

No. 894,284.

PATENTED JULY 28, 1908.

E. PFEIFER.

ALARM.

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Fig. 1.

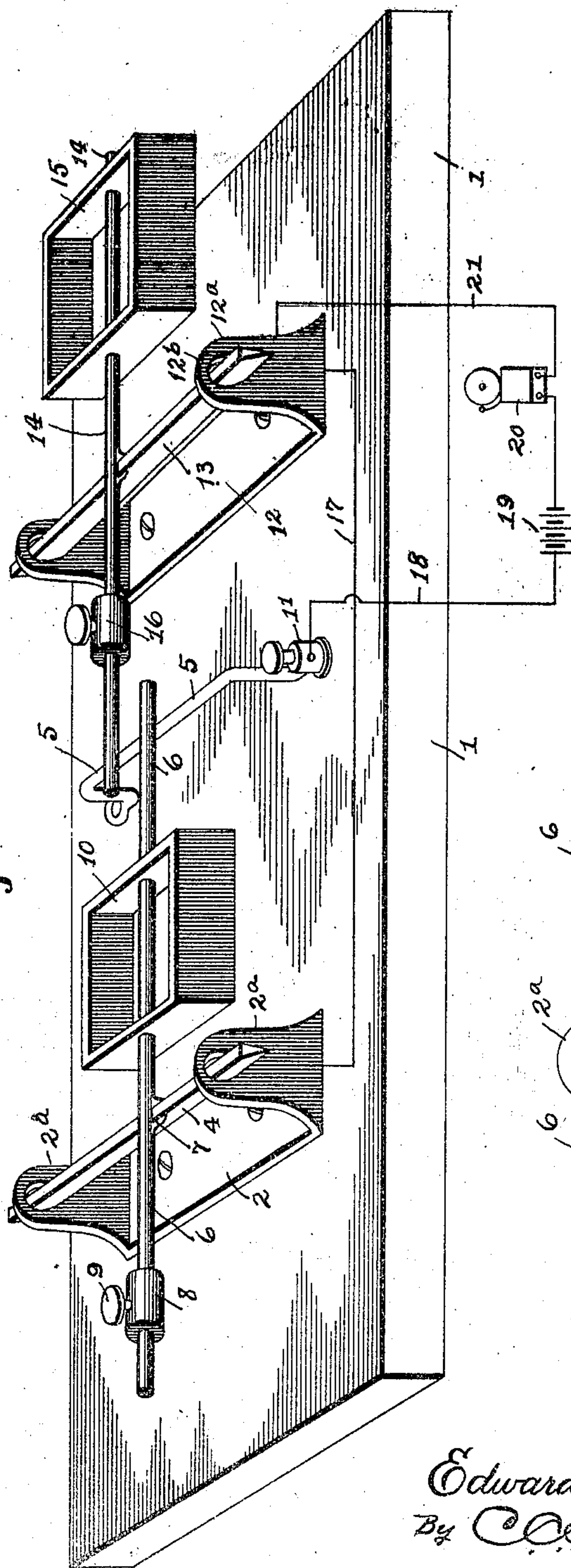
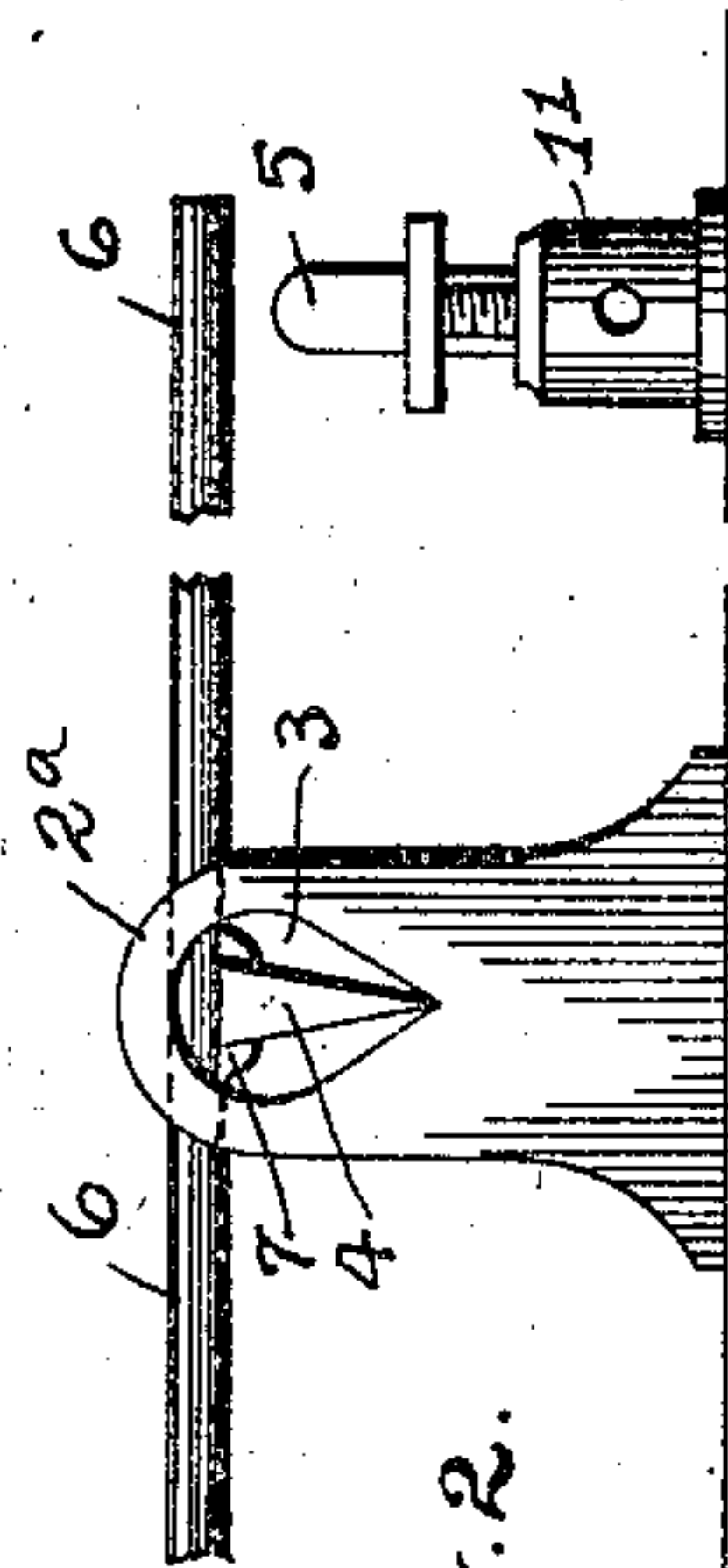


Fig. 2.



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UNITED STATES PATENT OFFICE.

EDWARD PFEIFER, OF COLUMBUS, OHIO.

ALARM.

No. 894,284.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EDWARD PFEIFER, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Alarms, of which the following is a specification.

My invention relates to the improvement of alarms and the objects of my invention are to provide improved means whereby the presence of escaping gas or water, or the presence of an unnatural degree of heat in a room, will be indicated by the ringing of a bell; to construct my improved device in a simple and inexpensive form and to produce certain improvements the details of construction of which will be pointed out hereinafter. These objects I accomplish in the manner illustrated in the accompanying drawing, in which:

Figure 1 is a view in perspective of my improved alarm mechanism, and, Fig. 2 is a side elevation of a portion of said mechanism, certain parts being omitted for the sake of clearness in illustration.

Similar numerals refer to similar parts throughout the several views.

In carrying out my invention, I employ a suitable supporting base 1 therefor, which may be, as shown, in the nature of an oblong board or platform. Upon this base toward one end thereof, which we will term the inner end, I support a bracket 2 which comprises a transversely arranged plate from the ends of which extend vertically upward parallel arms 2^a. In the upper portion of each of these bracket arms, I form an opening such as is indicated at 3, the lower portion of each of said openings being of V-form. Supported in these openings are the end portions of a horizontal bar 4, said bar being of wedge shape in cross section or being formed with a knife edge on its lower side, said knife edge bearing in the lower ends of the openings 3. At a point opposite and in front of the bracket 2, I support transversely upon said base 1 a metallic contact rod or bar 5, the downwardly bent ends of which are suitably attached to said base. 6 represents a rod which extends at right angles with the bar 4 and contact rod 5, said rod lying upon the bar 4 and having downwardly extending jaws 7 which engage opposite sides of said bar. On the inner side of the bracket 2, the rod 6 carries a weight body 8 which is adjustable longitudinally on said bar and which is adapted

to be held at any desired point on the latter through the medium of a set screw 9. Between the bar 4 and the rod 5, the rod 6 passes through the sides of and is rigidly connected with a box or receptacle 10, while the outer end of said rod 6 beyond said box is normally held slightly above and out of contact with the rod 5. This position of the rod 6 is attained by moving the weight 8 on said rod to a position which will insure the balancing of said weight and said box 10 and insure the support of the knife edge bar 4 in an upright position in the openings 3.

With one end of the rod 5, I connect a suitable electric wire binding post 11. In front of the rod 5, I provide a transverse bracket 12 which corresponds in form with the bracket 2 and which as prescribed for the latter, has upwardly extending end arms indicated at 12^a and openings 12^b in said arms corresponding with the openings 3 of the arms 2^a. These bracket arms 12^a have extending through and supported in the openings thereof the ends of a bar 13, which corresponds in form with the bar 4 and which is crossed centrally by a rod 14 which is suitably secured to said bar. This rod 14 carries on its forward or outer end a box or receptacle 15 and on its inner portion which extends over the rod 5 as prescribed for the outer end portion of the rod 6, it carries a longitudinal adjustable weight 16, by moving which to the proper point on said rod 14, the bar 13 is so balanced as to be supported upon its lower knife edge in the V-shaped opening terminations of the bracket arms 12^a.

As indicated in a diagrammatical manner, the brackets 12 and 2 are connected by a wire 17, and a wire 18 connects the binding post 11 through a battery 19 with one post of an electric bell 20, while the remaining post thereof is connected by a wire 21 with the bracket 12.

In utilizing my invention, the box or receptacle 10 is designed to contain a desirable amount of suitable water absorbing material, such as wood, chlorid of lime, sponge or any of the numerous well known water or moisture absorbents. As will be obvious, however, these absorbing materials might be omitted from the box and the box itself formed of a suitable water or moisture absorbent.

The device which I have described may be suitably located or supported within the room of a building and in case there should

be an undue amount of water in the room where said device is contained, such as might occur through the breakage of a water pipe or other similar accident, it is obvious that the moisture laden atmosphere coming into contact with the absorbent material contained in the box or receptacle 10, must result in such material taking up a certain amount of the moisture from the atmosphere and in a consequent sufficient increase in the weight of said box to depress the outer end portion of the rod 6 until the latter contacts with the transverse contact rod 5. By this contact it is obvious that an electric circuit will be closed through the battery and bell heretofore described, causing a ringing of the bell and indicating that undesirable conditions exist in the room in which the device is placed. The box receptacle 15 may be made to contain a material of a porous nature which will readily absorb gas, the latter displacing air which might have previously been contained in the pores of the material.

It will thus be seen that in case of the formation of an undue amount of gas in a room where the device is used, the displacement of the air in and about the box 15 and its contents by the lighter gas and the presence of gas above said box, will result in the latter moving upward sufficiently to cause a downward movement of the inner end of the rod 14 and a consequent contact of the latter with the contact rod 5, thereby producing through the arrangement of wires and the employment of the bell and battery heretofore described, a ringing action of said bell and an indication that an undue amount of gas exists in the room where the device is located.

It will be understood from the foregoing description of the construction and operation

of my device, that the same may be produced in a comparatively simple and inexpensive form and that it will effectually operate to sound an alarm in case of the escape of gas or water in a room. It is also evident that when the device herein described is located at a comparatively high point in a room, an undue amount of heat in said room may result in the lighter heated atmosphere causing a sufficient upward movement of the receptacle 15, to produce the result heretofore described when gas is present.

What I claim, is:

In a device of the character described, the combination with a pair of supports, of longitudinally extending rods pivotally supported from said supports, a transversely disposed contact rod, a member adapted to be depressed by air heavier than normal and supported from one of the longitudinally extending rods between its pivoted portion and the contact rod and a member located upon the other longitudinally extending rod beyond its pivotal point, a counterweight located upon said rod between its pivotal point and the contact rod, said counterweight being adapted to elevate the last named member when the air is lighter than normal there being an electrical circuit between the contact rod and each of the supporting members, and an alarm in said circuit whereby when either of the longitudinally extending rods contact with the transversely disposed contact rod, an alarm will be sounded.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD PFEIFER.

Witnesses:

L. CARL STOUGHTON,
MARTIN WENDEL.