

K. SMITH.

Time and Price Register.

No. 84,226.

Patented Nov. 17, 1868.

Fig. 2.

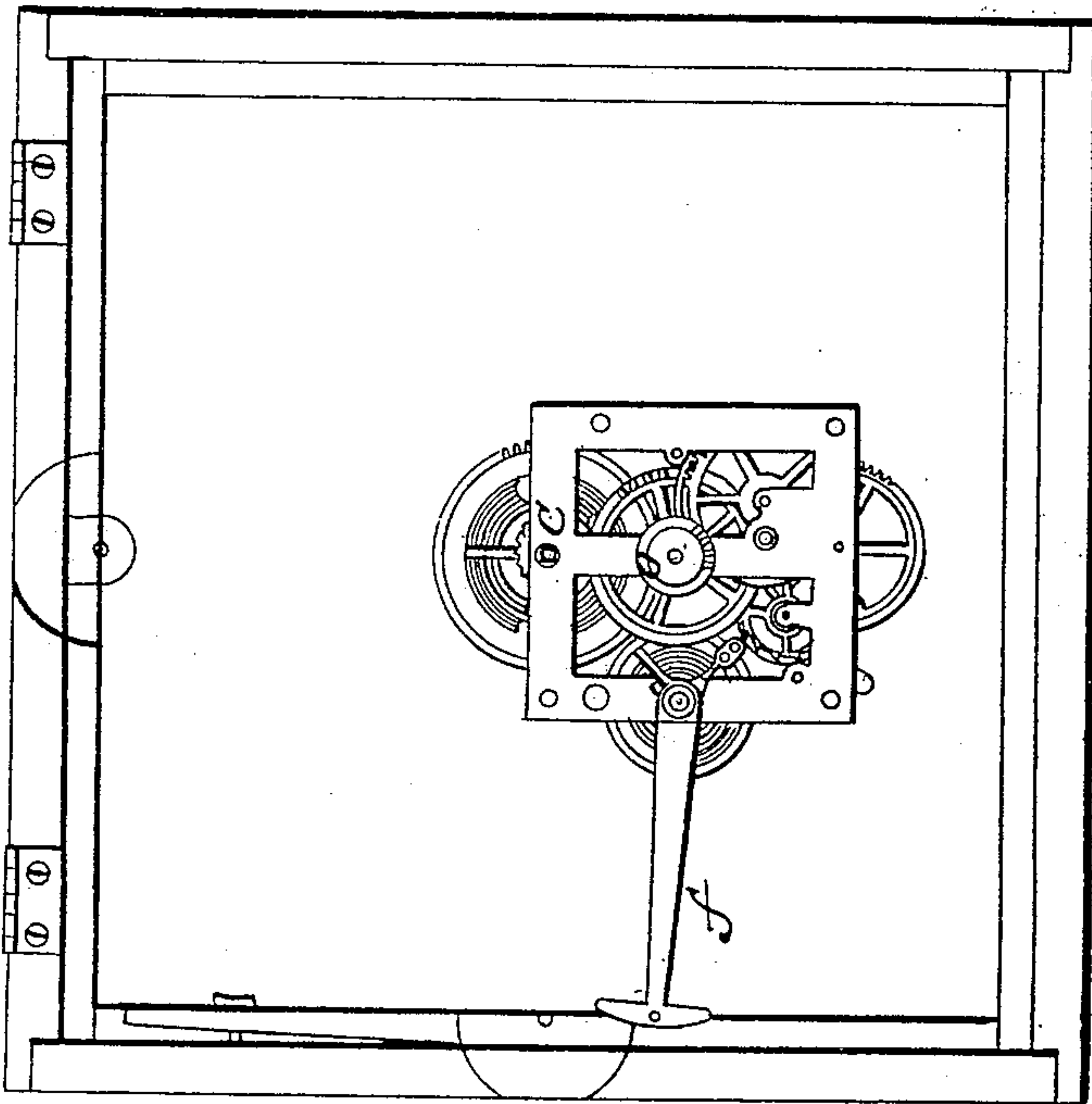
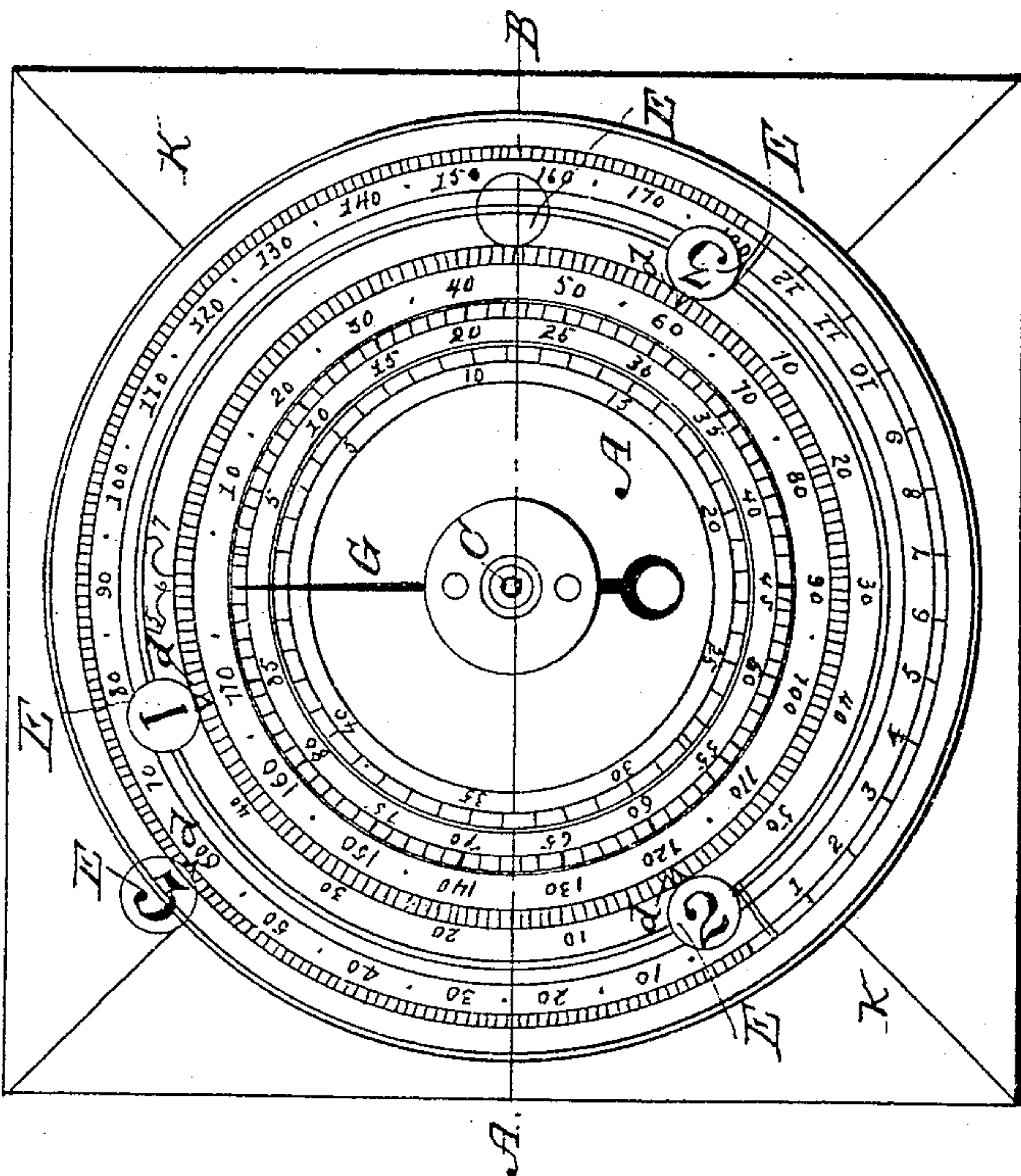


Fig. 1.



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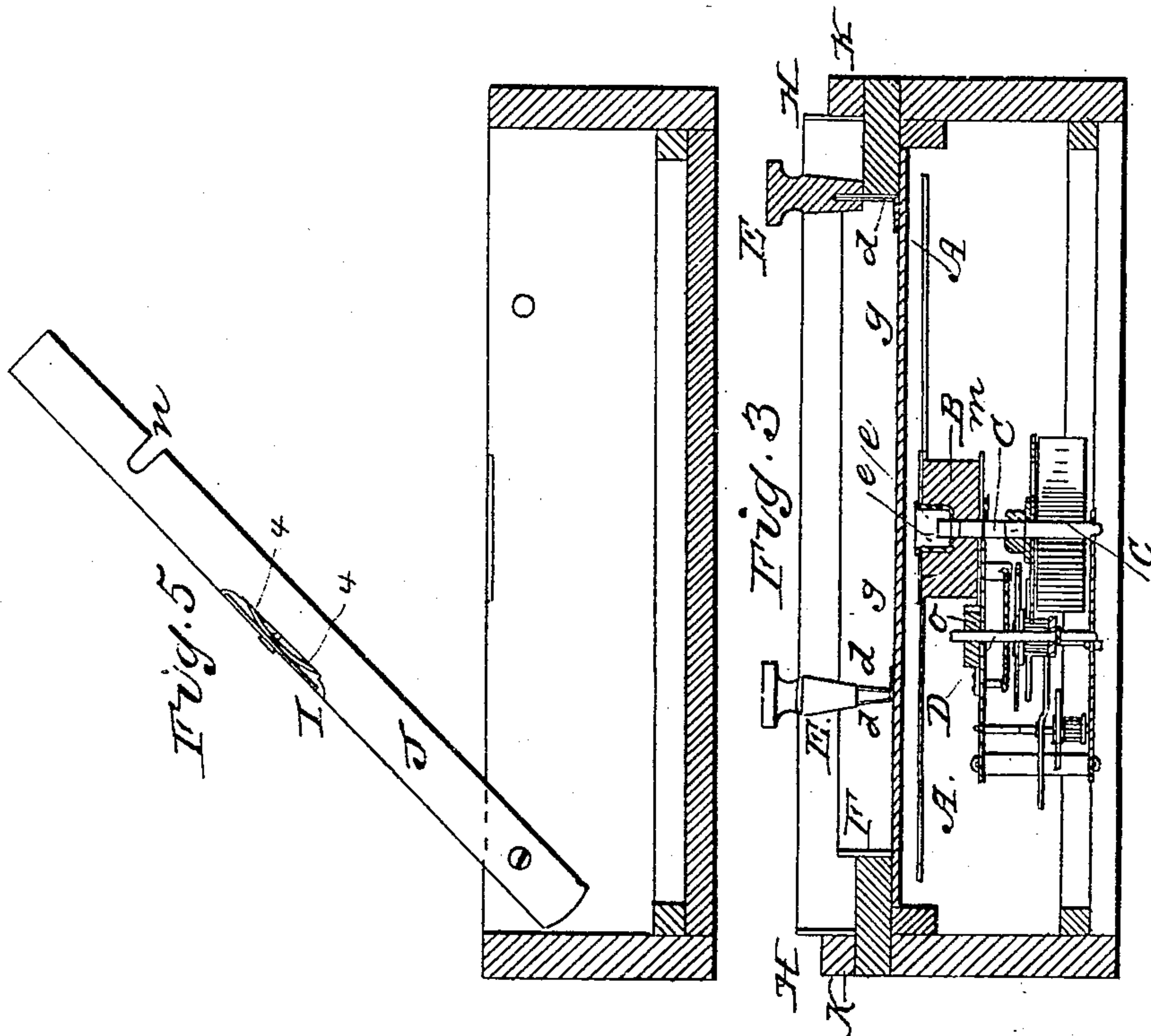
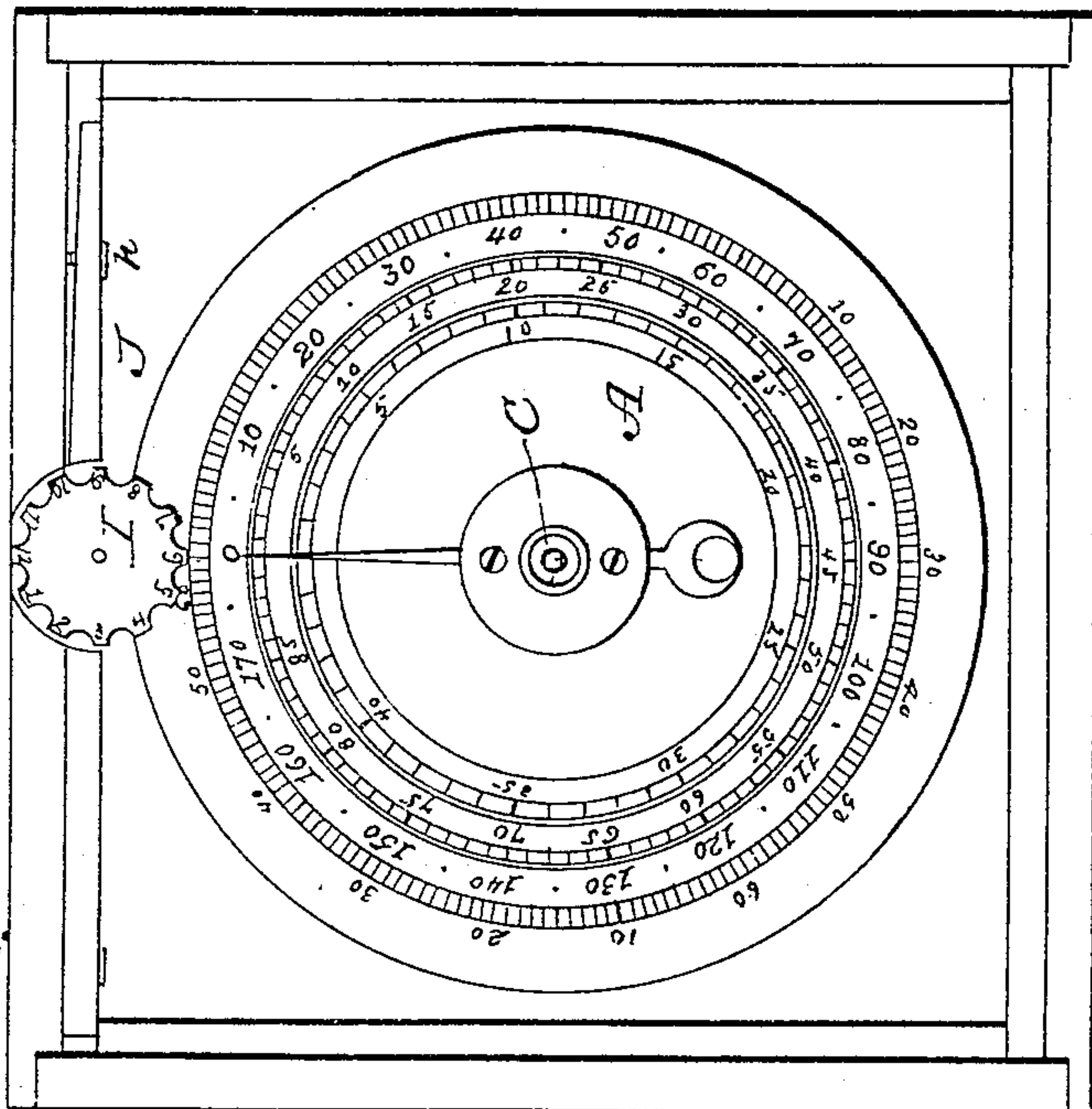


Fig. 4



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KILBURN SMITH, OF LOWELL, MASSACHUSETTS.

Letters Patent No. 84,226, dated November 17, 1868.

## IMPROVEMENT IN REGISTER FOR TIME AND PRICE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, KILBURN SMITH, of Lowell, in the county of Middlesex, and State of Massachusetts, have invented certain new and useful Improvements in Time and Price-Registers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1, sheet 1, represents the face or front side of my invention as it appears when in use.

Figure 2, sheet 1, represents an interior front elevation after the figured face or dial and the whole front have been removed, showing an ordinary marine-clock movement, to which the dial A is applied, and by which the required movements and motions are produced.

Figure 3, sheet 1, represents a sectional elevation on the line A B of fig. 1.

Figure 4, sheet 2, represents a front elevation after the hinged portion or door has been opened, showing a small dial, I, for indicating hours, and the figured face or dial A, which has smaller divisions to indicate minutes or amounts, and the relation of one dial with the other.

Figure 5, sheet 2, represents a sectional elevation of the sides and the bottom of the case, and the pivoted arm J, to which the hour-dial I is applied, with an edge view of said dial, and an adjusting-spring, 4, beneath it.

In my said invention, the dial or face A is applied to the winding-shaft C by means of a hub, B, which fits loosely on said shaft.

The dial A is secured to one end of the hub, which is recessed at *e e*, to allow the winding-key to enter and take hold of the winding-shaft, and to the opposite end, a gear, *m*, is also secured.

The teeth of the gear *m* mesh into the teeth of a gear, *o*, on the shaft D, which usually carries the clock-hands, but, in the present instance, is shortened to allow room for the dial A beyond it.

The object in applying the dial A to the winding-shaft is to facilitate the process of winding the clock, to avoid the necessity of a winding-hole through the dial, or the removal of the dial in order to wind the clock, either of which would be very objectionable.

It is immaterial what kind of a clock is employed to connect with and operate the dial, or how it is constructed or arranged, and the dial may be applied to some other rotatory-moving shaft, but I prefer the present arrangement, since the winding becomes a greater convenience.

On the face of the dial A will be seen three circles of figures or numbers, with radial division-lines beyond each circle of such numbers. The outer circle is divided into one hundred and eighty parts, the middle circle into ninety, and the inner circle into forty-five divisions.

The dial A, in the register shown, revolves once in three hours, and the radial lines on the outer circle correspond with and may represent the number of minutes in that time, or a certain amount of money chargeable by the hour for services or labor performed, or for articles, machines, or devices let or hired by the hour, or at a given rate.

For example, and to illustrate: A party employing several persons on small jobs, or where the time devoted to several different employers is for limited periods; each person employed, or the job of work, may be known by a number, 1, 2, or 3, and where one of such employed persons begins a piece of work, one of the numbered pointer-stands E (which are marked on the top 1, 2, 3, or more, and slotted, as shown in section in fig. 3, to fit the flanges F or H,) is placed on the projecting flange F, against the point *a* of the blank-indicator G on the slowly-moving dial A, with the point *d* of the pointer-stand near the glass, *g*, in the front hinged portion or door K.

To further illustrate: The person employed, or the job of work, may be numbered 3, and a pointer-stand bearing the same number having been placed on the flange F, as shown in fig. 3, and when the blank point of the indicator on the moving dial was opposite the stand 3; after a time the job is finished, or the work suspended, and if the former, the figure on the moving dial indicates the time it has taken to complete the job, viz, sixty minutes, and if the price charged per hour is sixty cents, then the price is also indicated. If, the price per hour is thirty cents, the middle circle of figures will indicate the price, where the lines and figures on the outer circle indicate the time; and so, if the price is fifteen cents per hour, the inner circle indicates the price, and the outer circle the time. If, on the other hand, the labor on the job is suspended for a time, the pointer-stand is removed from the flange F, and placed on the outer flange H, with the point *d* of the stand against the same number on the stationary circle of figures, between the flanges F and H, on the hinged door K, as shown in fig. 1. When labor is resumed on the same job, the pointer-stand is removed from the flange H, and again placed on the flange F, against the same number from which it was first taken, when it will indicate further time, until the job is finished, or labor again suspended as before.

The dial may be spaced, marked, and figured to correspond with, indicate, and register time and prices at any other rate per hour, or said dial may be so geared, spaced, and figured, as to run a longer or a shorter time, and still indicate and register time, and any other rate of prices.

This invention is very serviceable in billiard-rooms, and in the present case the moving dial is marked to indicate and register time and prices, where the price charged for the use of a billiard-table is sixty cents per



hour, and when a party engage or occupy a table, a pointer-stand, bearing the same number as the table, is placed on the flange F, the point *d* against the point *a* of the pointer-hand G, and if the table and the pointer-stand is number 2, and the party play billiards or occupy the table while the moving dial A is moving round until in the position shown in fig. 1, it will be seen at a glance that the party having so occupied such table, (number 2,) will be indebted to the person who lets such billiard-tables in the sum of one dollar and twenty-hundredths, and that such party have occupied the table two hours.

The two other circles of figures will indicate one-half and one-fourth the price per hour respectively.

For use in billiard-rooms, the dial A may be marked and numbered to indicate and register time at any other rate per hour, and the dial may be so geared as to run for a longer or a shorter time in each revolution.

The figures from 1 to 12 on the stationary circle, at the bottom, and between the flanges F and H, in fig. 1, may serve to keep the pointed stands in orderly positions, by placing such stands on the flange H, (when not in use,) each against a figure corresponding with its number.

In fig. 4 will be seen a second dial, I, at the top, and partly covering or lapping over the edge of the dial A. This dial shows semicircular notches in its edge, and is marked 1 to 12 between the notches.

This small dial I is arranged in a recess formed in the top of a pivoted arm, J, which may be swung upward, as seen in fig. 5, so as to allow the dial A to be removed or set to correct the time, or, in other words, to set the clock to correct time in case it should vary, that is, gain or lose.

The dial I is held in position on the arm J by a central pivot or screw, and is prevented from turning too easily by a curved spring, 4, beneath it.

The figures on the small dial I indicate the hours, and this dial is operated or turned in the present instance one notch, or, to change the hour, or to bring the right figure down to indicate the hour, once at

each and every third of a revolution of the dial A, and by a pin, *c*, three of which pins project from the face of the latter dial at equal distances apart, and at the right distance to turn the dial I one figure each hour, by coming in contact with a projection, (and in a notch between two figures,) which projections serve as gear-teeth to turn the small dial I, which, by such means, indicates the hour, while the minutes are shown on the outer circle by the radial lines, and figures 10 to 20, and, by tens, to 60, outside of the outer radial lines, mark the minutes in the hour of each third of a revolution of the dial A.

It will be seen, in fig. 2, that the regulator-arm *f*, extends upward to near the top of the inside of the case, the object of which extension is to regulate the clock without removing the dial A, which I find very convenient.

The arm J, when the regulator is in use, is down in the case, as seen in fig. 4, and the free end is held in position by a screw or pin, *h*, which enters a notch, *n*, near the free end of the arm.

Having fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The circular flange F, in combination with the moving dial A, in the manner and for the purpose set forth.

2. The outer flange H, in combination with the stationary circle of figures and indicating-lines, for the purpose and substantially as described,

3. The pointer-stands E, having each a point, *d*, when used in combination with the flanges F or H, and the moving dial A, or the stationary figured circle between said flanges, for the purposes and in the manner substantially as described.

4. The pivoted arm J, in combination with the dial I, for the purpose and substantially as described.

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Witnesses:

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