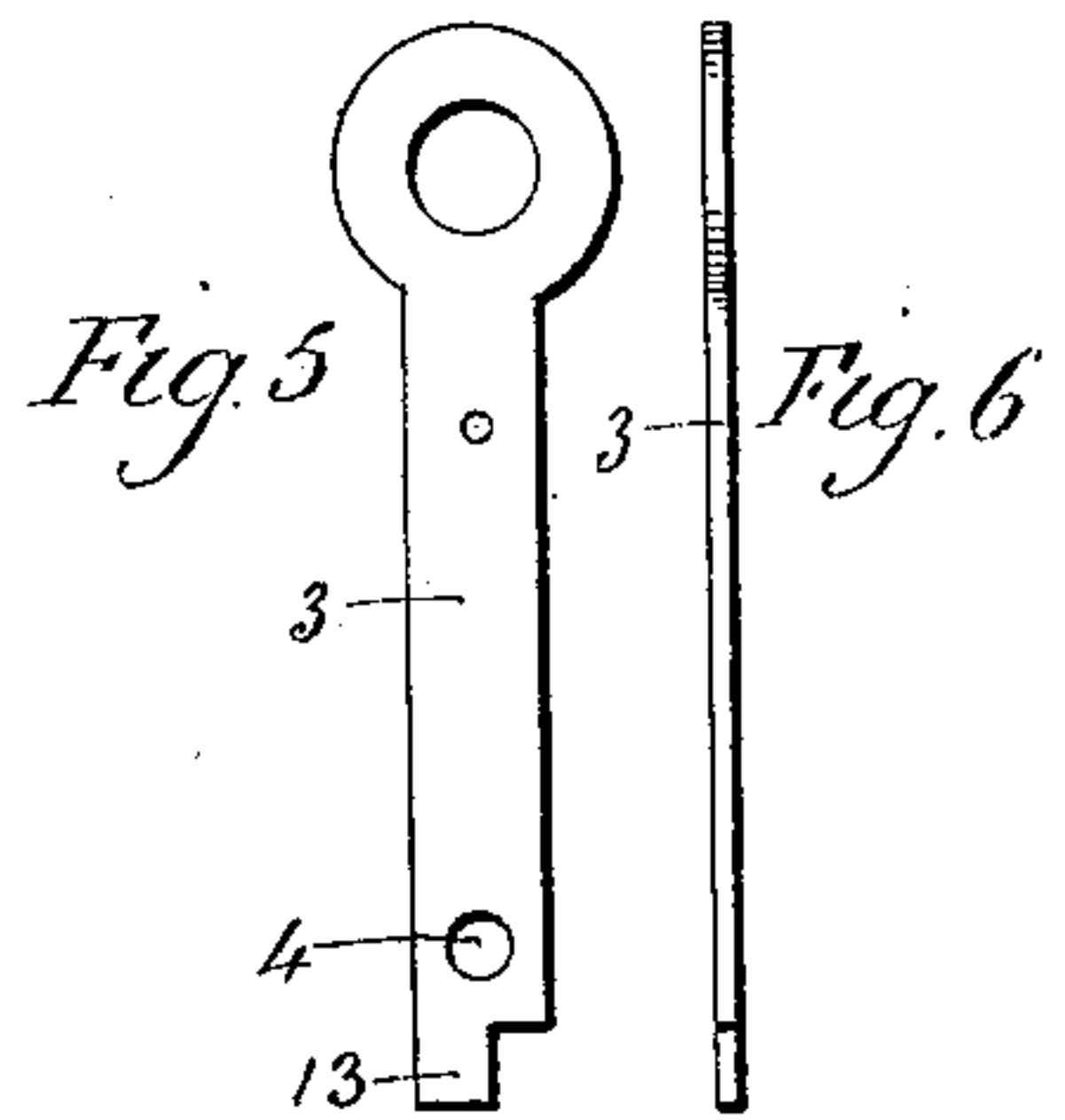
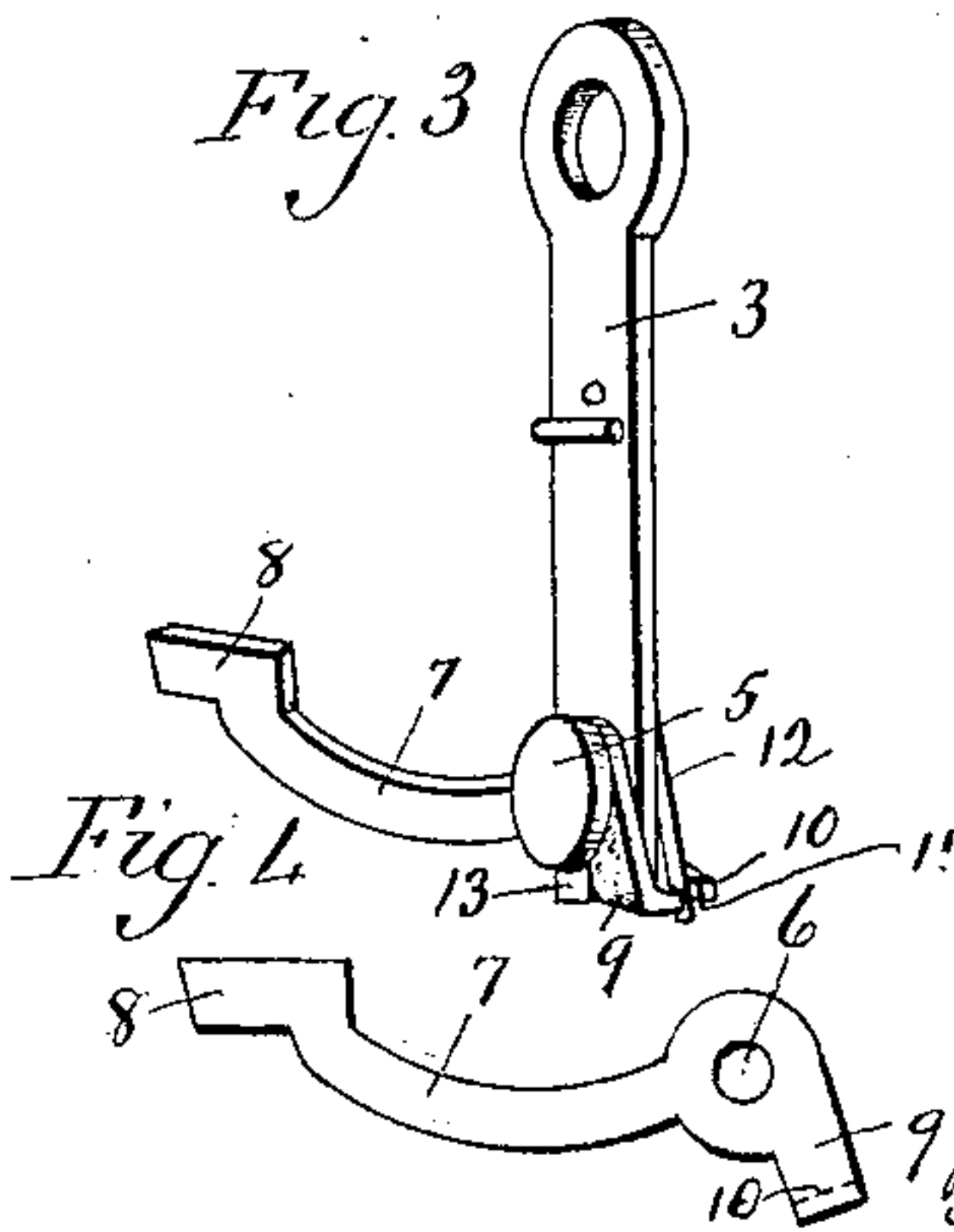
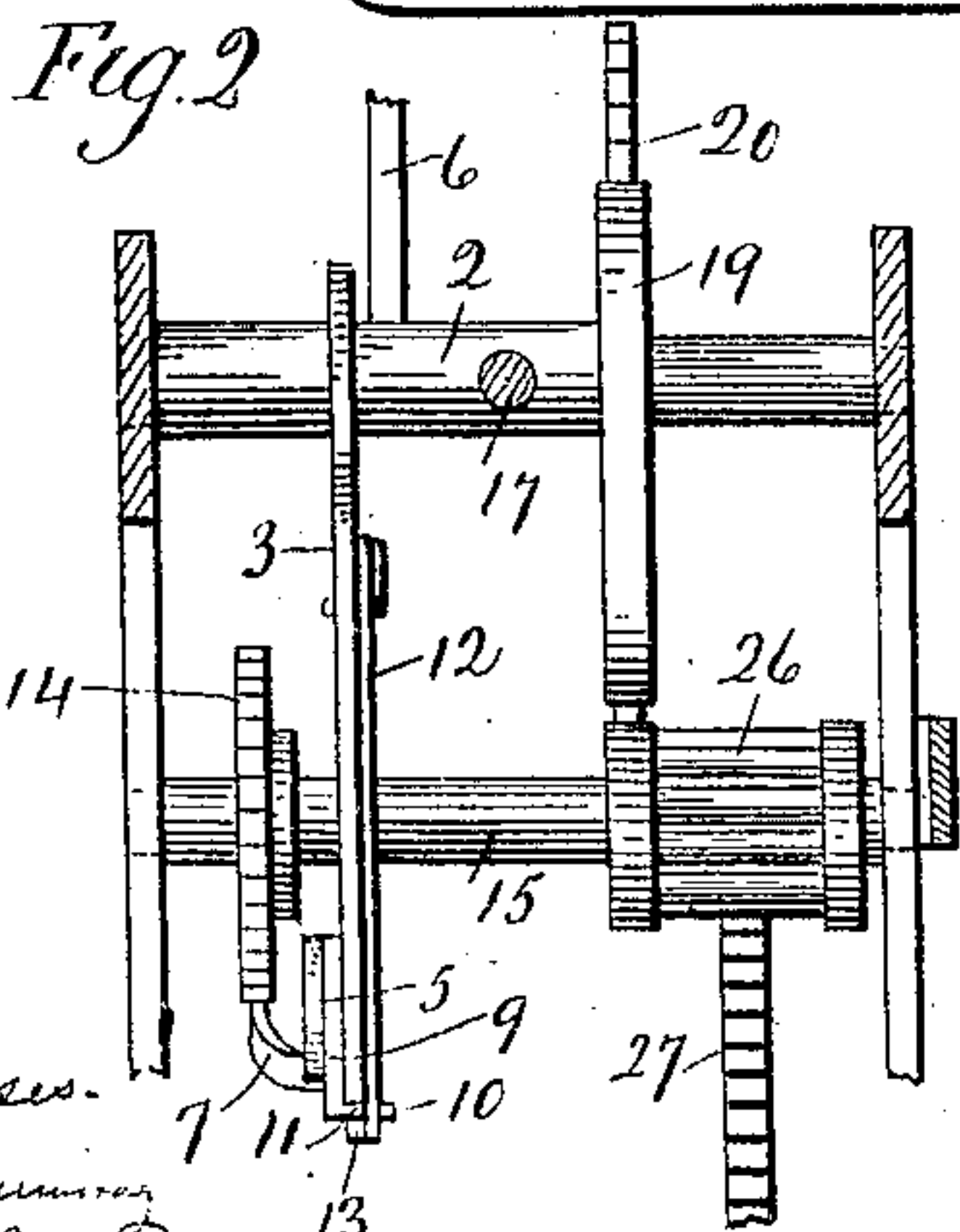
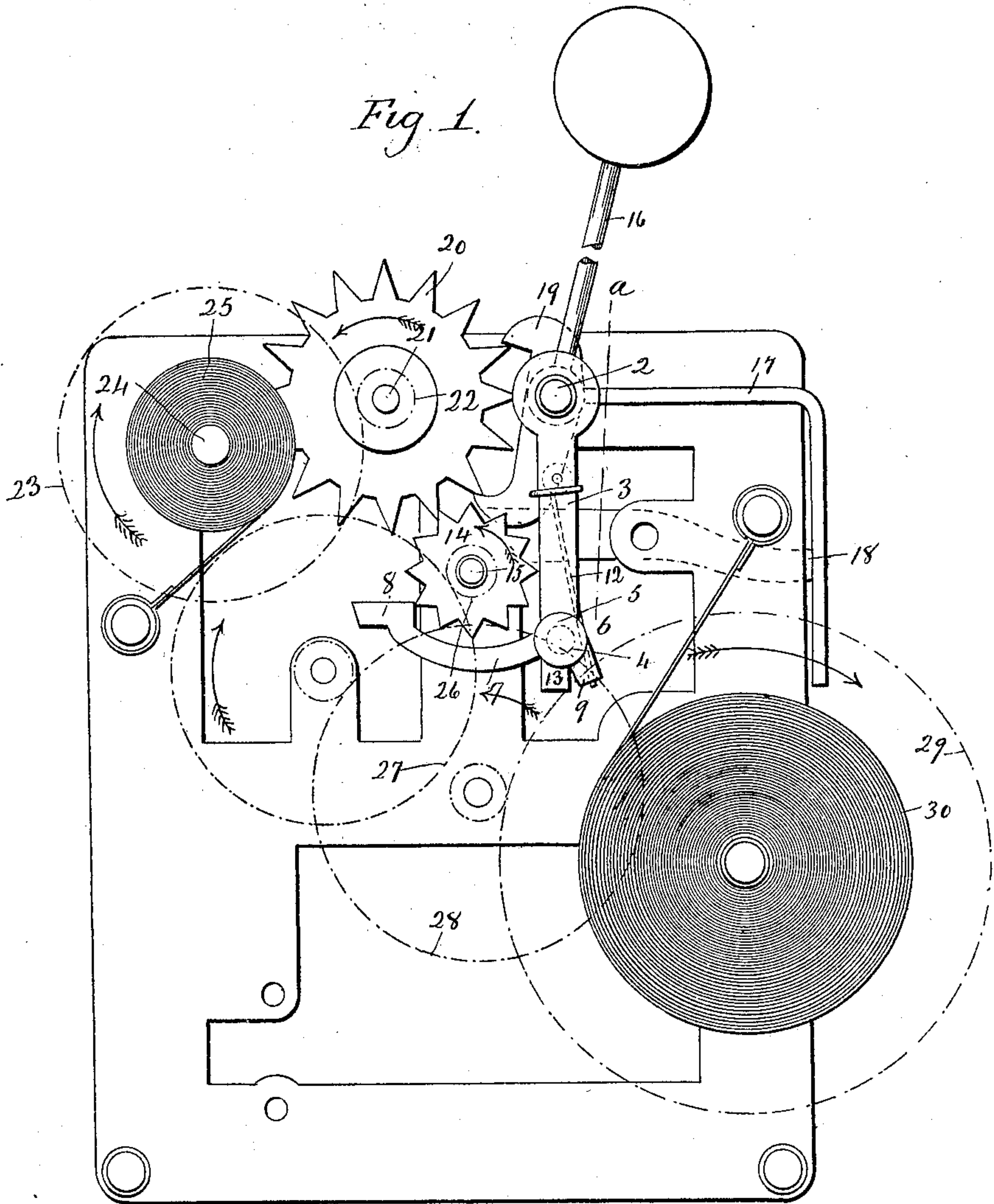


No. 829,602.

PATENTED AUG. 28, 1906.

W. E. PORTER.  
INTERMITTENT ALARM CLOCK.  
APPLICATION FILED JAN. 8, 1906.



Witnesses.  
*W. H. Thurman*  
*Clara L. Reed*

*W. E. Porter*  
Inventor.

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# UNITED STATES PATENT OFFICE.

WILSON E. PORTER, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO NEW HAVEN CLOCK CO., OF NEW HAVEN, CONNECTICUT, A CORPORATION.

## INTERMITTENT ALARM-CLOCK.

No. 829,602.

Specification of Letters Patent.

Patented Aug. 28, 1906.

Application filed January 8, 1906. Serial No. 295,066.

*To all whom it may concern:*

Be it known that I, WILSON E. PORTER, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Intermittent Alarm-Clocks; and I do hereby declare the following, when taken in connection with the accompanying drawings and the numerals of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a partial view, in front elevation, of my improved intermittent alarm-clock with the rear movement-plate removed; Fig. 2, a broken view in vertical section on the line *a b* of Fig. 1; Fig. 3, a perspective view of the carrier-arm and vibrating coupling-hook; Fig. 4, a detached view of the coupling-hook; Fig. 5, a detached plan view of the carrier-arm; Fig. 6, a detached edge view thereof.

My invention relates to an improvement in intermittent alarm-clocks of the type shown and described in my prior patent, No. 580,056, dated April 6, 1897, the object being to produce a simple, compact, and reliable intermittent alarm mechanism assisting rather than handicapping the performance of the time side of the clock during the period when the alarm is being sounded.

With these ends in view my invention consists in an intermittent alarm-clock having certain details of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In carrying out my invention as herein shown I provide the verge-arbor 2 of the alarm-train with a depending sheet-metal carrier-arm 3, formed at its lower end with a stud-hole 4 for the reception of a stud 5, which passes through a hole 6 in the inner end of a bowed alarm-stop hook, 7 formed at its outer end with a nose 8 and at its inner end with a depending arm 9, turned inward to form a finger 10, having a notch 11 for the reception of the lower end of a spring 12, applied to the back of the arm 3 and exerting a constant effort to turn the hook 7 on the stud 5 and lift its outer end until the inner edge of the arm 9 is engaged with the stop-finger 13 at the lower end of the arm 3. The nose 8 of the hook 7 coacts with the teeth of an alarm-wheel 14, the curvature of which corresponds roughly

to the bowed form of the hook, which partly embraces, as may be said, the lower portion of the wheel, as shown in Fig. 1. The said wheel 14 is mounted, as shown, upon the seconds-hand arbor 15 of the time-train, though this is not necessary, as the said wheel 14 may be mounted upon some other arbor of the time-train or some special arbor introduced thereinto, the location of the wheel 14 being determined by the desired period of intermission.

The verge-arbor 2 carries the bell-hammer 16 and the stop-wire 17, which coacts in the usual way with a let-off spring 18, controlled by an alarm-cam. (Not shown, but of ordinary construction and operation, as shown, for instance, in my prior patent referred to.) The arbor 2 also carries a verge 19, coacting with an escapement-wheel 20, the arbor 21 of which carries a pinion 22, meshed into by the main wheel 23 on the alarm-winding arbor 24, to the inner end of which the alarm-spring 25 is secured. The arbor 15 of the time-train carries a lantern-pinion 26, meshed into by the third wheel 27 of the time-train, which also comprises a second wheel 28 and a first or main wheel 29, driven by a mainspring 30, all of ordinary construction.

As soon as the alarm-train is released by the let-off spring 18, which disengages itself from the stop-wire 17, the power of the alarm-spring 25 is thrown upon the coupling-hook 7, the nose 8 of which is then engaged with one of the teeth of the alarm-wheel 14, which the hook tends to turn in the direction in which it is being driven by the time-train under the impulse of the mainspring 30. In other words, the power of the alarm-spring is added to the power of the mainspring. As the wheel 14 is turned it periodically releases the coupling-hook 7, and hence frees the alarm-train, which sounds its alarm. The ringing of the alarm-train also vibrates the arm 3 and the coupling-hook 7, the latter swinging back and forth under the wheel 14, the teeth of which sufficiently engage the beak 8 of the hook and push the same downward against the tension of its spring 12 until a tooth of the wheel is brought into position to be caught by the beak of the hook in such a way as to stop the vibration of the same, and hence the running of the train. The period of intermission will of course depend upon the rapidity at which the alarm-wheel 14 is re-



volved so as to bring its teeth successively into right position to catch and hold the hook. When the beak of the hook catches one of the teeth of the wheel 14, the alarm-  
5 train will be stopped, after which the power of the alarm-train will be used in drawing the hook from right to left, which it will do until the tooth engaged with the hook lets go of the same and releases the alarm-train again,  
10 and so on.

It is apparent that in carrying out my invention some changes from the construction herein shown and described may be made. I would therefore have it understood that I do  
15 not limit myself thereto, but hold myself at liberty to make such departures therefrom as fairly fall within the spirit and scope of my invention.

I claim—

20 1. In an intermittent alarm-clock, the combination with the time and alarm trains thereof, of an alarm-wheel driven by the time-train, a vibratory carrier driven by the alarm-train, and a pivotal hook carried by the said

carrier and coacting with the said wheel 25 which periodically releases it and hence the alarm-train, the said hook being under the pressure of the alarm-spring and engaging the teeth of the said wheel so as to apply the said pressure thereto, whereby the hook tends to  
30 turn the said wheel in the direction in which it is turned by the time-train.

2. In an intermittent alarm-clock, the combination with the alarm and time trains thereof, of an alarm-wheel driven by the time-  
35 train, an arm depending from the verge-arbor of the alarm-train, and a spring-actuated hook pivotally mounted upon the said arm and formed with a beak for engagement with the teeth of the said wheel. 40

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

WILSON E. PORTER.

Witnesses:

CLARA L. WEED,  
GEORGE D. SEYMOUR.