

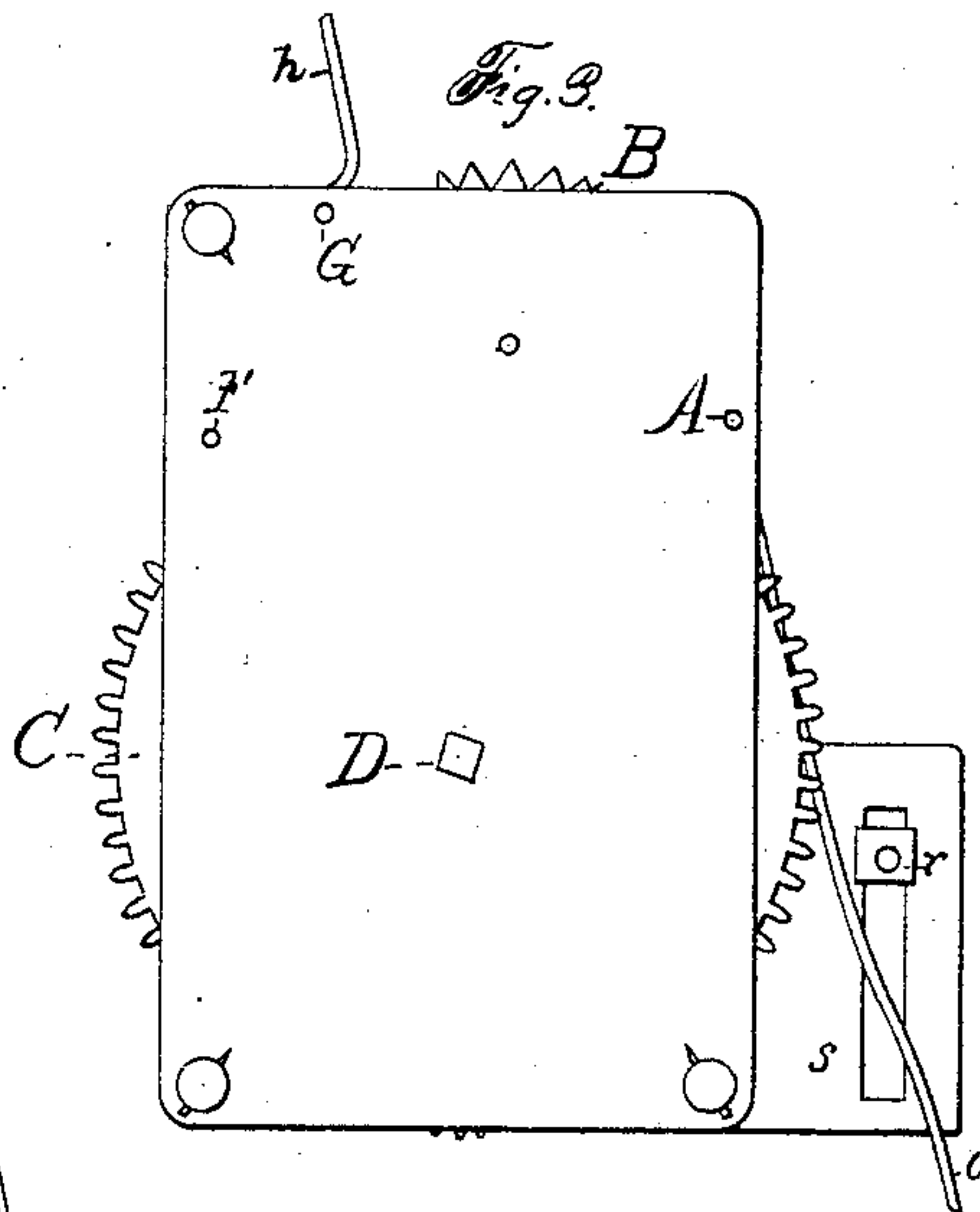
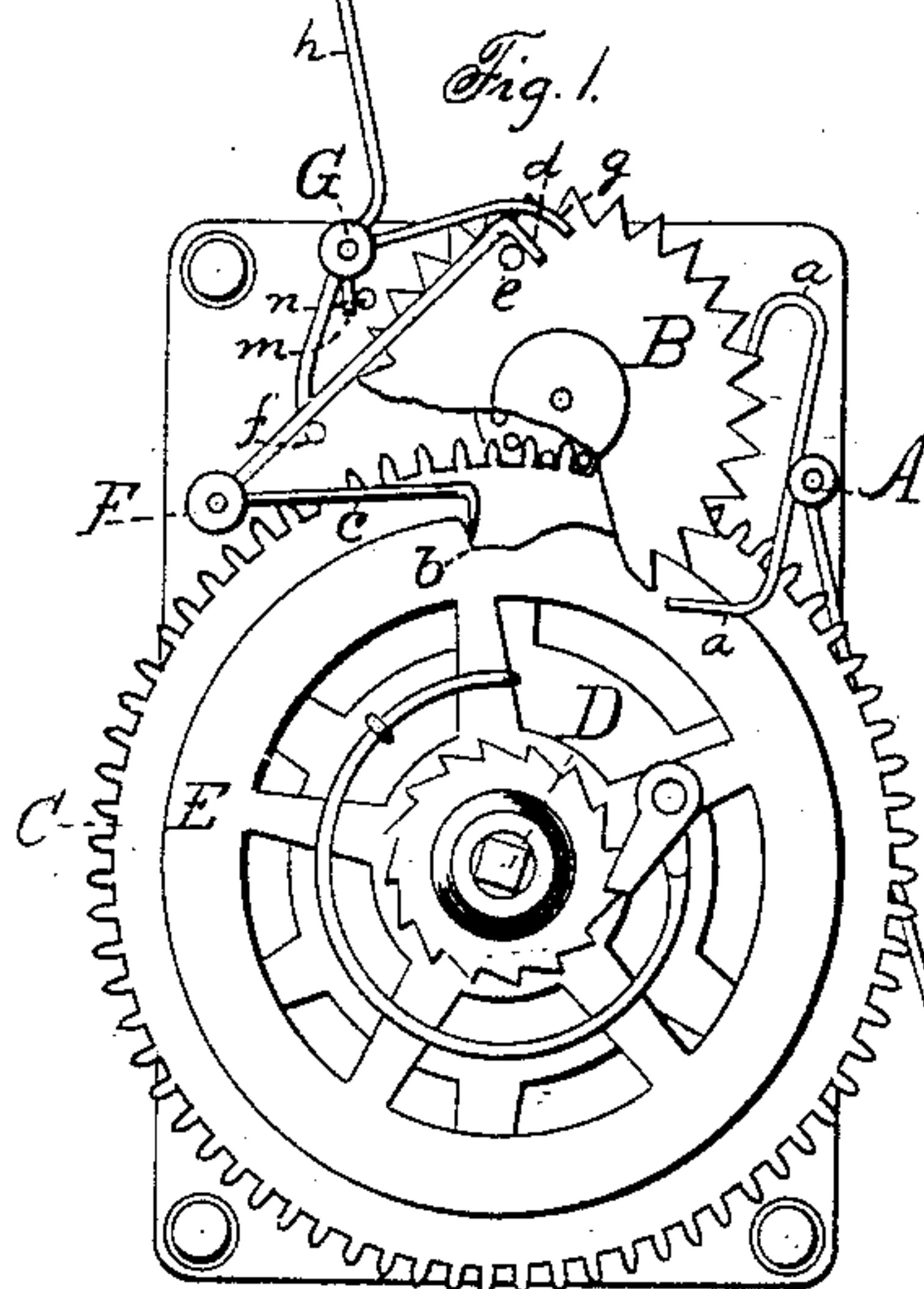
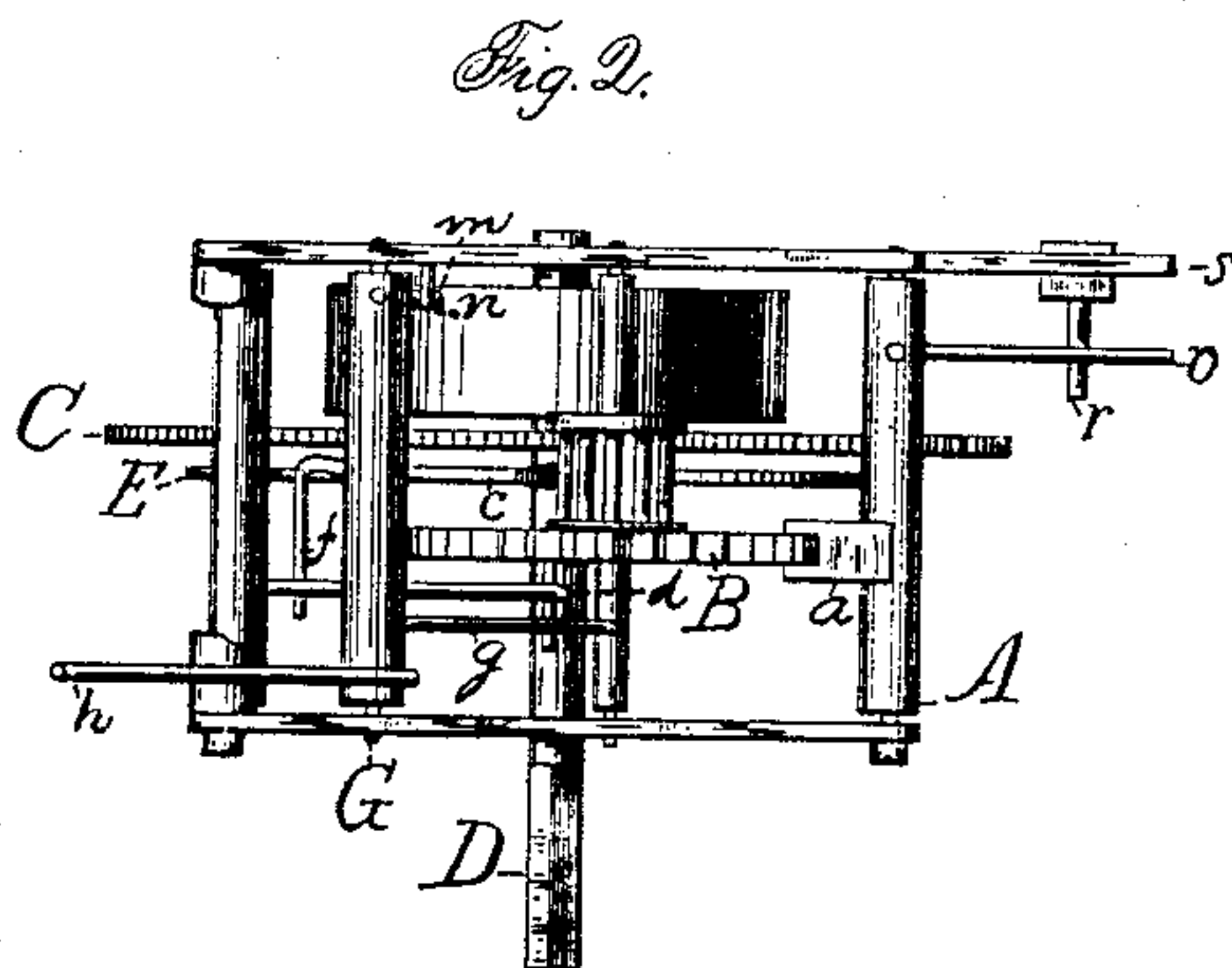
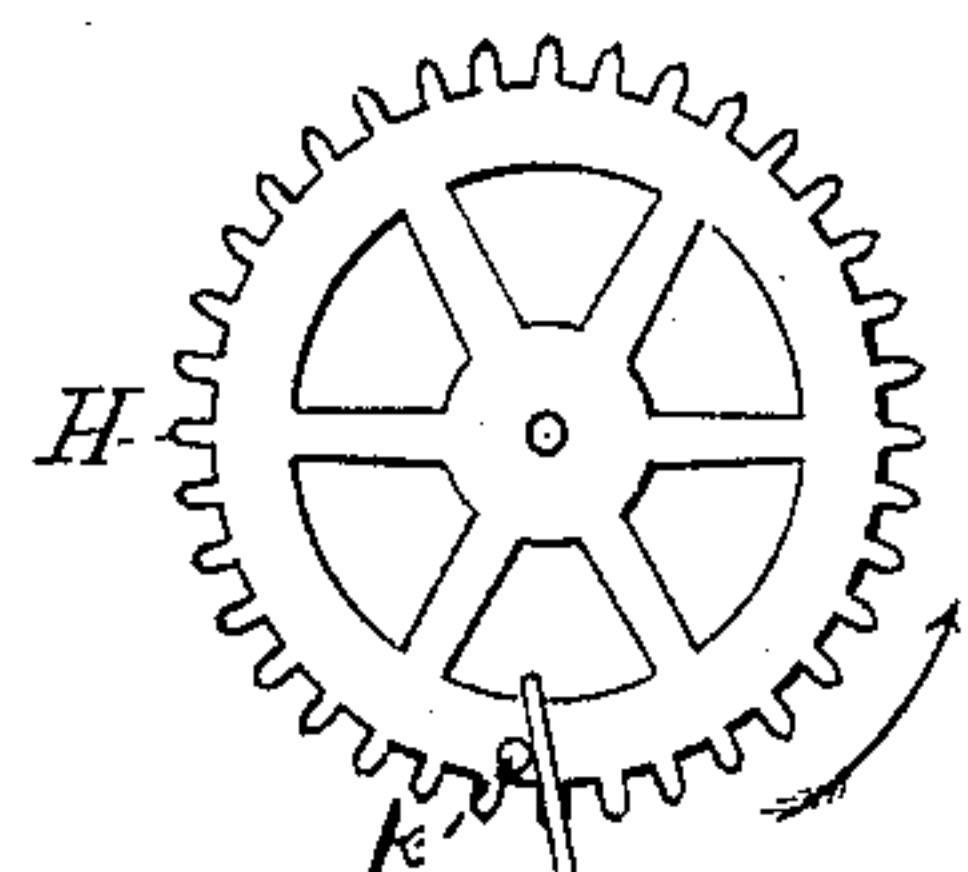
(No Model.)

J. POMEROY & J. WINSLOW, Jr.

TIME ALARM.

No. 259,584.

Patented June 13, 1882.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN POMEROY AND JOHN WINSLOW, JR., OF BRISTOL, CONNECTICUT.

TIME-ALARM.

SPECIFICATION forming part of Letters Patent No. 259,534, dated June 13, 1882.

Application filed August 15, 1881. (No model.)

To all whom it may concern:

Be it known that we, JOHN POMEROY and JOHN WINSLOW, Jr., of Bristol, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Alarm-Clocks, of which the following is a specification.

Our invention relates to improvements in alarm mechanism for eight-day clocks, in which a twenty-four-hour wheel acts upon lock-work to let off the alarm every morning and to stop it again after a given time; also in which there is an adjustable stop for acting upon the hammer to prevent sounding the alarm at such times as may be desired; and the objects of our improvements are to provide an alarm that requires winding but once a week, and which, if desired, may be prevented from being sounded upon any day; also, to so simplify the construction that the mechanism will not be liable to get out of order, and may be constructed at a small cost. We attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation with the front plate removed. Fig. 2 is a plan view, and Fig. 3 a front elevation.

The hammer-shaft A, its pallets *a a*, the escapement-wheel B, main wheel C, with its spring, ratchet, and pawl, may be of any ordinary construction. The spring however should be of such length as to impart to the main shaft D the desired number of turns for sounding the alarm every day for a week, so that the alarm will require winding only when it is necessary to wind the clock.

By the side of the main wheel C, and so connected thereto as to revolve with it, we place a smooth-edged disk, E, having a notch, *b*, in its periphery.

In the alarm-movement plates we pivot a lock-work shaft, F, bearing two hooked arms, *c d*, the former of which bears upon the periphery of the disk E and the latter of which extends along by the side of the escapement-wheel B, so as to engage the pin *e*, mounted on said wheel. A second lock-work shaft, G, is also pivoted in the alarm-movement plates, and bears a hooked arm, *f*, which extends under the arm *d* for lifting it at the proper time, and another arm, *g*, for engaging the pin *e*.

This lock-work shaft G is also provided with a lever, *h*, which extends upward to the clock-movement and engages a pin, *k*, on a twenty-four-hour wheel, H.

We have not shown the clock-movement nor the alarm-dial, as the same are well known. Any suitable dial for setting the twenty-four-hour pin-wheel H so that the pin *k* will release its hold upon the lever *h* at any desired hour may be employed, and the same may be done by ordinary gear-wheels, so that the wheel H will revolve once in every twenty-four hours. In setting the alarm the position of the pin *k* should be observed, so that it will release the lever not only at the desired hour, but at that hour in the desired part of the day, which is generally in the morning. This wheel moves in the direction indicated by the dart near the wheel H in Fig. 1.

The lock-work shaft G should be provided with a suitable stop to limit the extent of its backward movement, so that it will be caught by the pin *k*. In the drawings this stop is formed by the lever *m*, attached to the shaft G, and the stop-pin *n* on the rear plate of the alarm-movement. When the notch *b* in the periphery of the disk E comes under the end of the hooked arm *c* the arms *c d* both fall so far as to bring the end of the arm *d* into the path of the pin *e* on the escapement-wheel and stop said wheel by contact with said pin, all as shown in Fig. 1. The twenty-four-hour wheel is represented in the drawings as just about to take up the lever *h*. As said wheel moves on and the lever is moved with it the arm *f* lifts the arms *c d* out of the notch *b* and out of engagement with the pins *e*, thereby leaving the wheels free to be moved under the influence of the spring for a moment until the pin *e* is caught by the arm *g*, said arm being brought into the path of said pin by the forward movement of the lever *h*. Upon the release of the lever *h* by the pin *k* on the twenty-four-hour wheel the lever returns to its former position and the arm *d* is lifted out of the path of the pin *e* by means of the incline on the forward side of the notch in the disk E acting upon the arm *c*, while the uncut portion of the periphery holds said arms elevated so that the wheels revolve to sound the alarm until the notch *b* comes under the end of arm *c* and the arms *c*

and *d* again fall and stop the alarm. The parts are then ready for a repetition of the operation upon the following day, and so on for every day until the alarm is run down or purposely prevented from operating. As shown, the alarm will sound during the time that the main shaft is making one complete revolution. The train may be such that this one revolution of the main shaft will operate the hammer-wire *o* for a longer or shorter time by changing the relative size of the gears; or two or more notches may be made in the periphery of the disk, in which case the main shaft would make less than one revolution at each daily operation.

In Figs. 2 and 3 we have illustrated an adjustable stop for locking the hammer-wire *o* in place, so that the pallets *a* cannot escape the teeth of the escapement-wheel, and thereby the alarm may be prevented from sounding upon any day, or for so long a time as may be desired. This consists of a simple slide, *r*, placed in a slotted extension, *s*, of the frame, and so mounted therein as to stay in whatever position it may be placed within the slot. When this slide is in the position illustrated in the drawings the hammer-wire *o* is free to operate; but when it is crowded downward it binds snugly upon the wire and prevents its operation, although otherwise the parts will be in condition to operate. When this stop is not brought into position to hold the hammer-wire the hammer is perfectly free at all times, and in this respect it differs from the ordinary alarm, in which the escapement-wheel is held

by confining the hammer-shaft so that the pallets cannot escape the teeth of the wheel. The construction of our alarm is such that it is wholly disconnected from the clock, (except for a few hours out of the twenty-four,) so that no friction whatever is brought to bear on the clock-train, whereas other alarms generally have a device which bears upon the edge of a cam attached to the time-train with all the force of the alarm-spring, which is continually pressing upon the escapement-wheel to force the pallets to escape.

We claim as our invention—

1. In an alarm-movement, the combination of the main wheel, smooth-edge disk having a notch in its periphery, the escapement-wheel bearing pin *e*, the lock-work shaft bearing arms *c* *d*, and mechanism for tripping said arms once in twenty-four hours, substantially as described, and for the purpose specified.

2. The combination of the main wheel C, disk E, escapement-wheel B, pin *e*, lock-work shafts F *c* *d* G *f* *g*, lever *h*, and twenty-four-hour pin-wheel, substantially as described, and for the purpose specified.

3. In an alarm for an eight-day clock, the adjustable stop for acting upon the hammer-wire and holding the pallets from escaping when desired, substantially as described.

JOHN POMEROY.

JOHN WINSLOW, JR.

Witnesses:

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