

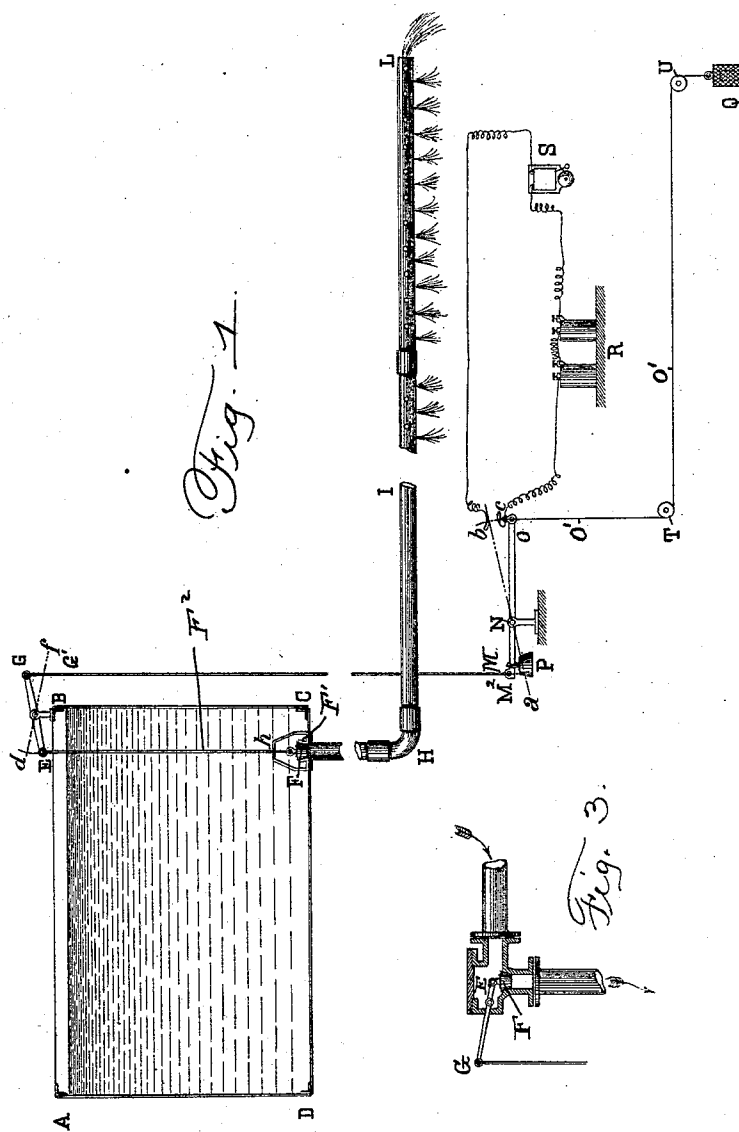
(No Model.)

2 Sheets—Sheet 1.

R. TRANQUILLI.
FIRE EXTINGUISHING APPARATUS.

No. 529,976.

Patented Nov. 27, 1894.



Witnesses:-

H. K. Boulter

C. Northrup

Inventor:-

Raffaele Tranquilli
By M. E. Boulter,
attorney.

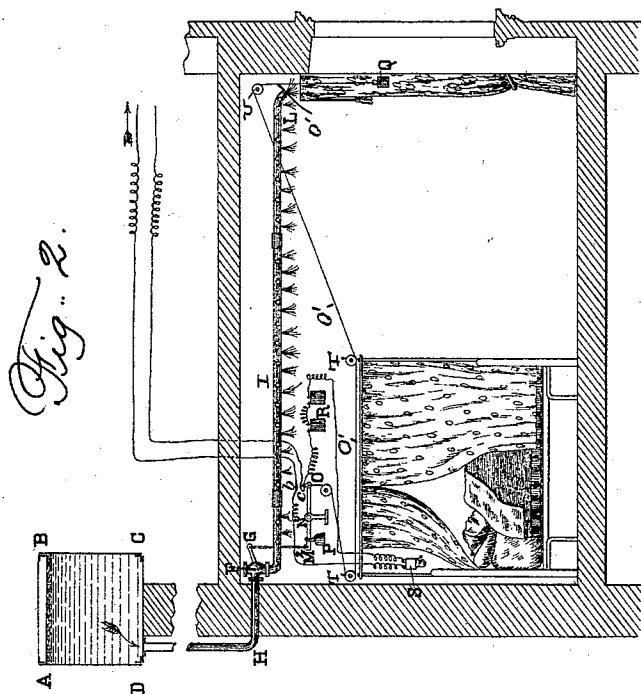
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Attorney

UNITED STATES PATENT OFFICE.

RAFFAELE TRANQUILLI, OF ROME, ITALY.

FIRE-EXTINGUISHING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 529,976, dated November 27, 1894.

Application filed July 24, 1894. Serial No. 518,488. (No model.)

to all whom it may concern:

Be it known that I, RAFFAELE TRANQUILLI, a subject of the King of Italy, residing at Rome, Italy, have invented certain new and useful Improvements in Fire-Extinguishing Apparatus, of which the following is a description.

My invention has relation to fire-extinguishing apparatus or devices, and among the objects in view is to provide a simple, inexpensive and efficient apparatus whereby the presence of a fire will be made known and such fire extinguished before the same has spread to any extent, and with the above and other objects in view all of which will presently be made apparent, the invention consists in the novel construction, arrangement, and combination of parts as hereinafter fully described, illustrated in the drawings and pointed out in the claims.

In the drawings:—Figure 1 is a sectional elevation illustrating my apparatus. Fig. 2 is a similar view, showing a slightly different arrangement of the parts. Fig. 3 is a sectional view showing a modified arrangement of the cut-off valve.

Referring to the above-described drawings and more particularly to Fig. 1, A B C D indicate a suitable metallic tank or cistern adapted to contain water, and with which tank communicates a discharge pipe H I L which leads off to the apartment or locality desired to be protected, said pipe being provided with a number of perforations to permit of the discharge therethrough of the water.

The communication between the tank and the discharge pipe is controlled by means of a suitable valve, adapted to normally remain in a position to cut off the communication between said parts, and to open communication between the same upon the breaking out of a fire.

In Fig. 1 I show a conical valve F, adapted to be seated within the conical valve seat F', and said valve is carried by a valve stem F² which passes upwardly through a guard or bridge h, and is connected at its upper end with one end of a lever E G centrally pivoted upon the tank. To the opposite end of the said lever is connected a wire or rod G' M

whose lower end is connected to one end of a counterpoised lever M² O pivoted centrally at N upon a suitable support. The opposite end of the said lever M² O carries a metallic contact c, and to said end is also connected one end of a combustible cord O', which passes around suitably-arranged guide pulleys T, U, located in the compartment desired to be protected, and the opposite end of the said cord carrying a weight, preferably a casing Q containing a substance that is readily melted.

R indicates a suitable battery, the wires from which connect with the contact c, and a similar contact b, a suitable alarm S being included in the electrical circuit.

It will be seen that in the event of a fire, if the cord O' should be burned at any point in its length the weight P carried by the lever M² O will draw down the rod G' M which causes the lever E G to assume the dotted line position whereby the valve F will be raised from its seat and permit the water to flow from the tank into the discharge pipe and through the perforations therein into the apartment to extinguish the fire; or if the cord should not be burned, the substance contained in the casing Q will be melted thereby reducing the weight and permitting the described operation of parts to take place. In either event the electrical circuit will be closed by the contact of the contacts b, c, thereby causing the alarm S to sound.

In the arrangement seen in Fig. 2, I show the apparatus applied to protect a bed-room, and in order to protect any number of rooms, as in a hotel, each of said rooms may be provided with the apparatus, all of which may derive their supply of water from the distributing pipe-system, the communication between such system and each set of devices being controlled by a cut-off valve or cock connected with a lever as seen in Fig. 3, and in this arrangement the cord O' is carried over guide pulleys so arranged as to bring the cord in close proximity to combustible materials, such as the bed-clothing, window-curtains, &c., so that ignition of these will immediately effect the desired operation of the parts and consequent discharge of water to extinguish the fire. In this arrangement, the contacts b, c, may be in electrical con-

nection with wires leading off to a fire-alarm station, whereby the brigade will be notified of the outbreak of a fire.

My apparatus may be employed for cooling heated bearings in various machinery wherein there may be parts liable to become hot, as for instance bearings of crank-shafts, thrust-blocks of propeller shafts, &c.

What I claim is—

10 1. The combination in a fire-extinguishing apparatus, of a suitable supply of water, a discharge pipe communicating therewith, a valve adapted to control said communication, a lever connected with said valve, a normally
15 balanced lever, a connection between the latter and the first lever, and a combustible cord connected with said balanced lever and adapted when severed to permit the parts to operate the valve to open communication between the water supply and the discharge
20 pipe, as and for the purpose specified.

2. The combination in a fire-extinguishing apparatus, of a suitable supply of water, a discharge pipe communicating therewith, a
25 valve adapted to control said communication, a pivoted lever connected with said valve at one end, a wire or rod connected with the opposite end of said lever, a pivoted normally balanced lever carrying a weight and connected at one end with said wire or rod, a
30 combustible cord connected with the opposite

end of said balanced lever, guide-pulleys around which said cord passes, and a casing carried by the said cord and containing a readily melted substance, all as and for the
35 purpose specified.

3. The combination in a fire-extinguishing apparatus, of a suitable supply of water, a discharge pipe communicating therewith, a valve adapted to control said communication, a
40 pivoted lever connected with said valve at one end, a wire or rod connected with the opposite end of said lever, a pivoted normally balanced lever carrying a weight and connected at one end with said wire or rod, a
45 combustible cord connected with the opposite end of said balanced lever, guide-pulleys around which said cord passes, a casing carried by the said cord and containing a readily melted substance, an electrical circuit containing an alarm and adapted to be closed
50 when the said cord is severed, in the manner and for the purpose specified.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 4th day of June,
55 1894.

RAFFAELE TRANQUILLI.

Witnesses:

DWIGHT BENTON,
JOHN L. HURST.