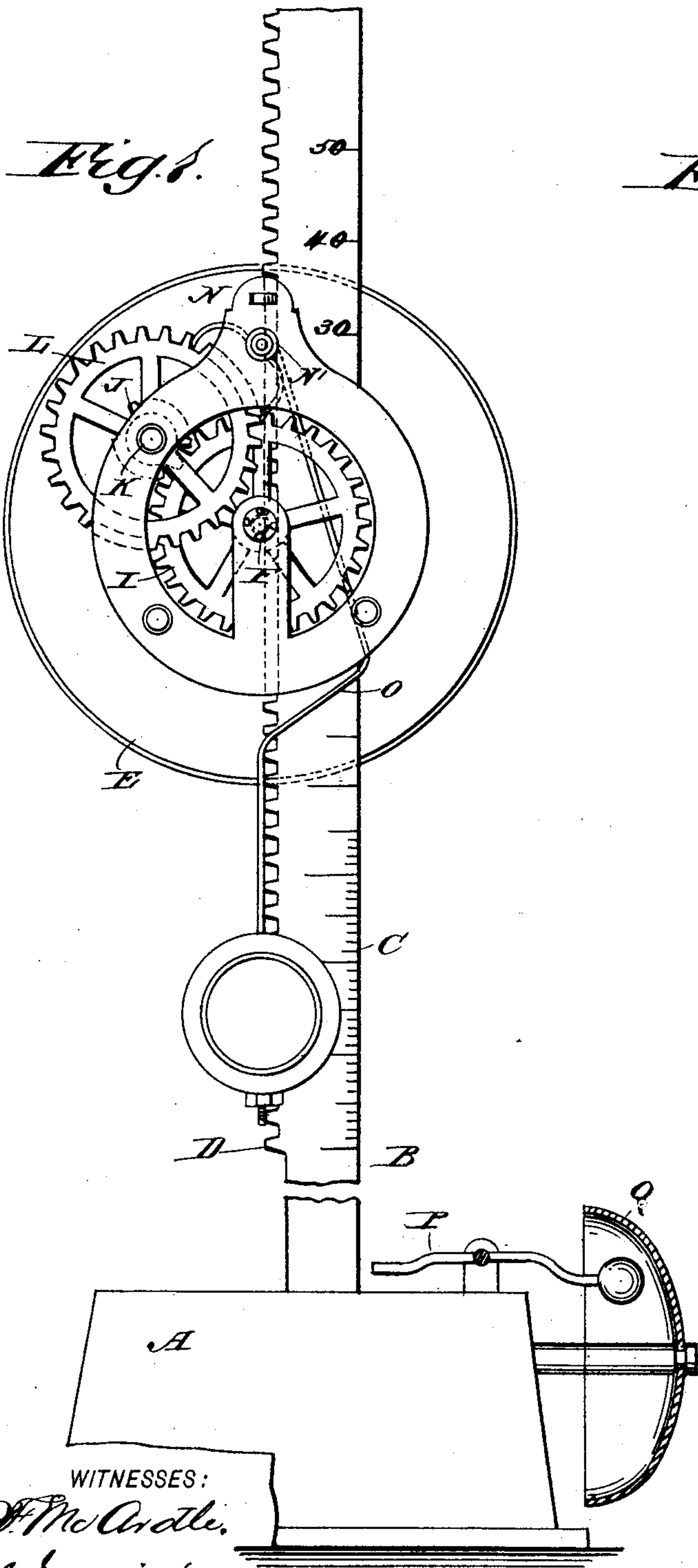


(No Model.)

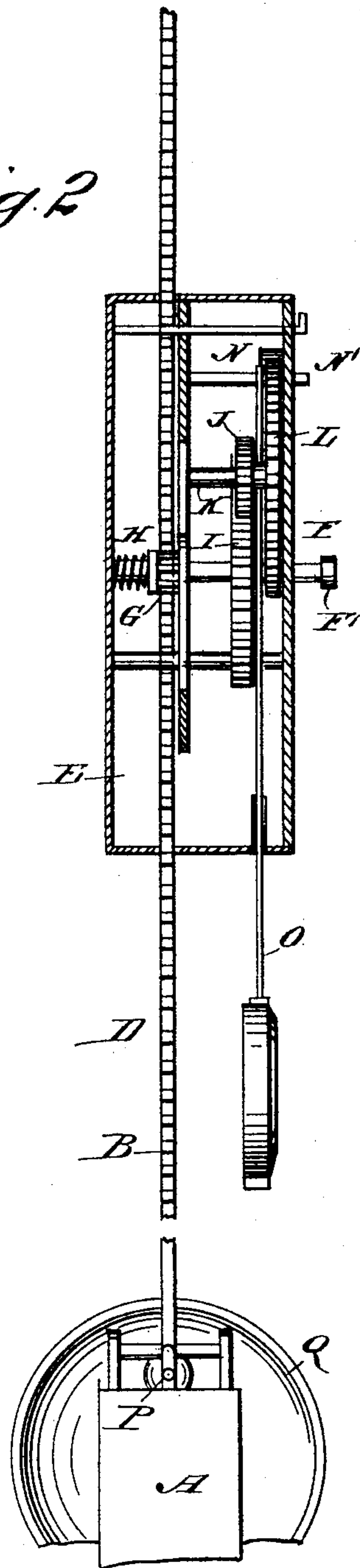
S. E. JONES.
TIME ALARM.

No. 459,402.

Patented Sept. 15, 1891.



WITNESSES:
J. McArdle.
C. Sedgwick



INVENTOR:
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UNITED STATES PATENT OFFICE.

SAMUEL E. JONES, OF CAÑON CITY, COLORADO.

TIME-ALARM.

SPECIFICATION forming part of Letters Patent No. 459,402, dated September 15, 1891.

Application filed December 16, 1890. Serial No. 374,855. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL E. JONES, of Cañon City, in the county of Fremont and State of Colorado, have invented a new and Improved Alarm, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved gravitation-alarm, which is simple and durable in construction, and adapted to sound an alarm at a given predetermined time.

The invention consists of a graduated rack set in a vertical position, a frame fitted to slide on the said rack and containing a train of gear-wheels controlled by a pendulum-escapement, one of said train of gear-wheels being in mesh with the said rack, and a gong adapted to be sounded by the said frame on reaching the lowermost position.

The invention also consists in certain parts and details and combinations of the same, as will be hereinafter fully described, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a front elevation of the improvement with parts in section; and Fig. 2 is a side elevation of the same, with the frame in section.

The improved alarm is provided with a suitably-constructed base A, on which is erected a post B, having on its front a graduation C, indicating hours, minutes, and subdivisions. On one edge of the post B are formed rack-teeth D, which terminate a suitable distance above the top of the base A. On the post B is fitted to slide vertically a frame or casing E, in which is mounted to turn and to slide transversely a main shaft F, projecting a suitable distance beyond the front plate of the frame or casing E, the outer end of said shaft being provided with a button F', adapted to be pressed by the operator.

On the main shaft F is secured a pinion G, in mesh with the rack-teeth D and adapted to be disengaged from the same by pressing the button F' so as to slide the shaft F rearward to move the said pinion out of mesh with the rack-teeth D. A spring H, secured in rear of casing E, presses against the rear face of the

pinion G so as to hold the latter in mesh with the rack-teeth D until moved out of mesh, as above described, by pressing the shaft F so as to compress the spring H. When the operator releases the pressure on the button F', the spring H forces the shaft F, consequently the pinion G, into its former normal position. (Illustrated in Fig. 2.) On the main shaft F is also secured a gear-wheel I, in mesh with the pinion J, secured on a shaft K, arranged transversely and mounted to turn in suitable bearings formed in the frame or casing E. On the shaft K is also secured an escapement-wheel L, adapted to be acted on by an escapement N of any approved construction and secured on the shaft N' mounted to rock in suitable bearings on the casing or frame E. The escapement-shaft N' is connected in the usual manner with a pendulum O, extending through the bottom of the casing to the outside. The under side of the casing or frame E is adapted to engage the free end of a striker P, provided on the top of the base A and adapted to sound a gong Q, also secured on the base A.

The operation is as follows: When the alarm is at rest, the frame or casing E is in a lowermost position, resting on top of the base A, the pinion G then being in a lowermost position and out of mesh with the rack-teeth D. When the operator desires to use the alarm, he presses on the button F' so as to move the pinion out of the path of the rack-teeth D, and then the operator lifts the frame or casing E to a desired position—that is, until the top of the casing indicates at the desired place on the graduation C. For instance, if it is desired to sound the gong Q fifty minutes after setting the alarm then the casing or frame E is moved up until the casing registers with the fifty-minute mark on the graduation C. When the desired place has been reached, the operator releases the pressure on the button F', so that the spring H moves the pinion G in mesh with the rack-teeth D. The operator then starts the pendulum O and releases the frame or casing E, so that the latter can slide downward by its own weight on the post B, the downward movement being gradual by the movement of the pendulum and the escapement N on the escapement-wheel L.

It is understood that the train of gear-

wheels connecting the rack-teeth D with the escapement is proportioned so that the frame or casing E moves downward until the pinion G leaves the last rack-tooth D at the time indicated. The moment the pinion G leaves the last tooth the frame E drops suddenly and strikes against the free end of the striker P, so that the gong Q is sounded, indicating that the time for which the alarm has been set is expired.

It will be seen that the alarm contains no actuating-springs, but depends solely on the gravitation of the casing E on the post B.

The alarm may be used for timing the cooking of food, in schools, &c.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A gravitation-alarm comprising a gong, a frame adapted to slide vertically and to actuate the said gong, and a train of gear-wheels controlled by a pendulum for regulating the downward movement of the said casing or frame, substantially as shown and described.

2. A gravitation-alarm comprising a post formed with a graduation and rack-teeth, a frame adapted to slide on the said post, and a train of gear-wheels in mesh with the said rack-teeth and controlled by a pendulum, substantially as shown and described.

3. A gravitation-alarm comprising a post formed with a graduation and rack-teeth, a frame adapted to slide on the said post, a train of gear-wheels in mesh with the said rack-teeth and controlled by a pendulum, and a

gong adapted to be sounded by the said frame on reaching its lowermost position, substantially as shown and described.

4. In a gravitation-alarm, the combination, with a post having rack-teeth, of a frame fitted to slide thereon, a pinion in mesh with the said rack-teeth, an escapement-wheel connected by a train of gear-wheels with the said pinion, and a pendulum-escapement acting on the said escapement-wheel, substantially as shown and described.

5. In a gravitation-alarm, the combination, with a post having rack-teeth, of a frame fitted to slide thereon, a pinion in mesh with the said rack-teeth, an escapement-wheel connected by a train of gear-wheels with the said pinion, a pendulum-escapement acting on the said escapement-wheel, and means, substantially as described, for throwing the said pinion out of mesh with the rack-teeth, as set forth.

6. In a gravitation-alarm, the combination, with a post having rack-teeth, of a frame fitted to slide thereon, a pinion in mesh with the said rack-teeth, an escapement-wheel connected by a train of gear-wheels with the said pinion, a pendulum-escapement acting on the said escapement-wheel, and a gong adapted to be sounded by the said frame on reaching its lowermost position, substantially as shown and described.

SAMUEL E. JONES.

Witnesses:

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