

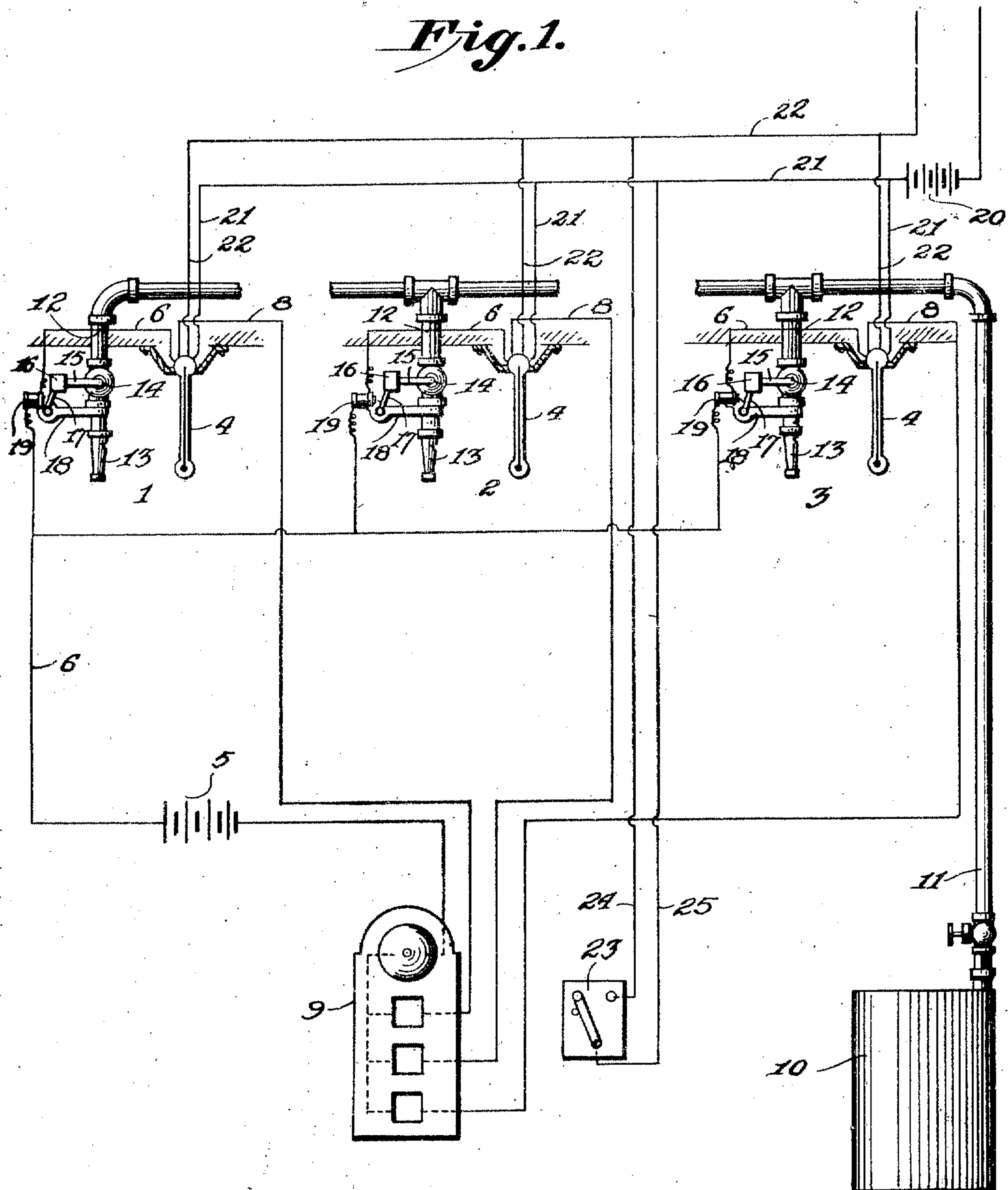
E. F. OLIVER.
 AUTOMATIC FIRE ALARM.
 APPLICATION FILED DEC. 4, 1900.

983,396.

Patented Feb. 7, 1911.

2 SHEETS-SHEET 1.

Fig. 1.



Inventor

Edward F. Oliver,

Witnesses

Everett Lancaster,
 H. J. M. Doyle

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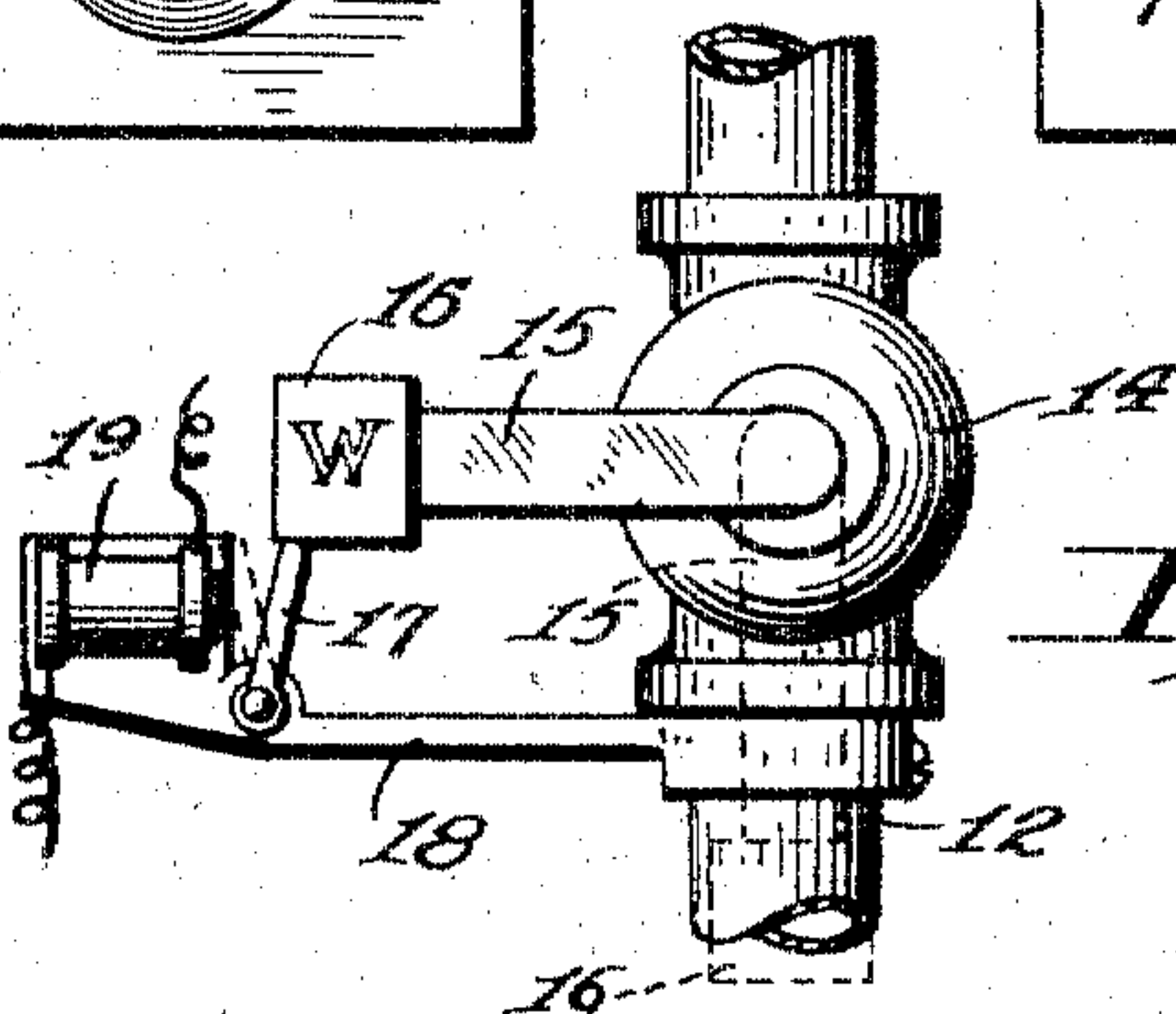
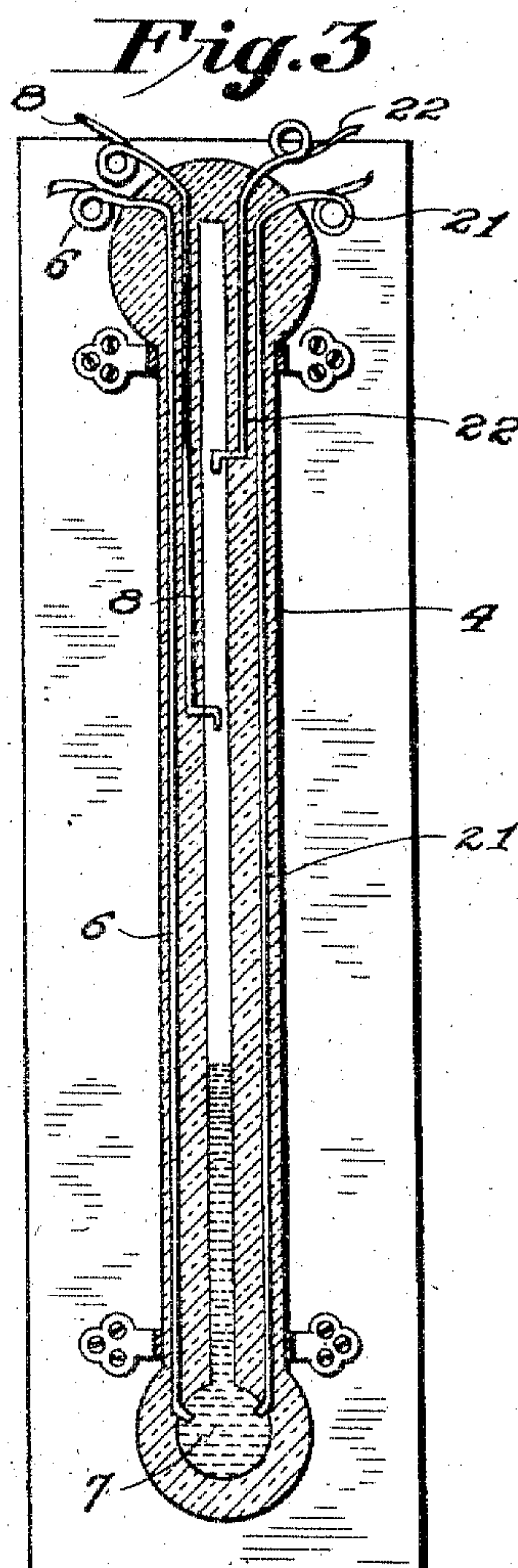
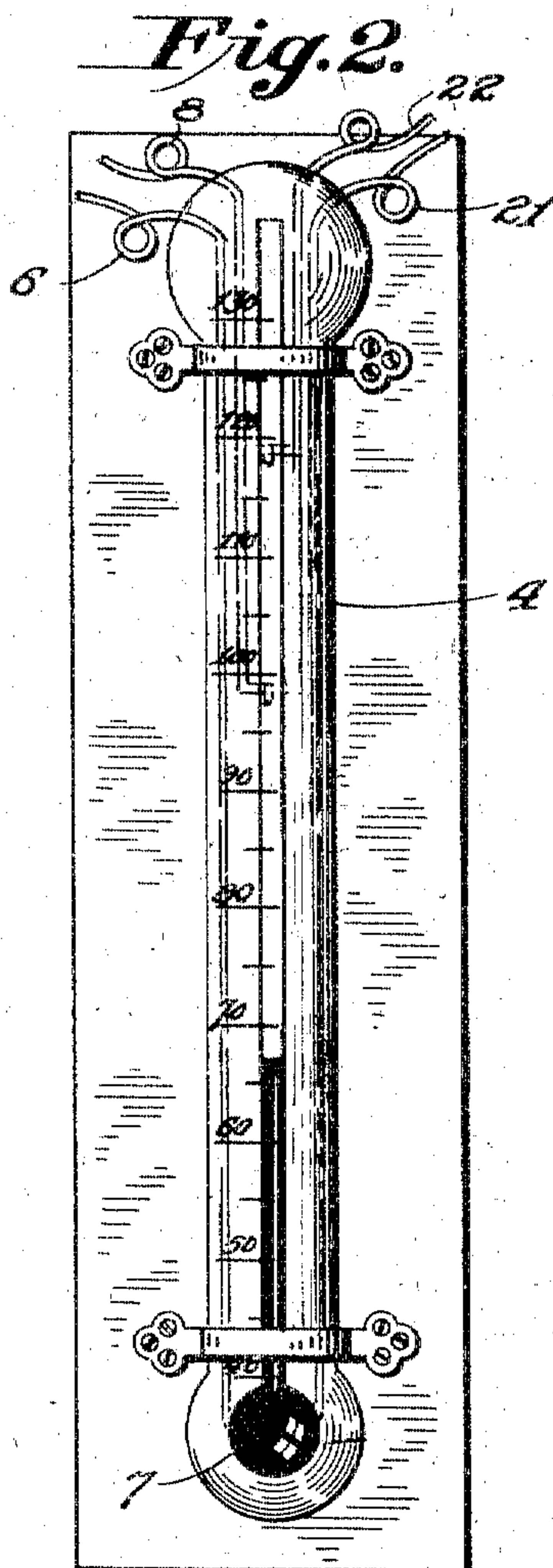
E. C. Sprooman,
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2 SHEETS-SHEET 2.



Witnesses

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UNITED STATES PATENT OFFICE.

EDWARD F. OLIVER, OF MONROE, INDIANA.

AUTOMATIC FIRE-ALARM.

983,396.

Specification of Letters Patent.

Patented Feb. 7, 1911.

Application filed December 4, 1909. Serial No. 531,382.

To all whom it may concern:

Be it known that I, EDWARD F. OLIVER, a citizen of the United States of America, residing at Monroe, in the county of Adams and State of Indiana, have invented certain new and useful Improvements in Automatic Fire-Alarms, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to combined fire extinguishers and alarms, and the principal object of the same is to provide electrically operated means within the various rooms or compartments of a building which will automatically liberate a fire extinguishing gas when a fire occurs therein and at the same time sound an alarm in the compartment or room and also sound an annunciator in another part of the building to indicate where the fire is.

In connection with the foregoing, means are provided whereby a signal may be transmitted to a fire station to call the fire department when the annunciator is sounded, the means for signaling the fire station being located adjacent the annunciator.

25 The invention also provides means whereby the fire station may be automatically signaled from the room or compartment where the fire occurs when the temperature therein reaches a certain degree above the point where the local alarm is sounded and the extinguishing gas liberated.

In carrying out the objects of the invention generally stated above, it will be understood, of course, that the essential features involved are necessarily susceptible of changes in details and structural arrangements, one preferred and practical embodiment of which is shown in the accompanying drawings, wherein:—

Figure 1 is a diagrammatic view of the improved fire extinguishing and alarm system. Fig. 2 is a detail view of a thermometer used in connection therewith. Fig. 3 is a vertical sectional view of the thermometer. Fig. 4 is a detail fragmentary view of the means for automatically liberating the fire extinguishing gas.

50 Referring to said drawings by numerals, it will be observed that in the diagrammatic view in Fig. 1, the improved extinguishing and alarm system has been shown applied to three rooms or apartments, 1, 2, 3, each

being equipped with a thermometer 4 that is suitably supported from a wall, ceiling or the like therein, the thermometers each being included in two circuits, one circuit being a local one and comprising the battery 5 and a wire 6 that extends into the mercury 7 of the thermometer, the other wire 8 thereon projecting into the usual tube of the thermometer at, for example the 100 degree mark thereof, so that the local circuit is closed when the mercury column reaches said mark. An annunciator 9 is located in the building that contains said compartments and obviously at a distance therefrom, said annunciator being included in the local circuit and being adapted to indicate the apartment that is afire. A supply tank 10 for the extinguishing gas has a pipe communication 11 with a delivery pipe 12 of each compartment, said delivery pipe being equipped with a discharge nozzle 13 in the form of a whistle that is sounded when the extinguishing gas is discharged thereby. Each delivery pipe 12 is provided with a valve 14 the handle of which is equipped with a lever 15 having a weight 16 on its free end, said weight being normally supported in a valve closing position by means of a lever 17 pivoted to an arm 18 projecting from pipe 12. Said arm 18 also carries a magnet 19, that is included in the local circuit and which when energized by the thermometer closing said local circuit, attracts lever 17, thereby releasing weighted lever 15 so that the same will drop and open valve 14 so that the extinguishing gas will escape to the room or compartment through nozzle 13. The other circuit in which the thermometers are included is for signaling a fire station, and includes the battery 20 and wires 21—22. Wire 21 extends into the base of the mercury of the thermometer and wire 22 extends into the tube of the thermometer at, for example, the 120 degree mark, so that when the mercury column reaches the 120 degree mark, the circuit will be automatically closed, thereby signaling the fire department. A switch 23 has wire connections 24—25 with the station signaling circuit, said switch being located adjacent the annunciator of the local circuit so that when desired the signaling circuit may be closed by said switch, such for example to signal the fire department before

the fire has reached the point where the thermometer will automatically close said circuit.

From the foregoing it will be seen that the improved system provides means for automatically delivering extinguishing gas to the room where a fire is and also means for simultaneously sounding an alarm in the said room and an annunciator in another part of the building, and further, provides means for automatically signaling the fire department in the event of the gas discharged into the room failing to extinguish the fire.

What I claim as my invention is:—

1. An extinguishing and an alarm system comprising a local circuit, an annunciator included therein, a thermometer adapted to close said circuit when a predetermined degree is reached, a discharge nozzle, a magnet adapted to be energized by said circuit, a valve for said nozzle operated by said magnet, and a second signaling circuit adapted to be closed by said thermometer when the temperature reaches a predetermined point above the first mentioned degree.

2. An extinguishing and alarm system comprising a local circuit, an annunciator in said circuit, a circuit closer adapted to close said circuit when the temperature reaches a certain degree, an extinguishing nozzle provided with sound emitting means, means operated by the closing of said circuit to operate said nozzle, and a second sig-

naling circuit adapted to be automatically closed when the temperature reaches a certain degree above the first mentioned degree.

3. An extinguishing and alarm system, comprising a thermometer, an annunciator, a local circuit including said thermometer and annunciator and adapted to be automatically closed by said thermometer, an extinguishing nozzle, provided with a valve, a magnet in said circuit for operating said valve, and a second signaling circuit adapted to be closed by said thermometer after the first circuit has been closed.

4. An extinguishing and alarm system comprising a temperature controlled local circuit, extinguishing means actuated by the closing of said circuit, and a second circuit adapted to be automatically closed when the temperature reaches a certain degree above the degree at which the local circuit closes.

5. A fire extinguishing and an alarm system comprising means for automatically delivering extinguishing material and sounding a local alarm when the temperature reaches a certain degree, and means automatically sounding a fire station alarm when the temperature reaches a certain degree above the local alarm sounding degree.

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

EDWARD F. OLIVER.

Witnesses:

M. F. PARRISH,
C. C. RAYL.