

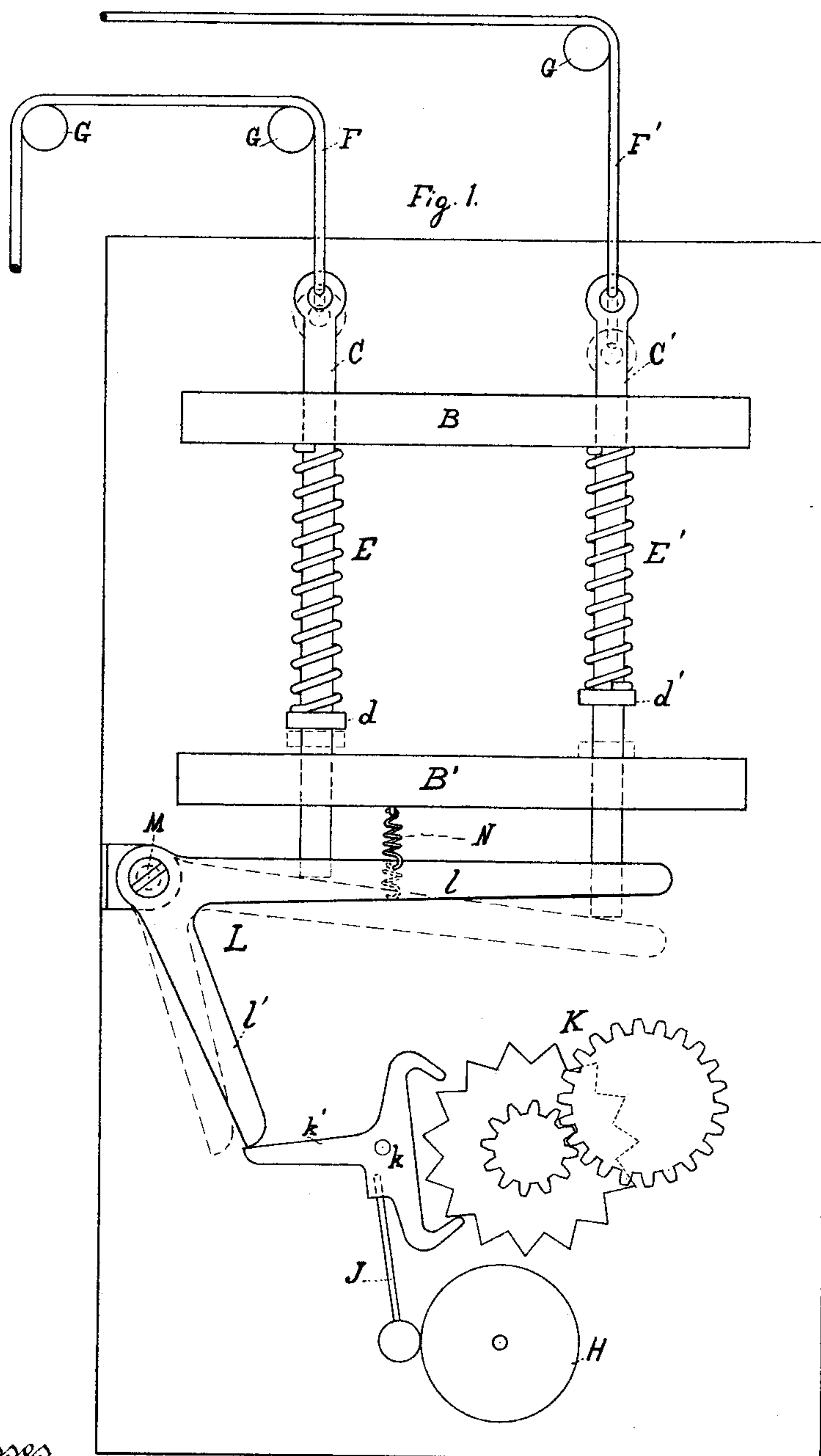
(No Model.)

W. B. MURRAY.

COMBINED FIRE AND BURGLAR ALARM.

No. 388,216.

Patented Aug. 21, 1888.



Witnesses
Pertho Wikstrand.
Emma F. Elmore.

Inventor
William B. Murray
By his Attorney
Jas. F. Williamson

UNITED STATES PATENT OFFICE.

WILLIAM B. MURRAY, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR TO
NATHAN UNDERWOOD, JR., AND EDWARD D. MACDONALD, OF
SAME PLACE.

COMBINED FIRE AND BURGLAR ALARM.

SPECIFICATION forming part of Letters Patent No. 388,216, dated August 21, 1888.

Application filed November 10, 1887. Serial No. 254,734. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. MURRAY, a citizen of the United States, and a resident of the city of Minneapolis, county of Hennepin, State of Minnesota, have invented a certain new and useful Combined Fire and Burglar Alarm, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to fire and burglar alarms, and it has for its object to simplify the construction of existing mechanism and provide a device of superior efficiency for the purpose.

My invention consists of the construction hereinafter fully described and particularly claimed.

In the drawing, like letters referring to like parts, the figure is a front elevation of my invention.

A represents an inclosing-case of any suitable kind with its front plate removed.

B B' are a pair of parallel guides, arranged crosswise of this case in the upper part of the same, and provided with coincident small holes in the same vertical plane. Rods C C', provided with nuts or spring-seats *d d'*, are placed with their extremities in these holes. Coiled resistance-springs E E' encircle these rods, bearing against the underside of the upper guide, B, and the tops of the spring-seats or nuts *d d'*, and tend to force the rods downward until the nuts rest on the top of the lower guide, B'.

To the upper end of the rods C C', in any suitable way, are attached combustible cords F and F', which extend over suitable supports, as the sheaves or guides G, to the various parts of a room or building most likely to take fire or to be disturbed by burglars, and are made fast at their extremities to some suitable support after having first been drawn taut against the resistance-springs E and E'. This part of the construction is identical with that described in my application for patent filed September 9, 1887, Serial No. 249,207, and constitutes what I call the "alarm-cord and its tension device."

In the case A, at some convenient point below the tension device, is placed a bell, H,

and the clock mechanism K, to whose escapement *k* is rigidly attached a bell-hammer, J, in proper position to strike the bell. The escapement *k* is provided with the lever *k'*.

L is a bell-crank lever, whose two arms, *l l'*, are at an acute angle to each other. This lever is fulcrumed to the case by the pivot-pin M through a hole at the junction of the two arms, intermediate the tension devices and the clock-work. The arm *l* extends across the case directly under the lower extremities of the rods C C', and the arm *l'* rests against the upper and outer surface of the lever *k'* in its normal position, locking the escapement *k* in its inoperative position.

A coiled spring, N, is fastened at one end to the guide B and at the other to the upper part of the long arm *l* of the lever L, and serves to keep the arm *l* always in contact with the lowermost rod, C or C', and to return the lever L to its normal position, where *l'* will lock the escapement *k*.

The operation is as follows: When for any reason any cord, as F or F', is made slack, the rod C or C', to which it is attached, is forced downward by its spring E or E' and rocks the lever L on its pivot M. The short arm *l* is thereby disengaged from the lever *k'* of the escapement *k*. The clock-work is thus set free to run and an alarm is sounded. The cord F or F' will be made slack whenever any part of it is burned in two or any movable part of the building—as a window or door—to which it may be attached is moved from its normal (closed) position.

Of course it will be readily understood that an indefinite number of cords and tension devices may be used—as, for example, one for each room, or two be used for each room, one for fire and the other for burglars.

It should be noted that the tension devices move different lengths in their guides B B', according to their nearness or remoteness from the pivotal point of the lever L. The rod C', for example, must move through a longer distance than the rod C to disengage *l'* from *k'*.

The retracting-spring N may be of any suitable kind and attached in any suitable way. All that is necessary is that it tend to keep

the lever L in its normal position, and that it be of less power than any one of the tension devices.

It will be understood that instead of using 5 springs the rods C C', &c., may be made of sufficient weight to afford the requisite tension on the cords F F', &c. In that event each rod would be provided with a stop to limit its upward as well as its downward motion. So, 10 also, the lever L might be retracted to its normal position by a counter-weight and cord acting over a suitable sheave or guide instead of by the spring, as shown.

The clock is the ordinary well known spring- 15 actuated movement, and no description of the same is deemed necessary.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

In combination, clock-alarm mechanism K k k' J H, tension device B B' C E d, bell-crank 20 lever L, fulcrumed at M and having its arm l in the path of the movable part C of said tension device, and having its other arm in engagement with the lever-arm k' of the clock-escapement k when in its normal position, a 25 retraction-spring, N, for returning said lever to its normal position, and the tight combustible cord F, attached at one end to the movable part C of said tension device, extending directly or indirectly to the parts of a room or 30 building likely to take fire or to be disturbed by burglars, as and for the purpose set forth.

WILLIAM B. MURRAY.

In presence of—

EMMA F. ELMORE,

JAS. F. WILLIAMSON.