

T. HAHN.
Watchmen's Time-Checks.

No. 156,729.

Patented Nov. 10, 1874.

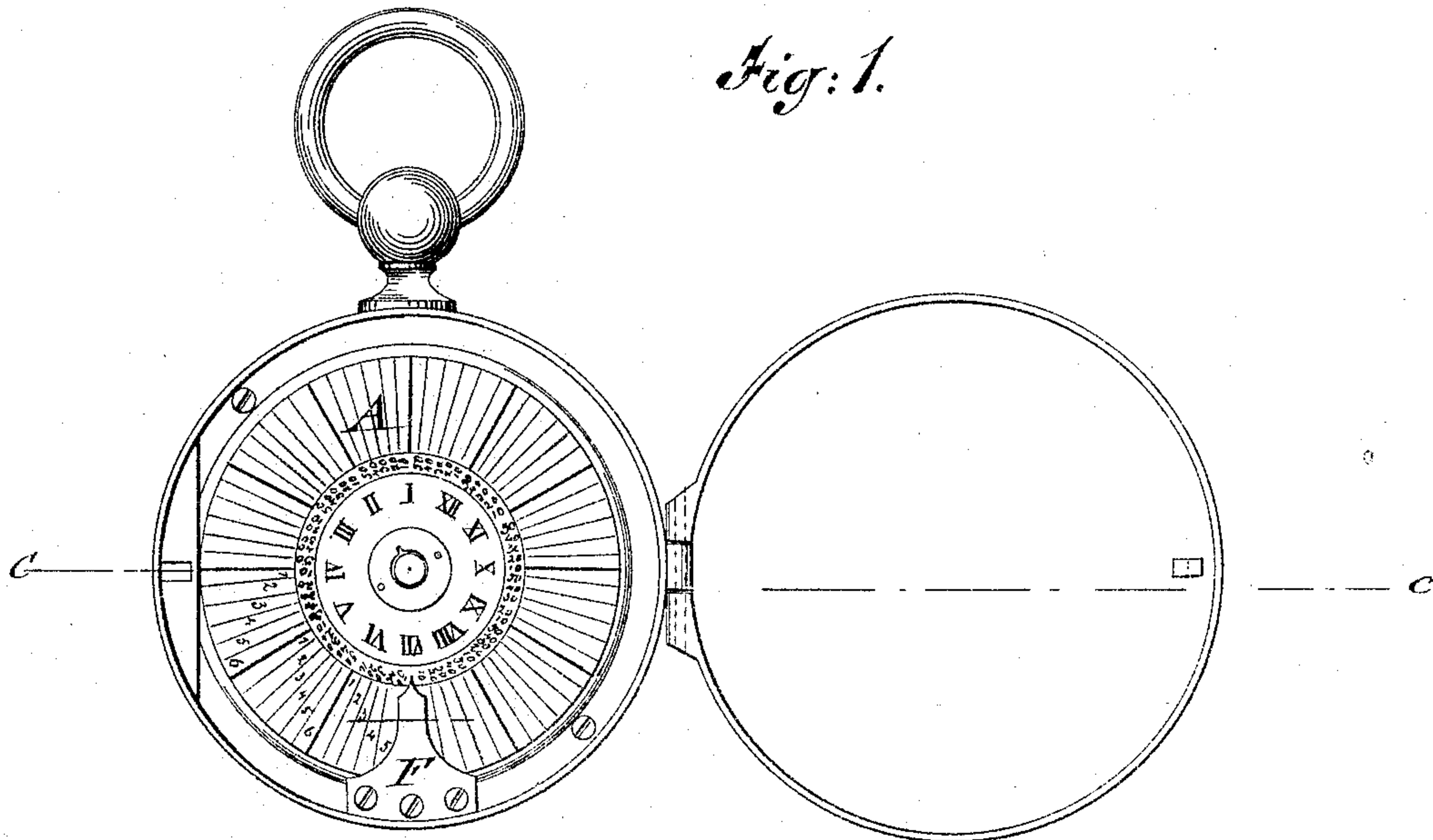


Fig: 2.

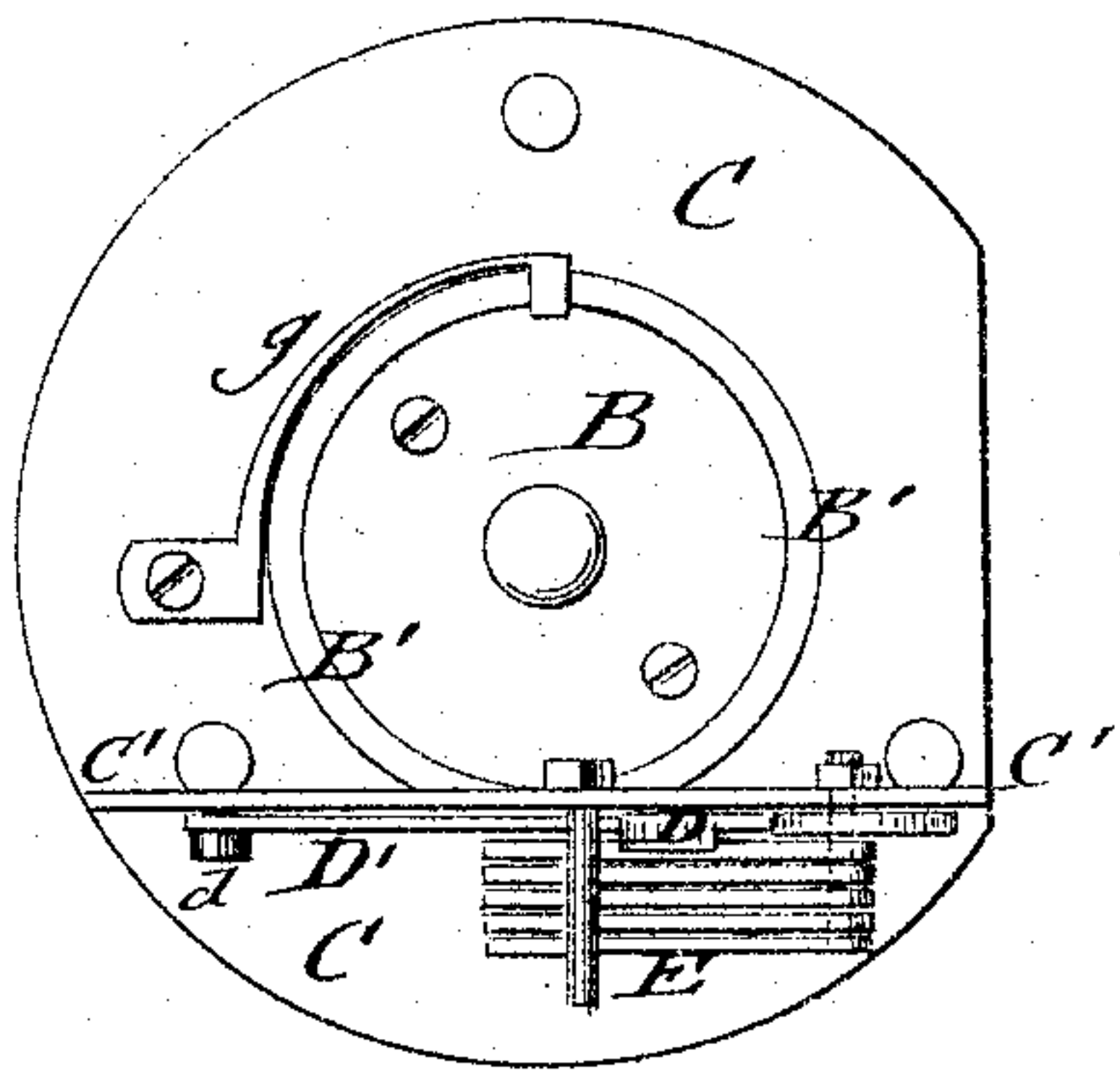


Fig: 3.

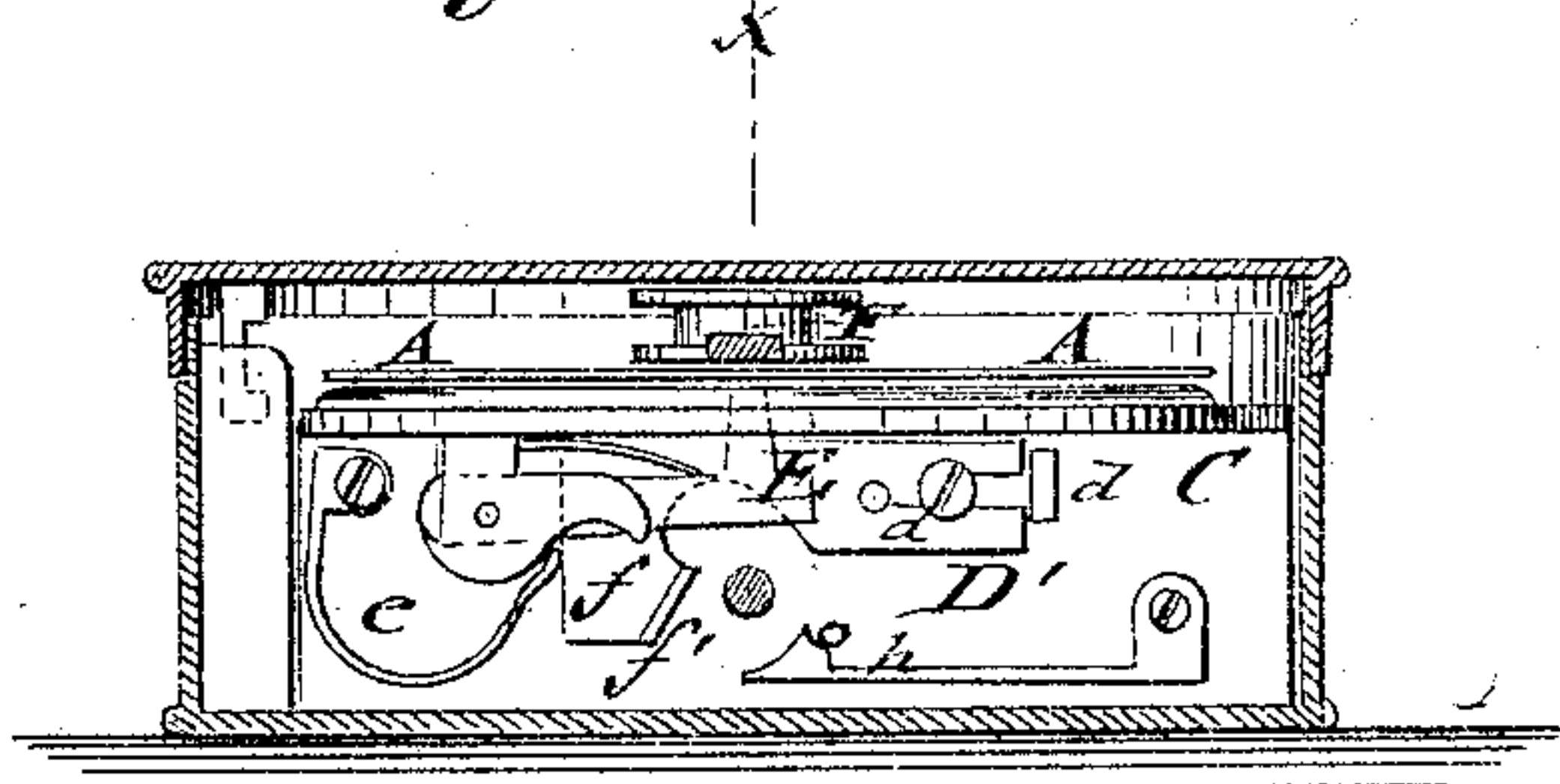


Fig: 4.

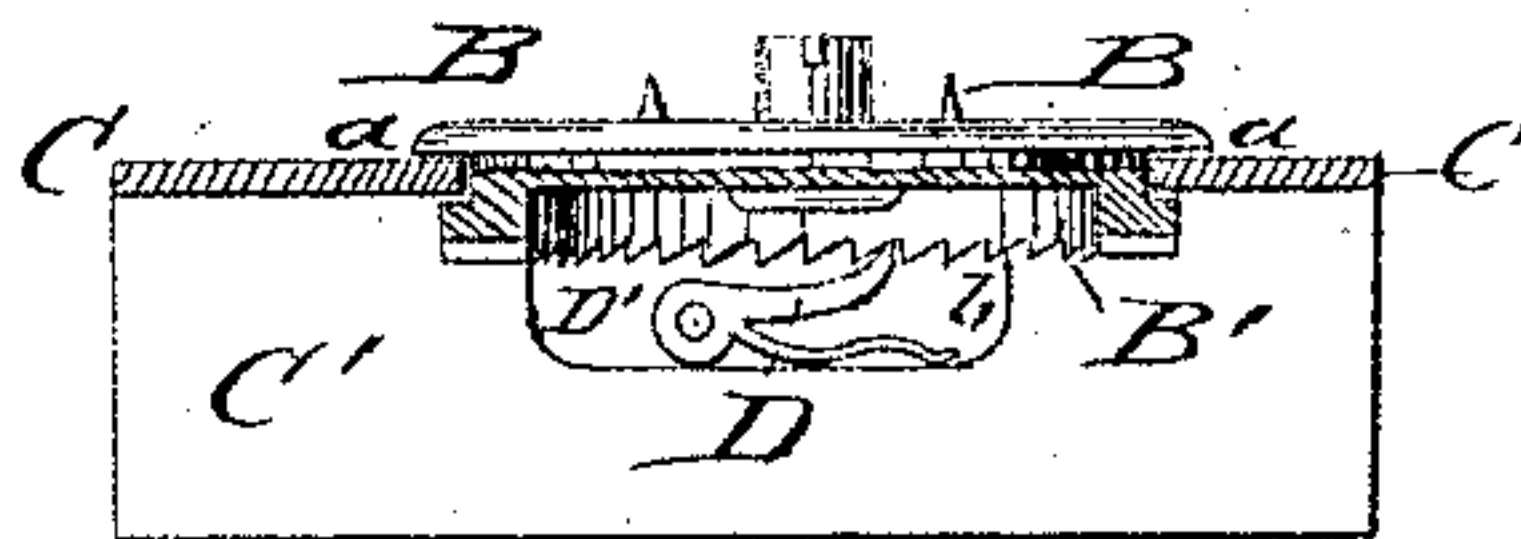
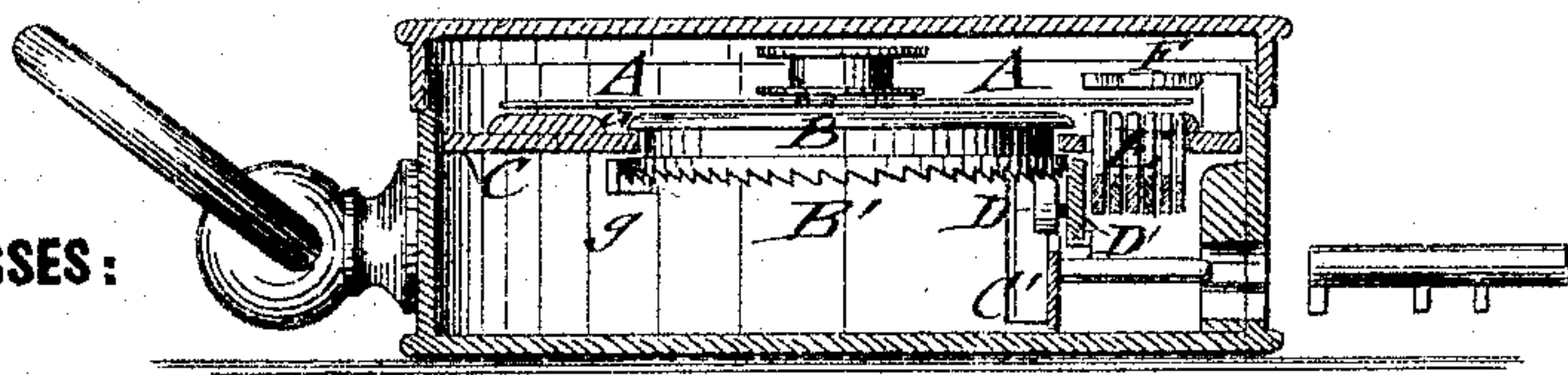


Fig: 5.



WITNESSES:

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UNITED STATES PATENT OFFICE.

THEODORE HAHN, OF STUTTGART, GERMANY.

IMPROVEMENT IN WATCHMEN'S TIME-CHECKS.

Specification forming part of Letters Patent No. **156,729**, dated November 10, 1874; application filed September 19, 1874.

To all whom it may concern:

Be it known that I, THEODORE HAHN, of Stuttgart, in the Kingdom of Wurtemberg, Germany, have invented a new and Improved Watchman's Time-Check, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a top or face view of my improved watchman's time-check with the lid thrown open; Fig. 2, a bottom view of the same, showing rotating and marking devices; Fig. 3, a vertical side elevation of the time-check, partly in section on line *c c*, Fig. 1; Fig. 4, a sectional rear view, showing rotating ratchet-dial and spiral pawl; and Fig. 5, a vertical transverse section of the time-check on the line *x x*, Fig. 3.

Similar letters of reference indicate corresponding parts.

The object of my invention is to furnish an improved watchman's time-check that is operated without a clock-train, but produces, by the action of the keys at the stations, simultaneously, the rotating of the dial and the suitable marking of the numbers of the stations on the dial, so that a simple and effective check, without the expense of the clock-train, is obtained.

My invention consists of the arrangement of a dial in connection with a disk, rotated by the action of the keys at the various stations, on a ratchet-wheel at the under side of the same, to produce the forward motion simultaneously with the action of the keys on the spring marking devices.

In the drawing, A represents the face-dial, of paper or other suitable material, which indicates in time checks the hours and minutes, and, by radial outer subdivisions, marking-columns for the numbers of the stations. The dial A is attached by pins and fastening center piece to a base-disk, B, that slides, by its projecting top flange *a*, on the main or supporting plate C, to which the marking mechanism is applied. The under side of disk B is provided with a ratchet, B', constructed with a number of teeth corresponding to the minute subdivisions of the dial, so that when, for instance, the time-check is arranged for six stations, and the hour-space on the dial subdivided into six parts, each tooth will

move the dial forward for one-sixth of an hour, or ten minutes; and, when the time-check is arranged for twelve stations, the hour is subdivided into twelve parts, or five minutes, and the ratchet provided with a corresponding number of teeth, each tooth will move the dial forward over one-twelfth part of an hour, or five minutes. A spring-pawl, D, is pivoted to a sliding plate, D', and engages the teeth of ratchet B, moving in a recess, *b*, of the vertical supporting-plate C', sidewise of which the sliding plate D' is guided by suitable lugs and stops *d*, and acted upon by a band-spring, *e*, for being carried back again. A downward extension, *f*, of sliding plate D', with inclined flange *f'*, is engaged by wards on all the keys, so that, when any key is inserted, it will carry the sliding plate sidewise, and move thereby, by the spring-pawl, the ratchet-dial forward one tooth, a spring check-pawl, *g*, of the same securing the exact motion of the dial. A spring guard or check, *h*, of plate C', is placed sidewise of the barrel-pin, opposite to the inclined flange of the sliding plate, for preventing the turning of the key in wrong direction. The spring lever-arms E are pivoted, in the usual manner, to bearings of the supporting-plates, and carried in upward direction by the wards of the marking-keys, of which each key corresponds with a lever-arm and a number or other mark at the end of its upward-projecting arm, which projects through a slot of the main plate and the top guide-ring, so as to press firmly the rotating dial against the bridge F, and mark thereby consecutively the stations as the watchman visits them.

After the key is inserted and turned, it engages first the sliding plate with pawl for carrying the dial forward, and then, by the ward, the corresponding marking-lever, for marking thereby, at one turn of the key, the station on the dial in the exact radial subdivision required. The dial will, therefore, indicate whether or not all the stations have been visited, forming, especially when the stations are arranged at suitable distances, also an approximately-exact record as to the time visited.

The rotating and marking devices are inclosed in a casing of the usual shape and size, which

is opened and locked, for setting the dial and substituting a new one, as in the time-checks patented heretofore.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. As an improvement in watchmen's time-detector, operated without clock-train, the combination of the rotating ratchet-disk and dial, operated by spring-pawl and sliding spring-plate, with the pivoted spring marking devices, both being actuated by the marking-keys at the stations, indicating thereby the numbers of the several stations, substantially in the manner and for the purpose set forth.

2. In watchmen's time-checks, the combination of dial-bearing disk and ratchet B B', sliding, by circumferential flange *a*, on supporting-plate C, with spring-pawl D and its

sliding spring-plate D', having extension with inclined flanged part *f'*, acted upon by the keys for rotating the dial, substantially as specified.

3. The vertical supporting guide-plate C', having recesses *b* for pivoted spring-pawl D, as described.

4. The vertical supporting-plate C', provided with a spring check-guard, *h*, opposite to sliding plate-extension *f*, for preventing turning of keys in wrong direction, as set forth.

The above specification of my invention signed by me this fourth day of August, 1874.

THEODORE HAHN.

Witnesses:

ALBERT PERLEN,
GOTTLÖB DENZINGER.