SELF POWERED AUTOMATIC FIRE EXTINGUISHER BASED UPON A MECHANICAL HEAT DETECTION MECHANISM AND A PYROTECHNICAL ACTUATOR FIRED BY A PIEZOELECTRIC DEVICE

ABSTRACT

A fire extinguishing apparatus includes a structure defining a first chamber containing an electrically operable explosive device. The apparatus also has a piezoelectric cell capable of producing an electrical output in response to the impact upon the piezoelectric cell. The apparatus also has a container of nonflammable pressurized fluid in contact with the structure, and a mechanical detection mechanism with a thermal sensor for producing a mechanical force at an established temperature. The mechanical force produced by the mechanical detection mechanism is applied to the piezoelectric cell to produce the electrical output that actuates the electrically operable explosive device.

Figure 1