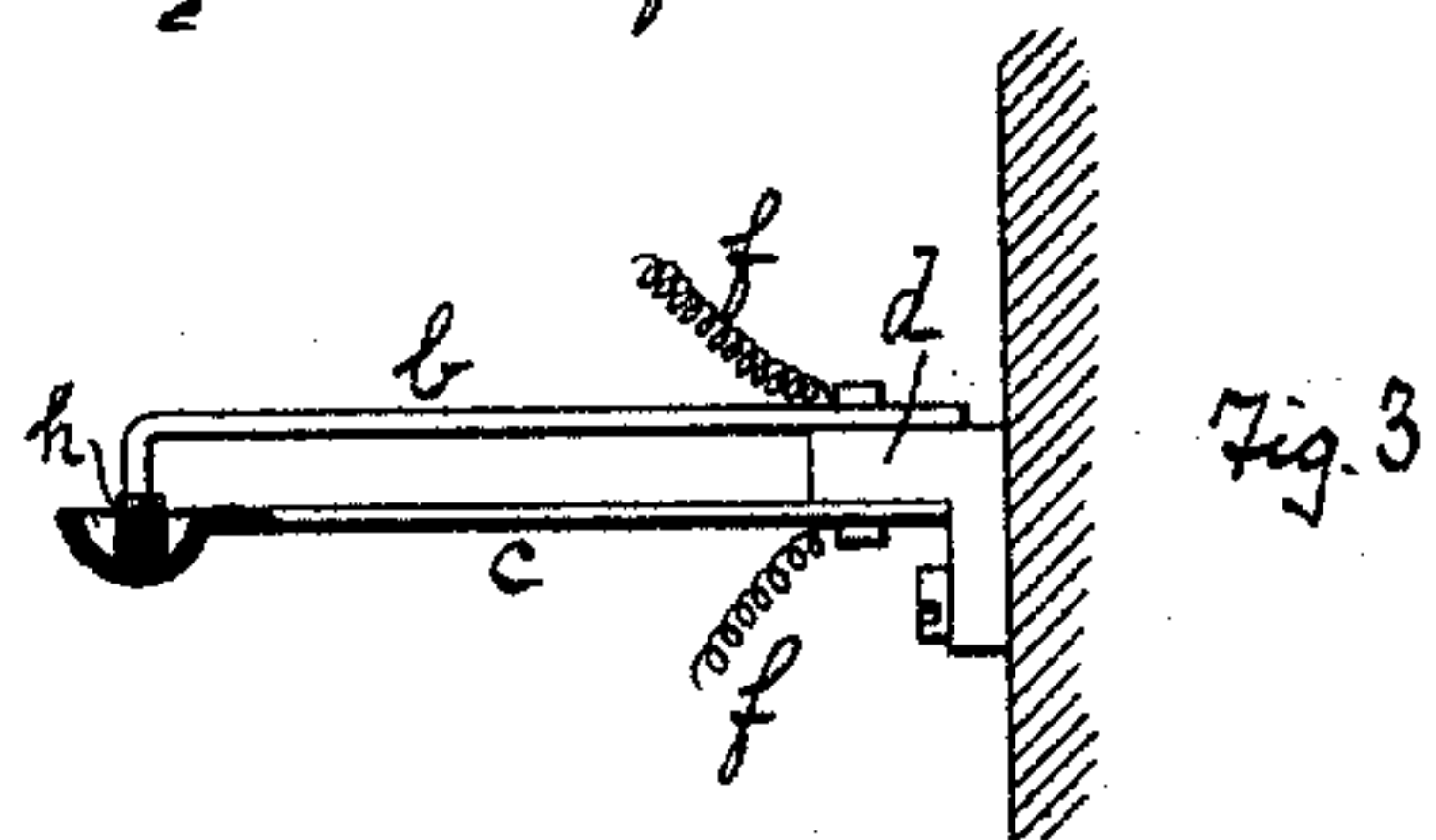
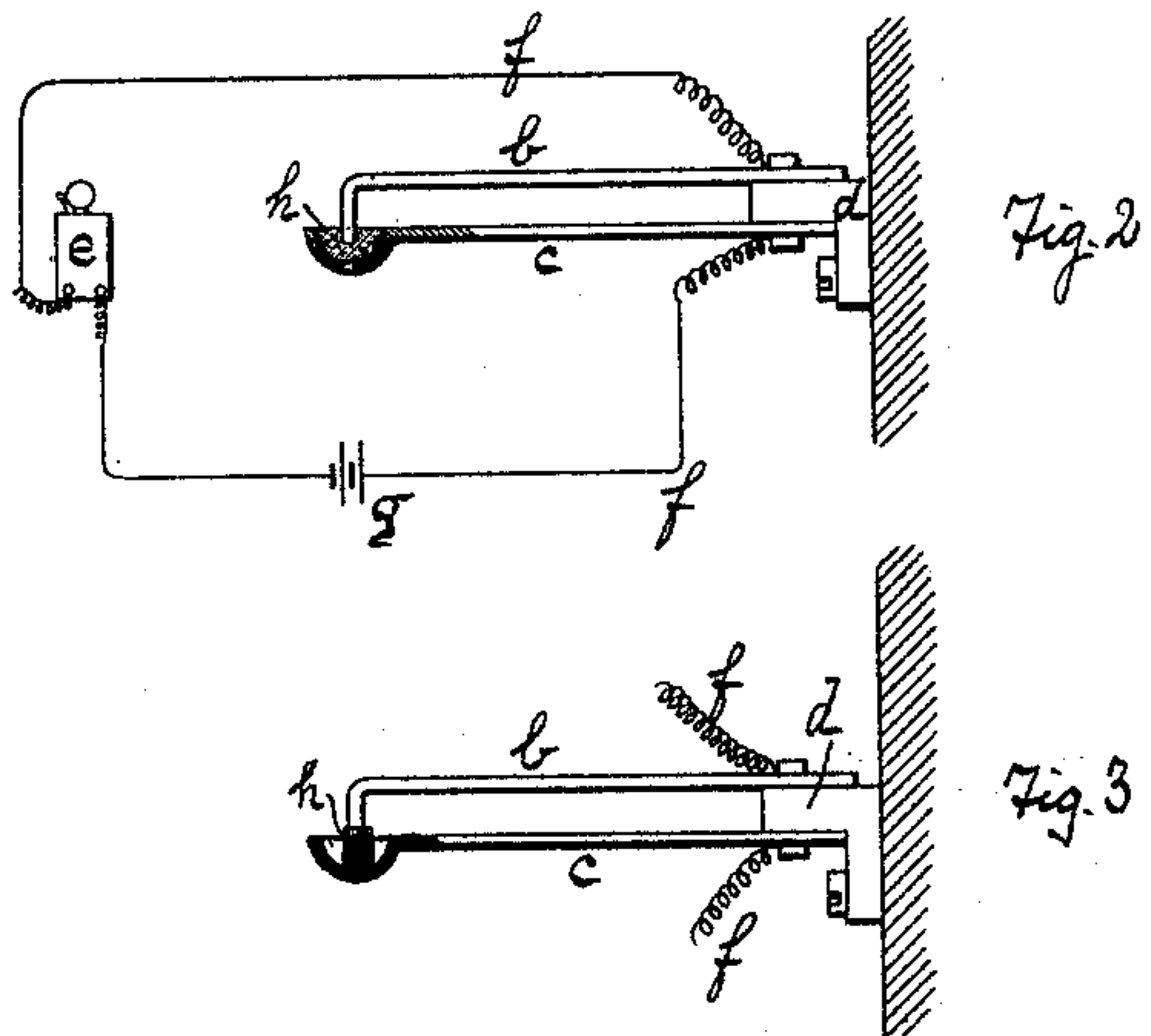
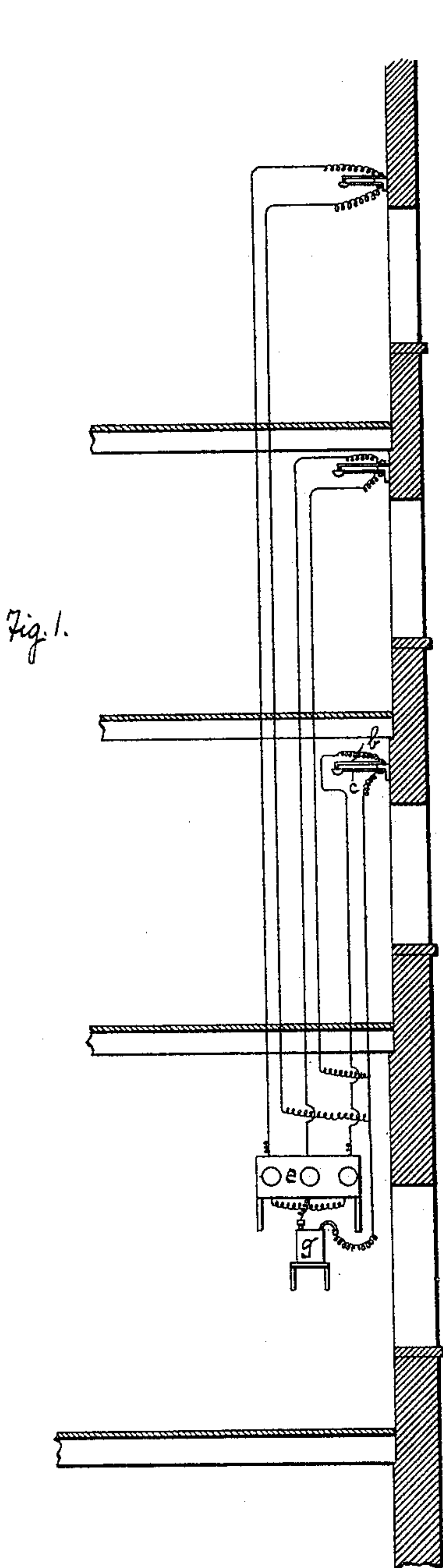


(No Model.)

C. B. HEAD.
ELECTRIC FIRE SIGNAL.

No. 414,155.

Patented Oct. 29, 1889.



Witnesses
J. K. Smith
C. Newell.

Inventor
Charles B. Head
by W. B. Russell & Sons
his attorneys

UNITED STATES PATENT OFFICE.

CHARLES B. HEAD, OF ALLEGHENY, PENNSYLVANIA.

ELECTRIC FIRE-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 414,155, dated October 29, 1889.

Application filed April 15, 1889. Serial No. 307,223. (No model.)

To all whom it may concern:

Be it known that I, CHARLES B. HEAD, of Allegheny, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Electric Fire-Signals, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical sectional view of a building provided with my improved apparatus. Fig. 2 is an enlarged vertical sectional view of the terminals of the system and the interposed fusible metallic plug. Fig. 3 is a similar view illustrating a modification.

Like symbols of reference indicate like parts in each.

Referring to Fig. 2, *b* and *c* are rigid metal rods or plates, which are bolted to a suitable insulating-block *d*, by means of which they may be attached to the wall of a room to be protected from fire. These rods are connected with a suitable alarm-signal *e* by conductors *f*, in the line of which is interposed a battery *g*. The end of one of the rods *b* is cup-shaped, and in the cup is placed a piece *h* of a metal alloy fusible at a low temperature, which is in constant contact with the end of the other rod, so that the circuit in which the battery and signal are included is constantly closed.

The signal is one of a well-known sort, which gives an alarm only when the circuit is broken, the advantage of which is that the alarm will be given not only on the occurrence of fire, as hereinafter explained, but also if for any cause the battery or electric circuit should become disordered.

The operation is as follows: If a fire should occur in the neighborhood of the rods *b* *c*, the heat will melt the metal piece *h*, which in liquid form will flow through a small hole formed in the bottom of the cup-shaped end of rod *c*, thus breaking the circuit and giving the alarm.

The apparatus shown in Fig. 3 is substantially the same, with the structural difference that there is no hole in the cup, but that the cup is made of such size relatively to the piece of fusible alloy that when it melts it shall sink in the cup out of contact from the end of the other rod.

In Fig. 1 I show the connection of several of the circuit-controlling devices arranged in different rooms of a building with a common battery and alarm-signal or annunciator *e*.

I am aware that the terminals of an electric signaling-circuit have heretofore been connected by a fusible connection; but this I do not claim.

I claim—

1. In an electrical signaling apparatus, the combination, with an electric circuit embracing a battery and signaling device, of two rigid terminals, one of which is provided with a cup into which the other terminal dips, an interposed insulator which separates the rigid terminals, and an interposed fusible plug, substantially as and for the purposes described.

2. In an electrical signaling apparatus, the combination, with an electric circuit embracing a battery and signaling device, of two rigid terminals, one of which is provided with a perforated cup into which the other terminal dips, an interposed insulator which separates the rigid terminals, and an interposed fusible plug, substantially as and for the purposes described.

In testimony whereof I have hereunto set my hand this 13th day of February, A. D. 1889.

CHARLES B. HEAD.

Witnesses:

W. B. CORWIN,
T. W. BAKEWELL.