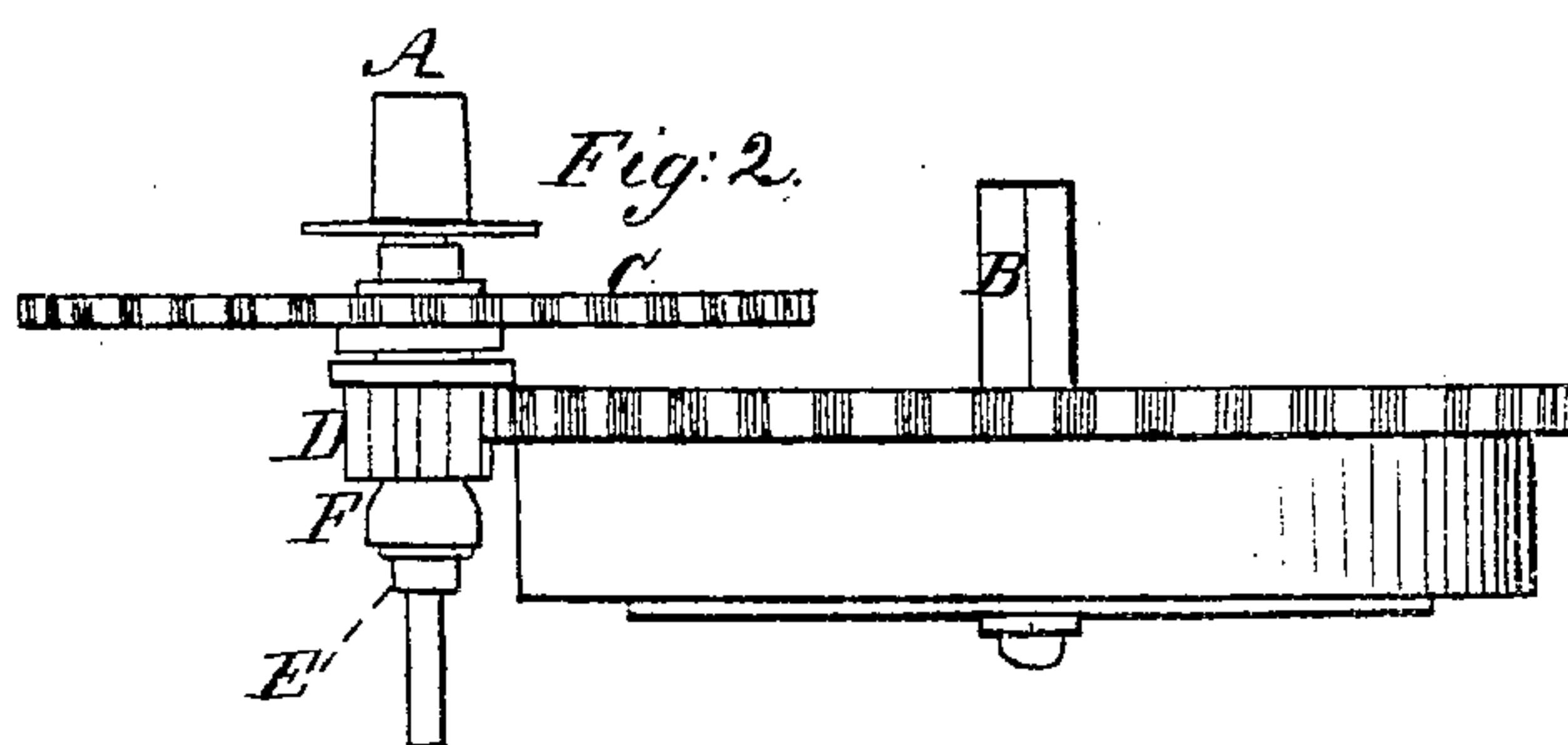
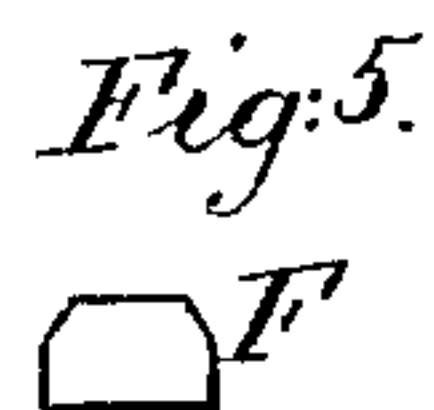
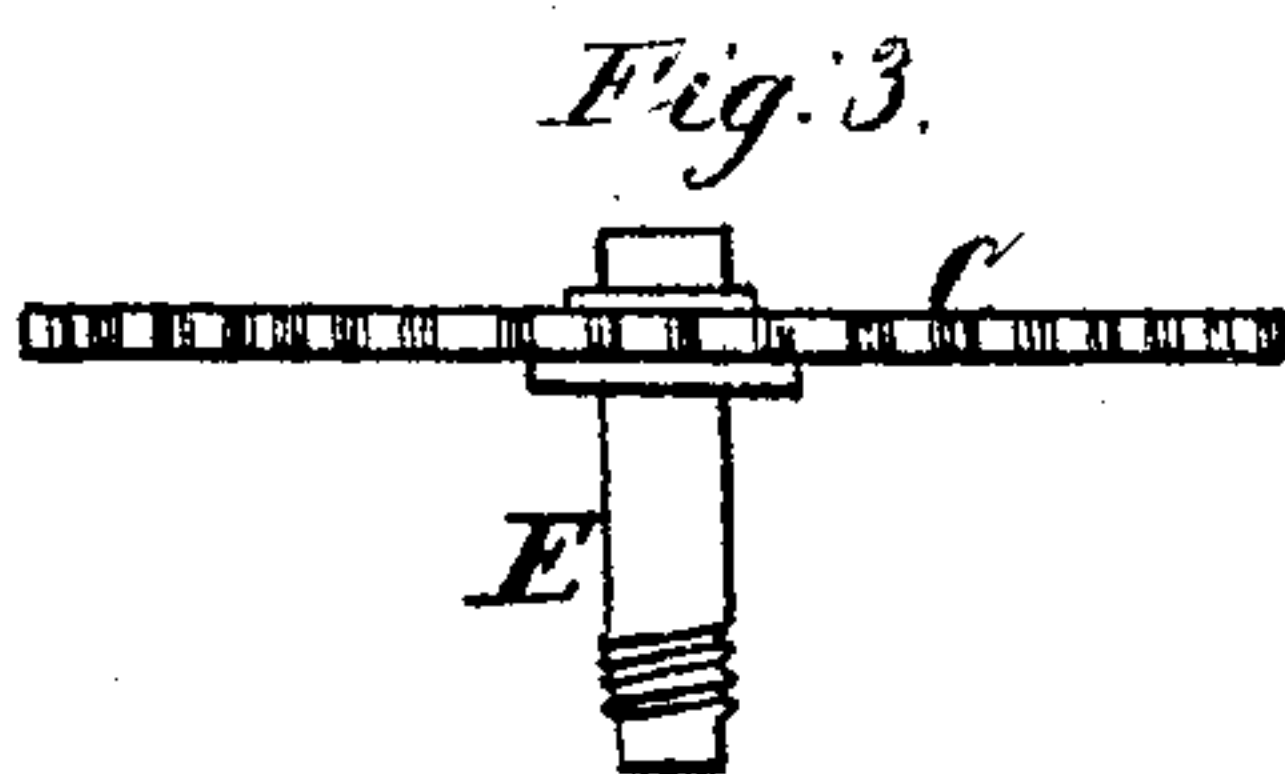
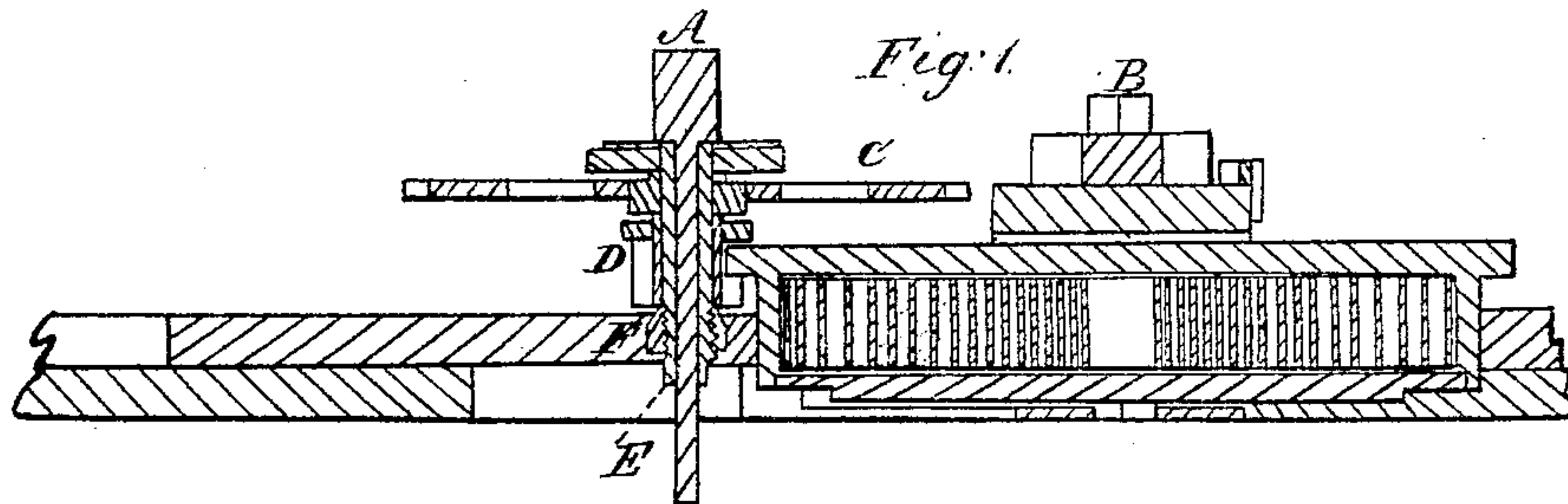


M. Burt.

Watch.

No 44,161.

Patented Sep 13. 1864.



Witnesses;
J. Leonard
W. McCallum

Inventor;
Merritt Burt

UNITED STATES PATENT OFFICE.

MERRITT BURT, OF CLEVELAND, OHIO.

IMPROVEMENT IN WATCHES.

Specification forming part of Letters Patent No. **44,161**, dated September 13, 1864.

To all whom it may concern:

Be it known that I, MERRITT BURT, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented new and useful Improvements in Watches; and I do hereby declare that the following is a full and complete description of the construction and operation of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a sectional view of the fusee and center-wheel with all the improvements attached. Fig. 2 is a side view of the fusee and center-wheel with the improvements put together. Fig. 3 is a side view of the center wheel with the hollow shaft and showing the thread of the screw on the lower end. Fig. 4 is a side view of the hollow friction-pinion, and Fig. 5 is the nut that secures the pinion in place upon the hollow shaft.

In the further description of my improvement I will refer to the several parts by letter.

The general structure of the watch remains unchanged.

A represents the center-post.

B represents the arbor to the drum.

C is the center-wheel.

D is a hollow friction-pinion. (Shown in place in Figs. 1 and 2 but detached in Fig. 4.)

E represents a hollow shaft, through which the center-post A passes.

F represents a nut, which holds the pinion D in place upon the shaft E. The center-wheel C is rigidly attached to the shaft E, while the pinion D is caused to turn with the shaft and in concert with the wheel C by its friction upon the shaft. This friction may be increased or diminished by the adjustment of the nut F upon the shaft E. This adjustment

and pressure may be increased in delicacy by interposing a concave washer between the nut and pinion. This washer, if made of very thin metal, acts as a spring, and would give a very nice adjustment of pressure. I do not, however, apprehend that this device would be generally needed.

The operation is as follows: When the watch is in motion as a time-keeper, the pinion D, shaft E, and wheel C rotate in concert.

In the ordinary winding of the watch the pinion D does not turn upon the shaft E, but if the winding is continued beyond the limits of the spring the pinion is caused to turn upon the shaft, thus relieving the teeth from an unnatural strain; and in case the mainspring should break while winding or at any other time while the watch was in motion, the pinion D would turn upon the shaft E, and thus save the teeth of the wheels from being broken. My improvement, therefore, relates to devices for preventing injury to the train or the usual bad effects which result from the sudden recoil of the mainspring in case of its rupture when wound or partly wound up, and to prevent injury to the teeth of the drum, leaves of the pinions, or any part of the train when wound up with too much force. The pinion D will turn in either direction upon the shaft E without entire disconnection with the train.

What I claim as my improvement, and desire to secure by Letters Patent, is—

The revolving friction pinion D, when constructed, arranged, and operating as and for the purpose herein specified.

MERRITT BURT.

Witnesses:

J. LEONARD,
J. HOLMES.