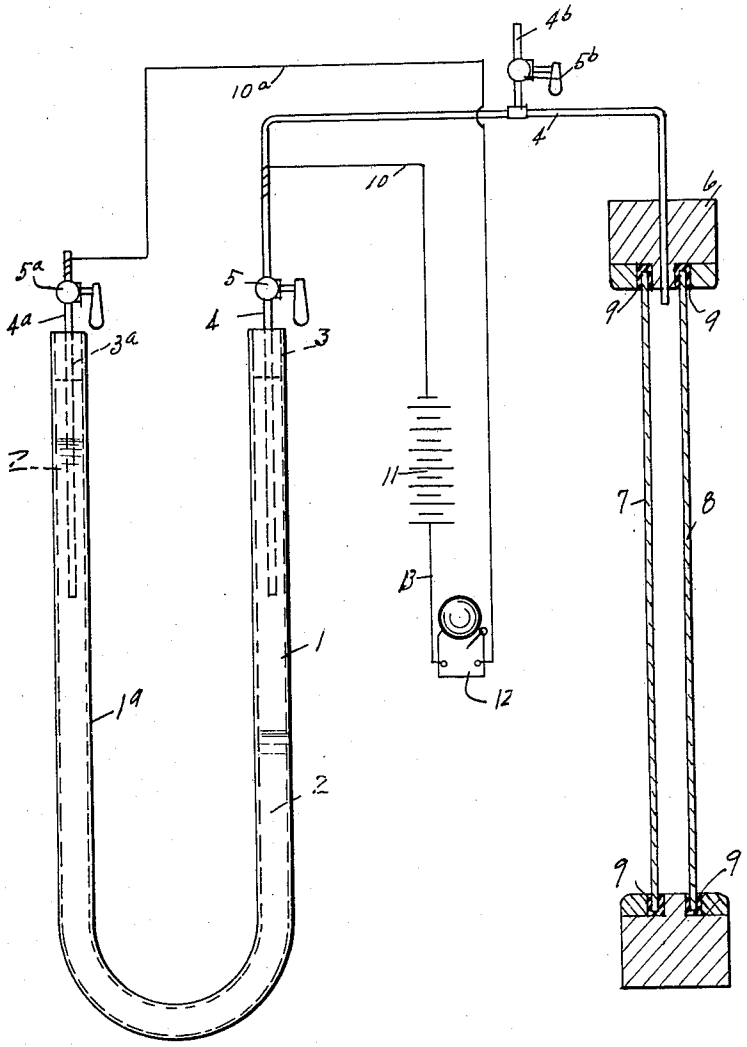
A. JULIAN.

ELECTRICAL ALARM SYSTEM.

APPLICATION FILED AUG. 17, 1914.

1,150,204.

Patented Aug. 17, 1915.



Witnesses:
Frank C. H. Fowler
Emma Kroger.

Inventor
Arthur Julian.
By Fred P. Goins,
Attorney

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ARTHUR JULIAN, OF SEATTLE, WASHINGTON.

ELECTRICAL ALARM SYSTEM.

1,150,204. Specification of Letters Patent. Patented Aug. 17, 1915.

Application filed August 17, 1914. Serial No. 857,055.

To all whom it may concern:

Be it known that I, ARTHUR JULIAN, a subject of Great Britain, and a resident of Seattle, Washington, have invented certain new and useful Improvements in Electrical Alarm Systems, of which the following is a full, true, and exact specification.

My invention relates to electrical alarm systems and has for its principal object to provide an air-controllable alarm in which the venting of impounded air is all that is necessary to cause an electrical connection to be made which closes a circuit between the source of current and a signaling device of any suitable character.

My invention will be more fully hereinafter described and explained, illustrated in the accompanying drawings and pointed out in the appended claim.

In the drawings, the figure is an elevation of my device attached to a window having double panes of glass and used as a burglar alarm.

Referring now more particularly to the drawings, numerals 1 and 1^a designate the legs of a U-shaped tube which are partially filled with fluid, indicated at 2. The legs 1 and 1^a of the body are closed by insulated stoppers 3 and 3^a respectively. Fine pipes 4 and 4^a pass through the stoppers 3 and 3^a respectively and into the said legs 1 and 1^a respectively, the ends of both of these pipes being submerged in the inclosed fluid within the said tubes when the level of the fluid in both of the tubes is the same. The pipes 4 and 4^a are provided with cocks 5 and 5^a respectively. The pipe 4^a is continued only a short distance beyond the cock 5^a while the pipe 4 is continued until it pierces the sash, 6, of a window, terminating in the inclosed space between the panes of glass 7 and 8 which are preferably set with rubber or some other material calculated to give an air-tight joint, as indicated at 9. Wires 10 and 10^a connect the pipes 4 and 4^a, respectively, to a source of electrical energy 11 and an annunciator 12. A wire 13 completes the connection between the annunciator and the said source of electrical energy 11. The circuit is shown, open, being opened by simply compressing or increasing the air in the leg 1, pipe 4, and the space between the panes of glass 7 and 8, and this may be accomplished by any convenient means, such, for example, as by blowing into the short pipe 4^b, which communicates with the pipe 4, and then turning the cock 5^b to prevent the escape of the air. The added pressure in the leg 1 causes the fluid 2 to be forced down in the leg 1 until it breaks the contact between the pipe 4 and the fluid 2, both the cocks 5 and 5^a being open. When either of the panes of glass 7 and 8 are broken the impounded air escapes and the pressure in the leg 1 is released, thereby allowing the fluid to flow back up to its normal level and thus make a contact between the pipe 4 and the fluid, which contact closes the circuit to the annunciator 12, which causes the alarm.

While I have shown my device operated by an increased air-pressure, it is evident that if a partial vacuum were created in the leg 1, the pipe 4 and the space between the panes of glass 7 and 8 the fluid would rise above the normal in the leg 1 until the contact had been broken between the fluid and the pipe 4^a.

Other minor changes will no doubt readily suggest themselves to others skilled in the art without departing from the spirit and scope of the invention and I therefore desire to avoid being limited to the exact form shown and described except as pointed out in the appended claim.

My device is adapted for use in burglar-proof safes, vaults, fire-alarm systems, business houses, offices, residences, etc.

Having described my invention, what I claim as new and desire to protect by Letters Patent is—

In a burglar-alarm device, the combination of a fluid-containing U-shaped tube, insulated stoppers for closing both ends of the tube, a source of electrical energy and conducting wires between the same and the fluid within the tube whereby an electrical circuit is completed, a double-paned window the panes whereof are in spaced relation

with respect to each other so as to make an air-tight compartment therebetween, fine tube connections between the said air-tight compartment and one of the legs of the tube and a cock-controlled tube which communicates with the first mentioned tube and through which air may be forced to compress the fluid and interrupt the electrical circuit.

ARTHUR JULIAN.

Witnesses:
FRED P. GORIN,
EMMA KROGER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."