W. A. GOBLE.

PLUMB LEVEL ATTACHMENT.

APPLICATION FILED JAN. 21, 1910.

969,855.

Patented Sept. 13, 1910.

Fig. 1.

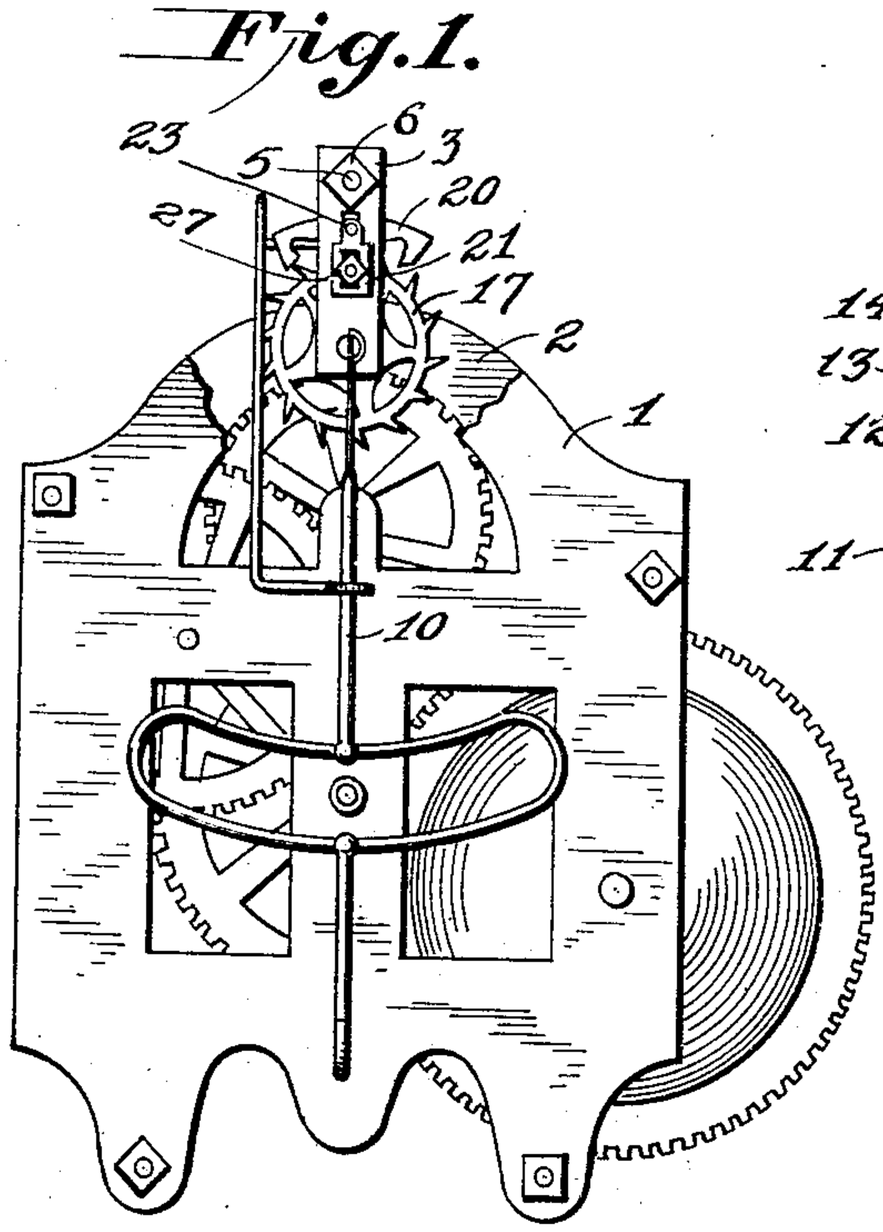


Fig. 2.

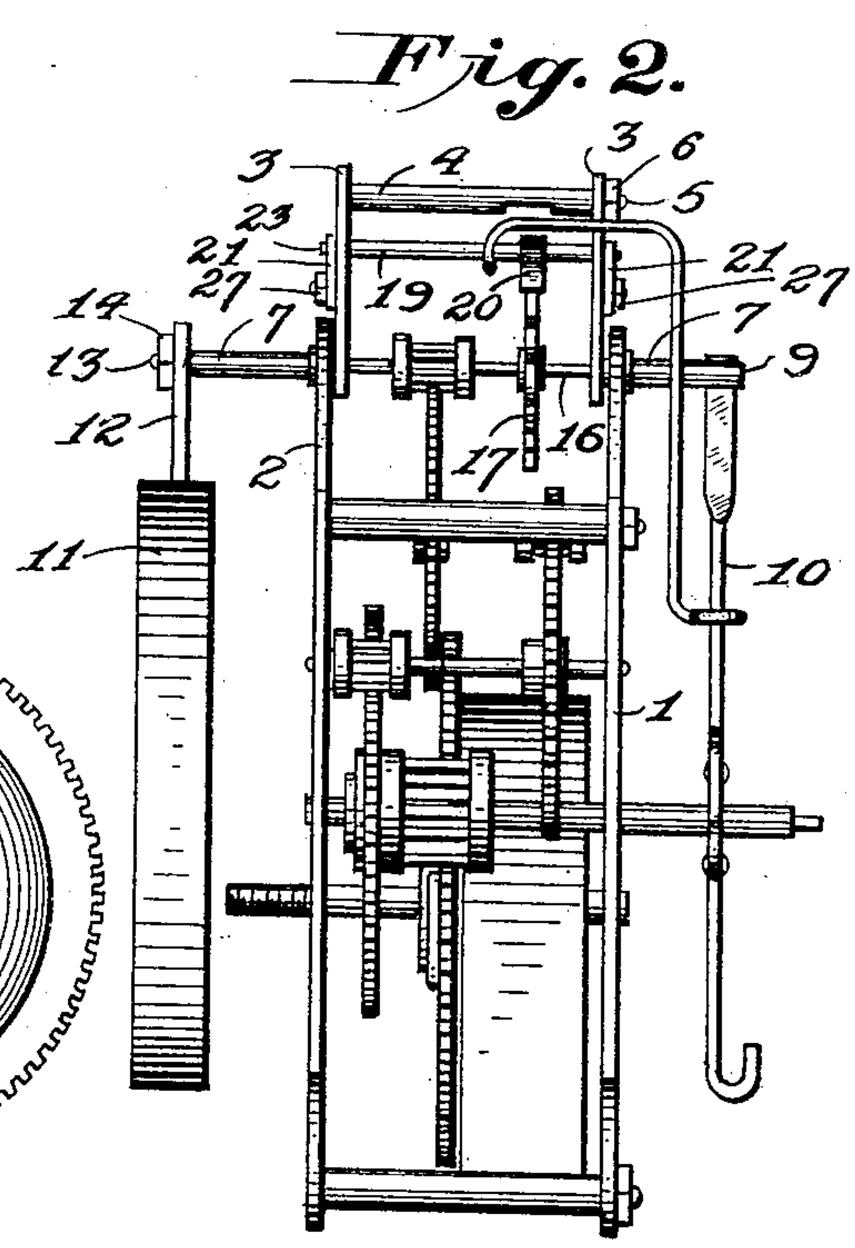


Fig. 3.

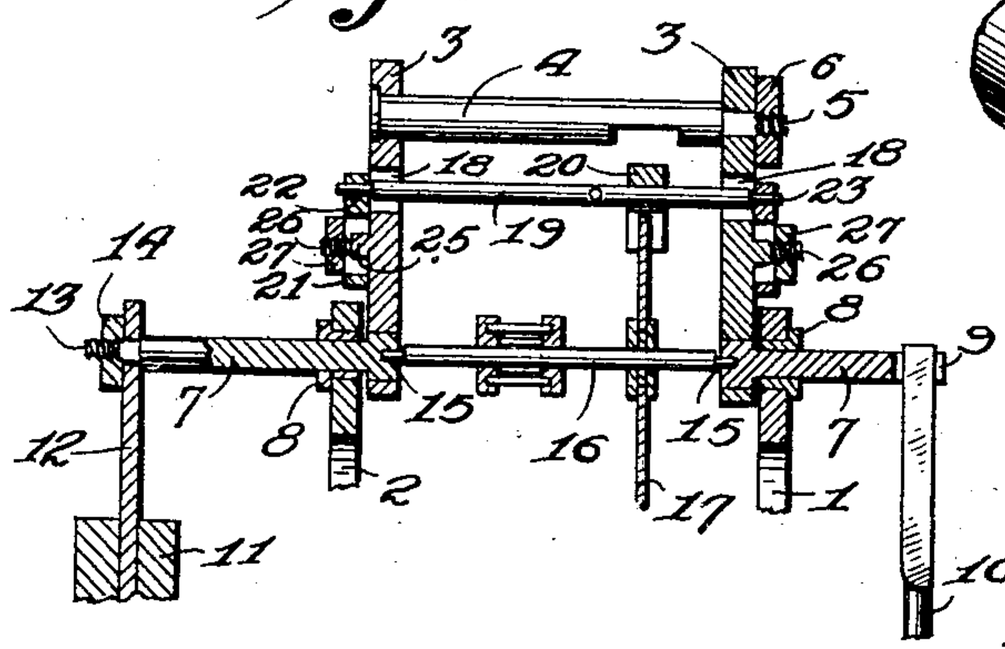


Fig. 4.

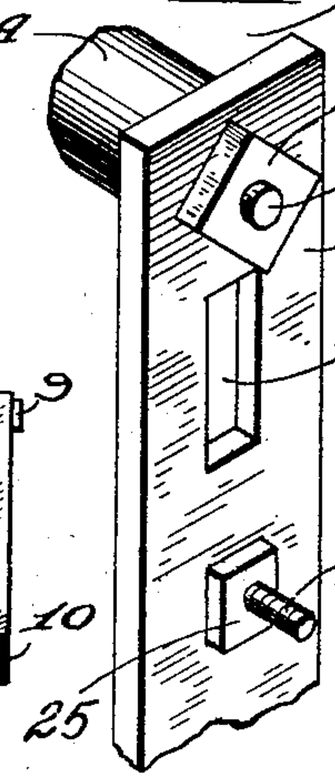
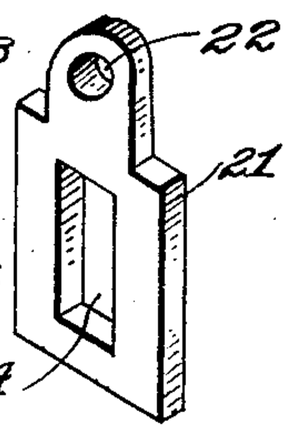


Fig. 5.



Witnesses

Everett Lancaster,

G. A. Cotter

Inventor

William A. Goble

By G. C. Crossman,

his Attorney

UNITED STATES PATENT OFFICE.

WILLIAM A. GOBLE, OF CONWAY SPRINGS, KANSAS.

PLUMB-LEVEL ATTACHMENT.

969,855. Specification of Letters Patent. **Patented Sept. 13, 1910.**

Application filed January 21, 1910. Serial No. 539,211.

To all whom it may concern:

Be it known that I, WILLIAM A. GOBLE, a citizen of the United States of America, residing at Conway Springs, in the county of Sumner and State of Kansas, have invented certain new and useful Improvements in Plumb-Level Attachments, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to devices by means of which the pendulum of a clock will automatically adjust itself to maintain perfect time when the clock is in a tilted or an inclined position.

The object of this invention is to provide an improved device of this character which will be simple in construction and efficient in operation.

In the accompanying drawings, Figure 1 is a front view of a clock mechanism provided with this invention. Fig. 2 is a side view thereof. Fig. 3 is an enlarged detail side view, partly in section, of the invention. Fig. 4 is an enlarged detail view in perspective of a portion of the construction shown in Fig. 3. Fig. 5 is a detail view in perspective of a plate used in connection with the device shown in Fig. 4.

Referring to the accompanying drawings, 1 is the front plate and 2 the back plate in which is mounted a clock work mechanism of the well-known construction. On the top of plates 1 and 2 is mounted the rocking frame consisting of the two vertical plates 3—3 which are connected at their upper end by a rod 4 secured at one end in one of the plates 3 and having an attenuated screw-threaded portion 5 at its other end extending through the other plate 3 and having mounted thereon a nut 6. The lower ends of the metallic strips 3—3 have fixed therein outwardly-projecting, rounded arms 7 which extend through sleeves 8 in the upper end of the plates 1 and 2. Secured to the slitted end 9 of one of the arms 7 is the hanger or pendulum 10 and suspended from the outer end of the other projection 7 is a weight 11 connected by a strip 12 to the outer screw-threaded attenuated end 13 of the arm 7, and held thereon by means of a nut 14. The inner ends of the arms or projections 7 are each formed with a recess 15 in which is located the end of the arbor 16 of the escapement wheel 17. The strips 3—3 are each provided with an elongated opening 18 in which is located an end of the arbor or shaft 19 of the verge 20. The verge 20 may be adjusted toward or away from the escapement wheel 17 by means of a plate 21 on each of the strips 3 and having an opening 22 at its upper end through which projects the attenuated end 23 of the shaft or arbor 19, said plate 21 having an elongated opening 24 which fits over a guide projection 25 on the outer face of the vertical strip 3 and has a threaded projection 26 which projects out from the outer face of the strip 3 and has mounted thereon a nut 27 by means of which the plate 21 is clamped against the vertical strip 3. By means of the nuts 27, the plates 21 at the ends of the shaft 19 may be adjustably raised or lowered so as to bring the verge nearer to or away from the escapement wheel 17. It will thus be seen that a rocking frame is provided which carries an escapement wheel arbor and the verge and its shaft or arbor and having longitudinally extending projections or arms mounted in the upper ends of the plates of the clock mechanism from one of which arms is suspended the pendulum and from the other of which is suspended a regulating weight.

It will be seen that by means of this construction, that when a clock, in which the works carrying this improvement are mounted, is out of plumb or inclined or tilted, the weight 11 will cause, by means of its connection with the projections 7 and the arbor and the escapement wheel, the pendulum to automatically adjust itself to a proper position so as to cause it to beat regularly.

What I claim as my invention is:

1. In a device of the character described, a clock work mechanism, vertical strips having lateral projections at their lower end rotatably mounted in the upper ends of the frame of the clock work mechanism and having bearings at their inner end, the escapement wheel arbor having its ends resting in said bearings, a verge having its ends adjustably mounted in said vertical strips, a rod connecting together the upper ends of said strips, a pendulum suspended from one of said lateral projections, and a weight suspended from the end of the other lateral projection.

2. In a device of the character described, a clock work mechanism, a frame having outwardly-extending lateral projections rotatably mounted in the upper ends of the frame of the clock frame mechanism, an

escapement wheel and arbor having the ends thereof resting in the inner ends of said lateral projections, elongated openings in the sides of said rocking frame, a verge having the ends of its arbor projecting through said openings and resting in a vertically adjustable plate having an elongated slot, a projection on the sides of said frame extending through said slotted plate, a nut for adjustably clamping said plate to the sides of said rocking frame, a pendulum suspended from one of the lateral projections, and a weight suspended from the end of the other lateral projection.

3. In a device of the character described, a clock work mechanism, a rocking frame consisting of two vertical plates having outwardly projecting arms secured to their lower ends and extending through sleeves in the upper ends of the frame of the clock work mechanism and rotatably mounted therein, an escapement wheel and its arbor having its ends resting in the inner ends of said outwardly-extending arms, a verge having its ends mounted in said vertical strips, a cross piece secured at one end to one of said vertical strips and detachably connected at its other end to the other vertical strip, a pendulum suspended from one of said outwardly projecting arms, and a weight having a vertically extending strip secured at its upper end to the end of the other outwardly extending arm.

4. In a device of the character described, a clock work mechanism, a rocking frame having at its lower end outwardly projecting arms rotatably mounted in the upper ends of the clock work mechanism frame and serving as trunnions for said rocking frame, an escapement wheel and arbor having its ends resting in the inner ends of said trunnions, a verge and its arbor having its ends vertically adjustable in the sides of said frame, a pendulum connected to one of said outwardly projecting arms, and a weight and its extension connected at its upper end to the outer end of the other outwardly projecting arm.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

WILLIAM A. GOBLE.

Witnesses:

DANIEL MILLER,

J. M. FRANTZ.