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I. F. SAMPSON
PROTECTION DEVICE

2,049,321

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FIG. 1.

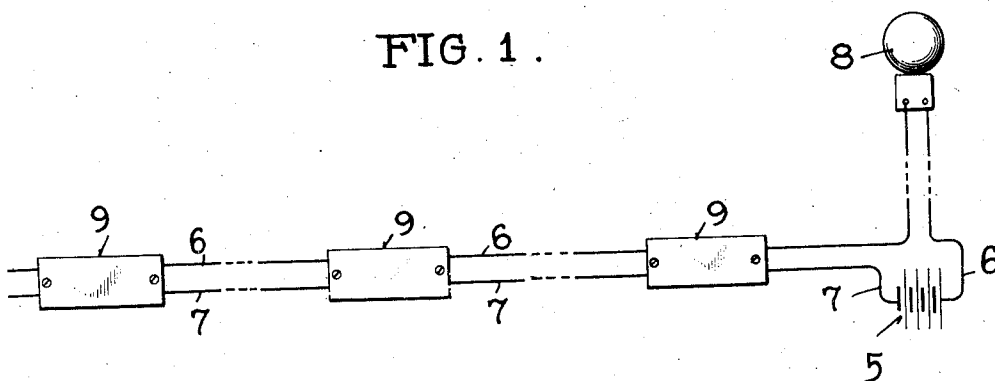


FIG. 2.

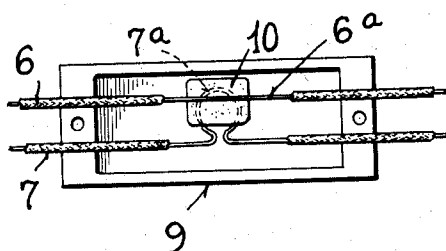


FIG. 3.

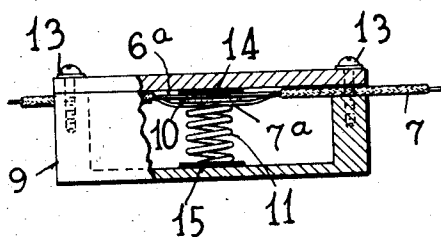
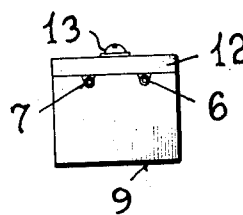


FIG. 4.



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UNITED STATES PATENT OFFICE

2,049,321

PROTECTION DEVICE

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Application December 29, 1934, Serial No. 759,787

2 Claims. (Cl. 200—52)

This invention relates to improvements in protection devices, and the primary object of the invention is to provide novel equipment to give complete protection, warning or notice of fire or other hazards either by means of an electric bell, pump, telephone, fire station alarm that may be operated by suitable motor power.

Another object of the invention is to furnish such a device having one or more sensitive elements affected by heat, water, dampness, gases or the like, for completing an electric circuit in which a signalling device or pump is located for the purpose of alarm or property protection.

A further object is to supply a protection device of simple and inexpensive construction and provided with one or more normally open switches in a two-wire circuit, which switches include an insulating partition or separator between the switch contacts, that will be dissolved or melted by heat, water, dampness, gases or the like that may have injurious effect on persons or property protected by this means.

With the foregoing objects outlined and with other objects in view which will appear as the description proceeds, the invention consists in the novel features hereinafter described in detail, illustrated in the accompanying drawing, and more particularly pointed out in the appended claims.

Referring to the drawing:

Fig. 1 is a plan view of one embodiment of my improved protection device.

Fig. 2 is an enlarged plan view of one of the switch elements of the device.

Figs. 3 and 4 are side and end views respectively of said element.

In the drawing, 5 designates a source of electric-motive force from which extends two circuit wires 6 and 7 normally out of contact so as to maintain the circuit in open condition and conserve the electric energy.

The device to be actuated upon the closing of the circuit is shown at 8 and it may be a bell, lamp or any other suitable signalling device, or a pump for distributing a fire extinguishing agent, etc. In the embodiment of the invention illustrated, the device 8 is shown as a bell interposed in the wire 6.

Both wires extend through boxes 9 forming switch elements or the wires may be connected to switches within these boxes. Each box may be made of metal or any other suitable material but, of course, the wires are insulated to prevent the box from short circuiting the current in case the box is made of conducting material. As best

shown in Fig. 2, the wire 6 may be extended through the box in a straight line, as shown at 6a, and the wire 7, as shown at 7a, may be provided with a yoke or loop positioned within the box. These portions 6a and 7a form the contacts of electric switches, and in each box the contacts are normally held in spaced relation by a partition member 10 formed of any suitable insulating material which may be melted by heat, dissolved by water or moisture or which may disintegrate under the action of certain gases. In other words the partition 10 forms a sensitive element that will be affected by actions to be guarded against. For example, if the equipment is used as a fire protection device, the elements 10 will be formed of fusible material, and if the device is to be used for protection against water or dampness, the partition may be formed of a material that will dissolve in liquid. For the purpose of completing the circuit as soon as any one of the elements 10 is destroyed, springs 11 are arranged in the boxes and press against the loops 7a.

To facilitate inspection, replacement or repair, the top 12 of each box may be detachably secured in place by any suitable fastening means, such as screws 13.

If the switch boxes are made of metal or other conducting material, of course, the portion 6a of the conductor 6 and the springs will have to be insulated from the box. This can be accomplished by placing inserts 14 and 15 of insulating material between the top of the box lids and the portions 6a of the conductors and between the bottoms of the boxes and the lower ends of the springs.

From the foregoing, it will be understood that my protection device is of such simple construction that it can be installed or repaired by an unskilled person, and when installed it will conserve the electric energy, as the power under ordinary circumstances is not in use.

While I have disclosed what I now consider to be a preferred embodiment of the invention, I am aware that changes may be made in the details of the apparatus without departing from the spirit of the invention as expressed in the claims.

What is claimed and desired to be secured by Letters Patent is:

1. A protection device comprising a receptacle, a pair of insulated wires extending through said receptacle and arranged in substantially parallel relation, a portion of each wire arranged within the receptacle being uninsulated, one of said

wires having a looped portion formed by the un-
insulated portion of said wire and overlapping
the uninsulated portion of the second wire, a
partition normally separating the uninsulated
5 portions of said wires and formed of disinte-
grable material, and resilient means arranged
within said receptacle for moving said looped
portion of the first wire into engagement with
the uninsulated portion of the second wire upon
10 disintegration of said partition.

2. A protection device comprising a receptacle,

a pair of contact elements arranged in said re-
ceptacle, a partition of disintegrable material
in the receptacle normally holding said contacts
apart, one of said contacts being in the form of
a substantially straight metallic member and the
5 other contact having a looped portion overlap-
ping said member, and separate spring means
bearing against said looped portion for moving
the contacts into engagement with one another
upon disintegration of said partition.

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