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SPRINKLER ALARM DEVICE.

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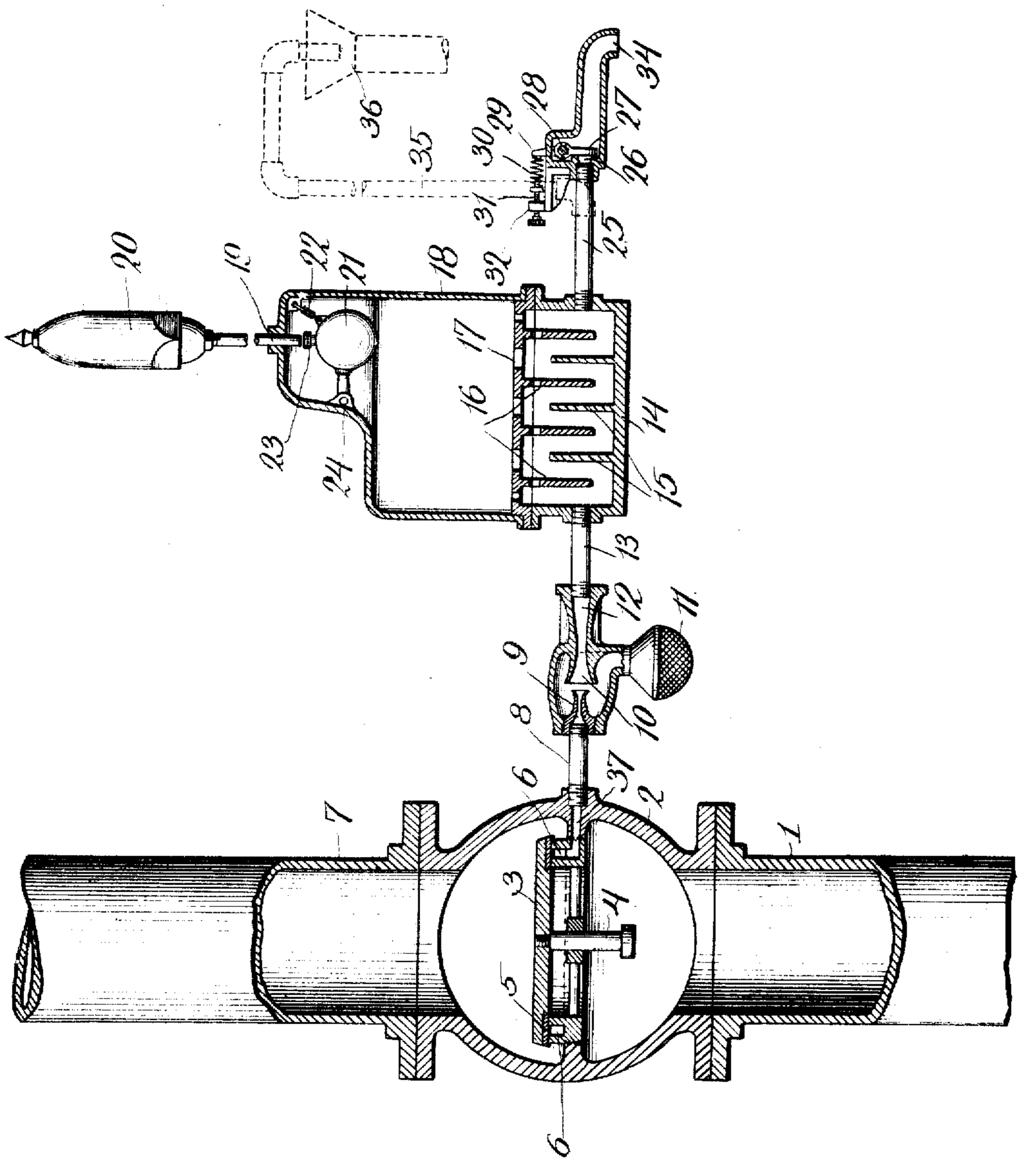
929,051. **Patented July 27, 1909.**



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No. 929,051. Specification of Letters Patent. Patented July 27, 1909.

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To all whom it may concern:

Be it known that I, EVERETT L. THOMPSON, a citizen of the United States, and a resident of Dover, in the county of Morris and State of New Jersey, have made new and useful Inventions Relating to Sprinkler Alarm Devices, of which the following is a specification, taken in connection with the accompanying drawings, forming part of the same.

This invention relates to sprinkler alarm devices and relates especially to audible alarm signals and means for operating the same from sprinkler alarm systems in the event of fire by means of water compressing blast devices and means to operate the alarm which may be in the form of a whistle from the blast thus created.

In the accompanying drawing showing somewhat diagrammatically an illustrative embodiment of this invention, 1 is the supply pipe connected with the casing 2 on the upper side of which the supply pipe section 7 may connect with the regular distributing system. The casing 2 may be provided with any suitable emergency device to operate in the event of fire and the check valve 3 may be used for this purpose when properly guided in the casing which may be done by a suitable stem, such as 4. The packing 5 indicated on this valve closes the alarm passage 6 connecting with the aperture 37 and pipe 8 leading to the air compressing apparatus or blast device, which may be in the form of a suitable injector as indicated. This injector may comprise the jet nozzle 9 coöperating with a suitable throat 10 so as to draw air or other blast medium through the protecting screen 11 and force the same under suitable pressure through the discharge 12, 13 into a suitable separator. This separator 18 may comprise any desired number of baffle plates 15 supported from the bottom 14 of the separator and coöperating depending baffles 16 supported from the upper wall of this water chamber, a number of blast escape openings 17 being provided so that the air or other blast medium rises and collects within the upper portion of the separator. This air may be led through the pipe 19 of any desired length or shape to operate an electrical or other alarm mechanism and may lead to an audible alarm in the form of a whistle 20 or otherwise located at any convenient point so as to continuously operate the same as long as the water is flowing through the system under emergency conditions.

It is usually desirable to have a water valve in connection with the separator and the valve may be mounted adjacent the discharge opening from the separator so as to control the same and prevent the escape of water therethrough. The valve 23 may for this purpose be mounted on the float 21 movably supported in the separator, for example by pivoting the same about the pin 24 and arranging the flexible connector 22 in connection therewith. On the rise of water this float would, of course, rise and close the discharge opening so that this water valve would effectually prevent any water from passing to the alarm until the water fell sufficiently to allow the float to descend and open the valve by its weight.

Any desired means may be used for maintaining in the separator the blast pressure proper for operating the alarm. This may be effected by arranging a suitable throttling device on the water discharge pipe 25, this device being, if desired, in the form of a valve pivoted about the pin 28 so as to control the opening 26 and forced down upon its seat by the spring 30 acting on the valve arm 29. The intensity of this spring action may be readily adjusted by any desired means, such as the set screw 31 operating in the lug 32 so that by this means any desired blast pressure may be maintained in the separator and when the pressure therein exceeds this amount the throttling valve will open and allow the discharge from the separator to pass out of the spout 34. Of course, if desired, a gravity throttling device may be employed for this same purpose by connecting a suitable uptake 35 to the discharge 25, this uptake being carried up to the desired vertical height and then emptying into a drain 36 or the like.

Having described this invention in connection with an illustrative embodiment thereof, to the details of which disclosure it is not, of course, to be limited, what is claimed as new and what is desired to be secured by Letters Patent is set forth in the appended claims.

1. In sprinkler alarm devices, a supply pipe connected to a distributing system, a check valve in said supply pipe, there being

an alarm passage controlled by said check valve to allow water to pass therethrough on the emergency operation of said sprinkler system, a blast injector connected to said alarm passage and operated by passing fluid therethrough, a separator provided with a water valve and throttling device connected to said injector and an alarm whistle connected to said separator and operated by the airblast therefrom.

2. In sprinkler alarm devices, a supply pipe to be connected with a distributing system, an emergency device in said supply pipe and provided with an alarm passage, a water blast device and separator connected to said alarm passage and operated by the water passing therethrough and an audible alarm connected with said separator and operated by the blast therefrom.

3. In sprinkler alarm devices, a water blast injector to be connected with an emergency device and operated by water therefrom, a separator connected to said device and having a water valve and throttling device connected therewith and an alarm connected to said separator and operated by the blast therefrom.

4. In sprinkler alarm devices, a water blast injector to be connected to and operated by an emergency device in a sprinkler system, a separator connected to said blast device to separate the blast from the water discharged therefrom and to be connected with an audible alarm and operate the same by the blast from said separator.

5. In sprinkler alarm devices, a blast device to be connected with an emergency device of a sprinkler system and operated by the liquid discharged therefrom, and a separator connected with said blast device to separate the blast from said liquid and to be connected with and operate an alarm by said blast.

6. In sprinkler alarm devices, a blast device to be connected with a sprinkler system and operated by fluid discharged therefrom to produce a blast during the irregular operation of said system and an alarm connected with said blast device and operated by the blast passing from said device toward said alarm.

7. In sprinkler alarm devices, an injector blast device to be connected with a sprinkler system and operated by fluid discharged therefrom to produce a blast during the emergency condition of said system and alarm mechanism to be connected with said blast device and operated by the blast passing from said blast device toward said alarm mechanism during the emergency condition of said system.

8. In sprinkler alarm devices, a blast device to be connected with an emergency device in a sprinkler system and operated by fluid discharged therefrom to produce a blast and alarm mechanism comprising a whistle to be connected with said blast device and operated by the blast passing from said blast device toward said alarm mechanism.

9. In sprinkler alarm devices, a blast device to be connected with a sprinkler system and operated by fluid discharged therefrom to produce a blast during the irregular operation of said system and means to be connected with an alarm and operate the same by the blast passing from said blast device toward said alarm.

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