to provide a recording instrument of this kind in which the lunch or noon hour is automatically taken out from the total; to provide a construction in which the case is of very simple character and serves as a holder for active order slips, and also future work ahead of the workmen; to provide a simple manner of effectually holding the time slips in position; and to provide an exceedingly simple form of device for marking the time slips.

Reference is to be had to the accompanying drawings in which—

Figure 1 is a front elevation of a time keeping and recording device constructed in accordance with this invention with a time slip in position; Fig. 2 is a front view of one of the time slips removed from the casing; Fig. 3 is a vertical sectional view on the line 3—3 of Fig. 1 of the entire casing showing the hand or pointer and illustrating in elevation the means for holding the time slip in position; and Fig. 4 is a front elevation of the back of the case.

The invention is shown in a simple form in which it comprises a sheet metal casing 10 having on the front a clock dial 11. This clock dial or face shown is of the usual form having all of the twelve numerals representing the twelve hours spaced equally around the same, and having the spaces between the hour numerals divided up to indicate quarters of an hour, and each quarter also divided into thirds to indicate periods of time of five minutes. Concentric with the dial is a circular slot 12. This slot is not continuous all the way around, but is discontinued at two places 13 and 14, one object being to provide for supporting it from the material of the case. Another object will appear below. For the purpose of holding time slips *a*, the casing is provided with a pocket just behind the clock dial formed by a sheet metal partition 15 and having a space in front of it. This space extends down to the bottom of the casing and the partition is provided with a circular slot 16 registering in all respects with the slot 12 on the clock dial. As there is only a small space between these two plates which constitute this partition and the front of the casing, it will be seen that the time slip is

held in such position that pressure brought to bear on it through the slot 12 will easily puncture it and produce an indelible mark.

On the time card a is a circular space a' adapted to register with the circular slot. This space is continuous. Adjacent to this space is a scale a^2 of hour divisions similar to the hour divisions on the clock dial, but the zero division is located to register with the opening hour of the works as for example in this case VII. These divisions are numbered in regular order up to the one which corresponds with the XII numeral on the dial or such other position as indicates the closing for the lunch hour. Then there is a space to the opening hour after the lunch hour, for example, the I numeral on the clock dial. The numeral (as for example 5 on the drawing) which registers with the XII numeral on the clock dial is repeated at this point, then the numbering continues on until the closing hour. In this way it will be seen that the number of hours registered on the time slip can be computed very easily. In case the operative commences at 7 o'clock, there will be no real computation at all as the number of hours he works during the day can be read directly on the time slip. It will be seen that the time lost during the lunch hour is taken out automatically on account of the repetition of the numeral (5) at XII and I. The spaces between the numerals on the time slip representing the hours are not divided into quarters and minutes, but into tenths of an hour. This also facilitates the computations in a way that will be obvious. The time card is also shown as provided with a clock dial a^3 exactly similar to the clock dial on the casing, except for size, so that in computing the time of the operative the computer will at all times be able to see exactly what the different divisions on the scale a^2 represent on the clock dial. This time slip is provided with a dot a^4 at the center of the circular scale which must register with the center of the clock dial. For this purpose the clock dial has a central perforation 17 through which this dot may be observed. The time slip will be provided with such heading spaces as are desired, a convenient form for certain classes of work being shown in the drawings.

In order to hold the time slip perfectly in position the rear wall of the casing is shown as provided with integral springs 18 punched therefrom, each having a spur 18′ on the end. These springs rest on eccentric portions 19 of a rock-shaft 20 located in the casing. This shaft has a handle 21 projecting from one end by which it is operated. It is mounted in bearings 22 integral with the casing. It will be obvious that when this shaft is turned to one position the spurs will be projecting up through openings 23 in the plate 15 to perforate the time slip and to hold it in position. To receive these spurs the face of the casing is shown as provided with perforations 24.

It will be seen that there is a pocket 25 behind the plate 15 which is designed to hold the extra time slips. Its bottom is defined by transverse projections 26 in the casing. The casing has an extension 27 projecting up at the rear so that it can be hung conveniently on the wall or elsewhere. It is provided with a convex surface 28 at the top to hold the cards out so that they may be separated from each other very easily.

Concentric with the clock dial is an eyelet 30 adapted to turn on the center of the clock dial as an axis. On this is mounted by an integral ring 31 a hand or pointer 32 arranged radially. Before being put on this ring is distorted so that it will exert a constant spring pressure on the casing and will always be operated at about the same turning pressure. Extending along this hand or pointer is a spring 33 which has a needle point 34 integrally connected with its end and extending down through an opening 35 in the hand in registration with the circular slot. The spring normally holds the needle point above the surface of the clock dial but an indicator 36, mounted to slide on the handle has a passage 37 at the bottom which, when the indicator is forced out, positively forces the needle point through the two slots in the clock dial and plate at the rear. This obviously results in perforating the time slip and also prevents the moving of the pointer without mutilating the time slip when the indicator is in this position. When the indicator is drawn back into contact with the ring it allows the spring to force the needle point back, which allows the hand to be turned. As the indicator preferably is of a bright appearance and is located just above the surface of the clock dial which is of a dark or dull appearance, it is readily observable at a distance, and consequently it cannot be tampered with without showing the fact. Ordinarily, the operative is expected to force this indicator out to show when his work commences and not to move it again until he leaves the works permanently or finishes the job, then he draws it back, turns the pointer the necessary distance, and then moves the indicator out to perforate the paper. If the indicator is in the out position the needle point must necessarily indicate on the time slip underneath and it would be difficult, if not impossible, for the workman to prevent the perforating needle from recording on the time slip when the indicator is in this position.

While I have illustrated and described a preferred embodiment of my invention, I am aware that many modifications can be made therein by any person skilled in the

art without departing from the scope thereof as expressed in the claims. Therefore I do not wish to be limited to all the details of construction herein shown and described, but

What I do claim is:—

1. As an article of manufacture a time keeping device comprising a casing having perforations therethrough, a series of numbers arranged along said perforations, said series of perforations having a bridge thereacross connecting the opposite parts of the casing between certain numerals of the series, the casing being provided with means for holding a card in such position that a space thereof registers with said series of perforations, the two numerals in said series at opposite sides of the bridge being represented on the card by the same number.

2. As an article of manufacture, a time keeping device comprising a casing having a slot therealong, a series of numerals arranged along the slot representing hours, the casing on opposite sides of said slot being connected between two of the consecutive numerals of said series in a plurality of places, the casing being adapted to receive a time card having a space thereon adapted to register with the slot and divided into divisions representing hours corresponding with the spaces of said series of numbers and having blank spaces adapted to register with said connections.

3. As an article of manufacture, a time keeping device comprising a casing having a series of numerals thereon representing hours and provided with a slot through the front of the casing, said slot being discontinued between two of the numerals, said casing being adapted to receive a time card having a space thereon in position to register with said slot and having a scale thereon corresponding with said series of numerals but having the division numerals thereof which register with two numerals of said series identical, said casing having means on the front thereof for projecting through the slot and marking the card.

4. As an article of manufacture, a time keeping device comprising a casing having a clock dial thereon provided with a circular slot through the front of the casing, said slot being discontinued between the numerals XII and I of the clock dial and being adapted to receive a time card behind the clock dial having a scale thereon corresponding with the hour scale of the clock dial, and having numerals commencing with zero at the starting time on the dial, but having the division numerals thereof which register with the numerals XII and I of the clock dial identical.

5. In a time keeping device, the combination of a member having a row of numerals thereon, means for holding a time card behind said row of numerals, a movable hand adapted to move over said member and having means for permanently marking on the time card the position of the hand at any desired point, and an indicator on the hand having means whereby said means on the hand will be forced into operative marking position when the indicator is in one position and will be withdrawn from marking position when the indicator is out of that position.

6. In a time keeping device, the combination of a member having a series of divisions thereon, means for holding a time card adjacent to said series of divisions, a movable hand adapted to move over said member and having means movable thereon for permanently marking on the time card when in one position on the hand, and an indicator movable along the hand for showing whether or not said means is in marking position on the hand.

7. In a time keeping device, the combination of a plate having a series of divisions representing time, means for holding a time card adjacent thereto, and manually operable means connected with said plate and movable at the will of the operator along said series of divisions for making a permanent record on the time card at any desired point along said series of divisions, said means being visible from a distance and showing by its position whether a permanent record has been made along said series of divisions.

8. In a time keeping device, the combination of a plate having a series of divisions thereon representing time, means for supporting a time card adjacent thereto, a perforating device movable along said series of divisions at the will of the operator for making perforations in said time card, and means movable with the perforating device and independent of the time card for indicating at what point along the series of divisions the last perforation has been made.

9. The combination with a casing having a clock dial provided with a slot through the front of the casing, said slot being discontinued between the numerals XII and I of the clock dial, a scale of hour divisions adjacent to said clock dial having the numeral thereof corresponding to the XII of the clock dial repeated opposite the I thereof, of a time card having means for holding the time card behind the clock dial, and means on the front of the clock dial for projecting through the slot and marking the time card, whereby the number of hours and fractions thereof contained between any two marks on the time card can be reckoned readily without the necessity of subtracting for the noon hour.

10. As an article of manufacture, a time keeping device comprising a casing having a dial provided with a circular slot concen-

tric with the dial, and adapted to hold a time card behind the dial, a hand adapted to swing around the dial and having a perforating point thereon adapted to project through the slot, an indicator on the hand, and means whereby when the indicator is in one position the point will be forced into the time card so that the point will be prevented from moving without mutilating the time card.

11. In a time keeping device, the combination of a plate having a row of numerals thereon, means for holding a piece of sheet material in a plane parallel with the plate, a movable hand adapted to move over the plate and having means for permanently showing on the piece of sheet material the position of the hand, and an indicator on the hand having means whereby said means on the hand will be forced into operative position when the indicator is in one position, and will be withdrawn when the indicator is in another position.

12. In a time keeping device the combination of a dial, means for holding a piece of sheet material in a plane parallel with the dial, a movable hand adapted to move over the dial and having means for indicating on the piece of sheet material the position of the hand, and an indicator on the hand having means whereby said means on the hand will be forced into operative position when the indicator is in one position and means whereby the hand cannot be moved without mutilating the piece of sheet material when the indicator is in said position.

13. As an article of manufacture, a time keeping device comprising a casing having a clock dial on the front thereof provided with a circular slot concentric with the clock dial, a hand adapted to swing around the clock dial and having a marking device thereon adapted to project through the slot, said casing having a support behind the clock dial for a time card, a reciprocable spur and means within the casing for projecting the spur through the time card to hold it in position.

14. In a time keeping device, the combination of a casing having a clock dial on the front thereof and provided with a circular concentric slot, said casing having a recess behind the clock dial for holding a time card, a shaft in the casing having an operating handle and provided with an eccentric portion, and a spring resting on the eccentric portion and having a spur on the end for holding the time card in position.

15. In a time keeping device, the combination with a plate having a series of divisions thereon and provided with a recess for a card, of a pointer movable along said series of divisions and having a spring extending therealong, said spring having a needle point at the end projecting past the pointer and adapted to be projected from the pointer through said plate, and an indicator movable along said pointer and having a restricted passage for the spring, whereby when the indicator is moved out to the end of the spring it will force the needle point past the plate and when moved back it will allow the needle point to be withdrawn.

16. In a time keeping device, the combination of a member having a curved series of divisions thereon, means for holding a card or slip adjacent thereto, a headed pivot at the center of the curved series of divisions, a pointer pivoted on said pivot, and a spring extending around the pivot under the head thereof and extending along the pointer and projecting from it and having an end adapted to pierce a card or slip held by said means.

In testimony whereof I have hereunto set my hand, in the presence of two subscribing witnesses.

CARL C. HARRIS.

Witnesses:
HAROLD W. BAKER,
W. A. BAINES.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."