(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) Publication number: **0 202 956**
A2

(12) EUROPEAN PATENT APPLICATION

(21) Application number: **86303991.3**

(51) Int. Cl.⁴: **E 04 H 3/12**

(22) Date of filing: **27.05.86**

(30) Priority: **24.05.85 GB 8513219**

(43) Date of publication of application:
26.11.86 Bulletin 86/48

(84) Designated Contracting States:
AT BE CH DE FR GB IT LI LU NL SE

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(54) Stadium safety system.

(57) A stadium safety system comprises a high pressure water supply (5, 6) connected to a water pipe (2) which extends around the boundary of a playing field (3). Adjustable nozzles (4) are provided at spaced intervals around the pipe (2) and water from the nozzles (4) may be used to extinguish fires, or for crowd control, in the crowd enclosure (13) or to water the playing field (3).

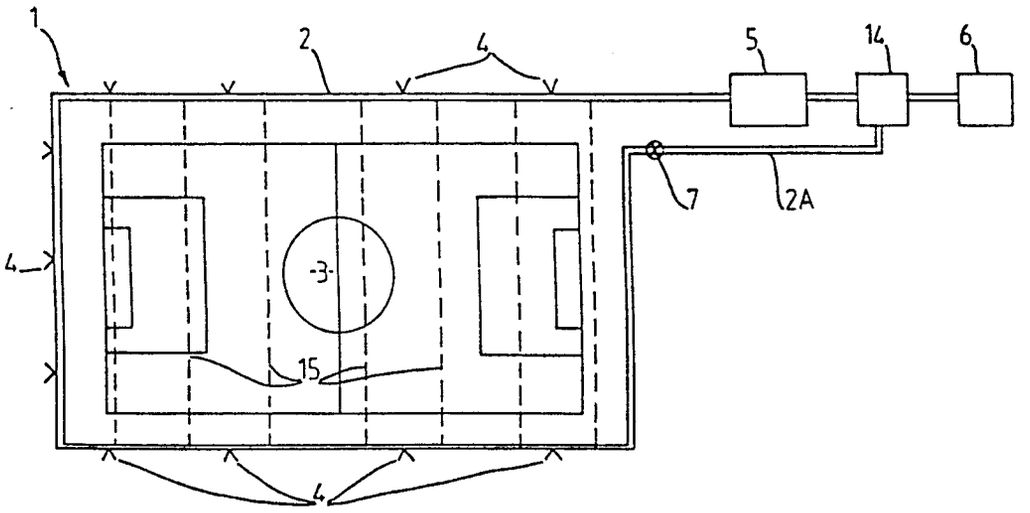

Fig.1

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"Stadium Safety System"

This invention relates to a stadium safety system for use in crowd control, fire fighting and ground maintenance.

The provision of high boundary fences to separate crowds in stadia, particularly football stadia, from the playing field is becoming a necessity to help prevent "pitch invasions" by the hooligan element of the crowd. Unfortunately, high fences are not always completely effective and more extreme measures, such as the electrification of fences and the separating of the crowd from the playing field by deep moats, and the use of guard dogs, have been implemented. These methods may be effective but they are potentially dangerous and may not be permitted by some authorities.

An object of the present invention is to provide a system to help prevent crowd invasions which is not potentially dangerous.

According to the present invention there is provided a stadium safety system comprising a high pressure water supply connected to a water carrying pipe extending along the boundary of a playing surface, the pipe being provided with a plurality of outlet nozzles for directing a stream of

water from the pipe in a desired direction.

Preferably, the pipe extends completely around the playing surface.

Preferably also, the nozzles are spaced along the length of the pipe.

The nozzles may be directed towards the crowd when they may be used to direct a jet of water towards the crowd to deter spectators from invading the pitch or to act as a fire hose. Alternatively, the nozzles may be directed towards the playing surface to act as sprinklers for watering the playing field.

A water pump may be provided to supply the system with water at high pressure.

Additional pipes may be provided to carry water under the surface of the playing field. A water heater may be provided to heat the water and the pipes can then be used to warm the playing field and thus prevent frosting.

Embodiments of the present invention will now be described, by way of example, with reference to the accompanying drawings, in which:-

Fig. 1 is a schematic plan view of a stadium safety system according to the present invention; and

Fig. 2 is a front view of part of the stadium provided with a stadium safety system in accordance with the present invention.

Referring to the drawings, a stadium safety system, shown generally at 1, comprises a pipe 2 extending around the perimeter of a playing field 3, a plurality of output nozzles 4 on the pipe 2, and a water pump 5.

Water is supplied from the mains 6 to the water pump 5 where the pressure of the water is raised. A valve 7 provided in the return pipe 2A is closed so that water entering the system may only leave through the nozzles 4.

The nozzles 4 are movable and may be directed towards the playing field 3 or towards the crowd 8.

In the event of an attempted pitch invasion when sections of the crowd climb over the boundary fence 11, stewards 9, who are positioned along the length of the pipe 2, open the nozzles 4 and direct the jets of water 10 issuing from the nozzles 4 towards the persons 12 who are attempting to climb the fence 11. The jets of water deter or dislodge these persons and help to prevent an invasion of the playing area.

In the event of a fire in a crowd enclosure 13, the stewards 9 direct the nozzles towards the fire and thus help to control or extinguish the fire.

The system may also be used to water the playing field in dry weather by directing the nozzles towards the playing area. Groundsmen can adjust the nozzles 4 to produce a fine spray of water and the system 1 can act as a series of sprinklers.

In the embodiment of the system shown, a water heater 14 and a number of pipes 15 passing beneath the playing field 3 are provided.

If the nozzles 4 are closed, and the valve 7 in the return pipe 2A opened, warm water may be pumped through the system and under the playing field 3. The heating effect of the pipes 15 below the playing field prevents the ground from frosting and allows the playing field 3 to be used in freezing temperatures.

Modifications and improvements may be made without departing from the scope of the invention.

CLAIMS

1. A stadium safety system comprising a high pressure water supply (5, 6) connected to a water pipe (2) extending along the boundary of a playing surface (3), the pipe (2) being provided with a plurality of outlet nozzles (4) for directing a stream of water from the pipe (2) in a desired direction.

2. A stadium safety system as claimed in Claim 1, wherein the pipe (2) extends completely around the playing surface (3).

3. A stadium safety system as claimed in Claims 1 or 2, wherein the nozzles (4) are spaced along the length of the pipe (2).

4. A stadium safety system as claimed in Claims 1, 2 or 3, wherein the nozzles (4) are adjustable and may produce a jet of water or a fine spray.

5. A stadium safety system as claimed in any one of the preceding claims, wherein a water pump (5) is provided to supply the system with water at high pressure.

6. A stadium safety system as claimed in any one of the preceding claims, wherein additional water pipes (15) are provided to carry water beneath the playing surface (3).

7. A stadium safety system as claimed in Claim 6, wherein a water heater (14) is provided to heat the water in the system and thus warm the playing surface (3).

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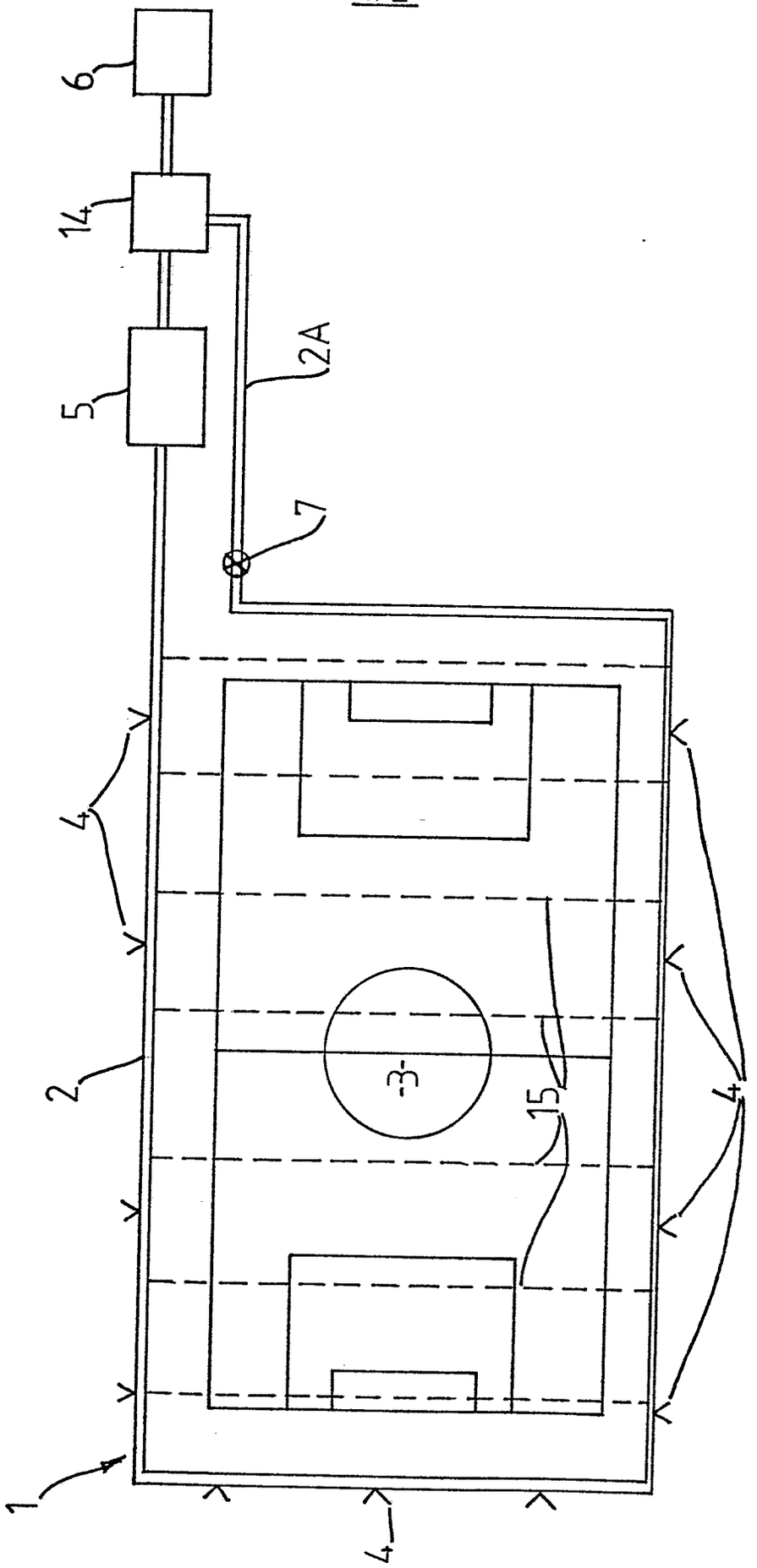

Fig.1

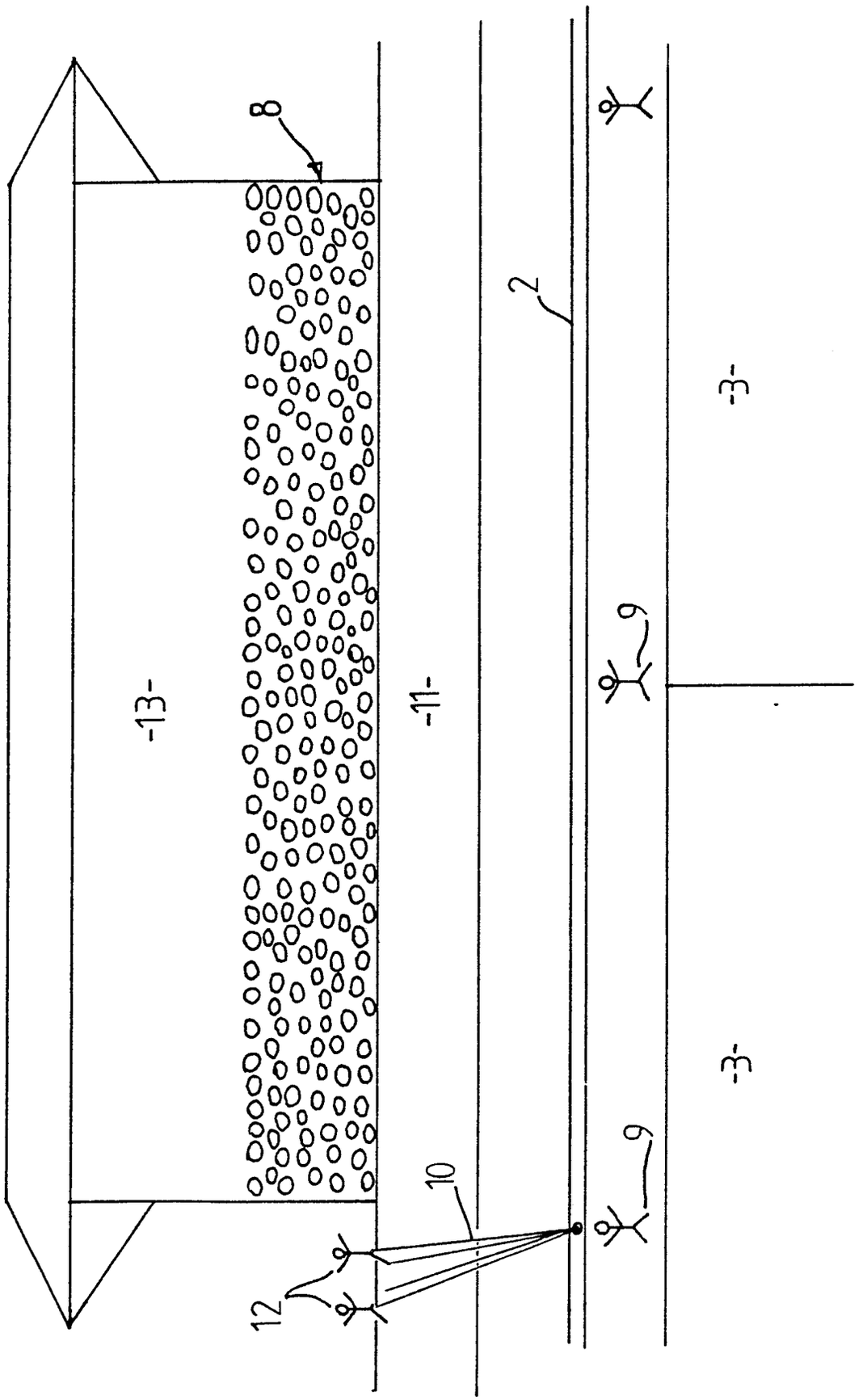

Fig.2