F. SIMONYI.

FIRE ALARM.

APPLICATION FILED JULY 21, 1910.

991,903. **Patented May 9, 1911.**

Fig. 1

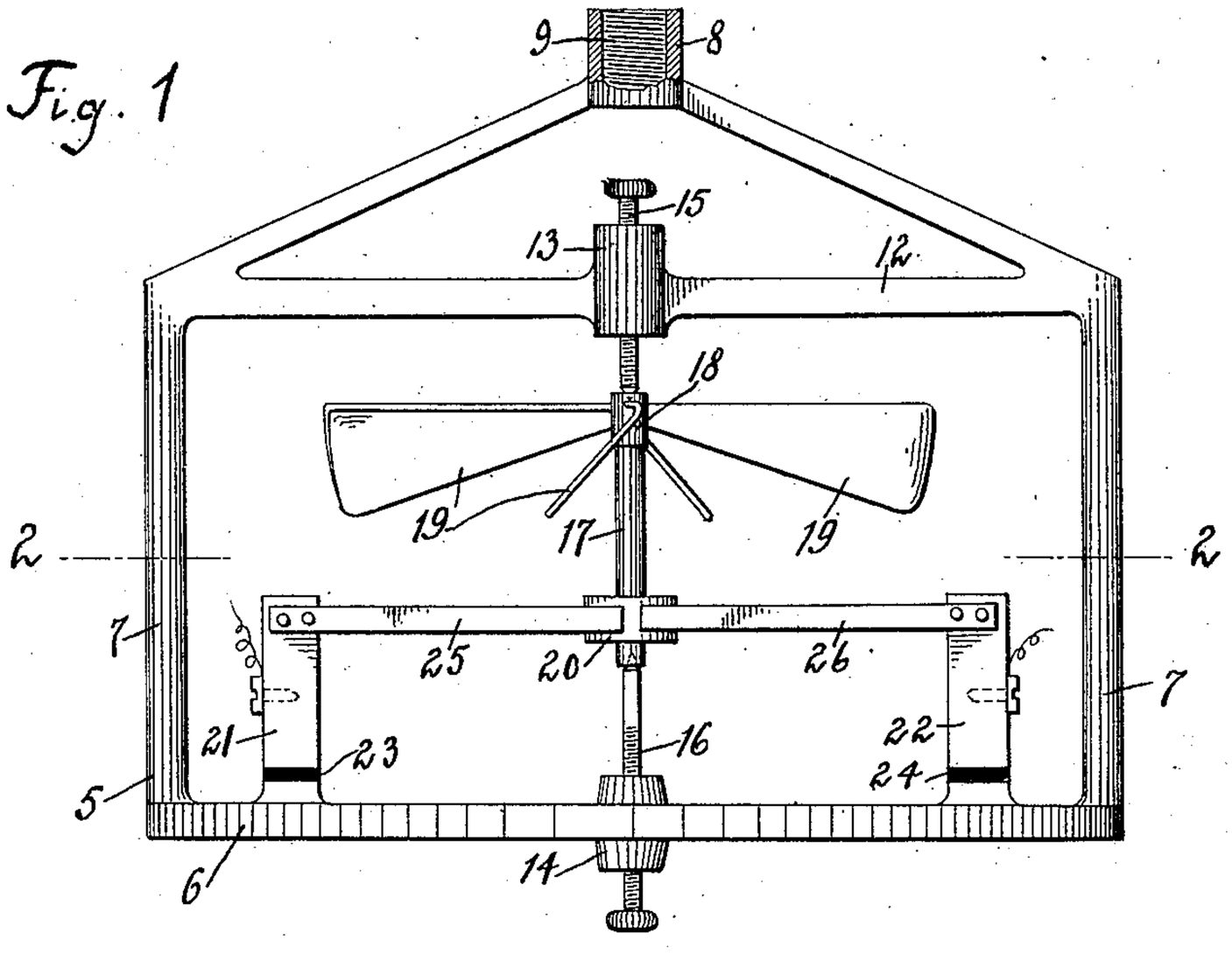
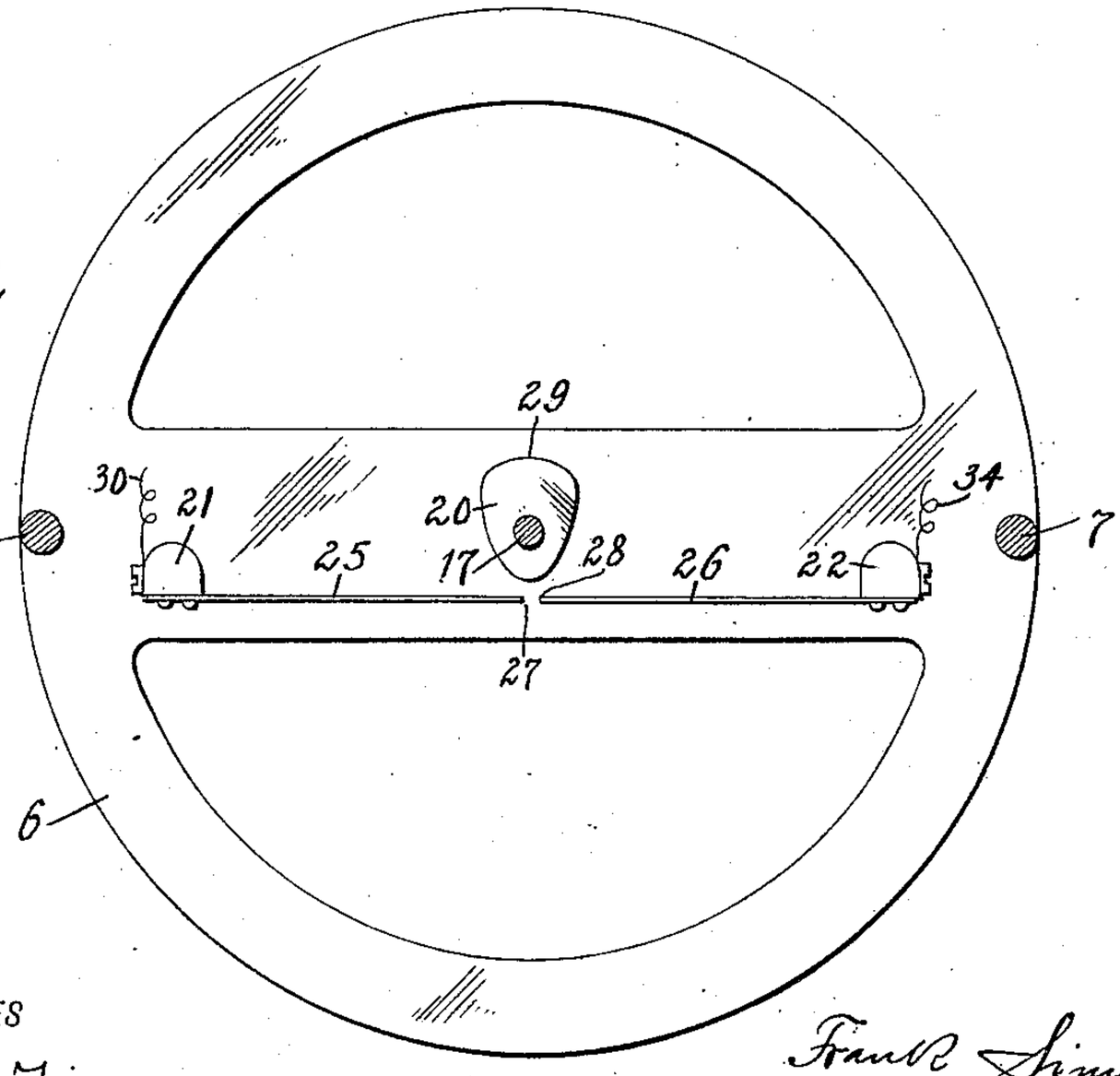


Fig. 2



WITNESSES

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FIRE-ALARM.

991,903.

Specification of Letters Patent. Patented May 9, 1911.

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To all whom it may concern:

Be it known that I, FRANK SIMONYI, a subject of the King of Hungary, and a resident of the city of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Fire-Alarms, of which the following is a specification.

The present invention relates to automatic fire alarms, and more particularly to a thermostat which closes an electric circuit into which audible or visible signals are inserted, when the temperature in the various rooms of a building, which are equipped with the device forming the subject matter of the present invention, rises above a predetermined degree and produces thereby a draft of air.

One of the objects of the invention is to provide an apparatus of the character specified which is cheap and practicable for causing and transmitting the signals in case of fire in a building with a minimum liability of signals being induced from other cause than fire.

With these and other objects in view, which will appear as the nature of the invention is better understood, the same consists in the construction, arrangement and combination of parts hereinafter fully described, pointed out in the appended claim and illustrated in the accompanying drawings, it being understood that various changes may be made in the size, proportion and minor details of construction without departing from the spirit or sacrificing any of the advantages of the invention.

One of the many possible embodiments of the invention is illustrated in the accompanying drawings, in which:—

Figure 1 is a side elevation of the thermostat, forming the subject matter of the present invention; and Fig. 2 a section taken on line 2, 2 of Fig. 1.

In the drawings, the numeral 5 indicates the frame of the thermostat which may be of any suitable configuration and size. The frame illustrated in the drawings comprises a base plate 6, carried by vertical posts 7, 7, which are attached to a tubular member 8, which latter is provided with inner screw threads 9, meshing with the threads of a rod which is attached to the ceiling of the building. The device may be arranged a suitable distance below the ceiling, each room being equipped with one or more of the same.

At or near the upper ends of the posts 7 is arranged a horizontal bar 12, having a tubular portion 13, arranged in the center line of the apparatus and in alinement with a tubular portion 14, attached to or made integral with the base plate 6 of the frame. Both tubular portions 13 and 14 are provided with inner screw threads, in mesh with the threads of pointed screws 15 and 16, respectively, which form adjustable bearings of the shaft 17 of a propeller 18 of the fan type. The blades 19 of this propeller are made of a non-combustible and light material so that a rotation is readily imparted to the same by the hot air current. Upon the shaft 17 of the propeller is mounted an eccentric 20, made of metal to form a conductor for the purpose hereinafter to be specified. On the base plate 6 are furthermore arranged two vertical posts 21 and 22, insulated from the base plate by means of blocks 23 and 24, respectively, of insulating material. To these posts are attached metallic spring contacts 25 and 26, respectively, extending toward the shaft 17 of the propeller, but not contacting with each other. The distance between the longitudinal axis of the shaft 17 and the inner ends 27 and 28 of the spring contacts 25 and 26, respectively, is somewhat less than the distance between the axis of said shaft and the outermost peripheral portion 29 of the eccentric 20.

The vertical posts 21 and 22, which are made of metal, are inserted into an electric circuit, containing any suitable source of electric energy and a bell or other signal, which latter is arranged at a distant point, for instance at the superintendent's office of the building or at a police- or fire-station.

The operation of the device is as follows: The fan propeller 18 is set so that the peripheral portion of the eccentric 20 which lies nearest to the longitudinal axis of propeller shaft 17 comes to stand opposite to the inner ends of the contact springs 25 and 26. Normally, therefore, the electric circuit is kept open. As soon as, however, a fire originates in the room, the current of hot air which flows toward the ceiling causes a rotation of the fan propeller 18, whereby, as soon as the portion 29 of the eccentric forces the spring contacts outward from the center

line of the apparatus, a connection will be established between the spring contacts 25 and 26, closing thereby the circuit and actuating thus the signal. The spring contacts 25 and 26 will tend to hold the propeller against rotation, whereby a continuous signal will be given. If, however, the current of air is so strong that the tension of the springs is overcome, the eccentric 20 will make and break the contacts, whereby an intermittent signal will be obtained.

What I claim is:

In a fire alarm, the combination with a tubular member provided with inner screw threads, of two vertical posts carried thereby, a horizontal base plate attached to said vertical posts, a horizontal bar arranged at the upper end of said posts having an interiorly screw threaded tubular portion, an interiorly screw threaded tubular projection upon said base plate in alinement with the tubular portion upon said horizontal bar, a vertical shaft, pointed set screws engaging said tubular portions and supporting rotatably said shaft, a vane wheel attached to said shaft and adapted to be operated by a draft of air, vertical posts supported by and insulated from said base plate, metallic spring contacts attached to said posts extending toward said shaft and normally out of contact with each other, a metallic eccentric fixedly attached to said shaft in the plane of said springs and adapted to make and break the contact between said springs as said vane wheel is operated by a draft of air.

Signed at New York, in the county of New York and State of New York, this 19th day of July, A. D. 1910.

FRANK SIMONYI.

Witnesses:
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