

(No Model.)

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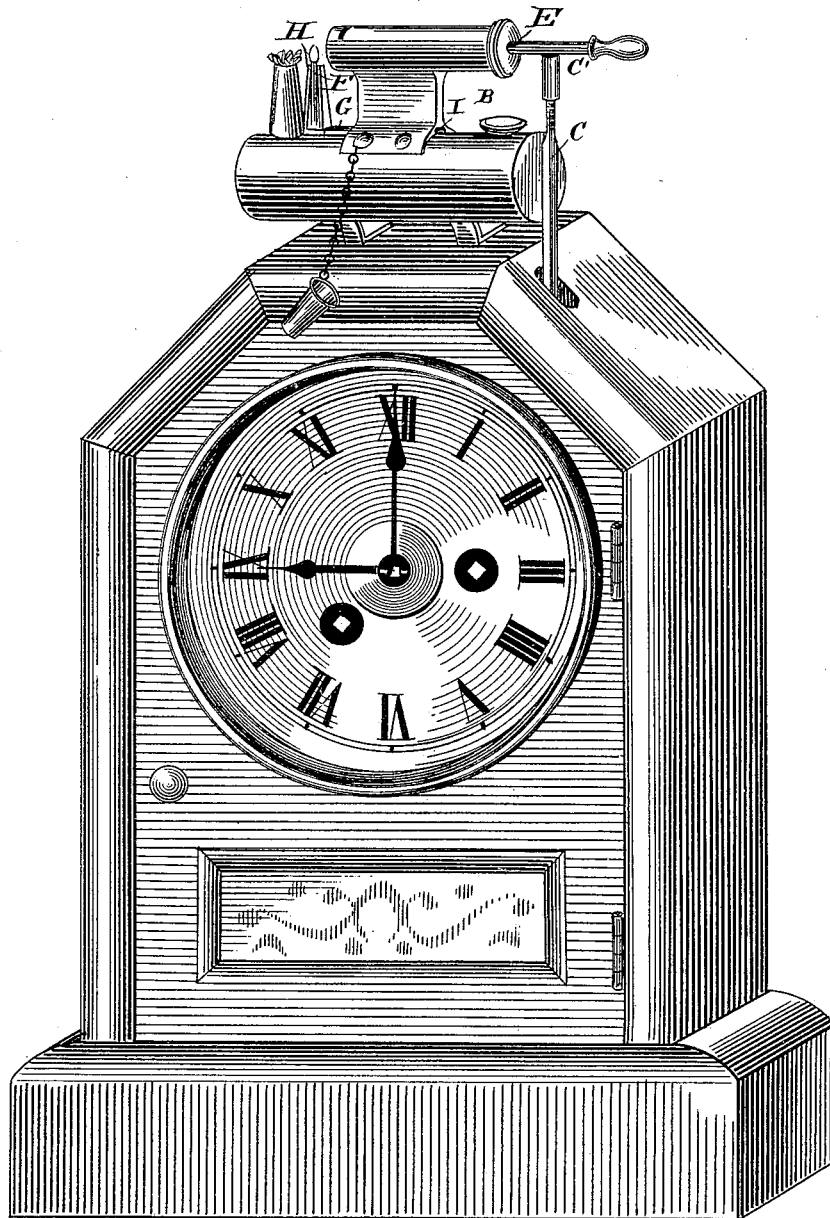
J. ISRAEL.

ALARM.

No. 386,132.

Patented July 17, 1888.

Fig. 1.



WITNESSES,

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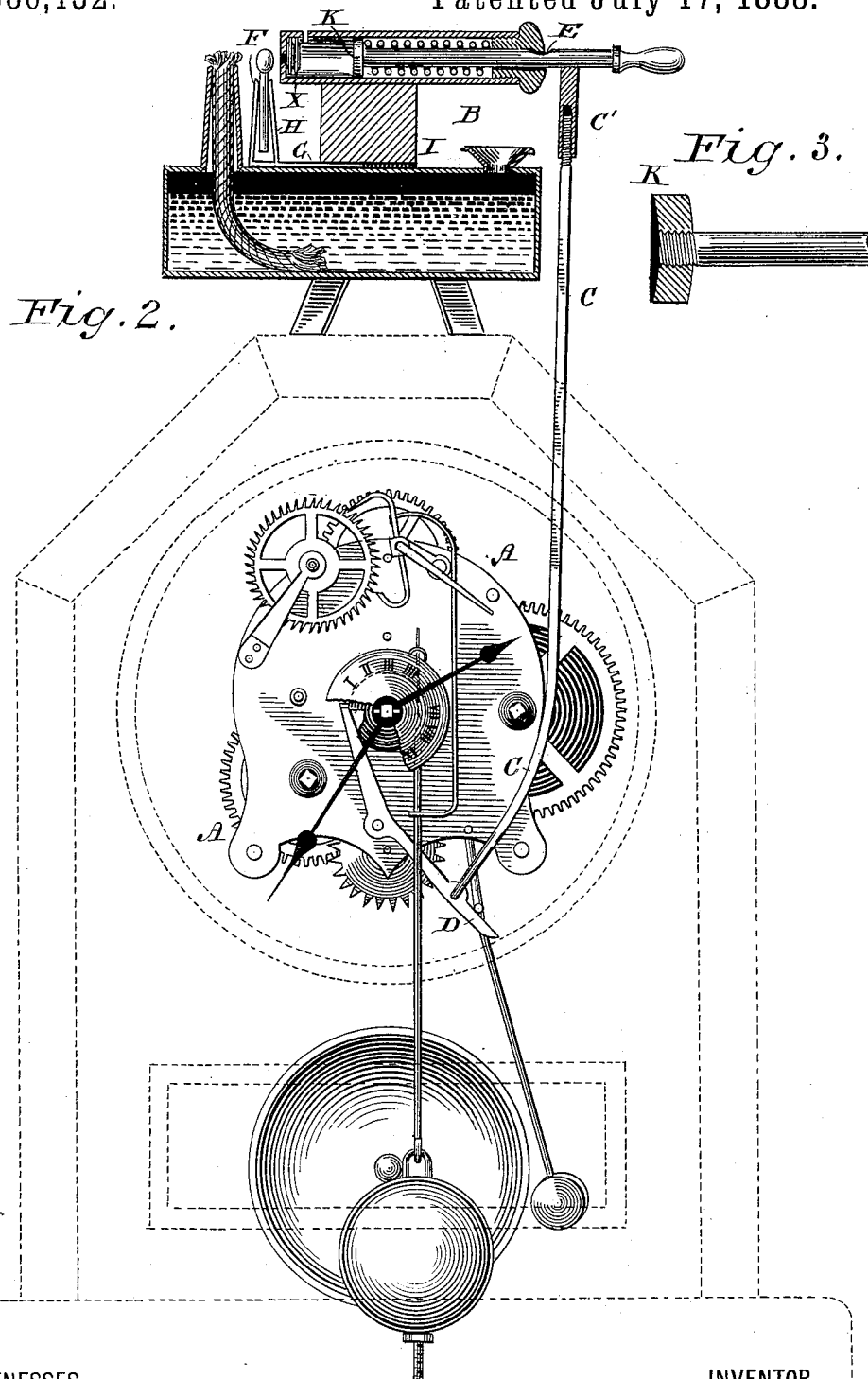
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UNITED STATES PATENT OFFICE.

JOHN ISRAEL, OF ST. LOUIS, MISSOURI.

ALARM.

SPECIFICATION forming part of Letters Patent No. 386,132, dated July 17, 1888.

Application filed February 2, 1888. Serial No. 262,793. (No model.)

To all whom it may concern:

Be it known that I, JOHN ISRAEL, of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Alarm Mechanisms, of which the following is a specification, reference being had to the accompanying drawings.

My improvements relate to the class of detonating alarms shown in my United States Patents Nos. 193,002 and 224,017.

The object of my present improvements is, first, to provide an adjustable supporting-rod in connection with time mechanism for supporting the spring-plunger when drawn out in position for being thrown by the spring to explode the fulminate; second, to provide an adjustable match-holder to insure the lighting of a lamp under different conditions—that is to say, when explosives of various sizes are employed for creating an alarm.

In the accompanying drawings, Figure 1 is a perspective view of a clock with my improved detonating alarm mechanism applied to it. Fig. 2 shows part of the interior clock mechanism, and its relation sufficiently for firing purposes to the alarm mechanism, which is shown in section on top of the clock. Fig. 3 shows a concave-faced plunger-head or hammer detached and drawn on a large scale for better illustration, which it is desirable to use in practice, as is well known.

Referring to the letters upon the drawings, A indicates any ordinary clock mechanism with an alarm attachment.

B indicates my firing burglar-alarm mechanism, similar to that shown in my said patents, applied to the upper part of the clock-case.

C is a rod connected at its lower end to a bell-crank lever, D, which latter is a part of the ordinary alarm mechanism of a clock not necessary to describe in detail. It is sufficient to say that the rod C is so connected with the bell-crank lever as to support the spring-plunger when it is drawn back so that it will stay in position. The notch E of the spring-plunger I make so slight that it will not hold unless the plunger is supported. When the bell-crank lever turns by the operation of the clock-alarm mechanism at a time predeter-

mined, as is usual, it will cause the rod to drop slightly and allow the spring-plunger to fire the fulminate X at the same time that the alarm of the clock mechanism begins to sound.

I have found in practice that it is exceedingly difficult to make rigid supporting-rods of the exact length required in manufacturing large quantities of them, and I therefore provide a longitudinally-adjustable rod adapted to be readily applied and adjusted at any time to the proper length. This I do by making a screw-thread upon the upper end of the rod and applying to it a screw-cap, C', which may be adjusted up and down as required.

I have found in practice that for different purposes varying charges or amounts of fulminate to be exploded are required under different circumstances, and that when a match is supported too near to the fulminate of a given size it will be blown away, whereas it would serve its purpose of lighting perfectly with a smaller fulminate. In other words, I have found that it is necessary to be able to adjust the match-holder to different distances from the fulminate, according to circumstances. Accordingly I provide a match-holder, F, consisting of a horizontal base, G, and clamps H, the base adapted to slide out and in the recess I, whereby the match-holder may be adjusted nearer to or farther from the lamp-wick, as required. The result is I can light the lamp with certainty from every explosion of fulminate by simply adjusting the match-holder properly.

I have found in practice that a convex or plain hammer-face on the plunger-head will not so uniformly explode the fulminate as is desirable. I therefore recommend the use of a dish-shaped or concave plunger-head or hammer, K, which, even with slight force in a spring, serves to cut the fulminate and explode it with certainty every time, as is well known.

Having described my improvements, what I claim, and desire to secure by Letters Patent, is—

1. The combination, with a clock alarm mechanism having a firing alarm mechanism connected to it, of the connecting supporting-rod C, the screw-cap C', working on the upper end of said rod to vary the length of the con-

nection between the clock alarm mechanism and firing alarm mechanism, and the spring-plunger of the firing mechanism, substantially as set forth.

- 5 2. The combination, with the lamp and firing-cylinder, of an alarm mechanism, the horizontally-adjustable sliding match-holder F, provided with a base, G, and the clamps H, whereby the base G may slide in the recess I

to adjust the match to different distances from the lamp, substantially as set forth.

In testimony whereof I have hereunto subscribed my name.

JOHN ISRAEL.

Witnesses:

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