W. ZINGER.

AUTOMATIC CIRCUIT CLOSER.

APPLICATION FILED FEB. 24, 1921.

1,412,501.

Patented Apr. 11, 1922.

2 SHEETS—SHEET 1.

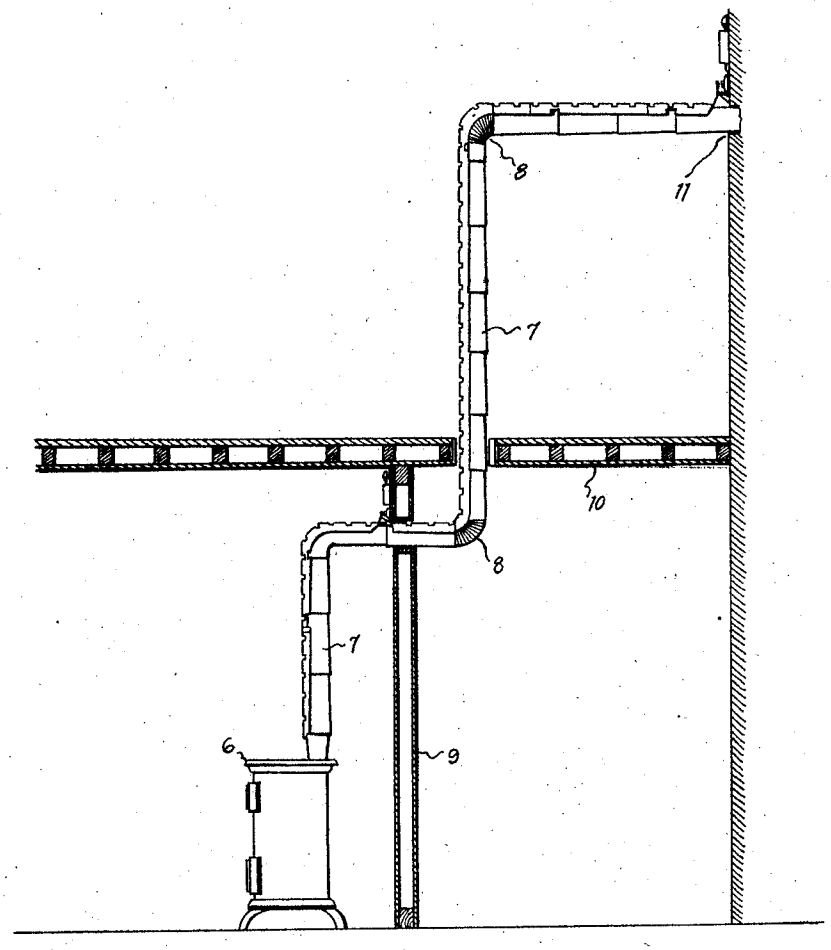



FIG. 1

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2 SHEETS—SHEET 2.

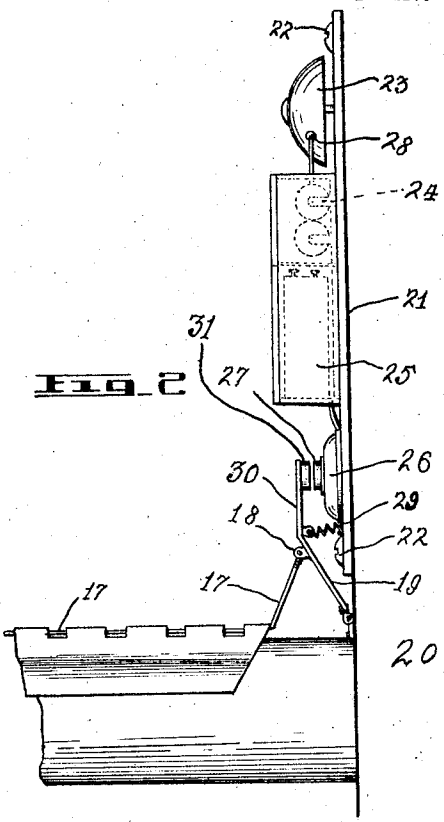



Fig. 2

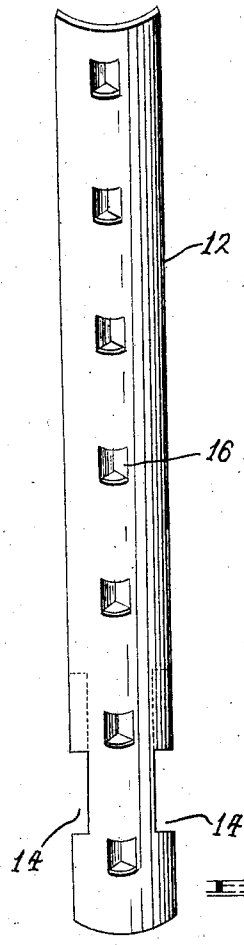



Fig. 3

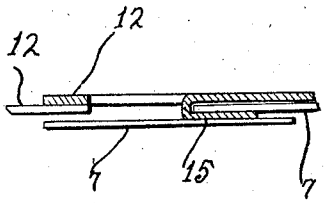



Fig. 4

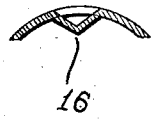



Fig. 5

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# UNITED STATES PATENT OFFICE.

WILLIAM ZINGER, OF SWAN RIVER, MANITOBA, CANADA.

## AUTOMATIC CIRCUIT CLOSER.

1,412,501. Specification of Letters Patent. Patented Apr. 11, 1922.

Application filed February 24, 1921. Serial No. 447,585.

*To all whom it may concern:*

Be it known that I, WILLIAM ZINGER, a citizen of the Dominion of Canada, residing at Swan River, in the county of Swan River and Province of Manitoba, Canada, have invented certain new and useful Improvements in Automatic Circuit Closers, of which the following is a specification.

This invention relates to automatic fire alarms to be positioned on stove pipes, so that when the stove pipes are overheated, the alarm will automatically ring.

The object of my invention is to provide an alarm which can be easily and quickly attached to stove pipes which extend through various rooms, walls, floors, partitions and the like.

A further object of my invention is to provide an automatic fire alarm in which a fuse is carried over the stove pipe and which fuse will be melted when the pipes are overheated. By the breaking of this fuse the alarm will ring.

A further object is to provide a simple and effective automatic fire alarm with a fuse therein which can be easily and cheaply replaced.

With these and other objects in view, the invention consists in the construction, combination and arrangement of parts as will be hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claim hereunto appended.

Figure 1 illustrates a general plan view of my invention as it would be used in operation.

Figure 2 is an enlarged view of the signalling device.

Figure 3 is an enlarged view of one of the links.

Figure 4 is a longitudinal sectional view of part of one of the links.

Figure 5 is a transverse sectional view of one of the links.

Referring to the drawings like numerals designate like parts in the various drawings.

6 indicates a stove of one particular type, although I do not wish to be limited to any particular type of heating element, as pipes similar to those hereinafter referred to are commonly used for heat-stoves, cooking-stoves or furnaces of many types and gas stoves.

7 indicates a pipe consisting of a number of sections and a number of suitable elbows 8, which allow the different sections to be so formed that they may pass through a partition 9 and a floor 10 in going from the stove 6 to the chimney 11.

12 indicates holder members which are preferably of a similar length as the sections of the pipes 7. These holder-members are slotted as at 14 and the part from this slot is bent back as at 15 so as to fit between the telescoping ends of the pipe 7. One end of holder member 12 overlaps the opposite end of the next holder member as illustrated in Figure 4. In this way, the holder members will fit tightly to the upper side of a pipe 7. Certain sections of the holder members 12 will have to be bent to conform to the elbows. At spaced intervals, the holder member 12 is provided with inwardly bent portions 16 to provide a means whereby a fuse-wire 17 may be threaded into the holding members 12, as illustrated in Figure 2. The end of the fuse wire 17, nearest the stove, is bent so as to engage around the nearest portion 16 to the stove. The opposite end of the fuse-wire 17 is attached to a lug 18, on a hinged member 19. This hinged member 19 may be suitably hinged, as at 20, to the wall in any desired manner.

21 is a plate suitably attached to the wall by screws 22 or otherwise, on which is mounted a bell 23, a bell operating means 24, batteries 25 and a switch 26. The switch 26 is controlled by the pin 27. When this pin is pressed inwardly, the switch operates and the hammer 28 reciprocates to ring the bell 23.

29 is a coil spring, having one end attached to the plate 21 and its opposite end attached to a lug, 30, on the hinged member 19, so that the free end of the hinged member 19 will be tensioned towards the plate 21. The free end of the hinged member is provided with any suitable enlarged portion 31.

When the pipe 7 is overheated the heat from the same will melt the fuse-wire 17 which when thus broken will allow the tension spring 29 to pull the enlarged end 31 into pressing engagement against the pin 27. When my alarm is in operative condition, the hinged member 19 will be pulled outwardly so that the pin 27 will be in inoperative position in the switch 27.

If the fuse-wire 17 has been broken a new fuse wire can be easily threaded through the holder member 12 for re-connecting the alarm for further use.

From the foregoing it is thought that the construction of my invention will be clearly

understood and, therefore, a more extended explanation has been omitted.

What I claim as new is:

In combination with pipes which have sections telescopically joined, an automatic circuit closer consisting of holder members adapted to fit the side of said pipes, means for attaching said holder members to the telescoping sections, inwardly bent portions in said holder members, a fuse-wire threaded through said inwardly bent portions, said fuse-wire having its end nearest the heating element connected to one of said portions, a circuit closer, a hinged arm tensioned to operate said circuit closer and the opposite end of said fuse-wire connected to said hinged arm to normally hold the same in inoperative position.

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

WILLIAM ZINGER.

Witnesses:

S. G. ANDERSON,

S. R. WRIGHT.