

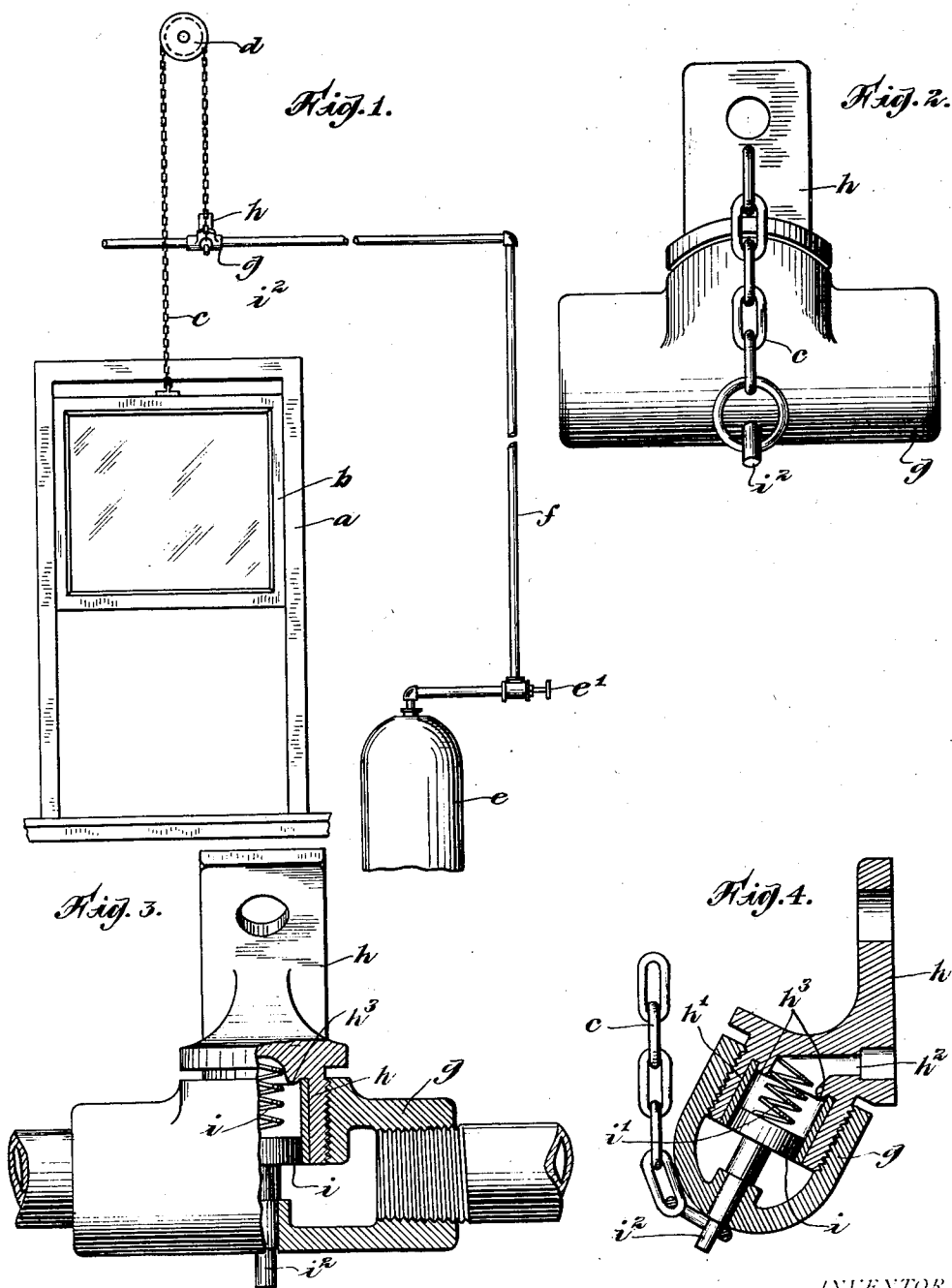
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FIRE EXTINGUISHING SYSTEM

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FIRE-EXTINGUISHING SYSTEM

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This invention relates to fire extinguishing systems in which a fire extinguishing medium such as carbon dioxide, is supplied from a source under pressure through a fixed pipe to the place of use. In the application of such systems to buildings provided with closures, such as doors or windows, which are normally or may be open at the outbreak of fire and should be closed in order to confine the fire extinguishing medium or to prevent the entrance of disturbing currents of air, or for any other reason, it is desirable that such closures should be closed and it is the object of this invention to provide a means which may be actuated by the pressure of the fire extinguishing medium in the conductor pipe and thereby effect the release of the open door or window that it may be closed by a spring, or gravity, or any suitable means.

The invention will be more fully explained hereinafter with reference to the accompanying drawing in which it is illustrated as embodied in a convenient and practical form and in which:

Figure 1 is a view in outline illustrating the relations of a source of fire extinguishing medium, a pipe system, a window, and a releasing device.

Figure 2 is a view of the releasing device in elevation on a large scale.

Figure 3 is a view of the same partly in perspective and partly in central longitudinal section.

Figure 4 is a view of the same in central transverse section.

In the embodiment of the invention illustrated in the drawing a window opening at *a* is represented as having a closure or sash *b* which is held in its normally raised or open position by a chain *c* passing over a guide pulley *d* and engaged with a releasing device to be described. A source of fire extinguishing medium under pressure is indicated at *e*, the fire extinguishing medium being conducted therefrom by a pipe system *f* to the loft or room to be protected by the admission of the fire extinguishing medium and by the closing of the open window.

The releasing device shown in the drawing comprises a fitting *g*, the fitting *g* being

interposed in the pipe line *f* and threaded upon a bracket *h* by which the fitting is secured to the wall or ceiling. For convenience the bracket *h* is formed with a cylindrical extension upon which the main body *g* may be threaded. The cylinder thus formed is open to the atmosphere and is provided with a valve seat *h*³. A loosely fitting piston or plunger *i* is placed on the cylinder *h*¹, being normally urged forward by a spring *i*¹ which serves to prevent accidental movement. The stem *i*² of the plunger is extended forward through the fitting *g* in order that it may be engaged by a link of the chain *c*.

It will now be understood that when the fire extinguishing medium is admitted from the container *e* by the opening of a valve, as at *e*¹, the relatively high pressure of the gas in the pipe line drives the plunger *i* upward or against the pressure of the spring *i*¹, drawing the stem *i*² from the chain *c* and thereby releasing the window so that it may be closed by gravity or under the urge of any other force.

It will be readily understood that the foregoing mechanism may be used to initiate the operation of many devices which are normally maintained in a predetermined position. For instance, dump valves may be controlled thereby to dump the contents of a tank or container, upon the existence of the conditions described above. Other uses of the invention, too numerous to outline here, will be apparent, and the scope thereof is not to be limited, save as defined in the appended claims.

I claim as my invention:

1. In a fire protective system including a closure having means to hold the same normally open, a source of fire extinguishing medium under pressure and a pipe line therefor, a release device interposed in the pipe line and actuated by the pressure of the fire extinguishing medium therein to release said closure, said release device comprising a fitting through which the fire extinguishing medium passes, a cylinder in communication with the fitting, and a plunger in said cylinder having a stem extending through the fitting and engaging the holding means.

2. A release device for a fire extinguishing system employing a fire extinguishing medium under pressure comprising a fitting having a chamber adapted to be interposed
5 in a pipe line, a bracket having a threaded extension adapted to engage the fitting, a cylinder in the extension and communicating with the chamber in the fitting, a plunger in the cylinder and subject to the pressure of
10 the fire extinguishing medium when admitted to the pipe line, a stem carried by the plunger and extended through the fitting for engagement with the device to be restrained thereby from movement, and means in the
15 extension to resist, yielding, movement of the plunger by the fire extinguishing medium in the chamber.

This specification signed this 31st day of July, A. D. 1928.

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DANIEL MAPES.

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