

(No Model.)

D. HEWITT.  
FIRE ALARM.

No. 500,329.

Patented June 27, 1893.

*Fig. 1.*

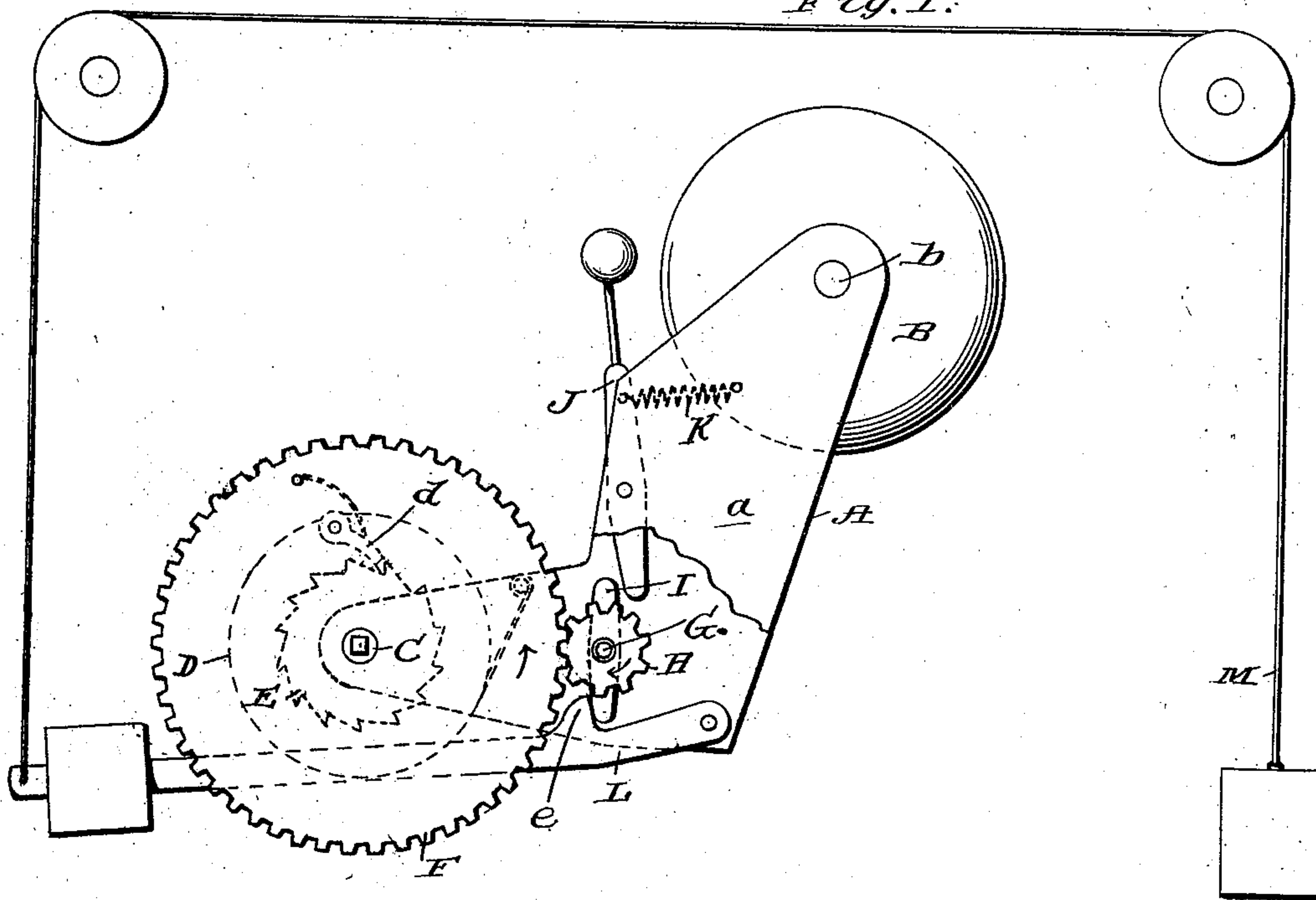
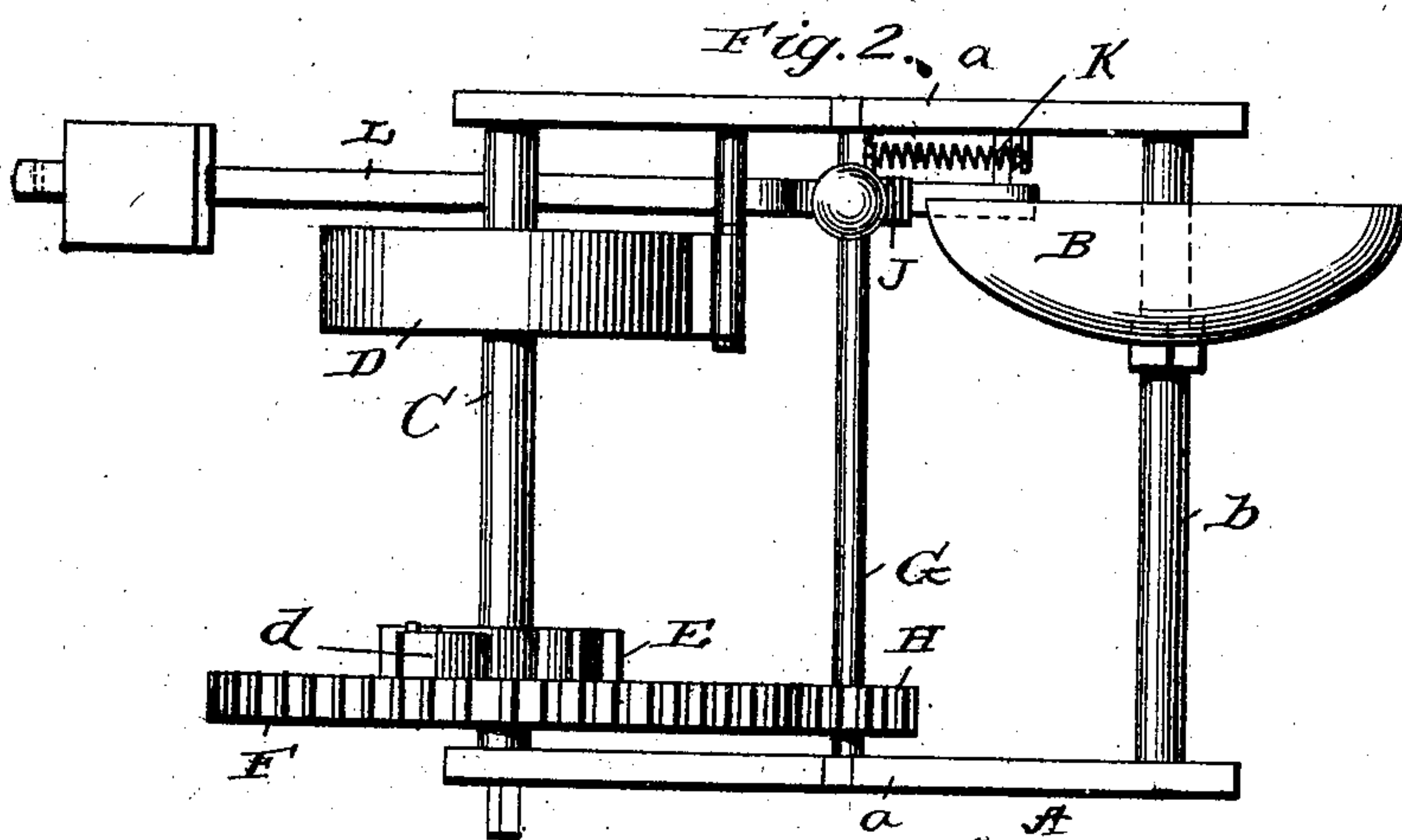


Fig. 2. a K



Witnesses:

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# UNITED STATES PATENT OFFICE.

DAVID HEWITT, OF MUSKEGON, MICHIGAN.

## FIRE-ALARM.

SPECIFICATION forming part of Letters Patent No. 500,329, dated June 27, 1893.

Application filed March 6, 1893. Serial No. 464,725. (No model.)

*To all whom it may concern:*

Be it known that I, DAVID HEWITT, a citizen of the United States, residing at Muskegon, in the county of Muskegon and State of Michigan, have invented certain new and useful Improvements in Fire-Alarms; and I do 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 improvements in that class of automatic fire alarms which are operated by the severance of a cord or wire or any fusible substance; and it has for its general object to provide such an alarm of a cheap, simple, and durable construction and one which will act positively to sound a protracted alarm when the cord is severed.

Other objects and advantages of the invention will be fully understood from the following description and claims when taken in connection with the accompanying drawings in which—

Figure 1, is a side elevation of my improved alarm; and Fig. 2, is a plan view of the same with the cord or wire removed.

Referring by letter to the said drawings:—A, indicates the main frame of my improved alarm, which preferably comprises side plates *a*, of the approximate form shown. These plates *a*, are connected at a point adjacent to their upper ends by a transverse bolt *b*, upon which the bell or gong B, is mounted; and the said plates are also connected, at a point adjacent to their lower ends, by the main drive shaft C, through the medium of which the bell hammer or clapper is actuated as will be presently described. This drive shaft C, is designed to be rotated by a suitable motor spring or weighted rope as D, and it is provided, preferably at one end with a fixed ratchet wheel E, and a loose gear wheel F; the latter of which carries a pawl *d*, in engagement with the wheel E, whereby it will be seen that when it is locked, as will be presently described, it will hold the spring contracted and will prevent the shaft from rotating.

Fixedly mounted upon a transverse shaft G, journaled in the plates *a*, is a pinion H, which meshes with the gear wheel F, as shown; and also mounted on the shaft G, is a trip

piece I, which is designed and adapted to engage and rock the clapper lever J. This lever is fulcrumed at an intermediate point in its length, as shown, and its upper portion is connected with the frame A, by a coiled spring K, whereby it will be seen that when the said lever is released by the trip piece its head will be carried violently against the bell and a loud sound will be made. The shafts C, and G, are normally held against rotation by the dog *e*, on the weighted lever L, which engages the trip piece I, as shown. This weighted lever is normally held in the position shown by the cord or wire M, which may have one of its ends secured or provided with a suitable counterbalance weight, spring or tension, as shown.

In the practice of my invention the alarm mechanism is placed at any suitable point in or on a building, and the cord or rope M, is stretched over sheaves or the like through the several rooms; the said cord being preferably arranged near chimneys and other points where a fire is likely to occur. Thus it will be seen that when a fire breaks out, the cord will be severed, the lever L, will be allowed to fall and the alarm mechanism will be set in motion.

By the provision of the mechanism described for actuating the clapper lever, it will be seen that the head of said lever will be repeatedly carried against the bell with great force, for a protracted length of time which is an important desideratum.

It will be noted from the foregoing description taken in connection with the accompanying drawings that my improved alarm is exceedingly simple; that it is positive in its action and that it embodies no parts that are liable to get out of order during the generally long period of its disuse.

In the foregoing description I have specifically described the construction of my improved alarm, in order to impart a full understanding of the same, but I do not desire to be understood as confining myself to such specific construction, as such changes or modifications may be made in practice as fairly fall within the scope of my invention.

Having described my invention, what I claim is—

1. In an automatic fire alarm, the combina-



tion of a bell or gong, the clapper lever, a spring tending to carry the lever against the bell, a rotary shaft G, a trip piece mounted on said shaft G, and engaging the clapper lever, 5 a suitable means for rotating the shaft, the lever arranged below the shaft G, and having a dog to engage and hold the trip piece and also having its free end weighted, and a cord having one of its ends connected to the free 10 end of the weighted lever and its opposite end secured or provided with a weight, substantially as specified.

2. In an automatic fire alarm, the combination with a bell or gong, a clapper lever, a 15 spring tending to carry the lever against the bell, a rotary shaft G, carrying a pinion, a trip piece mounted on said shaft and engaging the clapper lever, the drive shaft C, a mo-

tor spring or weighted rope for rotating the same, a ratchet wheel fixed on said shaft, and 20 a gear wheel loosely mounted on the shaft and meshing with the pinion of the shaft C, and carrying a pawl in engagement with the ratchet wheel; of a weighted lever having a dog adapted to engage and hold the trip piece 25 of the shaft G, and a cord having one of its ends connected to the weighted lever and its opposite end secured or provided with a weight, substantially as specified.

In testimony whereof I affix my signature in 30 presence of two witnesses.

DAVID HEWITT.

Witnesses:

S. A. ALDRICH,  
ADAM PYLE.