

ABSTRACT

SPRINKLER WITH AN INTEGRATED VALVE, AND FIRE-EXTINGUISHING
SYSTEM USING SAME

The present invention relates to a sprinkler with an integrated valve, and to a fire-extinguishing system using same. Conventional sprinklers are too sensitive to the outbreak of a fire, and operate even if no fire has broken out, which would lead to a large amount of damage. For this reason, conventional sprinklers are often prevented from being operated in advance. In addition, sprinklers do not operate even upon the outbreak of a fire when the sensitivities thereof are lowered, rendering the sprinklers useless. The present invention aims to solve the abovementioned problems, and is configured such that a manager in a building checks whether or not a fire has broken out and if so sends an extinguishing signal, and wherein in the event a sensor for operating a sprinkler senses the outbreak of a fire, only the relevant sprinkler operates by means of a valve mounted thereon, thereby operating sprinklers only when a fire has actually broken out, and enabling a central control office, a fire station, or the like to verify the outbreak of a fire in each household at all times. Further the present invention can be applied to public transportation facilities such that water-spraying is carried out after an engine room or a control board in charge of the safety of the passenger cars and outside of the latter verifies the outbreak of a fire, thus still taking advantage of a high-sensitivity of sensor. As the present invention sprinklers water only in the event of an actual fire outbreak, erroneous operation can be prevented, and water can be sprinkled only in the required area, thereby extinguishing the fire in the early state of a fire outbreak.

Fig. 1