C. E. SANFORD.

CLOCK.

APPLICATION FILED APR. 21, 1909.

929,024.

Patented July 27, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

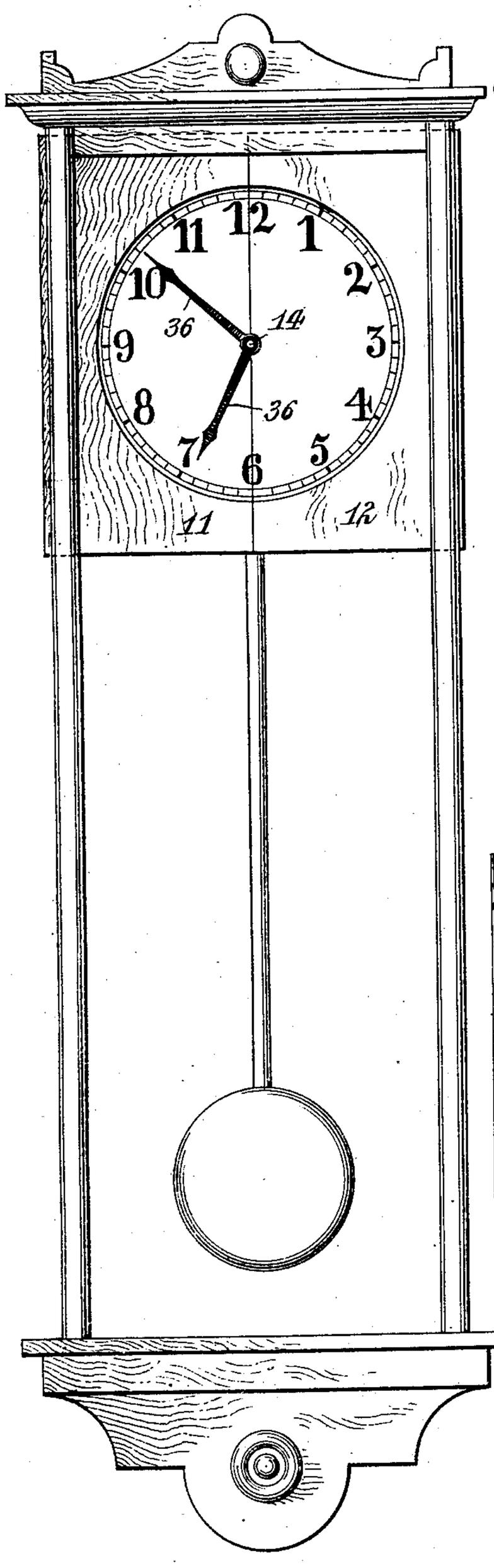


Fig. 3.

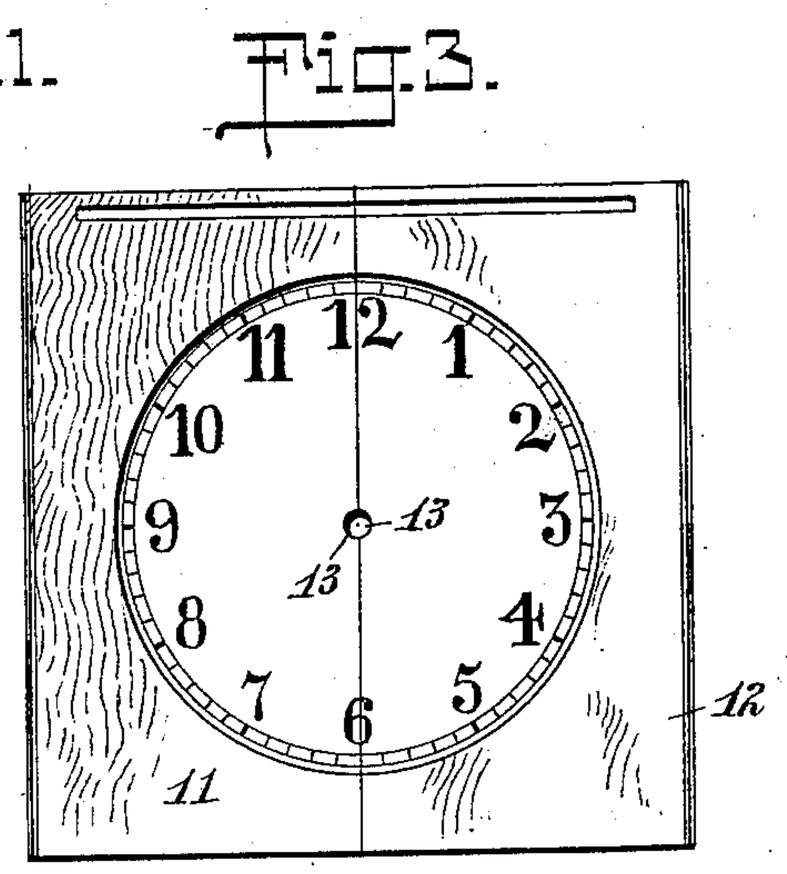
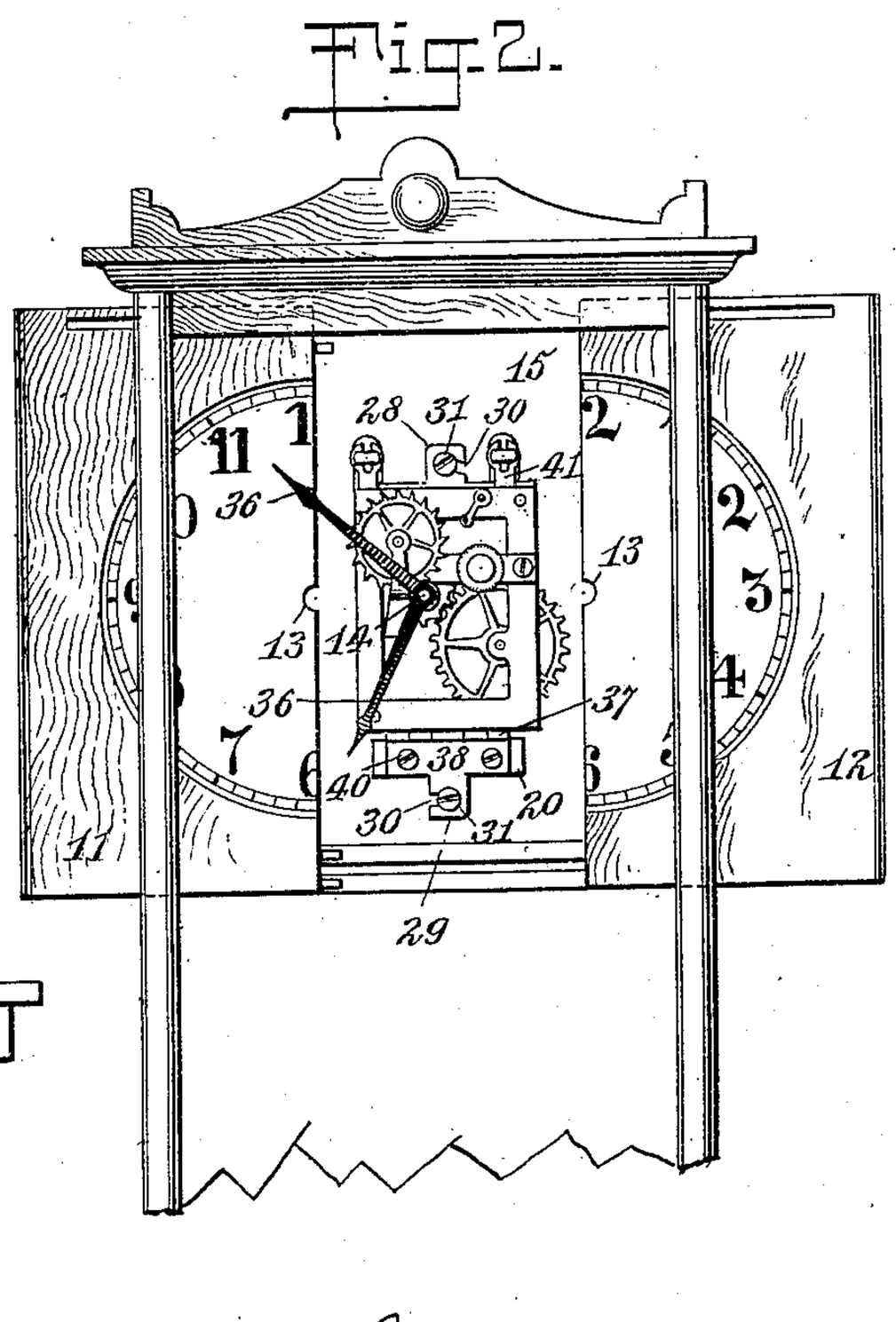


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 4.

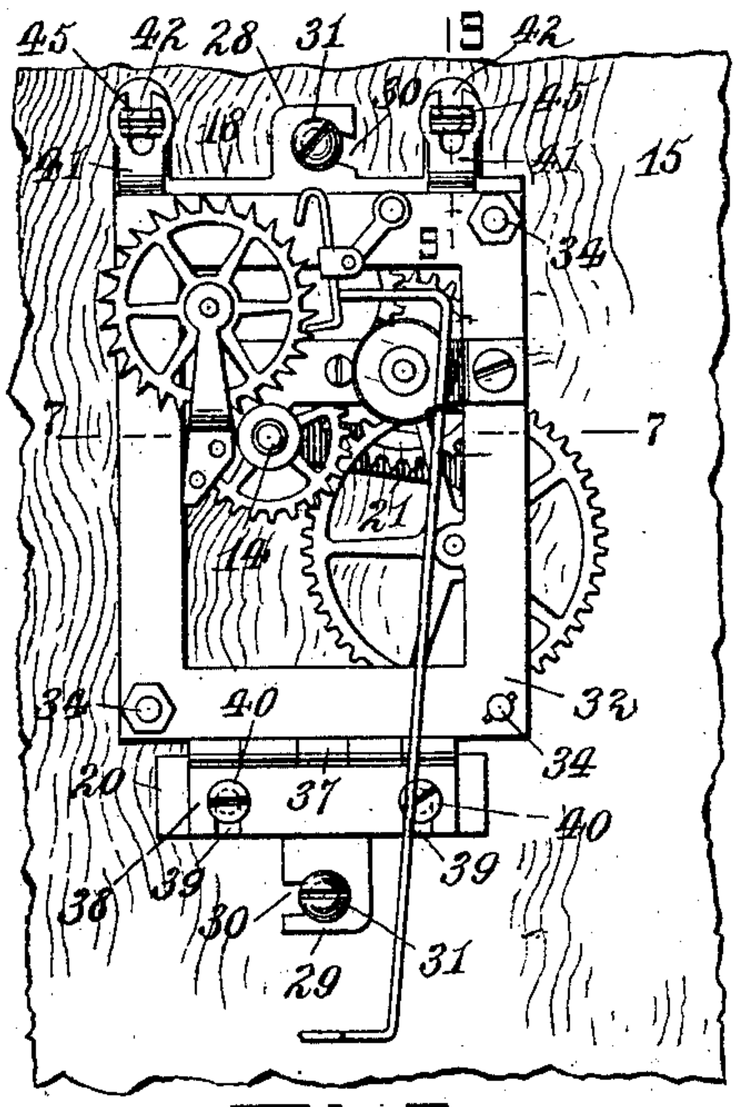


Fig. 5.

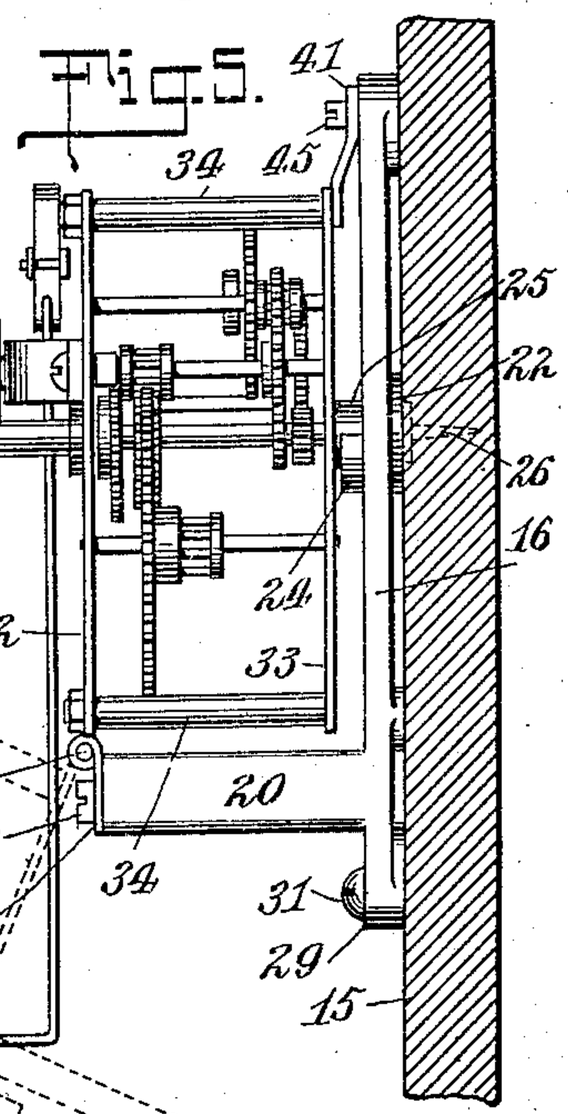


Fig. 6.

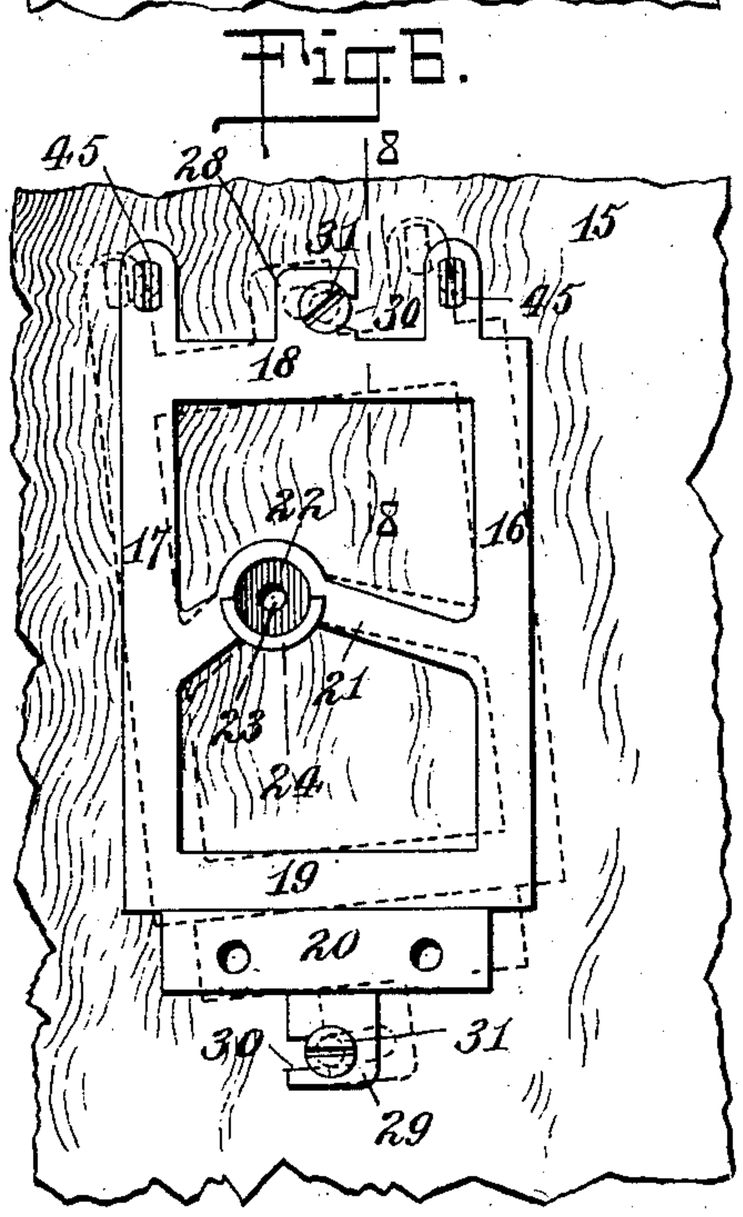


Fig. 7.

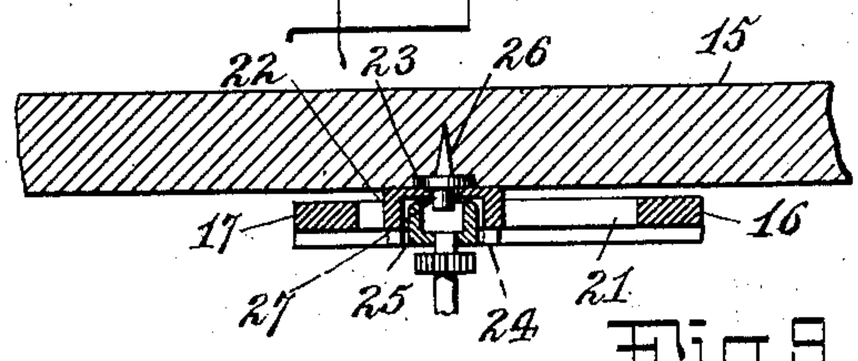


Fig. 8.

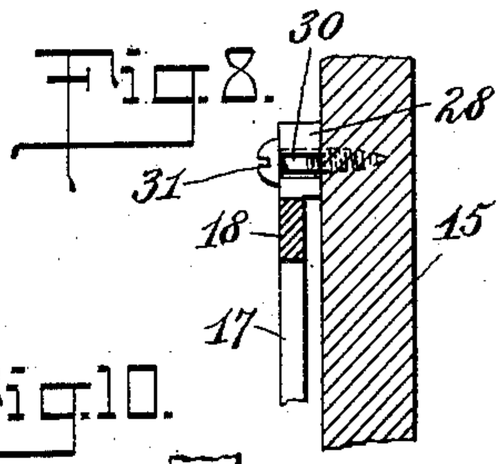


Fig. 9.

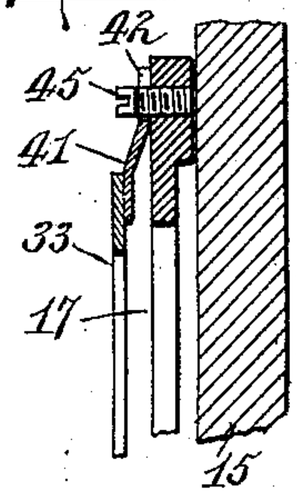
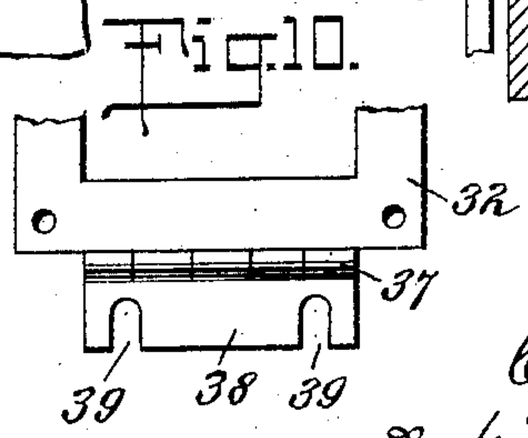


Fig. 10.



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UNITED STATES PATENT OFFICE.

CHARLES E. SANFORD, OF NEW YORK, N. Y.

CLOCK.

No. 929,024. Specification of Letters Patent. Patented July 27, 1909.

Application filed April 21, 1909. Serial No. 491,247.

To all whom it may concern:

Be it known that I, CHARLES E. SANFORD, a citizen of the United States, and a resident of New York, borough of Manhattan, in the county of New York and State of New York, have made and invented certain new and useful Improvements in Clocks, of which the following is a specification.

My invention relates to an improvement in clocks, and more particularly to pendulum clocks, the object being to provide means whereby the clock movement or mechanism can be easily and readily adjusted to the proper beat without the necessity of removing the clock mechanism from the case, and whereby the shaft or arbor carrying the hands, will always register with the hole or opening in the dial or clock face.

A further object of my invention is to so construct and assemble the parts that the clock movement may be tilted or swung outwardly to permit of easy and ready access thereto for the purpose of cleaning, repairing or oiling of the same.

With these and other ends in view, the invention consists in certain novel features of construction and combinations of parts, as will be hereinafter fully described and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in front elevation of a clock constructed in accordance with my invention. Fig. 2 is a view thereof with the dial or clock face partially removed and showing the clock mechanism. Fig. 3 is a view of the dial or face. Fig. 4 is a view in front elevation of the clock mechanism adjustably secured to the base or supporting frame. Fig. 5 is a view thereof in side elevation showing in dotted lines the manner of tilting the clock mechanism. Fig. 6 is a face view of the base or support, the clock mechanism being removed therefrom. Fig. 7 is a sectional view taken on the line 7—7 of Fig. 4. Fig. 8 is a sectional view taken on the line 8—8 of Fig. 6. Fig. 9 is a sectional view taken on the line 9—9 of Fig. 4. Fig. 10 is a detached view of a part of the clock frame and hinge secured thereto.

While I have illustrated in the drawings my improvement as applied to a pendulum clock, it will be understood that I do not limit the claim thereto, as the invention is as well adapted to other styles and constructions of clock mechanism, and also to the various styles of clock cases. This invention, however, is particularly adapted for use in clock cases employing a split dial, for instance, such as shown in the patent granted to me on the 20th day of August, 1907, and numbered 863,882, or such as shown and described in an application for patent filed by me on the 13th day of November, 1908, Serial No. 462,373, and which application was allowed on the 24th day of February, 1909. In such constructions of clock cases, the dial is formed in two sections, in order that they may be readily separated to permit of access to the movement or clock mechanism, without the necessity of removing the hands from the shaft, a small recess being formed in the adjacent edges of the dial through which the shaft projects when the parts are properly assembled.

In Fig. 1, I have shown a clock wherein the case is provided with the sliding sectional dial comprising the sections 11, 12, each formed with a recess 13 in its adjacent edge, which recesses when the parts are properly assembled, form an opening through which projects the shaft 14 of the clock mechanism.

To the base or back board 15 of the clock case, is secured a supporting bracket or frame, comprising the vertical sides 16, 17, and the cross pieces 18, 19, from the lower edge of which lower cross piece 19 extends the horizontal frame 20. The bracket is also formed with the cross bar 21 provided with a circular socket or receptacle 22, having a central opening 23 therein, and at its lower edge formed with the curved or arc-shaped supporting flange 24, this socket being adapted to receive a lug or projection 25 formed on or secured to the frame of the clock movement. In the back 15 of the clock case, is secured a pin 26, one end 27 of which projects from said board and into the opening 23 in the socket 22, and acting as a pivot or bearing on which the bracket may be rotated, as hereinafter described. This supporting bracket or frame is provided on its upper end with a lug 28, and at its lower end with the lug 29, each of said lugs being provided with a recess 30 for the purpose of receiving the screws 31 for adjustably securing the supporting frame to the back 15 of the clock case. In attaching the supporting frame to the back of the clock case, it is simply necessary to support the frame on the binding screws 31 and turn the latter down until they securely clamp the lugs 30 to the back of the case. The supporting frame or

bracket is adapted to carry the clock movement or mechanism, comprising in part the clock frame 32—33, connected by the cross bars 34, and in which frame is mounted the arbor or shaft 14 for carrying the hands 36, this shaft when the parts are in their assembled positions, being in alinement with the pin 26.

On the lower edge of the frame 32, is provided a hinge 37, one leaf 38 of which is provided with the recesses 39 adapted to receive the binding screws 40 threaded into the horizontal bracket frame 20, thereby permitting of the clock frame and its contained mechanism to be tilted, as illustrated in dotted lines in Fig. 4, permitting of ready and easy access to the clock movement for repairing, oiling or cleaning.

On the upper rear ends of the frame 33 are formed the lugs or projections 41 provided with the recesses 42 adapted to receive the turn-buttons or other fastening devices 45 secured to or formed on the supporting frame or bracket, and which when turned, as illustrated in Figs. 2 and 4, assist in holding and retaining the clock frame and its contained mechanism in proper position on said supporting frame. When desired, however, to tilt or lower the clock mechanism, in order to permit of access thereto, the buttons 45 may be partially turned, as illustrated in Fig. 6, whereupon the clock mechanism may be lowered, as before described. Further if it be desired to remove the clock mechanism from the supporting frame, it is simply necessary to slightly turn the screws 40 to release the plate 38, and partially turn the buttons 45, whereupon the clock frame with its contained mechanism, may be entirely detached or separated from said frame. To again assemble the parts, it is simply necessary to slide the leaf 38 of the hinge 37 onto the screws 40, turn the latter down until they tightly clamp said plate to the supporting bracket, and then turn the buttons 45 crosswise of the lugs 41, as illustrated in Fig. 4.

It will be understood from the foregoing description, that by constructing and arranging the parts as before described, the supporting bracket having the clock mechanism attached thereto, may be easily and readily adjusted to secure the proper beat of the clock movement by loosening the screws 31 and slightly tilting said frame, as illustrated for instance in dotted lines in Fig. 6, the pin 26 acting as a bearing for the rotation of the supporting frame, the screws 31 being subsequently turned down to bind the supporting frame to the clock case, as before described.

By reason of the fact that the shaft or arbor 14 is in alinement with this pin, it follows that the position of said shaft will in nowise be altered, thereby insuring its exact alinement with the opening 13 in the dial, and this regardless of the amount of rotation given the supporting bracket and its attached clock mechanism on the pivot or pin 26. In other words, by reason of the construction above described, the clock mechanism may be at any time easily and readily tilted downwardly to permit of access thereto, without the necessity of removing the hands from the arbor or shaft 14; furthermore, when the clock mechanism is righted, its proper position on the frame will always be insured by reason of the lug 25 being received in the socket 22; the supporting bracket may be easily and quickly adjusted to secure the proper beat to the clock mechanism attached thereto, and the alinement of the shaft carrying the clock hands insured with relation to the opening in the dial.

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

1. The combination with a clock case, provided with a pivot, of a supporting frame rotatably mounted on said pivot, means for securing said supporting frame in its different adjustments, a clock mechanism hinged to said supporting frame, an arbor carrying clock hands and forming a part of said clock mechanism, said arbor being in axial alinement with said pivot, substantially as described.

2. The combination with a clock case, provided with a pivot, of a supporting frame rotatably mounted on said pivot, means for securing said supporting frame to the clock case in its different adjustments, a horizontal bracket provided on the lower end of said supporting frame, clock mechanism hinged to the forward end of said horizontal bracket, an arbor carrying clock hands and forming a part of said clock mechanism, said arbor being in axial alinement with said pivot, substantially as described.

3. The combination with a clock case provided with a pivot, of a supporting frame rotatably mounted on said pivot and provided with a socket, means for removably securing said supporting frame to the clock case in its different adjustments, a horizontal bracket provided on the lower end of said supporting frame, a clock mechanism removably hinged to the forward end of said bracket and provided with a lug for seating in said socket, an arbor carrying clock hands forming a part of said mechanism, said arbor being in axial alinement with said pivot, substantially as described.

4. The combination with a pivot, of a supporting frame rotatably mounted on said pivot, means for removably holding said frame in its different adjustments on said clock case, a horizontal bracket provided on the lower end of said supporting frame, a clock mechanism removably hinged to the forward end of said horizontal bracket,

means provided at the upper end of said clock mechanism for detachably securing the same to said supporting frame, an arbor carrying clock hands and forming part of said clock mechanism, said arbor being in axial alinement with said pivot, substantially as described.

5. The combination with a clock case provided with a pivot, of a dial movably secured to said case and provided with an opening therein, a supporting frame rotatably mounted on said pivot and provided at its lower end with a horizontal bracket, means for adjustably securing said supporting frame to the clock case, a clock mechanism removably secured at its lower end to the forward end of said horizontal bracket, means for detachably securing said clock mechanism to said supporting frame, an arbor carrying clock hands and forming part of said clock mechanism, said arbor being in axial alinement with said pivot and projecting through the opening in said dial, substantially as described.

6. The combination with a clock case provided with a pivot, of a supporting frame adjustably secured to said clock case and provided with a horizontal bracket, said frame being formed with a socket, a clock mechanism provided at its lower end with a hinge, means for removably securing said hinge to said horizontal bracket, a lug provided on said clock mechanism and adapted to seat in said socket, an arbor carrying clock hands and forming a part of said clock mechanism, said arbor, lug, socket and pivot being in axial alinement, and means for detachably securing said clock mechanism to said supporting frame, substantially as described.

7. The combination with a clock case provided with a pivot, of a dial carried by said clock case and provided with an opening, a supporting frame detachably secured to said clock case and rotatably mounted on said pivot, a clock mechanism detachably hinged to said supporting frame, an arbor carrying clock hands and forming a part of said clock mechanism, said pivot, arbor and opening in said dial, being in axial alinement, substantially as described.

Signed at New York, borough of Manhattan, in the county of New York, and State of New York, this 19th day of April, A. D. 1909.

CHARLES E. SANFORD.

Witnesses:

PARKER COOK,

M. VAN NORTWICK.