No. 833,657. PATENTED OCT. 16, 1906.

T. J. ARNESON.

WINDING INDICATOR FOR CLOCKS.

APPLICATION FILED MAR. 17, 1906.

2 SHEETS—SHEET 1.

Fig. 1.

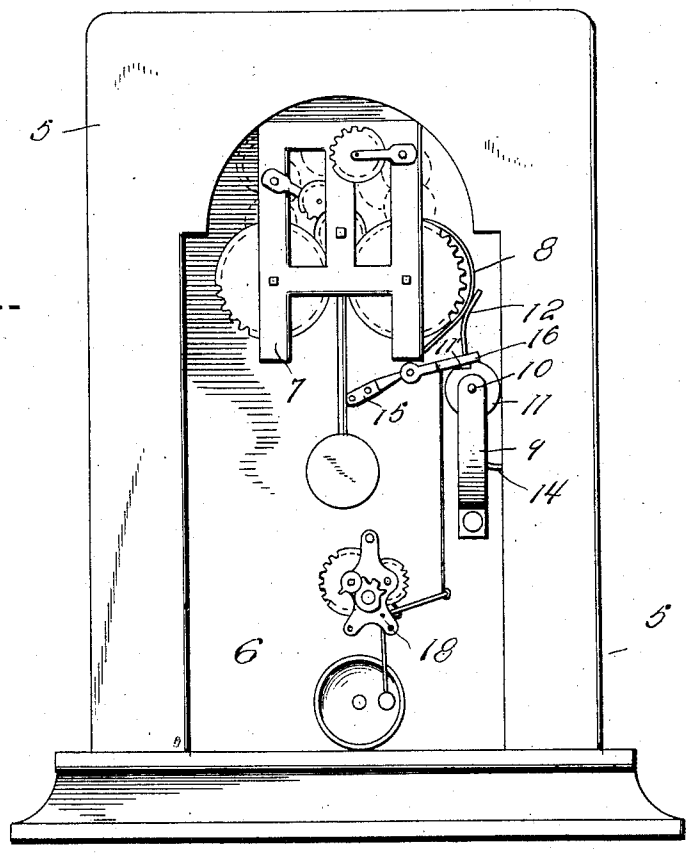
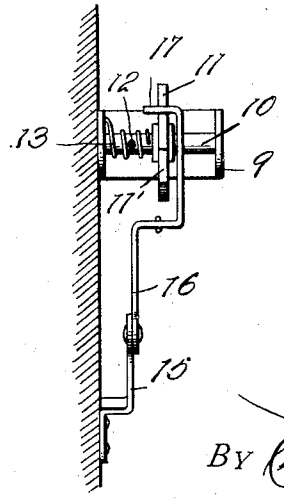


Fig. 3.



WITNESSES:
G. R. Thomas
F. C. Jones

INVENTOR
T. J. Arneson
BY Chandlee & Chandlee
Attorneys

THE NORRIS PETERS CO., WASHINGTON, D. C.

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2 SHEETS—SHEET 2.

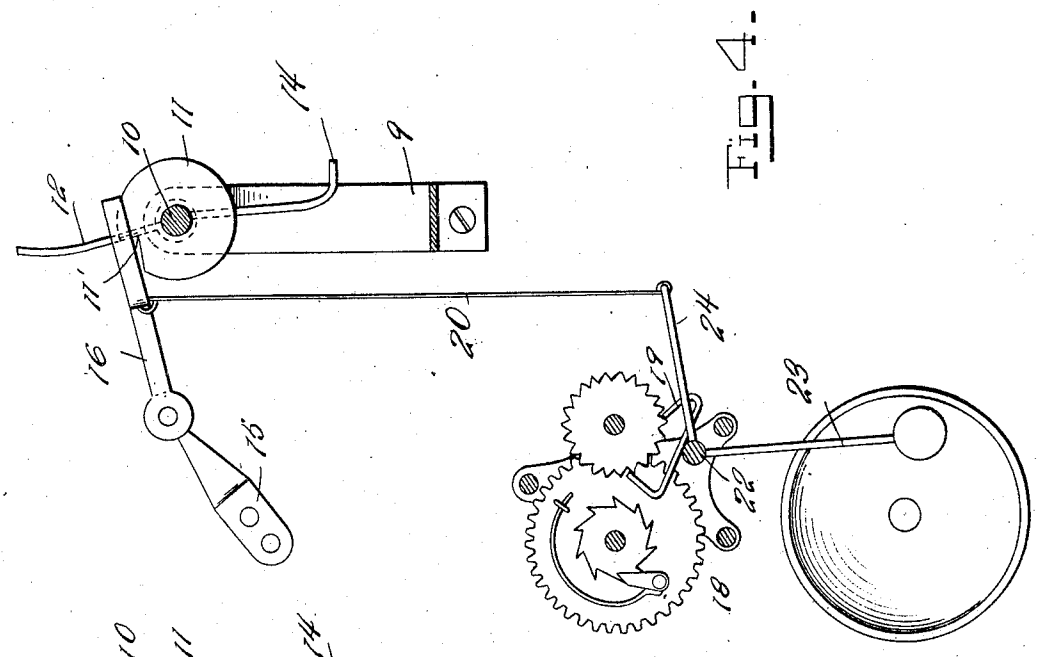


Fig. 4.

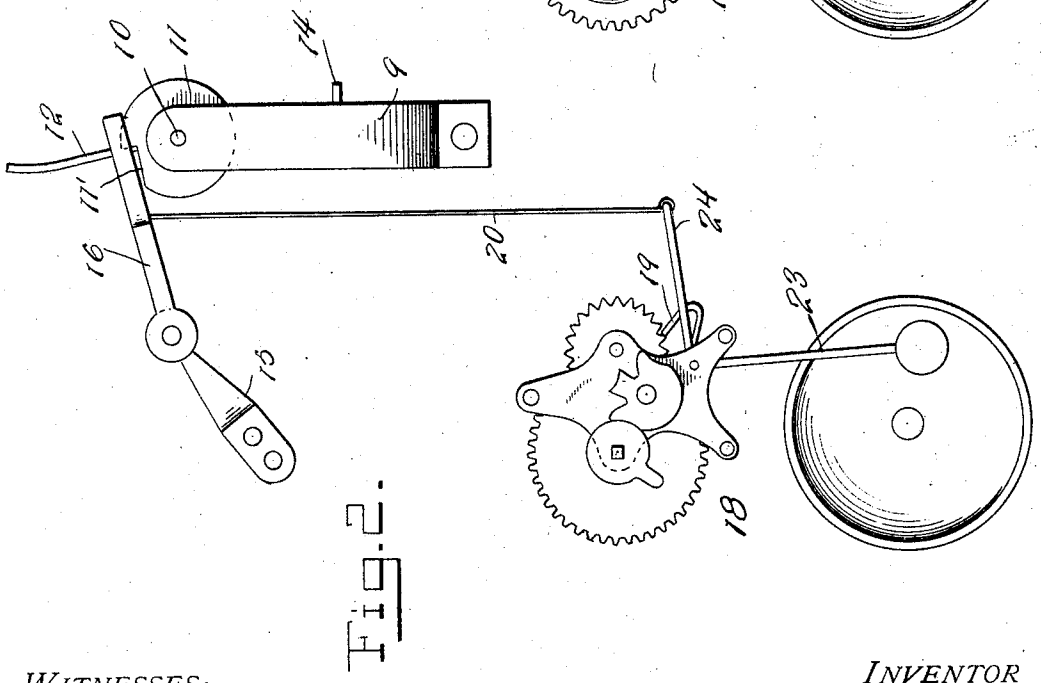


Fig. 2.

WITNESSES:

G. R. Thomas

F. C. Jones

INVENTOR

T. J. Arneson

BY Lamb & Lamb

Attorneys

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

THEODORE J. ARNESON, OF WESTBROOK, MINNESOTA.

WINDING-INDICATOR FOR CLOCKS.

No. 833,657. Specification of Letters Patent. Patented Oct. 16, 1906.

Application filed March 17, 1906. Serial No. 306,665.

To all whom it may concern:

Be it known that I, THEODORE J. ARNESON, a citizen of the United States, residing at Westbrook, in the county of Cottonwood, State of Minnesota, have invented certain new and useful Improvements in Winding-Indicators for 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 to clocks, and more particularly to indicators therefor, and has for its object to provide a mechanism arranged to indicate the necessity for winding a clock when the latter has run down, another object being to provide an indicator which will be simple in structure and arrangement and which will include a novel arrangement of parts.

Other objects and advantages will be apparent from the following description.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a view of a clock provided with the present invention. Fig. 2 is an elevational view of the releasing mechanism. Fig. 3 is a top plan view of the releasing mechanism. Fig. 4 is a longitudinal section of the releasing mechanism, taken on line 4 4 of Fig. 3.

Referring now to the drawings, there is shown a clock including a casing 5, having a back 6, to which there is secured the usual spring-actuated mechanism 7, which includes a coil driving-spring 8. Secured to the back 6, below the works 7, there is a bracket 9, in which there is journaled a horizontal forwardly-extending shaft 10, having mounted thereon a notched disk 11. An arm 12 is secured to the shaft and extends upwardly at one side of the spring 8, and the shaft is held with this arm against the spring by a helical spring 13, which is engaged with the shaft 10 and which is secured to the bracket 9, it being understood that the arm rests against the convex surface of the outermost layer of the spring, so that the arm will be moved to move the shaft against the action of the spring 13 as the clockwork runs down and the spring 8 moves outwardly from the shaft. A stop-finger 14 extends downwardly from the shaft 10 and engages the side of the casing 5 to limit the movement of the shaft 10 under the action of the spring 13.

A bracket 15 is secured to the back 6 adjacent to the bracket 9, and pivoted to this bracket there is an arm 16, which extends over the disk 11 and which has a laterally-turned finger 17 at its free end, which is arranged to rest upon the periphery of the disk. A spring-actuated alarm mechanism 18 is secured to the back 6 below the bracket 15 and has the usual stop mechanism 19, with which there is connected a rod 20, and the arrangement is such that when this rod is moved downwardly the alarm mechanism is released. The rod 20 is connected with the arm 16, and the arrangement is such that when this arm is in raised position, with its finger 17 resting upon the periphery of the disk 11, the alarm mechanism is held against operation. The finger 17 is so located upon the disk 11 that when the shaft 10 is rotated by expansion of the spring 8, as mentioned above, the notch 11′ of the disk 11 is brought into position for downward movement of the finger 17 thereinto, which releases the alarm mechanism.

The alarm mechanism 18 includes an oscillating shaft 22, to which the clapper 23 is connected, and an arm 24 is connected with the shaft and extends horizontally, this arm having the rod 20 secured thereto. It will thus be seen that when the shaft 22 is oscillated the arm 24 will be moved vertically in opposite direction, and when it is moved upwardly the finger 17 of the arm 15 is moved out of the notch 11′, so that the spring 13 is free to bring the unnotched portion of the disk 11 beneath the finger 17 to hold the alarm mechanism against operation. It will thus be seen that after the clock has run down and the spring 8 has expanded sufficiently to release the alarm mechanism 18 the latter will be sounded, when the spring 8 may be rewound to permit of movement of the disk 11 to its normal position under the action of the spring 13, the alternate upward movement of the arm 16 by the alarm mechanism 18 permitting of this movement of the disk, as just described. If it so happens that the alarm mechanism runs down before the spring 8 is rewound, the alarm mechanism may then be wound after rewinding of the spring 8, when the first upward movement of the arm 24 will raise the arm 16, permit-

ting the disk 11 to move into normal position and hold the alarm mechanism against operation until the spring 8 shall have been expanded.

What is claimed is—

The combination with a clock having an actuating-spring arranged for expansion as the clock runs down, of an alarm mechanism, and means for holding said mechanism against operation, said holding means consisting of a revoluble shaft, an arm carried by the shaft and lying in position for engagement and movement by the spring when the latter expands, to move the shaft, a notched disk mounted upon the shaft, a pivoted arm having a finger resting upon the periphery of the disk, said shaft being arranged for movement by the spring to bring the notch of the disk into position for passage of the finger therethrough, means for holding the shaft yieldably against movement by the spring, and connections between the second arm and the alarm mechanism, said connections being arranged to hold the alarm mechanism against movement when the finger is engaged with the periphery of the disk.

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

THEODORE J. ARNESON.

Witnesses:

GILBERT SWENSON,

ALFRED M. ARNESON.