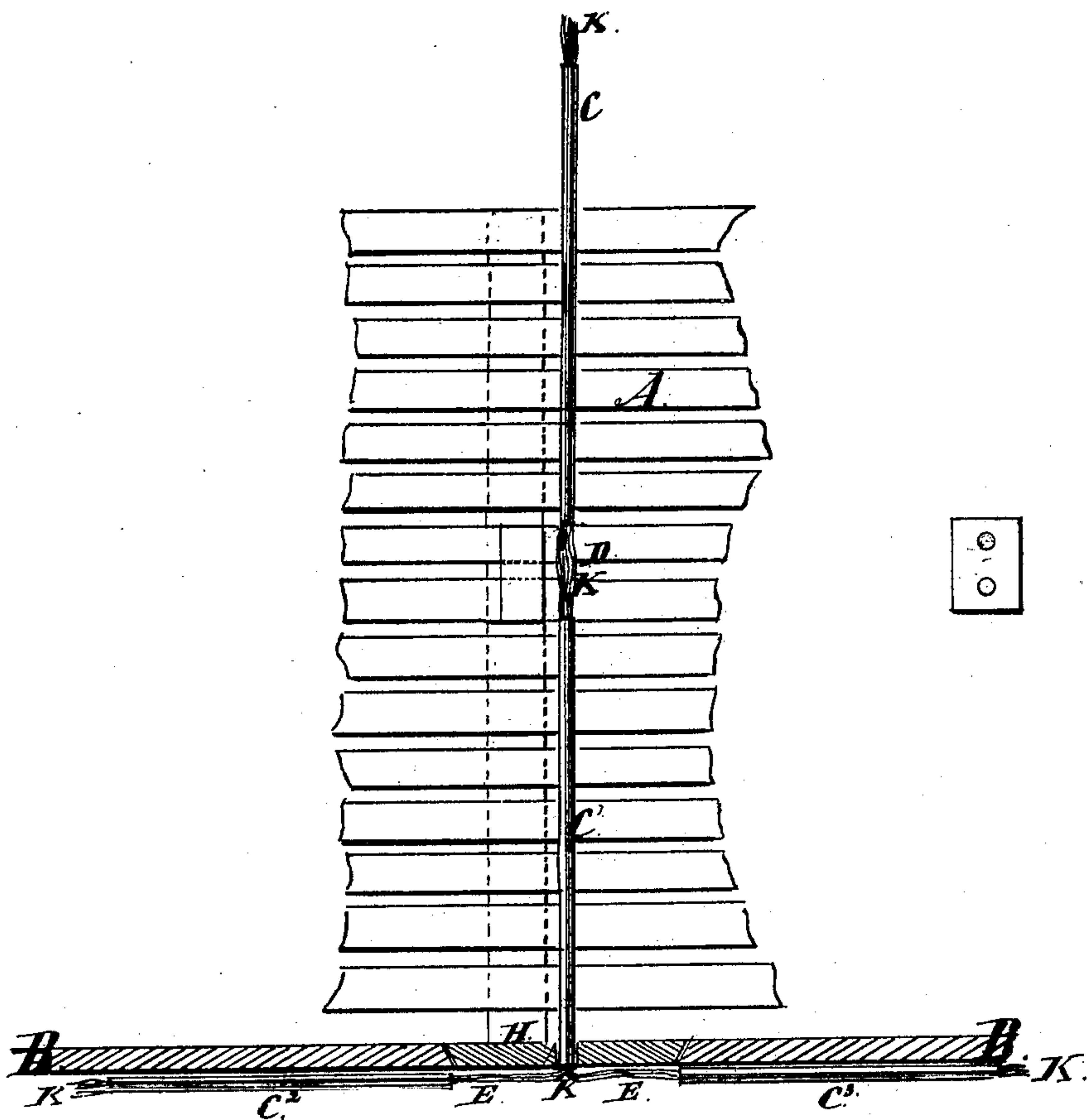


E. A. HILL.

ELECTRIC ANNUNCIATOR AND FIRE ALARM CONDUCTORS.

No. 176,784.

Patented May 2, 1876.



Witnesses:

Levin L. Brown.
Edw. B. Mealy and

Inventor:

Edward A. Hill
by Coburn & Munsey
his Atty.

UNITED STATES PATENT OFFICE.

EDWARD A. HILL, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN ELECTRIC ANNUNCIATORS AND FIRE-ALARM CONDUCTORS.

Specification forming part of Letters Patent No. **176,784**, dated May 2, 1876; application filed April 21, 1873.

To all whom it may concern:

Be it known that I, EDWARD A. HILL, of Chicago, in the county of Cook and State of Illinois, have invented certain Improvements in Means for Inclosing and Running Wires to Form the Circuits of Electrical Annunciators and Fire-Alarms, of which the following is a specification:

There has hitherto been great difficulty experienced in fitting a building (hotel or dwelling-house) with the wires to constitute the numerous circuits required by electrical annunciators and fire or burglar alarms. It is desirable that the wires shall be concealed from view, guarded from accidental injury, and protected from moisture; that they shall be always readily accessible for purposes of electrical tests and to repair breaks; and also that they shall be so disposed that new or additional wires may be supplied to form additional circuits.

To provide a means for readily accomplishing these several results is the object of this invention.

I propose to provide a series of tubes or pipes broken at each turning, and at intervals along their lengths, by open spaces, to afford access to the bundle of several wires which are run through said tubes. These tubes or pipes are laid throughout the building, preferably supported by the lathing, before the plastering is applied, and under the flooring before it is put down.

The object being to conceal or cover the pipes, they may be put through the walls or between the walls, or between the floors and ceilings, in manner desired, it being only necessary that the breaks in said pipes should be accessible through pockets or traps or other apertures in the floor, ceiling, or walls opposite said breaks, all of which will be hereinafter more fully explained.

The accompanying drawing, which forms a part of this specification, represents said series of pipes, or a portion thereof, as applied.

In the said drawing, A represents a portion of a lathed wall before the plastering is applied. B is a section of the flooring. C C¹ C² C³ are several of a series of small tubes or pipes secured to the lathing, or elsewhere, wherever it may be desired to run the wires of the annunciator or other circuits. The several tubes are separated from each other by

an interval. The interval at D is for the purpose of taking out one of the wires and breaking it to form terminals for key, which may be placed by the side of the break.

The breaks at E E are to accommodate the bend or change of direction from a horizontal to a perpendicular or vertical direction.

The break D may be covered or concealed by the plate of the key, and the breaks E are below the flooring B and concealed thereby. The flooring at this point is cut and a removable trap, H, inserted, to form what is technically termed a "pocket" to render the break accessible. These pipes, in series, are extended throughout the entire building, with breaks at every turning and at every place where a key is to be inserted, and also with breaks when proceeding vertically at every floor, and in every place where they can be properly concealed, and yet be made accessible. The wires to form the numerous circuits are pushed through these pipes and led to their destination.

Where a series of rooms occur one above another the wires for the whole series are run up a single pipe series extending to the uppermost.

The single return-wire of the circuit, common to the whole of the other wires, is inclosed with the smaller wires of the separate circuits, so that the circuits may be tested at any of the breaks.

Wires for new circuits may be added by simply pushing them through the tubes, commencing at one of the breaks and continuing through all the tubes.

The wires are indicated in the drawing by the letter K, and are several in number, to supply the number of circuits required.

Having thus described my invention, that which I claim as new, and desire to secure by Letters Patent, is—

The combination, with the wires of a series of circuits, of a series of inclosing tubes or pipes arranged within the walls or floors, either or both, of a building, and separated from each other by breaks accessible from the exterior of the walls or floors, substantially as and for the purposes set forth.

EDWARD A. HILL.

Witnesses:

J. W. MUNDAY,
HEINRICH F. BRUNS.