

(No Model.)

J. SMITH.
CLOCK.

No. 517,594.

Patented Apr. 3, 1894.

Fig. 1.

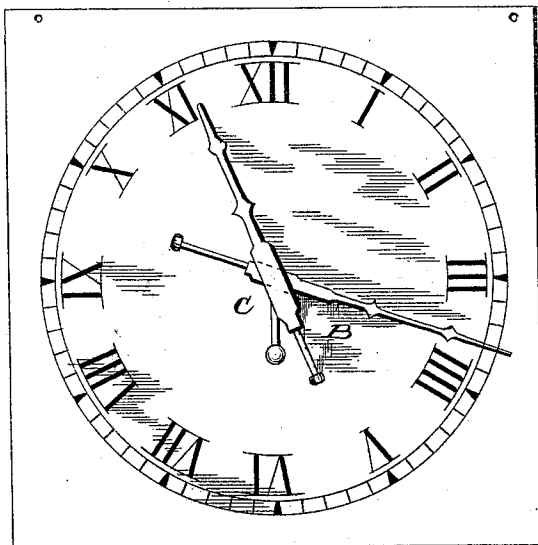


Fig. 1.

Fig. 2.

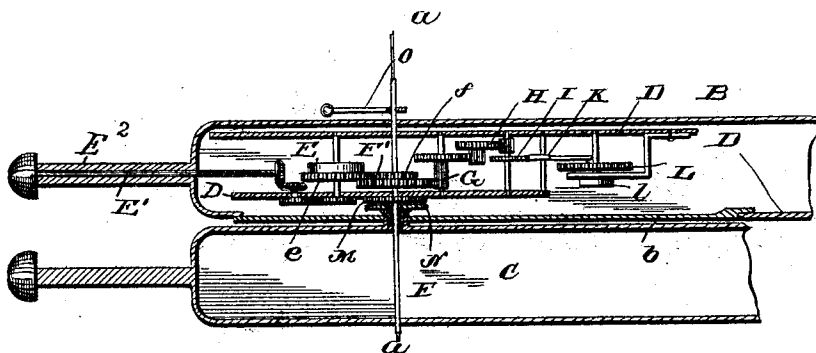
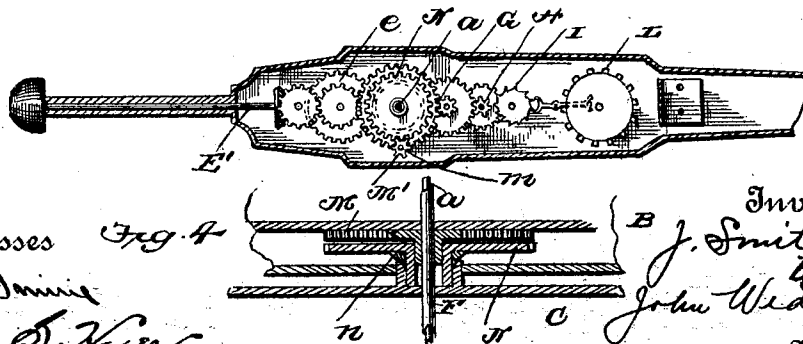


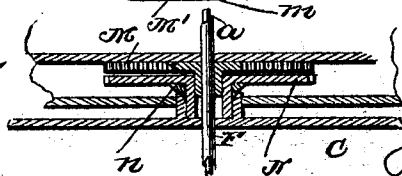
Fig. 3.



Witnesses

Fig. 4.

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UNITED STATES PATENT OFFICE.

JOB SMITH, OF ANNAPOLIS, MARYLAND, ASSIGNOR OF ONE-HALF TO
WALTER J. WERNTZ, OF SAME PLACE.

CLOCK.

SPECIFICATION forming part of Letters Patent No. 517,594, dated April 3, 1894.

Application filed May 4, 1893. Serial No. 473,040. (No model.)

To all whom it may concern:

Be it known that I, JOB SMITH, of Annapolis, in the county of Anne Arundel and State of Maryland, have invented certain new and useful Improvements in Clocks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates generally to clocks, and particularly to that class thereof known as magic or mysterious clocks, in which the hands are caused to move in synchronous order without apparent mechanism.

The objects of my invention are, first, to greatly simplify the construction of this class of clocks; secondly, to construct a mechanism which can be confined in one of the hands; thirdly, to provide a clock of this class which shall be stem winding; fourthly, to provide a clock in which the hands can be made to revolve either to the right or left, and, fifthly, to provide an improved means for keeping the hands in place.

With these various objects in view, my invention consists in the peculiar combination and arrangement of the various parts, all of which will be fully hereinafter described and claimed.

In the drawings forming a part of this specification: Figure 1, is a view showing the clock as it appears in operation. Fig. 2, is an enlarged view of a portion of the minute hand, showing the arrangement of the movements. Fig. 3, is a central sectional view of the same, and Fig. 4, is a sectional view showing the connection between the hour and minute hands.

Referring to the drawings, A, indicates a plate of glass, which may be a window plate or a base piece suitably suspended. This glass A, has the usual dial figures marked thereon, and these figures can be marked upon either side of the face as desired. At the center of this dial is mounted a pin *a*, and mounted thereon are the minute hand B, and hour hand C, said hands being perfectly balanced, so that they can be readily revolved about said pin by means of the clock mechanisms. These hands are also preferably made hollow for the sake of lightness. The clock mechanism is confined entirely within the minute

hand, and a chamber is formed therein to receive the same, said chamber being closed by means of a cover *b*, so that after the movements have once been inserted, and the cover set to place, the hand presents the appearance of a solid unbroken bar. The movement is arranged between the face plates D, and D, and comprises a main spring barrel E, which is wound by means of a stem E', journaled in the tubular contracted end E² of the minute hand, as clearly shown in Figs. 2 and 3. The barrel E, is provided with a gear *e*, which meshes with a pinion *f*, mounted upon the tubular shaft F, which also carries the center wheel F', which is connected with a wheel G, which in turn gears with the second wheel H, connected with the escapement I, which operates the fork and pallet K, the movements of which are regulated by means of the balance wheel L, provided with the usual hair spring *l*. The shaft F, extends through the face plates D, and when the clock is arranged in position, the pin *a*, passes through said shaft, the faces of the hands being apertured to register with the bore of the tubular shaft. Upon the end of the shaft projecting beyond the face plate D, I rigidly secure a face wheel M, which meshes with a pinion M' journaled on a stud *m*, on the face plate, and this pinion meshes with and drives the wheel N, which carries and operates the hour hand C, the number of teeth of the wheels M and N, and the pinion M' being such that the wheel M, stands still and the minute hand will make twelve revolutions, while the wheel N, will make only one.

The face wheels can be placed upon either end of the tubular shaft, and the movements can be reversed whenever desired, so that the hands may move either to the right or left. By this means the hands can be arranged to exhibit the time from either side of the dial plate as to show the time inside or outside of a window. The face wheel N, is provided with a collar *n*, upon which a tubular extension of the hour hand fits so that the hand is held firm in connection with the wheel N. It will of course be understood that the collar N, extends through the cover *b*, so that this hour hand can be readily set in place.

It often happens in magic clocks that the

relative arrangement of the hands becomes impaired by expansion or contraction, or by a sudden gust of wind or a jar. I avoid this objection by providing a counterbalancing weight O, which is connected with the tubular shaft, and is intended to hang in a vertical position. Should either hand become misplaced, the weight will be lifted, but its own weight will be sufficient to return the hands to their normal position. It will thus be seen that I provide a clock in which the works are contained within a single hand, one which is stem winding; one which can be moved either right or left, and one in which the hands are properly adjusted.

Having thus described my invention, what I claim is—

In a magic clock, the combination of an hour hand of tubular form, a minute hand adjacent thereto, and also of tubular form, and

containing the clock mechanism entire, a tubular shaft passing through the clock mechanism and two hands, the said minute hand having a contracted tubular extension E², a stem winding spindle E', rotatably mounted in said tubular extension, and an actuating stem winding mechanism, and a counter balance weight O, mounted on said tubular shaft, said hands being adapted to be turned either to the right or left without affecting the interior mechanism, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JOB SMITH.

Witnesses:

J. ROLAND BRADY,
CHARLES R. MARTIN.