

W. H. TAYLOR.
TIME MOVEMENT.
APPLICATION FILED JULY 14, 1909.

944,159.

Patented Dec. 21, 1909.

Fig. 1.

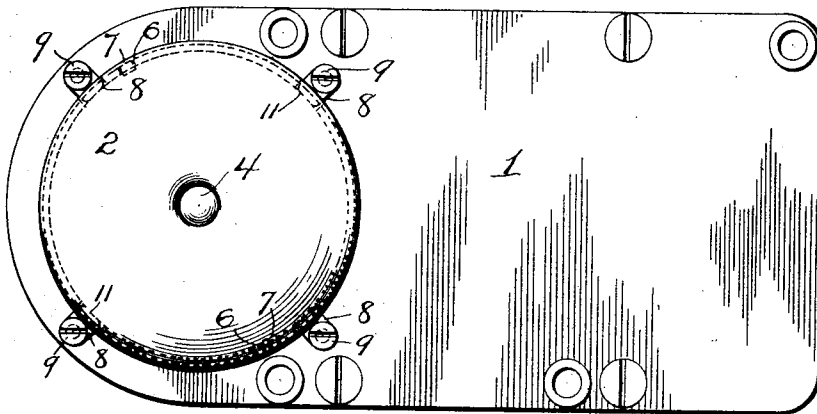


Fig. 2.

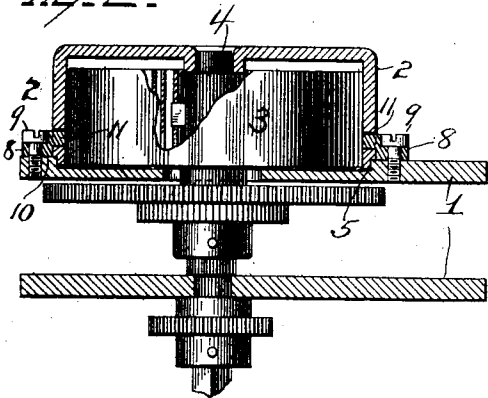


Fig. 3.

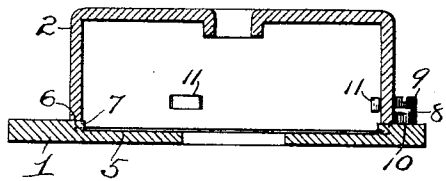


Fig. 4.

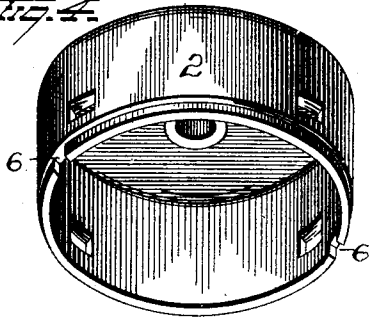


Fig. 5.

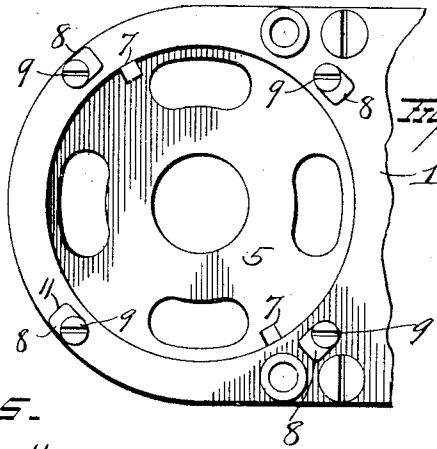
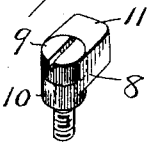


Fig. 6.



WITNESSES
E. Nottingham
G. J. Downing

INVENTOR
W. H. Taylor
Cy H. A. Seymour
Attorney

UNITED STATES PATENT OFFICE.

WARREN H. TAYLOR, OF STAMFORD, CONNECTICUT, ASSIGNOR TO THE YALE & TOWNE MANUFACTURING COMPANY, OF STAMFORD, CONNECTICUT.

TIME-MOVEMENT.

944,159.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WARREN H. TAYLOR, of Stamford, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Time-Movements; 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.

My invention relates to an improvement in time movements. Heretofore it has been the practice to secure the main spring barrel to a time piece, by screws passing through a flange on the barrel and engaging the frame of the time piece, thus firmly and solidly securing the two together. In the event of a severe jar, such as time pieces on locomotives are subjected to, or the falling of a safe or chest having a time lock thereon from one floor to another, as in case of fire, the heavy and strong devices connecting the spring barrel to the frame generally remain intact, while some of the lighter and weaker portions of the movement give way, thus permitting the movement to run down rapidly, which usually results in the destruction of the entire movement.

The object of this invention is to connect the main spring barrel to the movement frame, that abnormal jars sufficient to injure the time movement, will release the main spring barrel from the movement frame, thus permitting the barrel to turn under the tension of the spring in a direction to unwind the latter, and stop the time movement, thereby preventing the injury or destruction of the time movement, which, as above stated is liable to occur, if the barrel were held intact and the movement permitted to race and rapidly run down.

With this object in view my invention consists in the parts and combinations of parts as will be more fully described and pointed out in the claims.

In the accompanying drawing, Figure 1 is a view of a time movement frame and main spring barrel the latter being secured to the movement frame. Fig. 2 is a view in section through two of the securing clips. Fig. 3 is a view in section through the barrel retaining lugs. Fig. 4 is a view of the barrel detached. Fig. 5 is a view of the frame showing the clips and retaining lugs and

Fig. 6 is a view of one of the clips and its securing screw.

1 represents a time movement frame, which in the present instance is the movement frame of a time lock, but which may be the frame of any form of time piece.

2 is the main spring barrel, 3 the main spring, and 4 the spring arbor. The main spring is connected at one end to the spring barrel 2, and at its other end to the main arbor 3, the latter having a projecting end for the attachment of a winding key.

The frame 1 is provided with a recessed seat 5 conforming in size and shape to the open end of the cylindrical barrel 2, and adapted to receive the open end of said barrel, and the latter is provided at its open end with shallow recesses 6, preferably two of them, to receive the short angular lugs 7 secured to the frame 1, and which operate to hold the barrel against turning movement when the spring is under tension. The barrel is held down onto its seat and over the lugs, by the steel clips 8 secured to the frame 1 by the screws 9. In the present instance I have shown four clips securing the barrel in place, but I do not confine myself to any particular number. Each clip comprises a body 10 adapted to rest on the frame 1 and provided with a hole through same for the passage of the attaching screw 9, and a lip 11 adapted to rest in a slot or groove in the outer wall of the barrel. These screws 9 are comparatively small and light, and the clips, when released from the clamping action by the screws are free to turn on the latter, and disengage themselves from the barrel. A shock or jar will loosen the screws and disengage the barrel from the lugs and as soon as the barrel is disengaged from the lugs, the tension of the spring which normally tends to turn the barrel, and thus separate the parts will turn the barrel, and the latter in turning, will move the clips out of the slots or grooves in the barrel thus permitting the latter to be revolved by the spring until the latter is completely unwound. As the lugs engaging the barrel are small, it will be seen that an abnormal jar to the movement will loosen the screws, and carry the barrel off the lugs, or permit the tension of the spring to work the barrel up off the lugs, thus turning the holding clip and freeing the barrel as before explained, and in this

way protect the more fragile parts from the injury that would follow if the spring were permitted to run down rapidly.

It is evident that many slight changes might be resorted to in the relative arrangement of parts shown and described without departing from the spirit and scope of my invention hence I would have it understood that I do not care to limit myself to the exact construction and arrangement of parts shown and described, but,

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

1. In a time movement, the combination with a fixed frame, and a spring barrel, of means detachably connecting the barrel to the fixed frame, the said detachable connecting means adapted to be released from the barrel by an abnormal jar or shock.

2. In a time movement, the combination with a frame, a spring barrel and a spring within and connected to the latter, of means for detachably securing the barrel to the frame, the spring, when under tension, normally tending to assist in the separation of said barrel from the frame.

3. In a time movement, the combination with a frame, a spring barrel and a spring within and connected to the latter, of means for detachably connecting the barrel to the frame, the said connecting means adapted to be released from the barrel by an abnormal jar or shock, the spring normally tending to assist in the separation of said barrel from the frame.

4. In a time movement, the combination with a frame, main spring barrel, and en-

gaging means on said parts for preventing the barrel when properly seated from turning, of clips pivotally mounted on the frame and entering slots or grooves in the barrel.

5. In a time movement, the combination with a frame, main spring barrel, and engaging means on said frame and barrel for preventing the barrel, when properly seated on the frame from turning, of clips loosely mounted on screws secured to the frame, and adapted when turned to enter slots or grooves in the barrel.

6. In a time movement, the combination with a frame, main spring barrel, spring within and connected to the latter, and engaging means on said frame and barrel for preventing the latter, when properly seated on the frame from turning, of loosely mounted clips carried by the frame and engaging slots in the barrel for holding the latter on its seat on the frame, the spring normally tending to move said barrel in a direction to carry the clips out of the slots and thus release the barrel.

7. In a time movement the combination with a frame, and a flangeless barrel for the spring, of means carried by the frame and detachably connected to the barrel, the said detachable connecting means adapted to be released from the barrel by an abnormal jar or shock.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

WARREN H. TAYLOR.

Witnesses:

EVA C. ENGLAND,
W. H. TAYLOR, Jr.