J. DITTMEIER.

Clock.

No. 218,945. Patented Aug. 26, 1879.

Fig. 1.

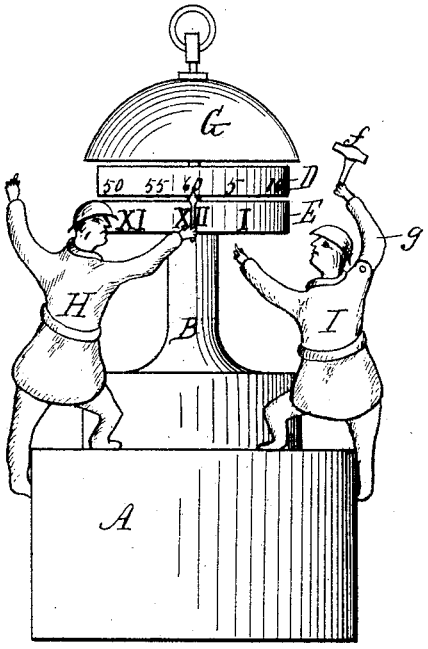


Fig. 2.

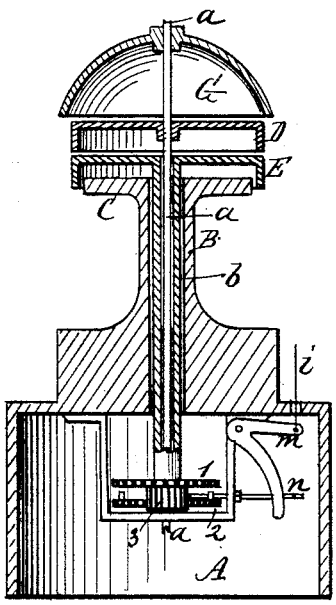


Fig. 3.

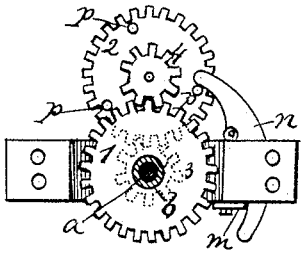
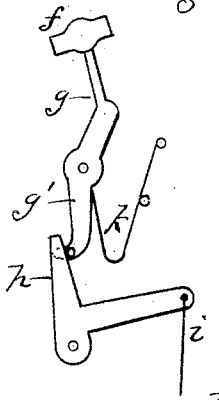


Fig. 4.



Attest.

R. E. White

John C. Arndt.

Inventor.

John Dittmeier.

per R. F. Osgood,

Atty.

UNITED STATES PATENT OFFICE.

JOHN DITTMEIER, OF ROCHESTER, NEW YORK.

IMPROVEMENT IN CLOCKS.

Specification forming part of Letters Patent No. **218,945**, dated August 26, 1879; application filed June 21, 1879.

To all whom it may concern:

Be it known that I, JOHN DITTMEIER, of the city of Rochester, county of Monroe, and State of New York, have invented a certain new and useful Improvement in Clocks; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is an elevation of the clock. Fig. 2 is a central vertical section. Fig. 3 is a plan of the gearing. Fig. 4 is an elevation of the striking apparatus, looking on the inside.

My invention consists in certain improvements in clocks in which the ordinary minute and hour hands are dispensed with, and revolving dial-rings are used instead.

The invention consists in the construction and arrangement hereinafter more fully described.

A is a cylindrical case, in which the clock-works and connecting operating parts are located. B is a hollow standard which rises therefrom, and forms the bearing for the two shafts which carry the dial-rings. At the top of the standard is preferably a circular fixed disk, C.

a is a central shaft or post, which is simply an elongation or continuation of the minute-hand arbor in a common clock. *b* is a hollow shaft situated around the shaft *a*, and which is simply an elongation or continuation of the hour-hand shaft in a common clock. These two shafts, which receive independent motions, extend up through the hollow standard B, and have fastened to their tops revolving dial-rings D E, upon the peripheries of which are respectively marked the characters representing the minutes and hours, as shown in Fig. 1. On the center minute-shaft, *a*, is also attached a bell, G, above the upper dial-ring.

The two shafts *a b* receive motion from the two spur-gears 1 2 and two pinions 3 4, (which are used in a common clock;) and the ordinary clock-work (not shown in the drawings) gives motion to the lower end of shaft *a*, and by this means the upper dial-ring, D, revolves once in an hour, and the lower dial-ring, E, revolves once in twelve hours, corresponding with the motions of the hands in an ordinary clock.

H I are two figures or images which stand upon the pedestal A. The figure H holds in one hand a pointer, *d*, which stands vertically midway of the two dial-rings, and indicates the hour and minute as the dial-rings revolve past it. The other figure, I, holds in one hand a hammer, *f*, which is made to strike upon the bell at each hour by the following means: The arm *g* of the figure, to which the hammer is attached, is pivoted at the shoulder, and on the inner side of the figure an extension, *g'*, of said arm extends down, as shown in Fig. 4. Against this extension rests the upper end of a bell-crank lever, *h*, pivoted at the bottom, and having attached at the outer arm a cord or other connection, *i*, which extends down into the case A. A spring, *k*, bears against the extension *g'*, and has a tendency to cause the hammer to strike down upon the bell. The lower end of cord *i* is attached to the outer end of a pivoted elbow-lever, *m*, the lower end of which projects down below the plane of the gear-wheel 1. To the frame of the gearing is also pivoted a horizontal rock-lever, *n*, which is so curved that the outer end embraces the lower end of lever *m*, while the inner end rests over the face of the spur-gear 2. On the face of this gear are three projecting pins, *p p p*. As the gear revolves, these pins trip the lever *n*, and, through the medium of the connections above described, cause the hammer to strike the bell. Other means might readily be used for operating the hammer, and, instead of the figures or images above described, other bearings for holding the pointer and hammer and connecting parts might be employed.

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

1. In a clock, the combination of the shafts *a b*, forming elongations or continuations of the minute and hour shafts of a clock, revolving dial-rings D E, having the minutes and hours marked thereon, and a stationary pointer to indicate the minutes and hours as the dial-rings revolve, as herein shown and described.

2. In a clock, the combination of the shafts *a b*, forming elongations of the minute and hour hand shafts, revolving dial-rings D E, attached to said shafts, a stationary pointer to indicate the minute and hour as the dial-rings

revolve, a bell, G, mounted above the dial-rings, and a hammer, operated by suitable mechanism, for striking upon the bell, as herein shown and described.

3. In a clock, the combination of the pivoted hammer *f*, provided with the extension *g'*, the bell-crank lever *h*, spring *k*, the cord or connection *i*, the elbow-lever *m*, the rock-lever *n*, and the pins *p p p* in the face of the gear 2, as shown and described, and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JOHN DITTMEIER.

Witnesses:
R. F. OSGOOD,
JACOB SPAHN.