W. J. A. MIELKE.

WINDING INDICATOR FOR CLOCKS.

APPLICATION FILED MAR. 29, 1909.

926,277. Patented June 29, 1909.

Fig. 1.

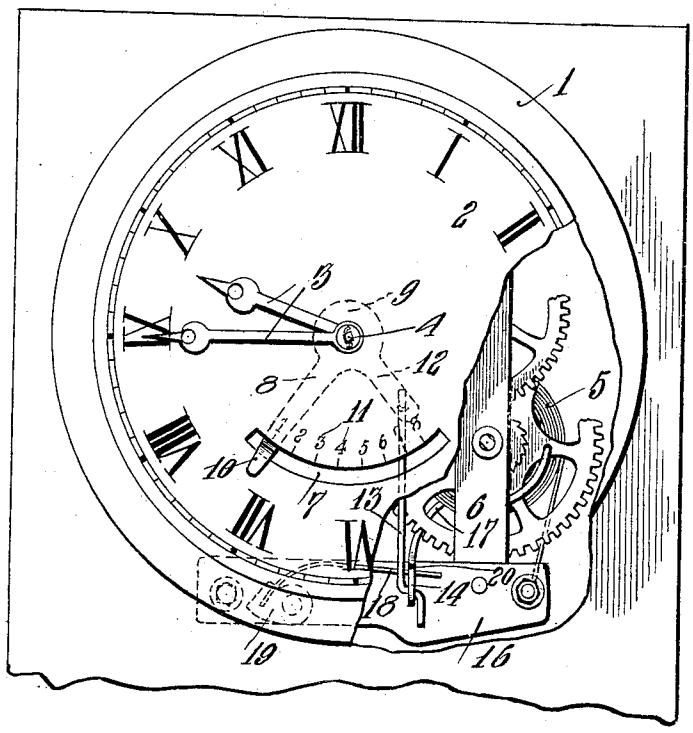
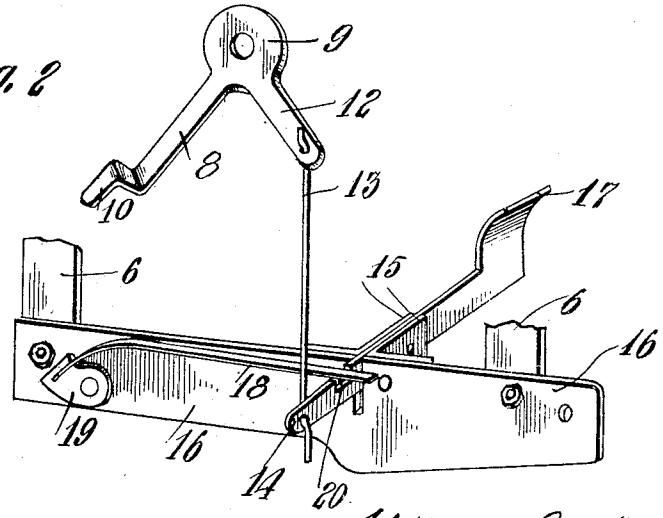


Fig. 2



Witnesses

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WINDING-INDICATOR FOR CLOCKS.

No. 926,277. Specification of Letters Patent. Patented June 29, 1909.

Application filed March 29, 1909. Serial No. 486,543.

To all whom it may concern:

Be it known that I, WILLIAM J. A. MIELKE, a citizen of the United States, residing at Grafton, in the county of Ozaukee and State of Wisconsin, have invented certain new and useful Improvements in Winding-Indicators for Clocks, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in clocks and more particularly to attachments therefor for indicating in spring clocks, when the clock has run down or requires rewinding.

The object of the invention is to provide a simple and practical mechanism of this character which may be easily applied to the clock works and which will indicate the number of days since the last winding of the main spring and the number of days that the clock will continue to run before its spring needs rewinding.

With the above and other objects in view, the invention consists in the novel features of construction and the combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawing, in which—

Figure 1 is a front view of a clock having the invention applied thereto, a portion of the dial being broken away, and Fig. 2 is a perspective view of the parts of the invention removed from the clock.

In the drawings 1 denotes the body or frame of a clock of any ordinary or preferred construction, 2 denotes the dial, 3 its hands mounted upon concentric shafts 4, and 5 denotes its main spring carried by the usual supporting frame 6 within the casing 1.

In practice of the invention I provide in the dial 2 an arc-shape slot 7 which is preferably concentric with the shafts 4 and in which operates an indication finger or pointer 8 forming one arm of a bell crank 9 pivoted at its angle on the shafts 4. The pointer or arm 8 is disposed in rear of the dial 2 and its free end is offset, shown at 10, so as to project through the slot 7 and outside of the dial to coact with numbered graduation marks 11 provided along one edge of the slot 7. The other or short arm 12 of the bell crank is connected by a link 13 to a forwardly and rearwardly extending lever 14 fulcrumed intermediate its ends between angular brackets 15 secured to a plate or bar 16 arranged upon the lower portion of the frame 16.

It will be understood that the plate or bar 16 may be a part of the frame 6 or that it may be formed separate and secured thereto by suitable fastenings. As illustrated in the drawings, said plate 16 is formed separate from the frame 6 and one of its ends projects to one side of the frame and has one end of the main spring 5 secured to it. I have found that by securing the outer end of the spring at a greater distance from the vertical center of the clock, the spring will uncoil more regularly and only in the one direction, thereby increasing the degree of movement of the lever 14.

The inner end of the lever 14 has an angular portion 17 adapted to bear against the main spring 5 so that said lever and consequently the bell crank 9 and pointing finger 10 will be actuated by said spring as it uncoils or expands. A leaf spring 18 has one of its ends fixed, as shown at 19, to the bar or plate 15 and its other or free end is seated in a notch 20 formed in the upper edge of the front end of the lever 14 whereby the end 17 of said lever is held at all times in contact with the main spring.

It will be understood that the graduations 11 are numbered to correspond to the number of days which the clock will run on one winding of its main spring, and that the parts of the invention are so proportioned that as the spring unwinds the finger or pointer 10 will indicate the number of days which the clock has run since its last winding and also the number of days it will continue to run before it must be rewound.

Having thus described my invention, what is claimed is:

1. The combination with a clock having a spring and a dial formed with an arc-shaped slot, and graduation marks along said slot, of a bell crank arranged in rear of the dial and having one arm offset to project through and move in said arc-shaped slot in the dial to provide a pointer which co-acts with said graduations, a rocking lever fulcrumed intermediate its ends and having one end bearing against said spring, a spring for actuating said lever in one direction and a link connecting said lever and the other arm of the bell crank.

2. The combination with a clock having a spring, hour and minute hand shafts, a dial formed with an arc-shaped slot concentric with said shafts, graduation marks arranged

along said slot and a supporting frame, of a bell crank mounted on said shafts in rear of the dial and having one arm offset to project through and swing in the arc-shaped slot in the dial and to provide a pointer to co-act with said graduation marks, a lever fulcrumed intermediate its ends on said frame and having a projection at its inner end to engage the clock spring, a leaf spring bearing upon the other arm of the lever to maintain its projection in contact with the clock spring and a link connecting the last mentioned end of said lever with the other arm of the bell crank.

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

WILLIAM J. A. MIELKE.

Witnesses:
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