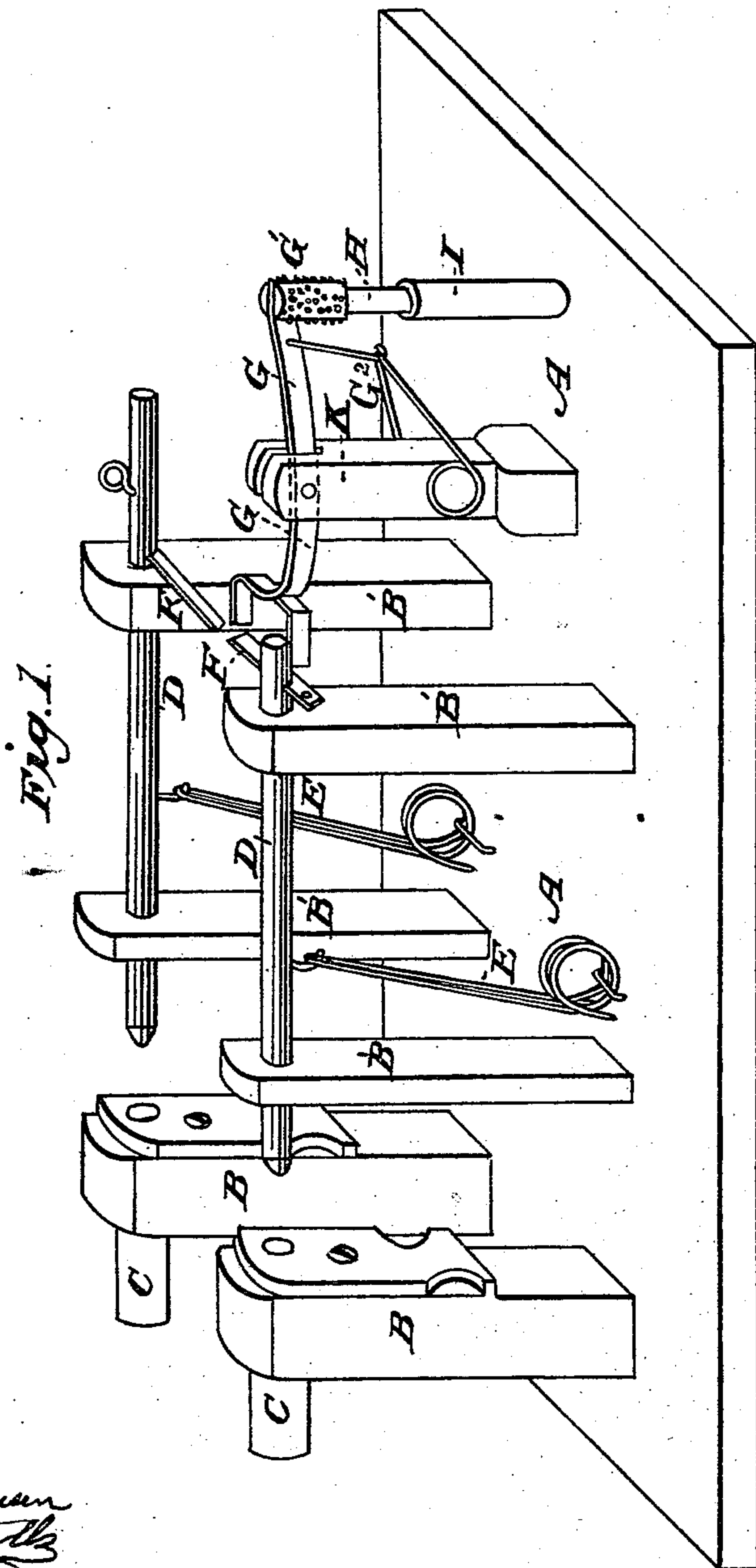


J. COULSON.

Fire Alarm.

No. 84,997.

Patented Dec. 15, 1868.



WITNESSES:

Chas F. Blauvelt
H. C. Smith

INVENTOR

John Coulson
By W. B. Alvord
Att'y -



JESSE COULSON, OF OSKALOOSA, IOWA.

Letters Patent No. 84,997, dated December 15, 1868.

IMPROVEMENT IN FIRE-ALARMS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JESSE COULSON, of Oskaloosa, in the county of Mahaska, and State of Iowa, have invented a new and useful Improvement in Fire-Alarms; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, in which it is shown in perspective.

My improvement consists in an arrangement of mechanism wherein plungers are caused, by springs, to strike against and explode percussion-cartridges whenever a fire, occurring in the vicinity of the machine, shall develop heat enough to melt a fusible composition, which, while firm, holds a trigger in readiness to act as soon as the composition is melted.

In the annexed drawings—

A is the base, by which the mechanism is attached in any exposed part of the structure where it is to be used.

B B are standards, which contain tubes, C, to hold ordinary copper percussion-cartridges, such as are in common use, except that no ball is used.

The plungers D D are placed in holes in the standards B', so arranged that the point of the plunger, when it is thrown forward, shall strike against the base of the cartridge containing the percussion-powder, in such manner as to cause it to explode. This movement is effected by springs, E E, the tension of which is applied to throw the plungers against the cartridge.

The plungers, when drawn back, are held by two triggers, F F, which catch into notches in the plungers.

A lever, G, is pivoted to the standard K, and is bifurcated, as shown, having one division set higher than the other, so that it shall act upon one of the triggers, to discharge one cartridge, before the other trigger is touched.

The opposite end of the lever rests upon a cylinder,

G', which I propose to paint black, and construct with many sharp points, like a rasp, so that it may more readily receive and communicate heat to the composition-cylinder or block H, which rests upon a post, I.

This composition-cylinder, H, is made of a mixture of beeswax and rosin, so combined as to melt at a temperature a few degrees above that to which the air may be raised by ordinary causes. The proportions must be varied according to climatic conditions. Thus, one part of beeswax mixed with fifteen parts of rosin will fuse at 110°, and one part of beeswax with twenty parts of rosin will fuse at 135°.

Other analogous fusible compounds may be used.

Whenever the heat conducted by the cylinder G' causes the composition to soften, and yield to the tension of the spring G², drawing on the lever G, the lever will slowly descend, discharging first one plunger against its cartridge, and afterwards the other.

Instead of one lever, two may be used, supported on blocks of different degrees of fusibility.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of the composition-block H, the roughened cylinder G', lever G, spring G², and triggers F, for discharging the plungers, arranged substantially as set forth.

2. The bifurcated lever G, triggers F, and roughened cylinder G', in combination with a fusible support, H, when so arranged as to act upon the triggers successively, with the melting of the support, substantially as set forth.

The above specification of my invention signed by me, this 27th day of March, 1868.

JESSE COULSON.

Witnesses:

WILLIAM P. McPHERSON,
DAVID COULSON.