The invention as hereinafter described refers to a fire hose reel so arranged that when the fire hose is wound off, this causes the outlet for the supply of the extinguishing water, liquid or gas to open, thereby allowing a very quick setting in operation of the apparatuses adapted to extinguish the fire; this results in a most important saving of time in disasters of this sort where the slightest delay may be the cause of important if not of irreparable losses.

The device is provided with a safety locking means which makes it almost impossible to have any interruption in the service of the apparatus; the first pulling motion exerted upon the hose having for effect to secure at once the opening of the delivery mechanism.

Therefore, a fire extinguisher most commonly comprises:

1st—A reel on which is wound up one or several hose members, the said hose being provided at one of its ends with part of a so-called symmetrical quick connecting joint piece and at the other end with a water pipe or lance;

2nd—A water supply most frequently constituted by a cock or valve which is secured to the delivery pipe and whose free outlet is provided with a part to be connected to the symmetrical joint of the hose.

After the said hose has been completely wound off, the joint thereof is quickly secured to the one of the valve; the said operations, although they are quickly performed, require a certain time and it frequently happens that delays were due to the fact that the joints did not enter at once in one another, or that the valves or cocks whose movable parts were, after having remained unused for a somewhat long period of time, oxidized or stuck together, required to be inspected, unlocked or taken to pieces and this, in case of a disaster, might have had the most fatal consequences.

The device according to the present invention does away with all these inconveniences and has the advantage of being capable of being maintained in a good state of operation without it being necessary to interrupt the supply of the apparatuses. The reel, the tight parts and all of the moving members can, at any moment, be taken apart for the purpose of being cleaned, lubricated and to receive every care for repairs which are usually required by moving parts. Such a device is of the most importance on ships, for instance, where the inspection of a fire valve requires the whole or part of the fire extinguishing service on board to be stopped.

An embodiment of the invention is represented, by way of example, diagrammatically in the accompanying drawings in which:

Fig. 1 is a sectional view of the whole of the reel or winding off device in the closing position.

Fig. 2, half a front view and half a section made through the axis of the supply pipe.

Fig. 3 is a part section in the opening position.

Fig. 4 is a part section of a detail of the device for locking the yoke or rider.

Fig. 5 is a part section of a detail of the device for unlocking the yoke.

Fig. 6 is a perspective view.

The reel or winding off device comprises a body 1, made of bronze or other metal or material suitable for the liquid or gas as employed for extinguishing the fire, the said body being rigidly secured to the fixed or steerable support. The same also comprises a valve 2 secured to the bottom and in the middle of the body 1, a movable part 3 screwed at 5 to the body 1 and a hub 3 adjusted and ground to the conical part of the member 1. The said hub 3 is maintained in position by the washer 18 and the nut 19. A two-branch handle 12 is adjusted upon a square part at the end of the member 2 and is maintained in position by the washer 15 and the screw 14.

The tightness of the member 2 when the same leaves the body 1 is secured by the washer 10 made of some plastic matter and the stuffing-box nut 8. To the walls of the hub are secured the cheeks 11 of the reel. Between the latter is adjusted and secured an interrupted circular sheet iron plate 27 between the spaced ends of which passes the outlet pipe 23 which receives the part of the joint connecting itself to one of the ends of the hose.

The washer 18, adjusted to one part of the member 2, is formed with an offset for supporting the axis 17 of the yoke 16 between the branches of which is engaged, in the closing position, one of the ends of the rod 19, the other end of which is maintained in contact with the external face of the stuffing-box nut 3 under the influence of the spring 20 bearing upon the washer 21. A tight washer 6 prevents, in the closing position, any introduction of the extinguishing liquid or gas into the threads of the member 2.

The ports 24 connect the interior of the member 2 with the annular space 25 and the outlet pipe 23.

The liquid or gas supply takes place through the pipe 26 cast in one part with the body.

The said figures are given by way of example...
only, the form of the reel or winding off device, of the valve, of the cheeks, the inlet and outlet connecting system can be modified so as to meet with particular conditions of use.

The operation of said apparatus is as follows:

The apparatus being in the closing position (Fig. 1), the pull exerted upon the hose so as to secure the winding off has for effect to unscrew the member 2, connected at this moment to the hub, through the introduction of the end of the rod 18 between the branches of the yoke 16 connected on its turn with the washer 18 centrally provided with a square 15 adjusted upon the member 2; at this moment, the said member 2 occupies in the body the position indicated in Figures 3 and 4 and the liquid coming through a bore, a valve cooperating with the element and serving in one limit position of the element to cut off communication with the source of fluid and the bore of the element while permitting such communication in the opposite limit movement of the element, a hose reel having a pipe nipple at all times in open communication with the bore of the element, means for fixing the reel with respect to the element to cause the element and reel to move as a unit in the initial movement of the reel, said means being automatically released following a predetermined reel movement to free the reel with respect to the element and permit free reel movement without moving the element.

A construction as defined in claim 2, wherein the means for fixing the reel with respect to the element includes a spring-pressed pin acting transverse the reel, and means carried by and fixed with respect to the element for normally engaging the pin.

Automatic hose reel for fire extinguishing apparatus, comprising a hollow body, a fluid admission conduit connected to said hollow body, a valve member mounted in said hollow body, a hollow member adapted to be screwed in said hollow body and having a valve seat adapted to engage said valve member when the hollow member is screwed into the body, a hollow hub rotateably mounted on said hollow member, said member having openings connecting its interior with the interior of the hollow hub, a reel mounted on said hub, a hose wound on said reel and having its inner end connected to the interior of said hub, an operating member for screwing and unscrewing said hollow member in the hollow body, and coupling means fastening the hub for common rotation with said hollow member when the latter is unscrewed a predetermined number of rotations away from the valve member.

Automatic hose reel as claimed in claim 4, wherein packing rings are provided for making fluid-tight joints between the hollow member and the body, as well when the said member is screwed in engagement with the valve, as when said member is unscrewed away from the valve.

Automatic hose reel as claimed in claim 4, wherein the coupling means comprise a rod slidingly mounted in the hub, parallel to the axis of said hub, a spring urging the rear end of said rod against the front surface of the body, a washer mounted on the hollow member for common rotation therewith, and a yoke pivoted on said washer and adapted to engage the front end of said rod.

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