

(No Model.)

J. BACHNER.

WATCHMAN'S TIME RECORDER.

No. 359,001.

Patented Mar. 8, 1887.

Fig. 1.

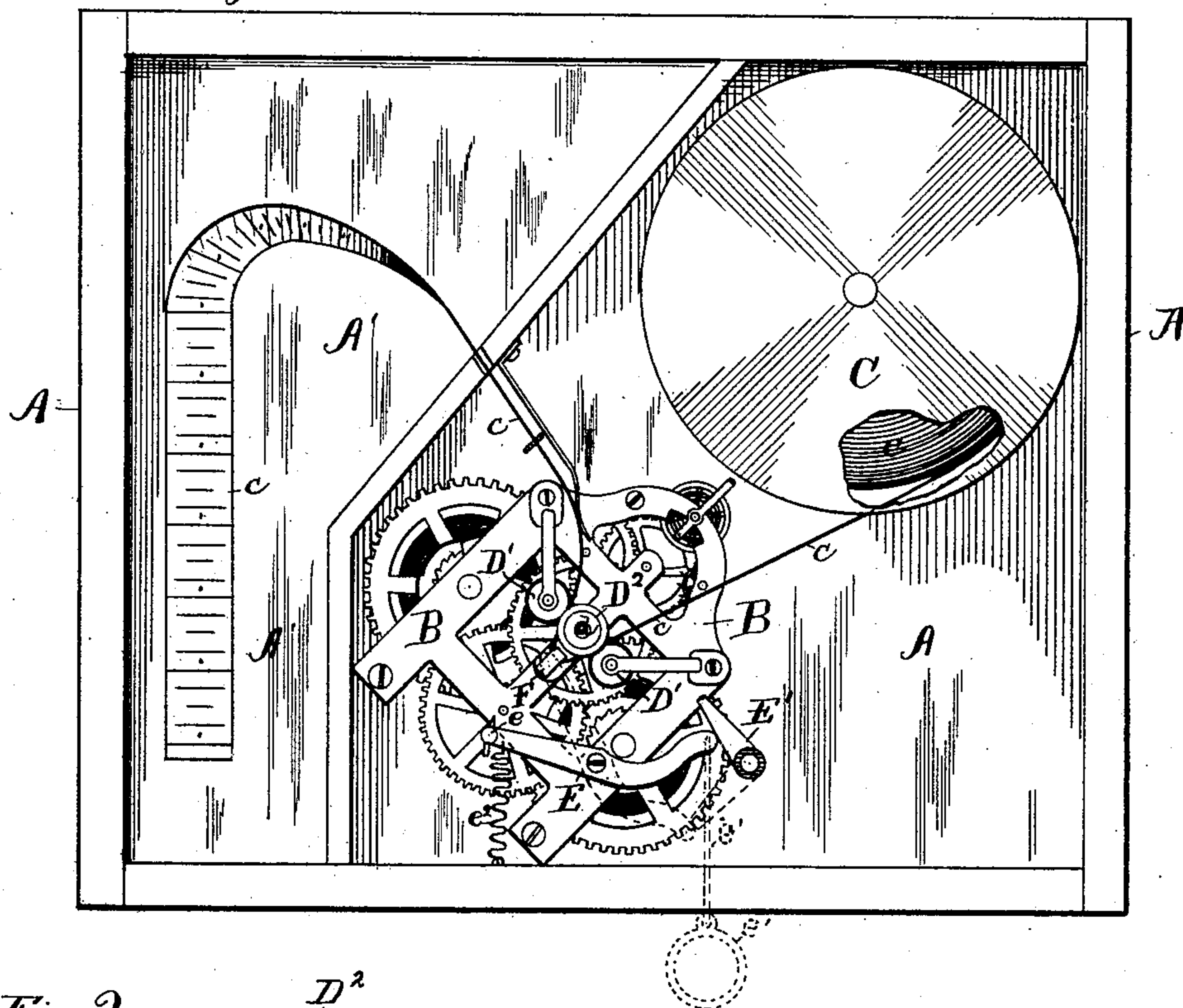


Fig. 2.

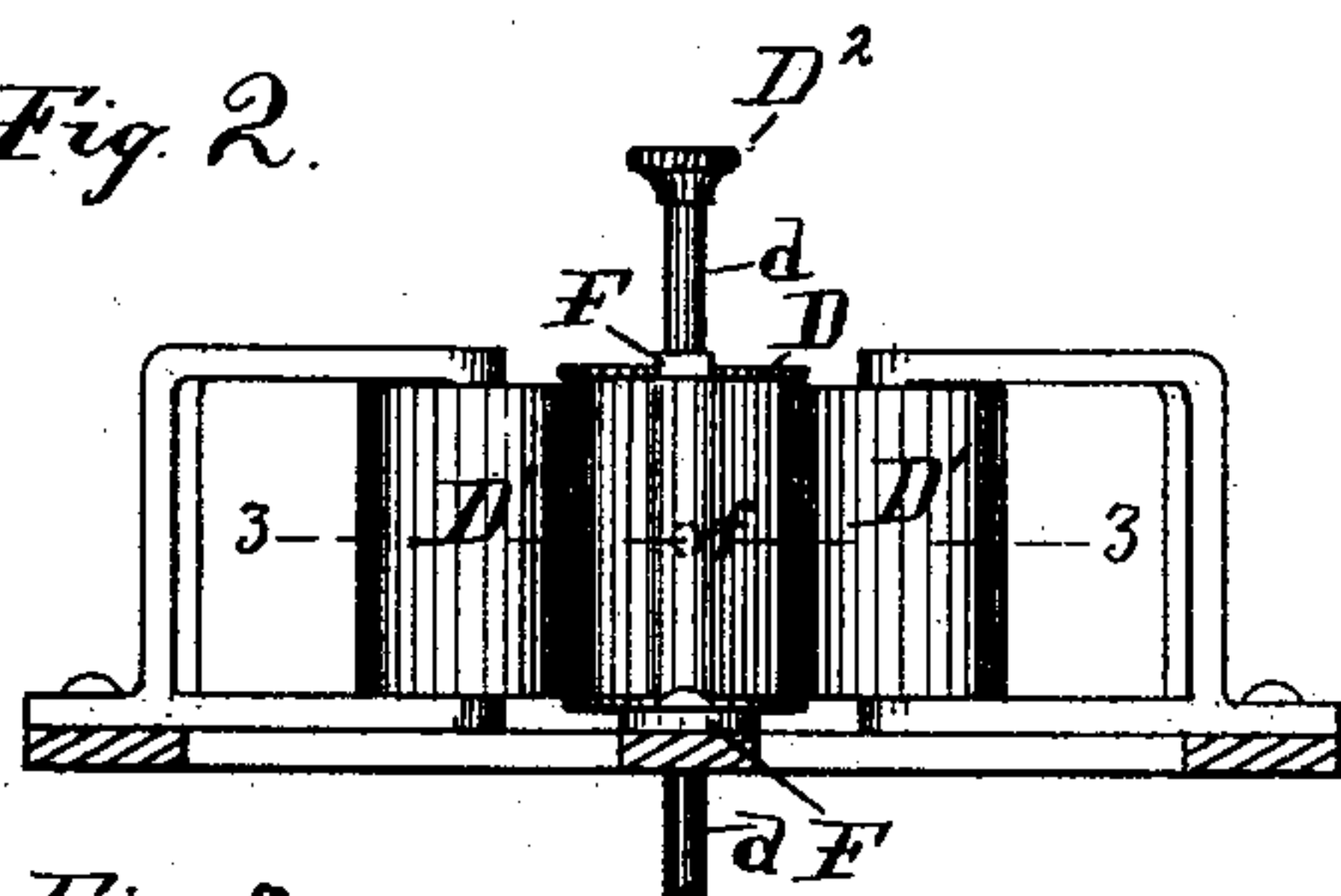
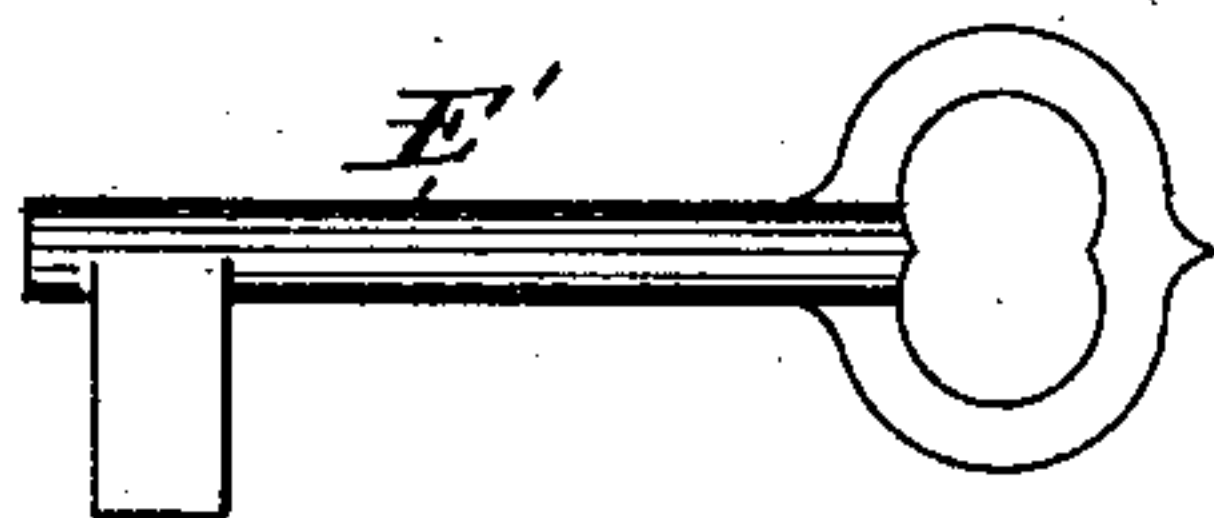


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOSEPH BACHNER, OF CHICAGO, ILLINOIS, ASSIGNOR TO HIMSELF AND
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WATCHMAN'S TIME-RECORDER.

SPECIFICATION forming part of Letters Patent No. 359,001, dated March 8, 1887.

Application filed November 9, 1885. Serial No. 182,219. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH BACHNER, a citizen of the Republic of France, who has declared his intention to become a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Watchmen's Time-Detectors, of which the following is a specification.

10 This invention is designed to simplify and cheapen this class of time-registering instruments; and it consists of a watchman's time-detector made up of the following elements, to-wit: a time-movement having no dial-wheels, a paper-operating roller mounted on the minute-shaft of the movement, an opposing roller or rollers for assisting in moving the paper, and a marking device, all combined and operating substantially as hereinafter set forth.

15 The invention also consists in other novel features of construction, hereinafter described, and pointed out in the claims.

In the accompanying drawings, which form a part of this specification, Figure 1 is an elevation of my invention, the box being open. Fig. 2 shows the ribbon-operating device. Fig. 3 shows a key whereby the watchman may operate the marking device.

25 In said drawings, A represents a suitable case or box for the instrument.

30 B is a clock-movement, such as is in common use. It may be a one-day or eight-day movement, and, indeed, almost any of the ordinary movements will answer the purpose very well.

35 C is a reel or spool provided with ribbon-paper *c*, and the end of this paper is passed around an operating-roller, D, mounted upon and actuated by an extension, *d*, of the minute-hand shaft of the clock.

40 To insure the degree of friction necessary to draw the paper along, I employ in connection with the roller D one or more rollers, D', the faces whereof are preferably of rubber. These devices deliver the paper into a receptacle or chamber, A'.

45 A puncturing or other form of marking device, to be operated by the watchman, is provided, whereby the ribbon is marked from time to time as it is moved along. I prefer

to employ as this marker the puncturing-point *e* upon the end of the vibrating lever E, the lever being operated to mark the ribbon by the key E', which may be inserted through the case whenever a record is to be made, or be permanently placed therein, with its end projecting to the outside of the case.

55 Instead of a key, a pendent cord or wire, *e'*, (indicated by broken lines,) may be employed. The spring *e''* returns this lever E to its normal position after each marking operation.

60 When a puncturing-point is used, I prefer to pass the paper around a stationary guard, F, whereby the paper is supported at the point where it is punctured, the guard having an opening, *f*, to allow the point to pass entirely through the paper. This guard, however, is not absolutely necessary, as the surface of the roller might be grooved or made of a yielding material, which would permit the marking-point to puncture, or at least indent, the paper; and if a pencil were substituted for the point, then, perhaps, no provision of this kind would be necessary.

65 In the apparatus as thus far described the paper passes from the spool to the chamber A' at a uniform speed—for instance, an inch and a half per hour—and therefore the position of the marks made by the watchman afford an easy means of determining with approximate accuracy the times at which the records were made. The paper employed should be divided by marks or prints into spaces representing divisions of time, preferably into both long and short periods, the latter not exceeding five or ten minutes. With the ribbon thus spaced the detector can be set whenever necessary by moving the ribbon along until the space thereon representing the proper hour and minute at which the detector is to be set registers with the marking-point; and this may be done without the aid of any dial or indicators whatever upon the clock or mechanism. The setting is done by turning the operating-roller. The thumb-nut D² affords a convenient means for thus operating the roller, being mounted upon the same shaft therewith.

90 By mounting the operating-roller upon the minute-shaft of the clock-movement I am enabled to dispense with what are commonly 100

known as the "dial-wheels"—viz, those parts which are employed to operate the hour-hand. This cheapens the movement very considerably, as such parts are among the most costly in the entire movement.

I claim—

1. The watchman's time-detector herein shown, consisting of receptacles for the delivery and reception of the paper-ribbon, a time-movement, an operating-roller mounted upon the minute-shaft and located between said receptacles, an opposing roller or rollers for assisting in the moving of the paper, and a marking device, all combined and operating substantially as set forth.

2. In a watchman's time-detector, the combination, with the paper-operating rollers, of a time-movement consisting of a minute-shaft

and operating mechanism and a graduated ribbon, substantially as specified, operating to move the paper-ribbon from the delivery to the receiving receptacle, and located between said receptacles.

3. In a watchman's time-detector, the combination, with the paper-operating rollers, of a time-movement consisting of a minute-shaft and its operating mechanism, independent of the devices for delivering and receiving the paper, substantially as specified, whereby the ribbon is moved rapidly and short divisions of time may be indicated.

JOSEPH BACHNER.

Witnesses:

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JOHN W. MUNDAY.