

C. S. COMINS.
TIME INDICATOR.
APPLICATION FILED OCT. 20, 1910.

994,126.

Patented June 6, 1911.

Fig. 1

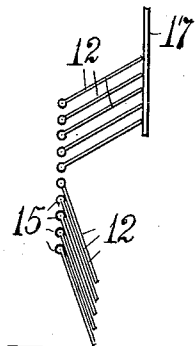
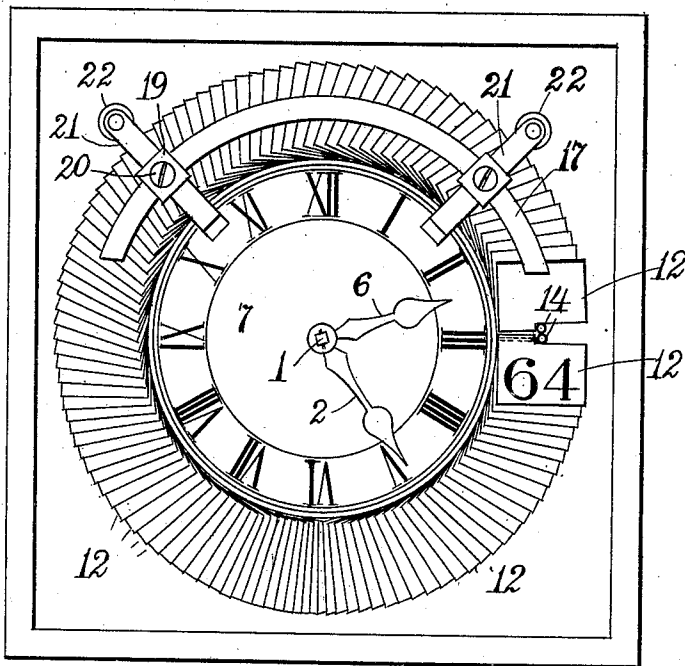


Fig. 4

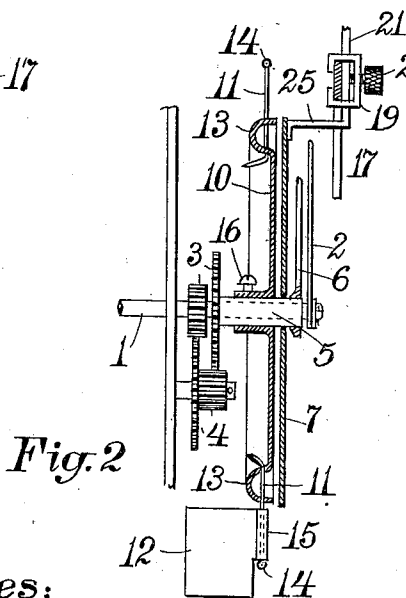


Fig. 2

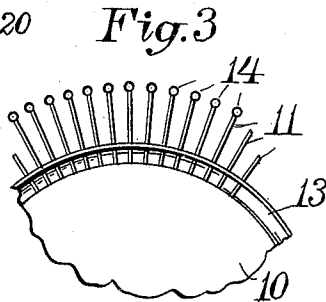


Fig. 3

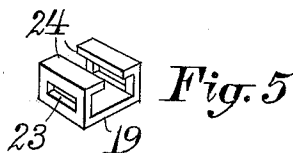


Fig. 5

Witnesses;

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UNITED STATES PATENT OFFICE.

CHARLES S. COMINS, OF WOLLASTON, MASSACHUSETTS.

TIME-INDICATOR.

994,126.

Specification of Letters Patent.

Patented June 6, 1911.

Application filed October 20, 1910. Serial No. 588,072.

To all whom it may concern:

Be it known that I, CHARLES S. COMINS, a citizen of the United States, and a resident of Wollaston, in the county of Norfolk and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Time-Indicators, of which the following is a specification.

One of the annoying details of shop practice is the task of keeping account of the time expended by the men upon job work. In the first place, the time is usually in hours and fractions, and the cost-charge is in decimal parts of a dollar, rendering the calculations very liable to error, as well as slow and bothersome. Further, several fractional periods of time must frequently be added together in making up the total expense account of a single job, thus still more increasing the awkwardness and unreliability to the total. Moreover, the attempt to figure out the exact time between a certain hour and fraction in the morning and another in the afternoon, and especially to deduct the noon-hour, is even more annoying and provocative of mistakes.

The object of this invention is the construction of a time-recording device which shall reduce to a minimum all these troubles.

Referring to the drawings forming part of this specification, Figure 1 is a front elevation of a time recorder made in accordance with my invention. Fig. 2 is a central vertical section of a part thereof. Fig. 3 is a face view of a part of the radial pins designed for carrying the time-designating plates. Fig. 4 is a detail view showing the support for the said plates. Fig. 5 is a perspective view on an enlarged scale of one of the adjustable devices for holding said support.

This time recorder is equipped with any suitable clock-work communicating its motion in the usual manner through a spindle 1 to the minute hand 2 (Fig. 2), and by reducing gears 3, 4 to the sleeve 5 and hour hand 6. Behind these hands is a customary dial 7; the purpose of said dial and hands being a corrective one, to insure the user that the less evident time recording devices to be hereinafter described, are correct and that the clock-work has not run down. Directly behind the dial and fastened upon said sleeve 5 is a disk 10 bearing a large number of radial pins 11 each pivotally car-

rying a time-plate 12. The number of these plates is preferably about ten times the hours of a working day, in order that each hour shall be divided into decimal parts. Said pins are held by said disk by forming the latter with a bead 13 (Fig. 2) through which radial holes are drilled, and into which holes the pins are introduced and fastened in place by bending up the inner ends of the pins. The outer ends of the pins being formed with heads 14, each pin is first passed through an eye 15 of its associated plate 12 before its insertion through said bead. This method of pivoting the time plates is both economical and exact, as well as durable. Said disk being mounted upon the sleeve 5 and adjustably held thereby, as by a set screw 16, it makes a complete rotation in twelve hours.

Exterior to the upper quantity of time plates and keeping the same from swinging downward, as shown in Figs. 1 and 4, is a rail 17. As the disk 10 slowly revolves, said plates one after the other reach the extremity of said rail and drop to a nearly vertical position, as indicated in Fig. 4. Upon the faces of the plates thus exposed are the indicator numerals, while the opposite faces are blank. Inasmuch as the fallen plates overlap each other far enough to cover all the numerals save the one or ones on the plate last dropped, there will remain exposed for a tenth of an hour each of said indicator plates in succession, and by having the same in numerical order beginning with the hour of commencing work in the morning, a glance thereat at any moment during the day will reveal the number of hours and decimal parts thereof which have elapsed since such commencement of work. Inasmuch, however, as it is customary to take out an hour or a half-hour for noon-time, I do not number the indicator-plates belonging thereto, but begin again at the close of the nooning the numbering which terminated at the moment of stopping work. For example, if the day's work begins at 7.30 and the nooning at 12.30, five hours will have elapsed and the last time-indicator numeral will show as 50. Then, if the noon-recess be thirty minutes, the indicator-numeral which will drop into view at one o'clock will be 50 again (since the former 50 was exposed but a second during working-time), and in a tenth on an hour past one,

the numeral 51 will be seen, and so on. If, now, the job which was begun at 7.30 lasted until two-twenty-four, the numeral which will then be noted by the workman will be 5 64, as illustrated in Fig. 1, since from one to 2.24 is 1.4 hours. The 50 of the morning's time added to this 14 of the P. M. amounts to the 64 illustrated. If the workman's pay, or, rather, the shop's charge for the work- 10 man's time, is at the rate of fifty cents an hour, a tenth of an hour is five cents. The 64 multiplied by five cents gives \$3.20 as the total to be charged for the job.

To enable the same lot of clocks to suit 15 different concerns, some of which begin at seven and others at 7.30, the disk 10 can be shifted to present the zero indicator-plate at the time desired, such adjustment being permitted by the set screw 16 which holds 20 said disk in place upon the spindle 1.

To permit the rail to be angularly adjusted, so that the indicator-plates will drop into view at the exact proper moment to correspond with the clock-hands on the dial, 25 the rail 17 is adjustably supported by means of the collars 19 held by set screws 20. As shown in Figs. 1 and 5, each of said collars is formed to inclose or clasp both the rail 17 and a bar 21 projecting radially inward 30 from the posts 22, said bars passing through the slots 23, while said rail lies between said bars and the overhanging flanges 24, as shown in Figs. 2 and 5. By unloosening the set screws 20, the rail 17 can be slid concentrically with the spindle 5 as much as 35 needed.

As set forth in Fig. 2, the bars 21 are formed with elbows 25 attached to the dial 7 and suitably supporting the same.

40 What I claim as my invention and for which I desire Letters Patent is as follows, to wit:—

1. The combination with a clockwork 45 mechanism, of a circular member rotated thereby, pins projecting from and carried by said member, said pins being in substantially the same plane as said member and

projecting radially therefrom, and indicator plates swinging on said pins.

2. The combination with a clockwork 50 mechanism, a dial, and hour and minute hands moved by said mechanism over said dial, of a circular plate located behind said dial and rotating with said hour hand, pins projecting radially from the periphery of 55 said plate, and indicator plates swinging on said pins, each plate bearing a number designating the number of predetermined time-intervals occurring between a certain time in the early part of the day and the mo- 60 ment when such plate comes into sight.

3. The combination with a clockwork mechanism, of a circular disk rotated thereby having a half-round bead about the periphery thereof, said bead having radial 65 holes formed through its walls, headed pins located in said holes and held therein by being bent, and indicator plates having eyes fitted upon said pins.

4. The combination with a clockwork 70 mechanism, of a member carried thereby having a multiplicity of indicator-plates swinging on radial axes, and a rail adjustably supported for holding from dropping all but the desired indicator-plate. 75

5. The combination with a clockwork mechanism, of a disk rotated thereby once in twelve hours, radial pins projecting from said disk, time-indicator plates pivotally 80 carried by said pins, a curved rail supported in front of the said plates which are uppermost and controlling the dropping of the same, and a clock dial located within and concentric with said circle of plates, said mechanism being provided with and prop- 85 erly actuating hands carried in front of said dial.

In testimony that I claim the foregoing invention, I have hereunto set my hand this 17th day of October, 1910.

CHARLES S. COMINS.

Witnesses:

A. B. UPHAM,
ALEX. I. PECKHAM.