July 3, 1923. 1,460,902

H. S. HART

WATCHMAN'S RECORDING MECHANISM

Filed March 13, 1922 2 Sheets-Sheet 1

Fig. 1.

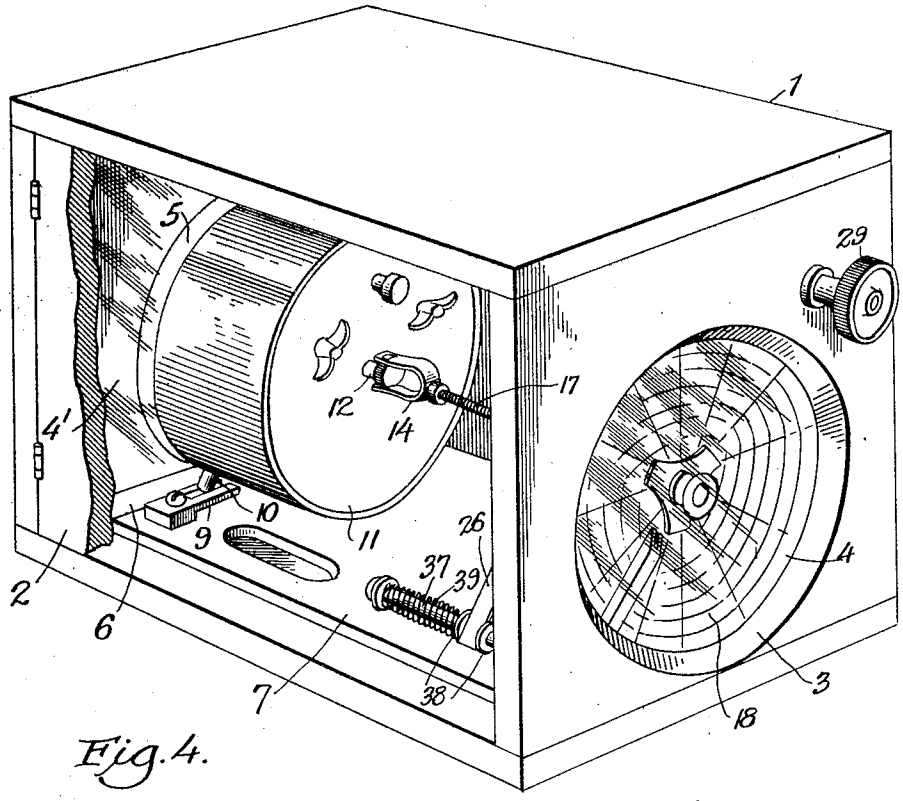


Fig. 4.

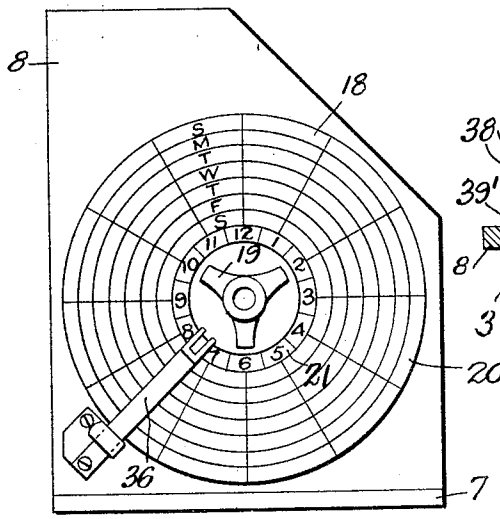
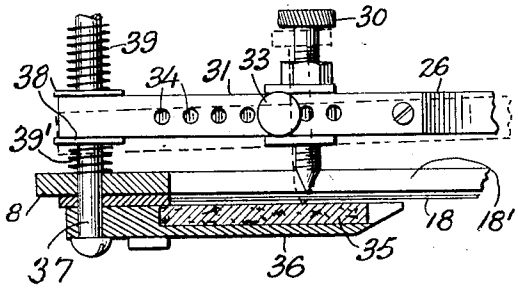


Fig. 5.



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Fig. 2.

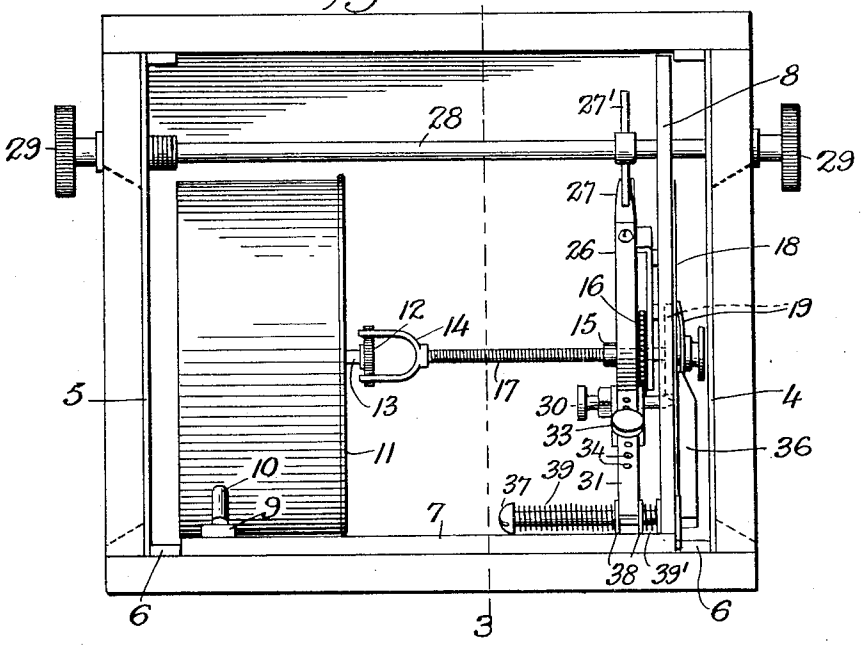
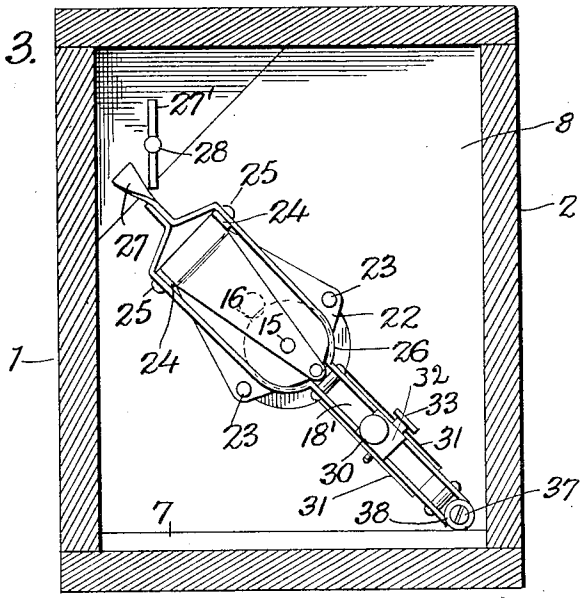


Fig. 3.



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UNITED STATES PATENT OFFICE.

HARRY S. HART, OF SHREVEPORT, LOUISIANA.

WATCHMAN'S RECORDING MECHANISM.

Application filed March 13, 1922. Serial No. 543,380.

To all whom it may concern:

Be it known that I, HARRY S. HART, a resident of Shreveport, in the parish of Caddo and State of Louisiana, a citizen of the United States, have invented certain new and useful Improvements in Watchmen's Recording Mechanism, of which the following is a specification.

My invention relates to improvements in watchmen's recording mechanism and the main object of my invention is the provision of a device which will keep a permanent and absolutely correct record of the manœuvres of the watchman, to indicate that he is performing his service or duty in a reliable and proper manner.

Another object of my invention is the provision of a device capable of production at a very low price to provide a substitute for the expensive and complicated mechanisms at present in use, and which will keep an accurate record as to hour, minute and day of the watchman in order to render it impossible for the watchman to neglect his duty without making such neglect instantly known.

Another object of my invention is the provision of a device of the character and for the purpose stated which will be small and compact in size to occupy a very small space and which can be operated with ease either from within or from the outside, and which in either instance will perform its function in a reliable manner.

Another object of my invention is the provision of a device of the character stated which may be used in connection with an ordinary and cheap clock and which by reason of its few parts will not get out of order and which generally in every particular will provide a desirable, efficient and thoroughly practical device for the purpose intended.

The invention consists of a recording mechanism of the character stated embodying novel features of construction and combination of parts substantially as shown, described and particularly defined by the claims, the right being reserved to make any changes in the structure which come within the scope of the claims.

In order that the details of construction embodied in my invention and its operation may be understood, as well as its many advantages be fully appreciated, I invite attention to the accompanying drawings, in which:

Figure 1 represents a perspective view of the complete time recorder, with a portion of the door removed to illustrate the interior mechanism and looking towards the end of the casing where the indicating dial is in view.

Fig. 2 represents a side elevation of the mechanism with one side removed to more clearly show the enclosed mechanism.

Fig. 3 represents a sectional view taken on the line 3—3 of Fig. 2.

Fig. 4 represents a view looking at the end of the mechanism carrying frame in which the indicating dial is mounted, and

Fig. 5 represents an enlarged detail view of the rock lever which carries the pointer and indenting device for indicating the time upon the sheet or dial, which receives its indication from the time upon the clock operating synchronously with said dial and indenting device.

Referring by numeral to the drawings in which the same numerals of reference are employed to denote the same parts in all the views:

The numeral 1 designates the case or cabinet of my improvement which is of any desired size to suit the requirements, and is provided with a hinged door 2, and an opening 3, in one end protected by a glass panel 4, and at its other end with an opening 5, the purpose of which openings will presently appear.

The cabinet or case is of rectangular shape and is provided at each end with cleats 6, which hold the glass panels 4 and 4′ in position as well as serve to guide and position the base or foundation strip 7, which is provided with the end vertical wall 8, in place in the case. This forms a right angle shaped frame which carries the operating mechanism of my invention and also permits the ready insertion and removal of said frame, the frame being provided with latches 9, which engage the feet 10, of the clock 11, which is of the usual and common type.

To the milled head 12, mounted upon the minute arbor or shaft 13, of the clock, is connected the yoke shaped member 14, which is coupled to the shaft 15, of the train of gears 16, by the coiled spring or elastic element 17, which construction and arrangement causes the rotation of the minute arbor

of the clock to rotate the train of gears similarly, and such rotation causes the indicating dial 18, which is connected to the shaft 15 by means of the clamping discs 19, and thus the indicating dial, which carries the spaces 20, indicating the days of the week, and the spaces 21, denoting the hours and minutes to rotate.

The train of gearing 16, is shown most clearly in dotted lines in Fig. 3 and consists of a small gear wheel which is connected to revolve twelve times, and the large gear wheel in mesh with said gear wheel and which revolves once to twelve of the smaller gear wheel to thus move the dial 18, one throw to each entire revolution of said small gear wheel as will be evident.

The train of gearing is mounted in the metal frame or support 22, consisting of a pair of spaced plates, which are secured by suitable fastenings 23, to the vertical wall 8 of the removal frame, and said frame is provided at its upper end with a pair of ears 24, to which is pivoted or fulcrumed at 25, the rock lever 26. This lever 26 which is rigid or stiff throughout carries at its upper end the bent portion 27, adapted to be engaged by the trip device 27′, mounted on the shaft 28, journaled in each end of the frame and having upon each projecting end, a knob 29, by which the shaft may be rotated from either end of the cabinet, to operate the device from within or without.

From this construction it will be noted that the operating shaft may be rotated from either end and only in one direction to cause the trip device 27′, to engage the bent portion 27 on the rock lever 26, to cause said lever to move in and out, the purpose of which is to cause the operation of the indicating and indenting device 30, which is adjustable in the pair of spaced bars 31, of the lever by means of the sliding block 32, mounted between said bars, and the pin 33, which engages any one of the seven series of openings 34, in said spaced bars, to place the indicating device in proper relation to cause it to indicate the proper day, hour and minute upon the dial 18, the frame being provided with an elongated opening 18′ to permit movement of the indicating device to indent the dial and against the cork or flexible backing 35, carried by the holding arm 36, mounted upon the rod 37, said rod passing through the lower end of the spaced bars, which are confined in proper relation by the collars 38, and upon each side of which collars are placed the coiled springs 39 and 39′, whose impulse both releases the holding arm as well as retains the lever in proper position to cause it to operate properly.

It will thus be noted that the turning of heads 29 rotates shaft 28, causing trip device 27′ to engage bent portion 27, to move rock lever 26, and force marker or indenting device 30, to be raised and then to strike the sheet 18, to indicate the time on said sheet.

The new and important features of my invention reside in the peculiar contsruction of the rock-lever, which consists of an upper bent end on arm 27, to be engaged by the trip device 27′; the pivoted open yoke or frame and the pair of arms 31, between which is mounted the adjustable indenting device 30, for engaging the recording dial 18, and impacting against the cork or backing 35 disposed in the spring controller holding arm 36.

From the foregoing description taken in connection with the drawing the operation of my invention will be readily understood, and it will be at once apparent that the connection between the dial and the minute arbor of the clock causes said dial to be moved similarly or synchronously with the movement of said shaft or arbor, and that instantly upon the watchman rotating the shaft and causing the lever to rock, the indenting device will punch or indicate upon said dial the exact time as registered upon the clock dial, that is to say, the time at which the watchman rotates the operating shaft will be instantly designated on the indicating dial and as shown on the clock dial, and thus an absolute and perfect time record is obtained and it is impossible for fraud or deception to be practiced.

It will be understood that the case or cabinet may be made of any material and of the desired size and may be placed in the most advantageous location for operation either from without or within; also that the device is the embodiment of simplicity, durability and cheapness, and that generally will produce an efficient and thoroughly practical recorder to take the place of the complicated and expensive recorders for this purpose in general use.

I claim:

1. A recording mechanism, consisting of a casing, a time piece disposed in one end of said casing, a record dial arranged in the other end of said casing, a connection between said time piece and record dial, a shaft mounted in said casing, a trip device carried by said shaft, a rock lever having an upper bent arm, an intermediate frame, and a pair of spaced lower arms, said upper bent end adapted to be engaged by said trip device to rock said lever, a marking device carried by the spaced arms of said rock lever to indent the said record sheet, said marking device being adjustable in the spaced arms of the rock lever, an arm forming a backing to receive the impact of the marking device, and spring means to actuate the rock lever and to retain the marking device and arm in proper relation.

2. A time recording mechanism, consisting of a case having an opening in one end having a transparent covering and an opening in its other end, a clock arranged in said case with its dial visible through said transparent covering, a record dial arranged at the other end of the case, a connection between the minute hand shaft of the clock and said record dial, a shaft passing through the case and extending outside at each end for manual turning, a trip device carried by said shaft, a bracket secured to the end of the case adjacent the record dial, a rock lever fulcrumed to said bracket and having an arm extending from one end to be engaged by the trip device, and a guide arm extending from its other end, an indenting device adjustably mounted in said guide arm and arranged to indent upon the record dial, and a spring controlled holding arm mounted in the guide arm of said rock lever and acting as a backing and stop for the indenting device and retaining the record dial in proper position.

In testimony whereof I hereunto affix my signature.

HARRY S. HART.