April 10, 1951 F. S. LOVELACE ET AL 2,548,382

EXPLOSIVE TYPE FIRE ALARM

Filed May 21, 1949 2 Sheets-Sheet 1

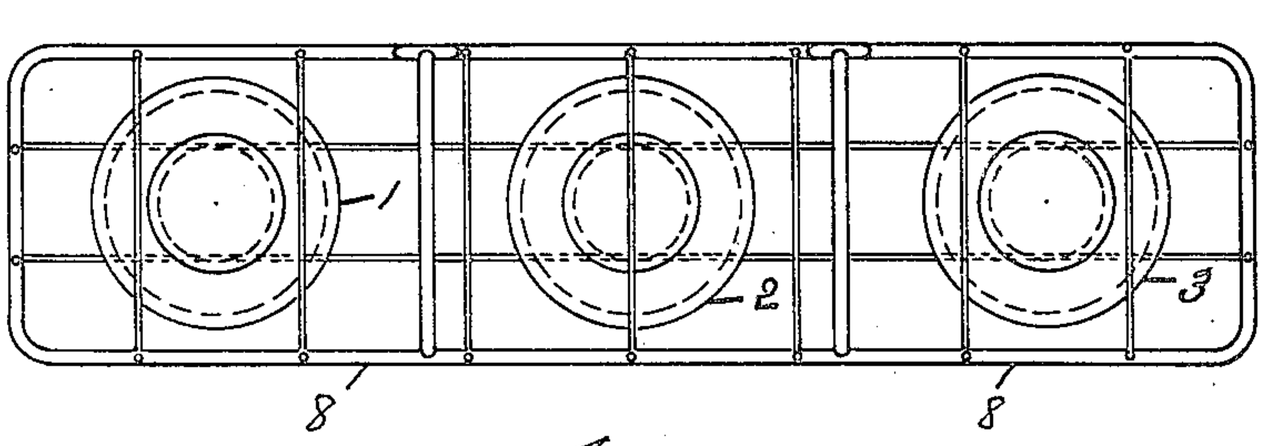

Fig. 1.

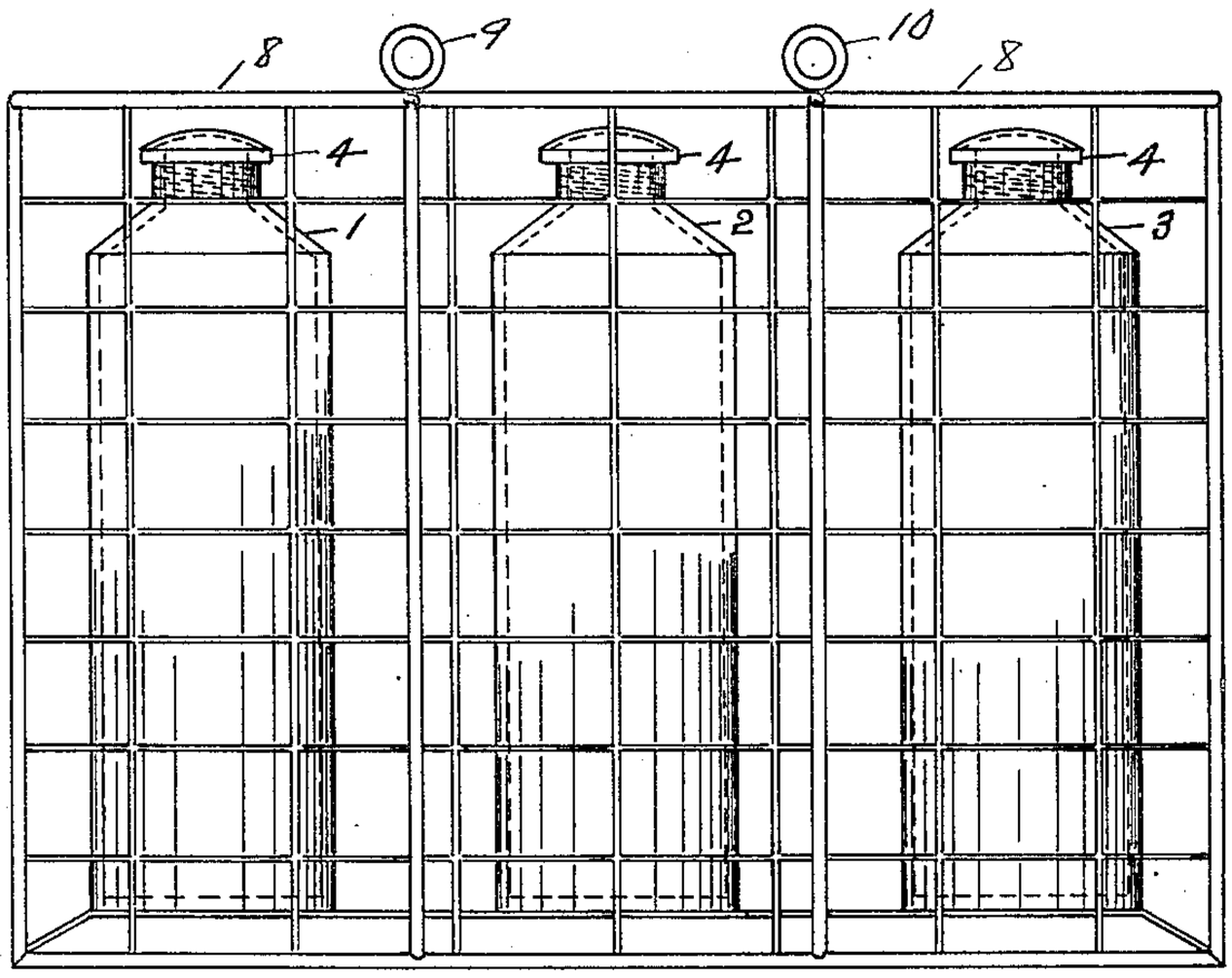

Fig. 2.

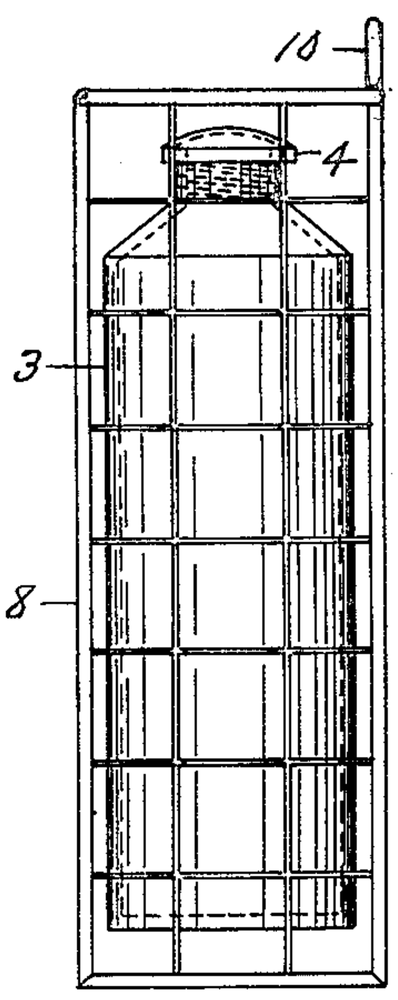

Fig. 3.

Frank S. Lovelace
and James G. Lovelace
INVENTOR.

BY Chas. Denegre
Attorney.

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EXPLOSIVE TYPE FIRE ALARM

Filed May 21, 1949 2 Sheets-Sheet 2

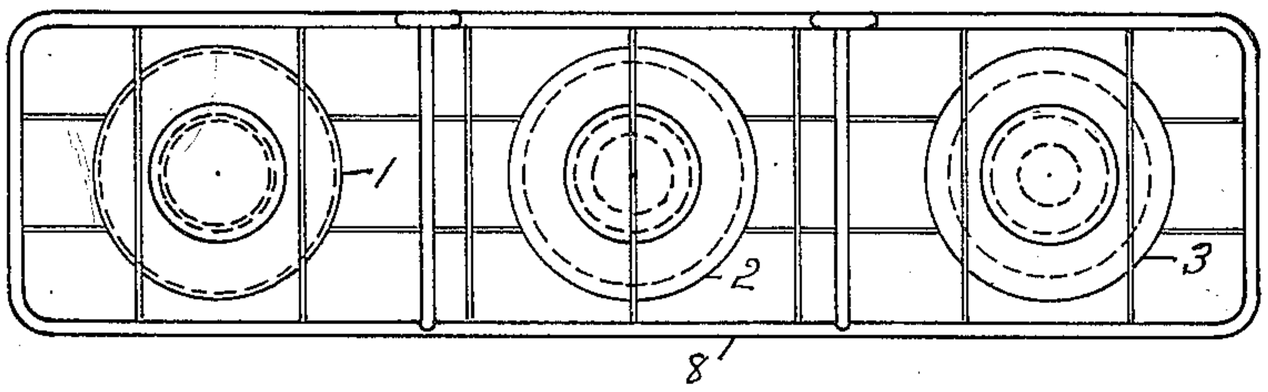

Fig. 6.

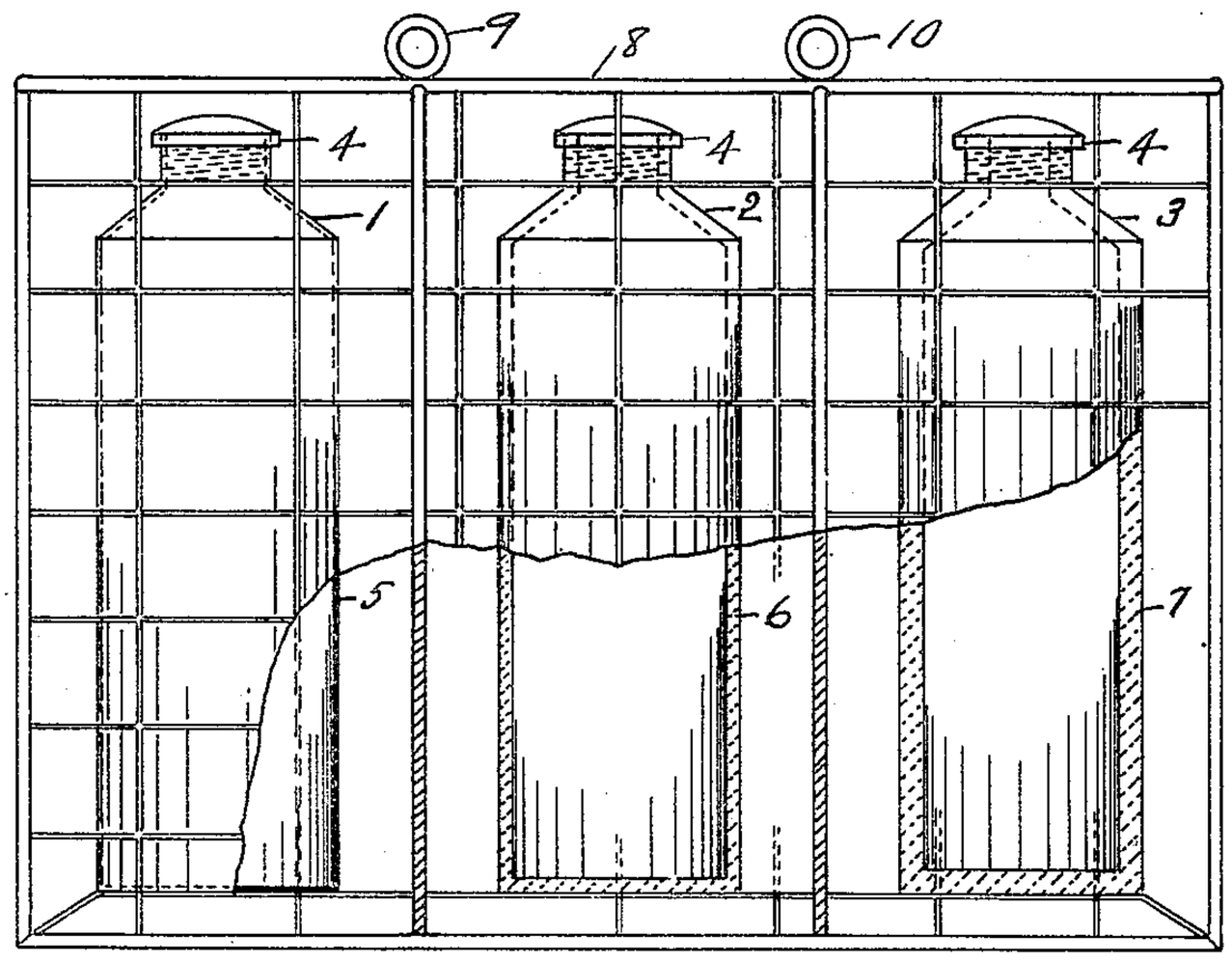

Fig. 4.

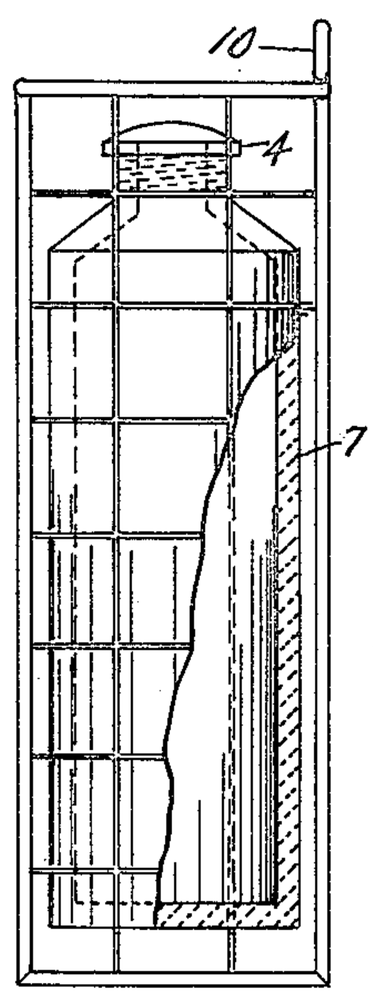

Fig. 5.

Frank S. Lovelace
and James G. Lovelace
INVENTORS

BY Chas. Denegre
Attorney.

Patented Apr. 10, 1951

2,548,382

UNITED STATES PATENT OFFICE

2,548,382

EXPLOSIVE TYPE FIRE ALARM

Frank S. Lovelace and James G. Lovelace,
Birmingham, Ala.

Application May 21, 1949, Serial No. 94,648

1 Claim. (Cl. 73—368)

1

This invention relates to an explosive type fire alarm. It has for its main objects to provide such a device that will be highly efficient, cheap to manufacture, simple in structure, easy to install, and adapted to act with certainty if necessary as the result of adjacent high temperature.

A further object is to provide an alarm that will act without fire coming into actual contact with it.

A great many accidental fires could be prevented from spreading if detected in their incipiency. The present invention is intended for such a purpose as it will act as the result of various degrees of heat resulting in progressive explosions causing extremely loud sounds calculated to attract attention of a person or persons in the vicinity of the alarm.

Other objects and advantages will appear from the drawings and description.

By referring generally to the drawings, part of this application, it will be observed that Fig. 1 is a top plan view of Fig. 2; Fig. 2 is a front elevational view of the alarm device showing three separate containers in an enclosed metal cage with means for hanging same on a wall or the like; Fig. 3 is an end view of Fig. 2; Fig. 4 is a front elevational view of the same parts shown in Fig. 2 but partly cut away to disclose the different thicknesses of the explosive containers; Fig. 5 is an end elevational view partly cut away showing the thickness of the container adapted to cause the loudest noise in the succession of explosions; and Fig. 6 is a top plan view of Fig. 4.

Similar reference numerals refer to similar parts throughout the several views.

Referring to the drawings in detail it will be seen that the device comprises three separate containers 1, 2 and 3 having screw-on type caps 4. The containers are made of different thickness of material as shown at 5, 6 and 7. The containers may be made of "plastic," glass, or metal, and are enclosed in a wire cage 8 with eyes 9 and 10 for hanging on nails or hooks on a wall or the like. The containers in Figs. 1, 2 and 3 are charged with gas that is highly susceptible to change of temperature. It has been found that ether or chloroform gas or similar gases are suitable for the purpose. However, the device is not limited to any particular kind or quantity of gas, as any kind or quantity may be used suitable for the purpose to cause the three containers to explode at approximately the following temperatures: the first 1 at 180 degrees F., the second 2 at 220 degrees F., and the third 3 at 250 degrees F.

From the foregoing it will appear that by placing the alarm device in any place where fire is liable to start accidentally, one, two, or three loud sounds will occur when the temperature surrounding the container becomes sufficiently high to cause the gas therein to expand and burst the containers with each sound becoming louder to thus be more certain to attract attention.

2

The containers for the gas may be made of any material suitable for the purpose such as "plastic," glass, aluminum or other metals. The containers also may be made in different shapes and capacities, and the number of containers may be more than three as shown. The invention resides in a plurality of containers of different strengths charged with highly heat-expansible gas susceptible to quick action when exposed to or brought into contact with heat.

While we have shown and described the preferred embodiment of our invention, we do not wish to limit same to the exact and precise details of structure, but reserve the right to make all modifications and changes so long as they remain within the scope of the invention and the following claims.

Having described our invention, we claim:

In a fire alarm of the character described comprising; a plurality of containers, each of said containers having an outlet adapted for opening and closing thereof and having a charge of highly head-expansible substance therein, said containers being constructed to have progressively greater bursting strength with respect to expansion of said substance charging each container with the first being the weakest and the last being the strongest, whereby said substance is adapted to cause said containers to explode progressively starting with the weakest container and ending with the strongest container when said containers are exposed to predetermined degrees of heat, said containers when so exploded being adapted to cause loud sounds progressively with each succeeding sound being louder than the preceding sound; and cage structure housing said containers.

FRANK S. LOVELACE.
JAMES G. LOVELACE.

REFERENCES CITED

The following references are of record in the file of this patent:

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