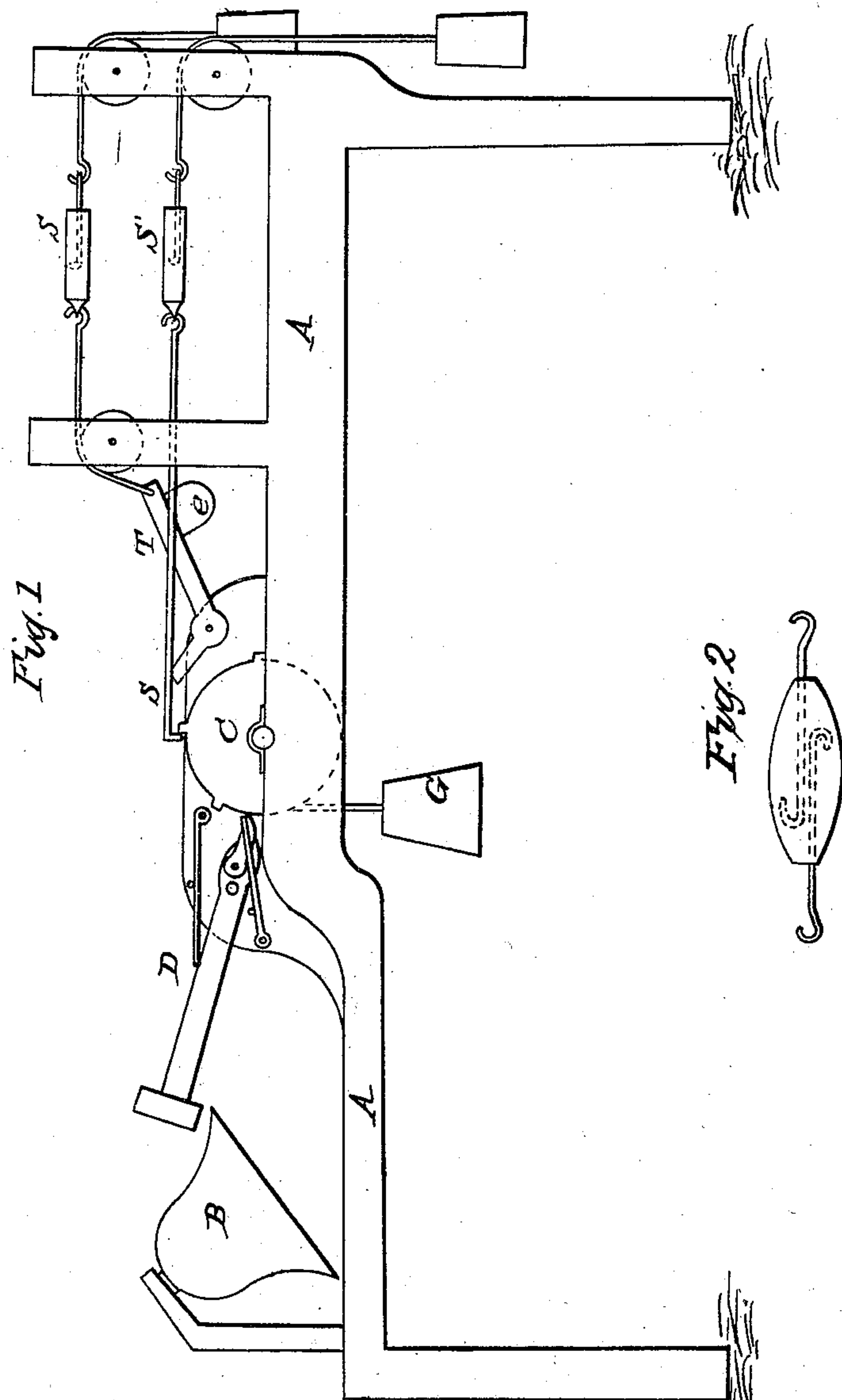


R. POWERS.  
Fire Alarm.

No. 54,202.

Patented April 24, 1866.



Witnesses  
E A Thomas  
B W Thomas,

Inventor  
Rufus Powers

# UNITED STATES PATENT OFFICE.

RUFUS POWERS, OF PRESCOTT, MASSACHUSETTS.

## IMPROVED FIRE-ALARM.

Specification forming part of Letters Patent No. **54,202**, dated April 24, 1866.

*To all whom it may concern:*

Be it known that I, RUFUS POWERS, of Prescott, in the county of Hampshire, State of Massachusetts, have invented a new and useful Improved Fire-Detector; and I do hereby declare the following to be a full, clear, and exact description of the same, due reference being had to the accompanying drawings.

The object of my invention is to detect or give notice of any fire or excessive heat endangering property at the earliest moment practicable, whereby many disastrous fires may be prevented, and much valuable property saved.

To these ends its nature consists in placing in such places as may be best certain connections which operate at a certain degree of heat, and connecting them by wires or other suitable means to an alarm or other apparatus to make their action known.

It is well known that many substances melt or become soft at various degrees of heat, and by selecting one that melts at that point or degree beyond which it is not deemed safe to go, and so constructing my connections that when heated to that degree they shall act and connect this action, or make it give warning, I accomplish the desired ends.

Figure 1 (see drawings) shows a side view of an embodiment of my invention connected to an alarm-bell, and Fig. 2 shows a variation of the way of making the connections.

A A is a frame supporting the several parts. B is the bell; D, the hammer with its springs; C, the barrel with pins to operate the hammer; C', the weight with cord winding on C;

S, the catch holding the barrel, when the weight or cord is wound up, until the action of the connections S S', or one of them, releases it.

T is a lever with a weight, X, attached, which operates to release the catch on the operation of S.

The connections S S' may be made by inserting a piece of wire loosely into the open end of a tube and filling around it with the melting substance, or two wires may be laid in a mold and the substance cast around them, as shown in Fig. 2; or, if thought best, the substance may be made into wire and thus carried to all exposed points.

The operation is evident. On the melting or softening of material used the wires part, and thus release the alarm or give notice of the heat.

I am aware that threads have been used to place in exposed places, so that on being burnt off they shall give an alarm, and also that fusible plugs have been used to indicate danger. These I do not claim; but

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

The use of fastenings or connections for wires in fire-alarms, so constructed with soft metal or other substance that they shall melt and release the wires or give the alarm upon being heated.

RUFUS POWERS.

Witnesses:

E. A. THOMAS,  
B. M. THOMAS.