

No. 755,100.

PATENTED MAR. 22, 1904.

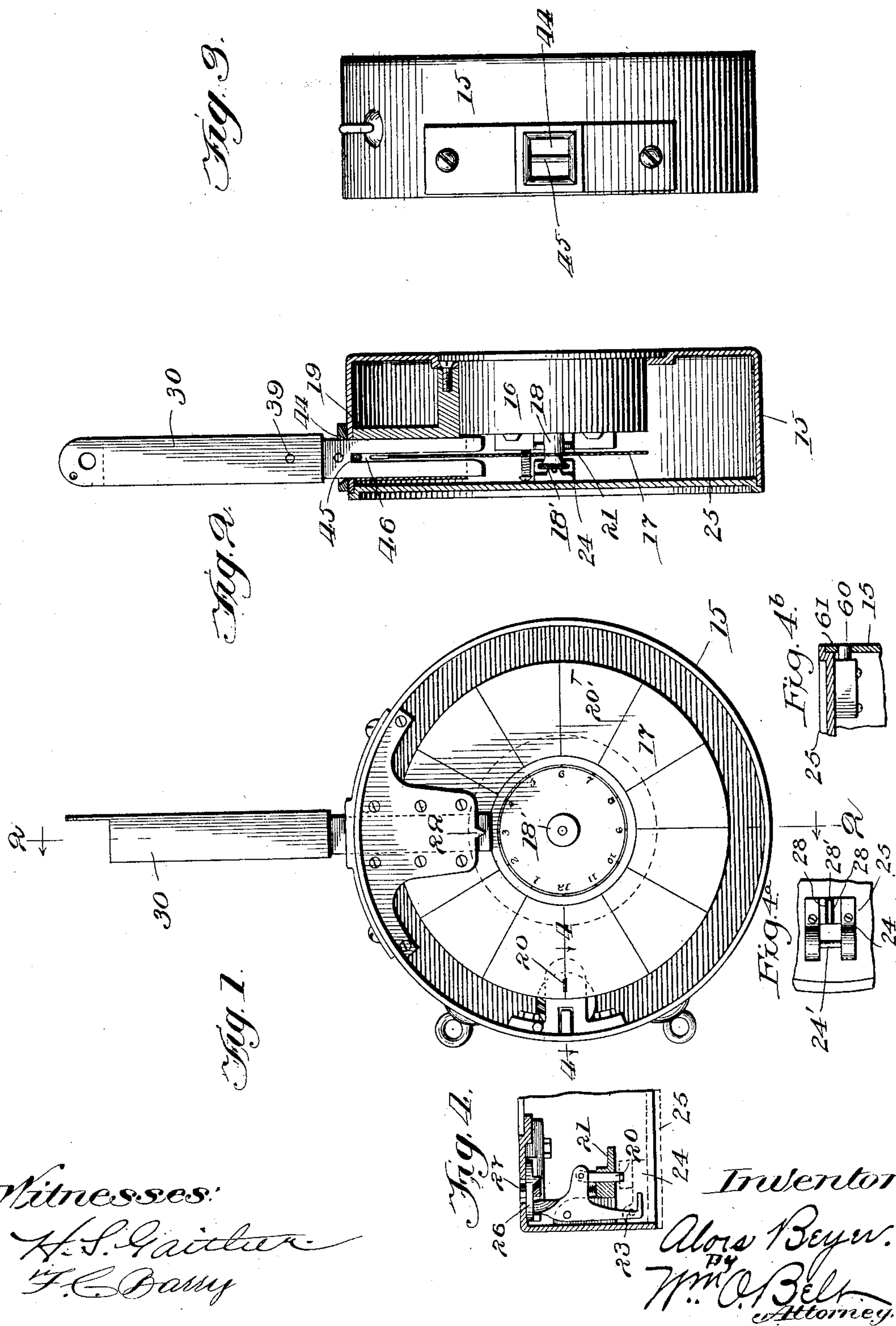
A. BEYER.

WATCHMAN'S CLOCK.

APPLICATION FILED MAY 11, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



No. 755,100.

PATENTED MAR. 22, 1904.

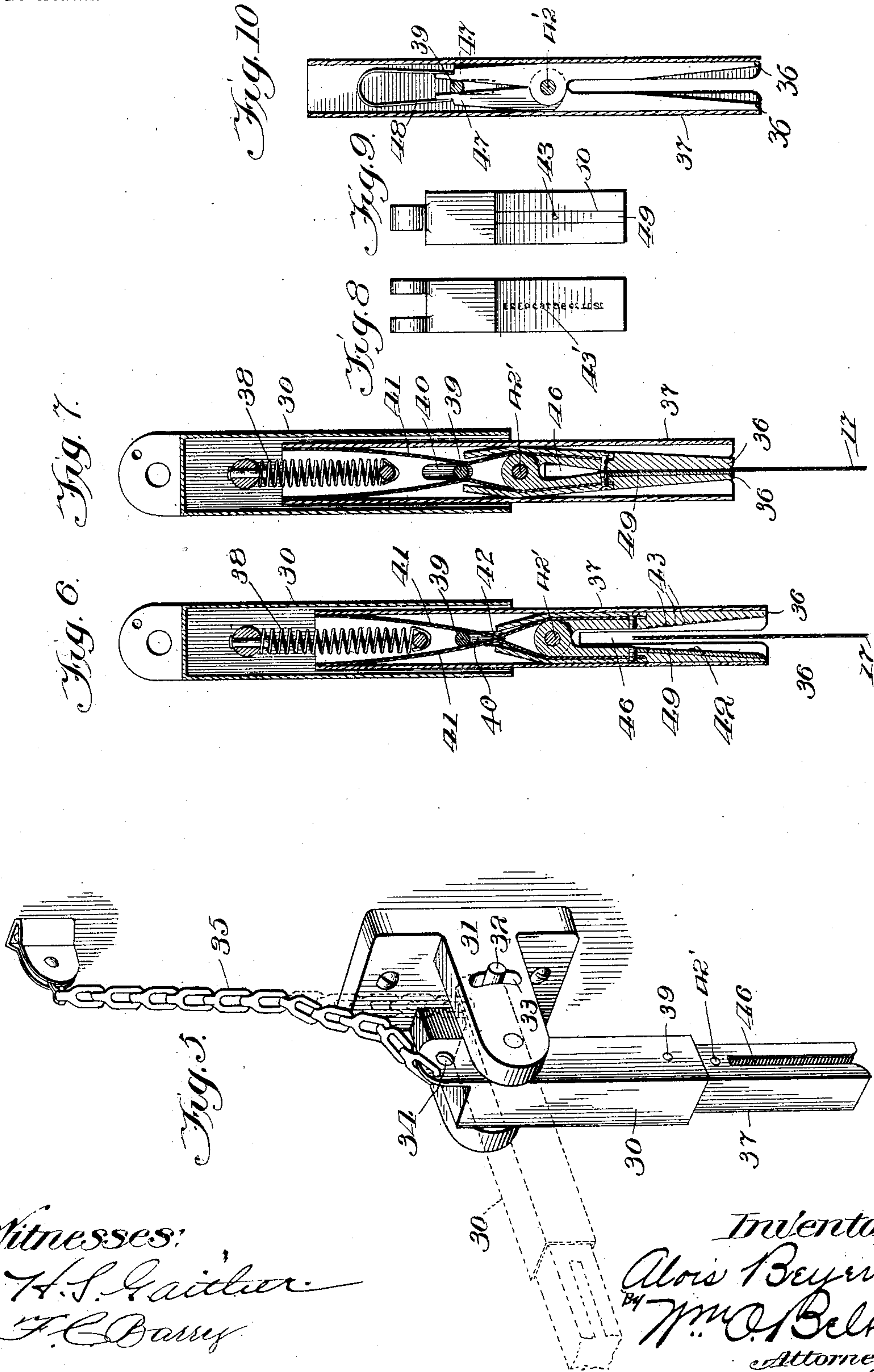
A. BEYER.

WATCHMAN'S CLOCK.

APPLICATION FILED MAY 11, 1903.

NO MODEL.

2 SHEETS—SHEET 2.



Witnesses:  
H. S. Gaither  
F. C. Barry

Inventor:  
Alois Beyer.  
J. M. O. Bell  
Attorney.



# UNITED STATES PATENT OFFICE.

ALOIS BEYER, OF CHICAGO, ILLINOIS.

## WATCHMAN'S CLOCK.

SPECIFICATION forming part of Letters Patent No. 755,100, dated March 22, 1904.

Application filed May 11, 1903. Serial No. 156,662. (No model.)

*To all whom it may concern:*

Be it known that I, ALOIS BEYER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have  
5 invented certain new and useful Improvements in Watchmen's Clocks, of which the following is a specification.

This invention relates to watchmen's clocks of the kind described in United States Letters  
10 Patent No. 711,712, granted to me on October 21, 1902, which comprise a portable recording-clock and a number of fixed instruments or keys located at different stations for making a record on an impression-surface within  
15 the clock.

The object of the invention is to simplify and improve the manner of and means for securing the record-impressions, as well as to provide against tampering with the record-  
20 sheet.

The invention also has in view to provide a novel station instrument carrying impression devices for operating directly upon the recording-sheet without affecting the clock  
25 mechanism or straining the parts thereof or the instrument itself.

With these and other objects in view, which will be fully and clearly pointed out hereinafter, I have illustrated one manner in which  
30 the invention may be embodied in the accompanying drawings, in which—

Figure 1 is a plan view of the clock with the back plate removed and shown in recording position on a station instrument. Fig. 2  
35 is a sectional view on the line 2 2 of Fig. 1. Fig. 3 is a plan view of one portion of the periphery of the clock-casing, showing the opening therein to receive the station instrument. Fig. 4 is a sectional view on the line 4 4 of  
40 Fig. 1. Figs. 4<sup>a</sup> and 4<sup>b</sup> are detail views. Fig. 5 is a perspective view of a station instrument. Figs. 6 and 7 are sectional views of a station instrument and showing the two positions of its movable parts. Figs. 8 and 9 are  
45 plan views of the female and male dies, respectively. Fig. 10 illustrates a modification of the impression devices.

Like numerals of reference designate corresponding parts in the several figures, and referring thereto 15 indicates the casing, and

16 the clock mechanism, the latter being of any suitable construction and inclosed in a suitable case. A dial-sheet 17 is mounted on a revolving shaft 18 of the clock mechanism and travels in the slotted guide 19, secured within the casing. A knife 20 is guided  
55 in a bracket 21, fastened to the casing, preferably at an angle of forty-five degrees with the pointer 22 on the slotted dial-guide. This knife is carried by a pivoted locking-plate 23,  
60 which is moved into locking or unlocking engagement with the bracket 24 on the back plate 25 of the casing by means of a disk 26, provided with a key-post 27 to receive a key. When the back plate of the casing is removed,  
65 so that a dial-sheet can be inserted in place, the knife will be projected beyond the bracket 21 in the manner shown in Fig. 4, and the dial-sheet will rest thereon. After the dial-sheet has been secured on the shaft 18 by a  
70 nut 18' or other suitable fastening means the back plate will be arranged in position with the stud 60 in opening 61, and when pressed to its seat the projections 28 thereon will force the paper down on the knife, which enters the  
75 slot 28' between said projections. When the locking-plate is thrown into locking engagement with the bar 24' on the back plate, the knife will be carried back into the bracket 21  
80 to leave the sheet free from engagement therewith, but with a slit 20' therein, from which it can be figured by reference to the relative positions of the knife and the pointer 22 at what time the dial-sheet was inserted in the clock. The dial-sheet will of course be suitably  
85 marked to correspond with the usual clock-dial, and the pointer enables the sheet to be properly arranged in the clock in a position to correspond with the actual time as indicated by the hands on the clock-movement dial. To  
90 remove the dial-sheet, it is necessary to release the locking-plate and throw it again into the position shown in Fig. 4, which thereby produces another slit in the sheet near its periphery and indicates the exact time at which the  
95 sheet was removed, the relative positions of the knife and pointer being considered as before. The sheet will thus bear two slits when removed from the clock, which show the exact time the sheet was put in and taken out  
100



of the clock and also provide an absolute check against tampering with the sheet, so that the watchman cannot surreptitiously replace a sheet without detection.

5 The station instrument comprises a frame 30, which may be suitably supported or suspended in any desired manner; but for convenience I prefer to pivotally support the frame in a bracket 31, which can be fastened  
10 at any place desired, so that when not in use the instrument may hang down in the manner shown in full lines. At night or at any other time when the instrument is to be regularly used it can be swung up to a horizontal position, as shown in dotted lines, and fastened  
15 by a pin 32, passing through openings 33 in the bracket and an opening 34 in the frame, or the instrument may be used while hanging down, as shown in full lines. I prefer also  
20 to secure the instrument by a chain 35 in addition to the bracket, so that it cannot be removed from its station.

Each station instrument is provided with impression devices, which comprise pivoted  
25 jaws 36, carried in a slidable sleeve 37, arranged in the frame 30 and normally held outward in projected position by a spring 38. This sleeve is limited in its sliding movement by a transverse pin 39, mounted in the frame  
30 and passing through slots 40 in the sides of the sleeve, the movement of the sleeve being sufficient, however, to permit the jaws to be brought into operative engagement with the dial-sheet 17. The jaws are normally held  
35 open by spring-plates 41, which are bent to approach each other at 42 between the pin 39 and the pivot 42' of the jaws, so that when the sleeve is forced into the frame by pressing the clock against it the spring-plates will  
40 be forced apart by the pin 39 and the jaws brought into operative engagement with the dial, Fig. 7, and an impression produced thereon by the male die 43 and its complementary female die 43'. The clock is provided with  
45 an opening 44, Fig. 3, in its periphery to receive the station instrument, and a cross-bar 45 enters the slot 46 of the sleeve and engaging with the end wall thereof constitutes a stop and a bearing-point at which the pressure  
50 applied to the clock is communicated to the sleeve.

I may construct the jaws in the manner shown in Fig. 10, with their rear ends 47 extended to directly engage the pin 39 and normally held apart by a bent spring-plate 48.

Each station instrument is adapted to record at a different point radially of the dial from all other stations, and each instrument preferably records a character indicating its position in the circuit of all the stations, so that  
60 when the watchman completes the circuit of all the stations the impressions on the dial-sheet will be consecutively arranged radially thereof from its periphery toward its center,  
65 or vice versa. Each impression on the dial-

sheet will indicate the particular time at which the station designated thereby was visited and the time which has elapsed between the first impression and the last impression, showing the time consumed by the watchman  
70 in making the circuit.

I have found it to be convenient to stamp each jaw carrying the female dies with all of the dies for all of the stations and then provide the male die on a strip 49, which can be  
75 adjusted in a slot 50 in the jaw to bring the male die in complementary position to its female die. This enables me to readily change the characters of the stations and absolutely insures the proper positioning of the dies.  
80 The strip may be molded directly on the female dies and then cut down to fit in the slot 50 and all dies except the one to be used removed.

My improved clock is of very simple but  
85 substantial construction and its parts are not apt to be injured or get out of order in the use thereof. The impression is effected in a very simple manner by simply pressing the clock  
90 upon the station instrument, the construction of all the parts being of a complementary nature, so that the necessary pressure for producing the impression cannot be exceeded and will always be secured when the operation is properly performed. I entirely avoid  
95 all twisting and other strains on the clock which have a tendency to loosen and weaken the parts and, on the contrary, produce the impression by a direct pressure. It will also be observed that the character-impression devices are carried entirely by the station instrument and not by the clock, which enables me to make the clock in a comparatively small and compact form, if desired. I consider it of importance to locate the impression-  
100 dies so that they cannot be easily tampered with, and this is fully accomplished in my present invention, in which they are arranged approximately midway between the outer end of the jaws and their pivot.  
110

Without limiting myself to the exact construction and arrangement of parts herein shown and described, what I claim, and desire to secure by Letters Patent, is—

1. The combination of a watchman's clock  
115 carrying a record-sheet, and a station instrument operated by said clock and comprising movable jaws adapted to make an impression on said sheet.

2. The combination of a watchman's clock  
120 carrying a record-sheet, and an impression device operated by said clock and comprising pivoted jaws adapted to make an impression on said sheet.

3. The combination of a watchman's clock  
125 carrying a record-sheet, and an impression device comprising movable jaws provided with complementary male and female dies and adapted to enter the clock and make an impression on said sheet.  
130



4. The combination of a station instrument having an impression device comprising movable jaws, and a watchman's clock provided with an opening to receive said jaws, and adapted to operate the jaws when forced thereon to make an impression on a sheet carried by the clock.

5. The combination of a station instrument having an impression device comprising movable jaws, means acting to hold said jaws normally open, a clock provided with an opening to receive the jaws and carrying a record-sheet, and means carried by the clock to cause the jaws to make an impression on said sheet.

6. The combination of a station instrument having an impression device comprising movable jaws, spring-plates acting on the jaws to hold them normally open, a clock provided with an opening to receive the jaws and carrying a record-sheet, and a cross-bar in said opening adapted to act on the plates to cause the jaws to make an impression on said sheet.

7. A station instrument for a watchman's clock having an impression device comprising pivoted jaws, plates acting to hold the jaws normally open and made to approach close to each other behind the pivot of the jaws, and means to act on said plates to cause the jaws to make a record on an interposed sheet.

8. A station instrument for a watchman's clock comprising a frame, a spring-pressed impression device carried by and slidable within the frame, and means for causing the impression device to make a record on a sheet when pressure is applied to move the impression device within the frame in opposition to its spring.

9. A station instrument for a watchman's clock comprising a frame, a spring-pressed sleeve movable in the frame, an impression device carried by the sleeve and consisting of jaws, means for holding the jaws normally open, and means for causing the jaws to make a record on an interposed sheet when the sleeve is moved in opposition to its spring.

10. A series of station instruments for a watchman's clock each instrument having an impression device consisting of a pair of movable jaws, one of said jaws having thereon fe-

male dies corresponding to all the other instruments and the other jaw having a single male die, and means for causing the male and its corresponding female die to make a record on an interposed sheet.

11. The combination of a station instrument, a clock provided with an opening to receive said instrument and carrying a sheet, a spring-pressed impression device carried by the instrument and comprising movable jaws, and means for moving the impression device in opposition to its spring when the clock and instrument are engaged to cause the jaws to make a record on the sheet.

12. The combination of an impression device comprising a pair of pivoted jaws normally held open, a clock provided with an opening to receive said impression device and carrying a sheet, and a cross-bar in the opening of the clock to act on the jaws and cause them to make a record on the sheet when the clock and impression device are engaged.

13. In a watchman's clock, the combination of a casing comprising a removable back, a record-sheet, a knife adapted to mark the sheet inside of its edge when the back is put on the casing, and means for operating the knife to similarly mark the sheet when the back is unlocked.

14. In a watchman's clock, the combination of a casing comprising a removable back, a record-sheet, a knife, means carried by the back for pressing the sheet down into engagement with the knife, and means for withdrawing the knife from engagement with the sheet when the back is locked.

15. In a watchman's clock, the combination of a casing comprising a removable back, a record-sheet, a knife, means carried by the back for pressing the sheet down into engagement with the knife, and locking means for the back adapted to withdraw the knife from engagement with the sheet when the back is locked and cause the knife to mark the sheet when the back is unlocked.

ALOIS BEYER.

Witnesses:

WM. O. BELT,  
HELEN L. PECK.