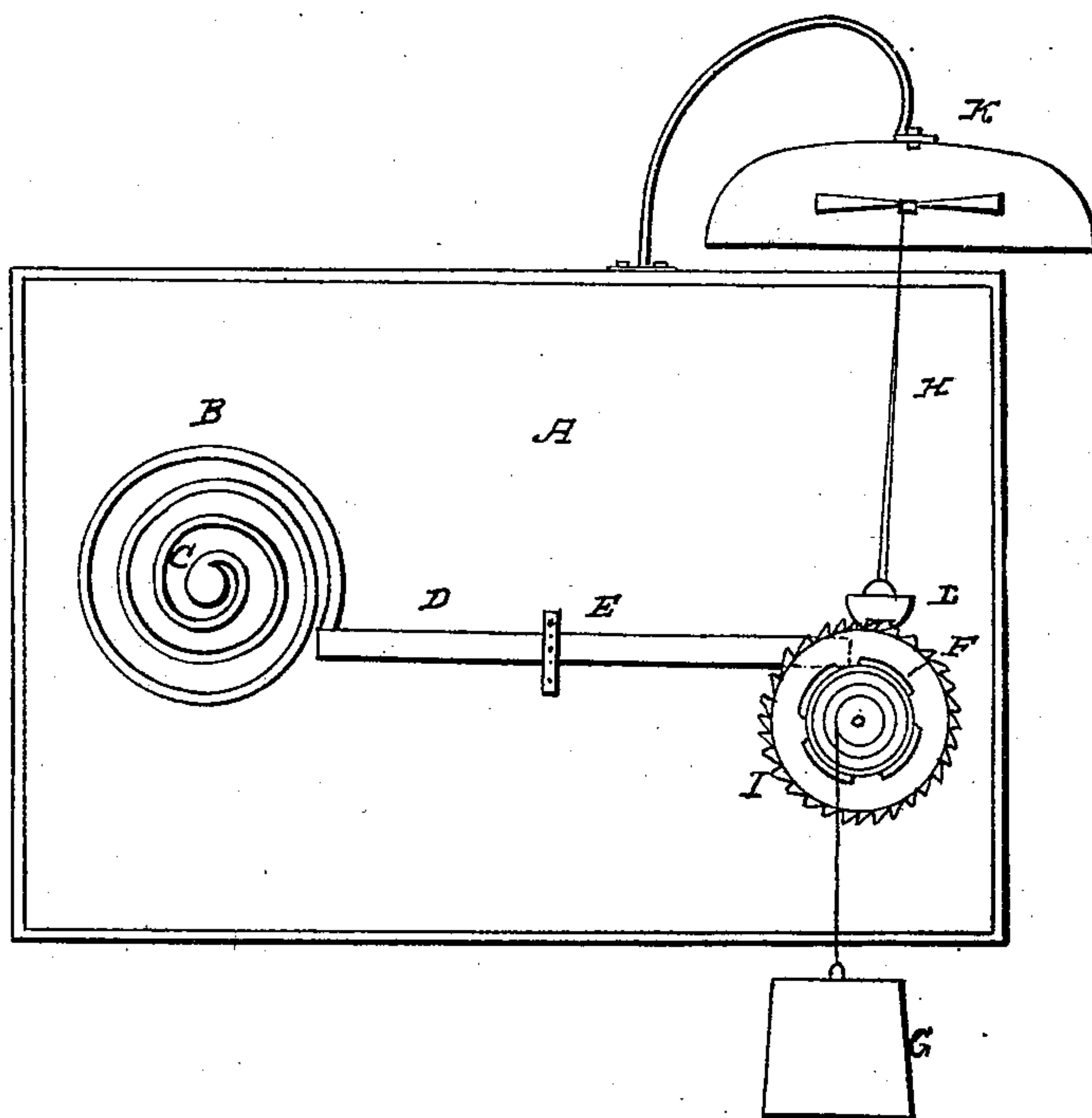


T. GOODWIN.

Fire Alarm.

No. 1,956.

Patented Jan'y 30, 1841.



WITNESSES:

Joshua Lawrence
John C. Gurnish

INVENTOR.

Stephen Goodwin

UNITED STATES PATENT OFFICE.

THEO. GOODWIN, OF EXETER, NEW HAMPSHIRE, ASSIGNOR TO JOSIAH BROWN.

MACHINE FOR ALARM OF FIRE.

Specification of Letters Patent No. 1,956, dated January 30, 1841; Antedated July 30, 1840.

To all whom it may concern:

Be it known that I, THEOPHILUS GOODWIN, of Exeter, in the county of Rockingham and State of New Hampshire, plater,
5 did on or before July 4, 1836, invent a new and useful Machine or Instrument for Giving Alarm of Fire, and have used the same in my premises and not elsewhere, which
10 machine I denominate the "Expanding Metallic Fire-Alarm," and I hereby declare that the following is a full and exact description.

The nature of my invention consists in applying the expanding power of heat upon
15 metals to start a hammer acting upon a bell, by means of machinery similar to that of a common alarm clock.

To enable others to make and use my invention I will proceed to describe its construction, and operation.
20

I prepare a piece of wood six by nine inches square, as shown at A. in the accompanying drawing, upon this is fastened the metallic coil marked B. with a screw at c.
25 The coil is composed of iron and zinc, a plate of each metal being soldered together one-half an inch wide, and about one-tenth of an inch thick, and from twelve to fifteen inches long. This plate is bent into circle
30 of about three inches diameter, the zinc being of greater expansion is coiled in such a manner as to bring the zinc upon the outer sides to prevent the spreading of the coil and to secure its direct straight forward action upon the lever, this coil fastened with
35 a screw at the center, can be turned so as to set the instrument to any given temperature, a few degrees of heat higher than that to which the instrument is set expanding
40 the metallic coil disengages the lever D. from the ratch wheel and the alarm is given, the lever D, on which the end of the coil rests, is four and a half inches long, one-fifth of an inch wide, and one-twelfth
45 of an inch thick, hung in the middle with a pin at E. the end of the lever touching the ratch wheel F, which is fastened to the

shaft and cylinder to which the weight G is attached by a small cord, which produces a rotary movement to the cylinder and
50 scape wheel marked i. which puts in motion the hammer H, that strikes the bell K. by means of the pallet L. that plays into the notches or teeth, of the scape wheel.

The movement, or machinery of this instrument, is constructed precisely like that
55 of a common alarm clock, and may be operated by any similar contrivance, and any person skilled in the art of clock making, can make and construct the instrument
60 without further explanation.

In addition to the above described mode, I contemplate using a plate of metal or composition of metals, of any convenient length and width, fastened at each end by
65 means of screws or pins, the expanding power of heat upon this plate will cause it to rise between the fastenings, in circular form to start an alarm, by means of a lever
70 or other contrivance resting upon the middle of the plate. I also contemplate using two plates of metal meeting together at the center and screwed to a piece of wood at the outer ends. The application of heat to
75 those plates will produce the same effect as above described. I further contemplate using bars or wires of various kinds of metals both straight and crooked, or circular, and of various lengths and sizes, many are the
80 methods that I contemplate the applying of heat upon those metals, in conformity with the principles of the foregoing description.

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

The employment of the expansion of
85 metals by heat to start an alarm of fire, in the manner and for the purpose herein described, using any other of the solid metals and applying them in any other shape to produce the same effect.

THEOPHILUS GOODWIN.

Witnesses:

JOTHAM LAURENCE,
P. B. SWETT.