

Nov. 23, 1937.

J. T. CORLEY

2,099,799

CELLAR PIPE

Filed July 19, 1934

3 Sheets-Sheet 2

Fig. 2

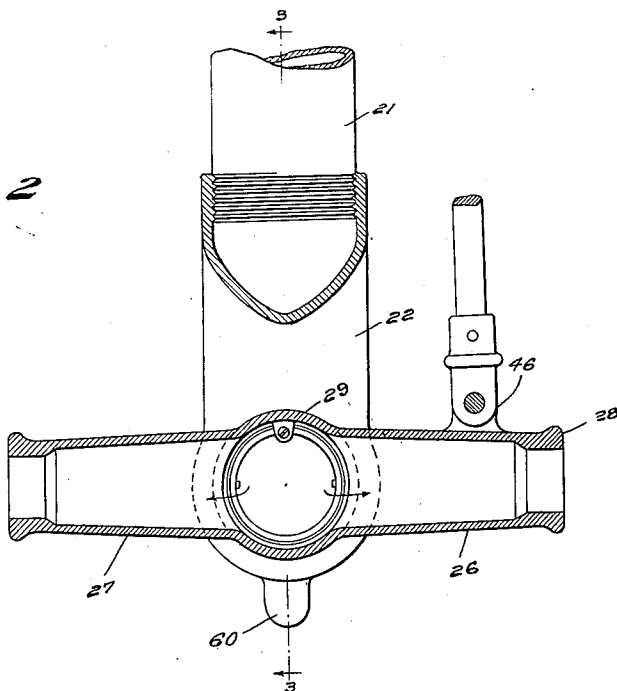
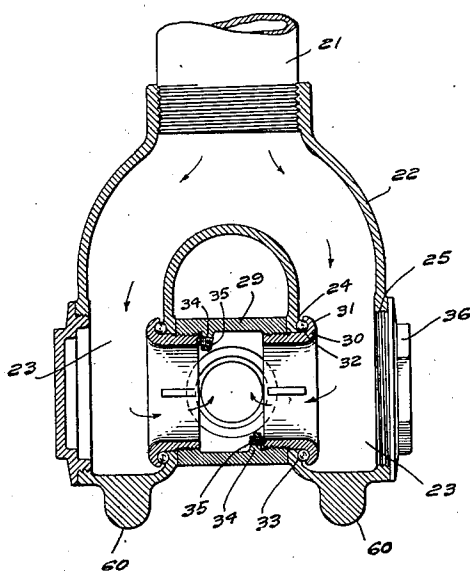


Fig. 3



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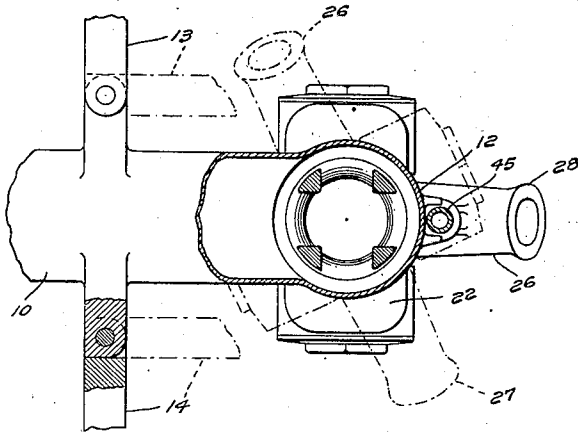


Fig. 1

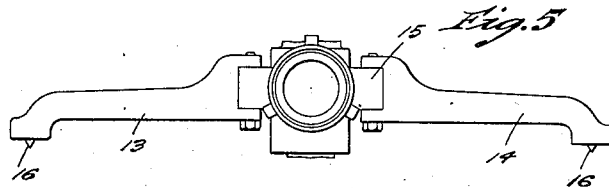


Fig. 5

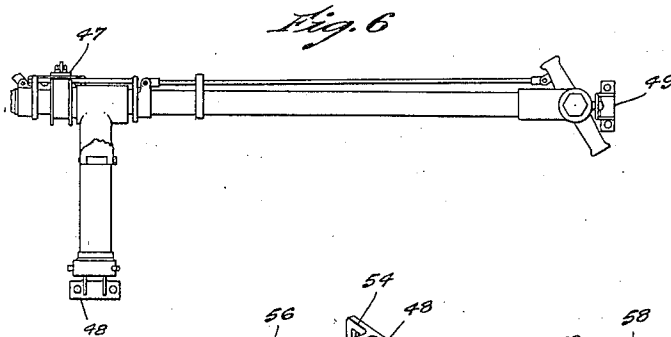


Fig. 6

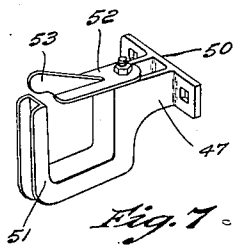


Fig. 7

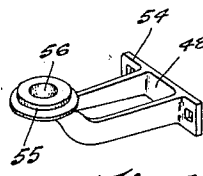


Fig. 8

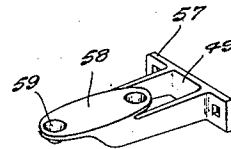


Fig. 9

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UNITED STATES PATENT OFFICE

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CELLAR PIPE

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6 Claims. (Cl. 299—73)

My present invention relates to fire fighting apparatus, and has particular reference to cellar, roof and dock pipe constructions utilized for directing fire extinguishing fluid into fluid places where firemen cannot enter.

Cellar pipe apparatus usually include a base to which a hose may be attached, and a depending nozzle carrier which is inserted in an opening in a floor or the like, the nozzle carrier supporting one or more nozzles which may be adjusted by the fireman outside the room so as to guide the water or other fire extinguishing fluid in any desired direction. These constructions have heretofore had certain operating disadvantages, in that it has been difficult to properly support the base so as to carry the nozzle holder without tilting, and to selectively adjust the nozzles so as to guide the water in the desired direction; moreover, there has been a lack of balance for the apparatus, due to the reactive effect of the stream emerging from the nozzle.

The objects of my invention are to provide a portable cellar pipe construction which is compact, inexpensive to manufacture, and light in weight, and which may be quickly set in operating position and easily controlled so as to direct the water streams to any desired point, the apparatus having no reactive effect resulting from the flow of water out of the nozzles.

To this end, my invention consists of a novel arrangement of parts more fully disclosed in the detailed description following, in conjunction with the accompanying drawings, and more specifically defined in the claims appended hereto.

In the drawings:

Fig. 1 is a front elevation showing the novel cellar pipe in operating position, a different operating position being shown by means of dotted lines;

Fig. 1a is a sectional enlarged view through the base and the nozzle carrier;

Fig. 2 is a view of the nozzle carrier tip and the nozzle, parts being shown in section;

Fig. 3 is a view on the line 3—3 of Fig. 2;

Fig. 4 is a sectional view on the line 4—4 of Fig. 1;

Fig. 5 is an end elevation of Fig. 1 showing the supporting legs in open position, parts being broken away;

Fig. 6 is a skeleton view showing the position of the supporting brackets for carrying the novel cellar pipe; and

Figs. 7, 8, and 9 are perspective views of the separate bracket parts.

It has been found advisable to provide a cellar

pipe construction which is light in weight, is inexpensive to manufacture and assemble, which is rigid when in operation, but can be readily manipulated by the operator so as to direct a stream of water or streams of water in any desired direction, and which has no reaction or side thrust due to the flow of water from the nozzle thereof. I have obtained these desirable results by constructing a cellar pipe which has lateral supporting legs for the base, and which has a plurality of nozzles readily shiftable by an operator so as to direct the outflowing fluid towards any point, the nozzles being so arranged that the reactive effect is balanced.

My improved cellar pipe construction includes the formation of a cellar pipe from a plurality of separable parts which are readily assembled and are fluid tight after assembly, the nozzles being readily movable to control the flow of water from the cellar pipe.

Referring to the drawings, the novel cellar pipe includes a base 10 which has the usual coupling end 11 at one end, and an end nipple arrangement 12 at the other end, two support legs 13, 14, see Fig. 5, being pivotally mounted on the ends of a laterally extending block 15 cast intermediate the ends of the base 10, to fold forwardly and transversely of the base, these legs having calks 16 which contact the floor to firmly grip the legs when the ends are extended transversely of the base 10. A cap 17 is rotatably mounted within the base nipple 12 as indicated in Fig. 1a, suitable packing 18 being provided to make a leak tight joint, the cap 17 threadedly receiving a lock ring 20 which is screwed down to place the packing 18 under suitable compression and having spider bars 19 to permit free flow of water into the nozzle carrier tube 21. The nozzle carrier tube 21 is secured to the lower end of the cap 17, and has a carrier yoke 22 fixed to the lower end thereof, as by threading. The yoke 22 has two parallel passageways 23, the walls of these passageways being bored to provide two inner central openings 24 and two outer openings 25 of larger diameter. A double nozzle member 28, see Fig. 2, is provided with two oppositely directed nozzles, 27, 26 and a central bearing portion 29 which is machined to fit snugly between the inner walls of the yoke 22 and is threaded to receive the similarly threaded ends of lock rings 30 which have their ends 31 bent over to receive packing rings 32, whereby threading the lock rings on the central bearing 29 engages the packing 32 between the ring ends 31 and the inner walls of the yoke; the inner walls are recessed as at 33

to conform to the shape of the packing rings 32. The lock rings, after tightening, are locked in position by means of set screws 34 which pass through oppositely positioned lugs 35 integral with the central bearing portion 29. The openings 25 are threaded to receive the corresponding threads of closure caps 36.

Referring to Fig. 1, the cap 17 has spaced bearings 37 at the upper end thereof between which a lever 38 is pivotally mounted, one end 39 of the lever being tubular to receive a control handle 40, preferably connected to the lever 38 by a flexible chain 41 to prevent displacement or loss. The other end of the lever 38 is pivotally connected by means of a link 42 to a collar 43 which is slidably mounted on the cap 17, this collar being rigidly connected to a similar collar 44 positioned below the nipple 12 by means of a connecting rod 45a, whereby vertical movement of the collar 43 resulting from movement of the handle is imparted to the collar 44. A connecting bar 45 is hingedly mounted to the collar 44, the lower end being connected through a link 46a to lug 46, see Fig. 2, forming integral with or otherwise secured to one of the nozzles, whereby vertical swinging of the handle 40 produces a corresponding swinging of the nozzle member 26.

Referring now to Figs. 6 to 9, inclusive, the novel cellar pipe is detachably mounted on a fixed support such as the wall of a building, or on a movable support such as a fire engine, by means of a novel bracket arrangement consisting of three bracket elements 47, 48, 49; the bracket 47 has a base 50 adapted to be secured to a fixed support and a U shaped tip 51 for receiving the cap 17, a slide cover 52 having a finger portion 53 being mounted on the upper face of the bracket so as to selectively overlie the U shaped tip 51 or to be displaced laterally so as to permit removal of the cap 17 therefrom. The bracket 48 has a base 54 shaped to be secured to a fixed support, and a bearing plate 55 which has an upstanding top 56 of smaller diameter adapted to be seated in the open end of the hose connection 11, and the bracket 49 has a base 57 adapted to be secured to a stationary support, and is provided with a bearing plate 58 which has two spaced recesses 59 for receiving nubs 60 positioned at the ends of the nipple yoke 22.

Considering Fig. 6, the cellar pipe is placed in position by seating the cap in the bracket 47 and engaging the hose connection end with the bracket 48 and the yoke end with the bracket 49, the lock plate 52 being turned to hold the assembly in place. The cellar pipe is removed by swinging the lock plate 52 sidewise whereupon the cellar pipe is immediately removed from the brackets, and is placed in operative position by extending the nozzle tube 21 downwardly through an opening in a floor or the like, and spreading the legs laterally so as to support the cellar pipe on the two legs and the cellar pipe base. With the cellar pipe in the position shown in Fig. 1, the nozzle member may be moved vertically so as to direct the two nozzles at any desired angles by vertical movement of the handle, and may be shifted laterally by swinging the handle and turning the cap in the head 12, whereby any directional flow of fluid from the nozzles may be obtained.

It is thus evident that the improved cellar pipe is of simple construction, is readily manufactured and assembled, permits universal flow

of the fire fighting fluid, is rigid in use, and has no backward, lateral or other reaction thrust, as the flow of a fluid through the nozzles is always balanced.

I claim:

1. In a cellar pipe, a base, a nozzle carrier rotatably mounted therein, a nozzle swivelly mounted in said nozzle carrier and rotatable about an axis at right angles to the axis of rotation of the nozzle carrier, means for rotating said nozzle carrier and for swivelling said nozzle independently of the rotation thereof, and means for nullifying the reactive effect of fluid emerging from said nozzle, said latter means including a second nozzle secured to and oppositely directed to said first nozzle.

2. In a cellar pipe, a base, a nozzle carrier rotatably mounted therein, a nozzle swivelly mounted in said nozzle carrier and rotatable about an axis at right angles to the axis of rotation of the nozzle carrier, means for rotating said nozzle carrier and for swivelling said nozzle independently of the rotation thereof, and means for nullifying the reactive effect of fluid emerging from said nozzle, said latter means including a second nozzle oppositely directed to said first nozzle and connected thereto for simultaneous movement therewith.

3. In a cellar pipe, a base, a nozzle carrier rotatably mounted therein, a nozzle swivelly mounted in said nozzle carrier and rotatable about an axis at right angles to the axis of rotation of the nozzle carrier, unitary means for rotating said nozzle carrier and for swivelling said nozzle independently of the rotation thereof, and means for nullifying the reactive effect of fluid emerging from said nozzle, said latter means including a second nozzle secured to and oppositely directed to said first nozzle.

4. In a cellar pipe, a base, a nozzle carrier rotatably mounted therein, a nozzle swivelly mounted in said nozzle carrier and rotatable about an axis at right angles to the axis of rotation of the nozzle carrier, unitary means for rotating said nozzle carrier and for swivelling said nozzle independently of the rotation thereof, and means for nullifying the reactive effect of fluid emerging from said nozzle, said latter means including a second nozzle oppositely directed to said first nozzle and connected thereto for simultaneous movement therewith.

5. In a cellar pipe, a base, a nozzle carrier rotatably mounted therein and terminating in a yoke, a nozzle swivelly mounted in said yoke and rotatable about an axis at right angles to the axis of rotation of the nozzle carrier, means for rotating said nozzle carrier and for swivelling said nozzle independently of the rotation thereof, and means for nullifying the reactive effect of fluid emerging from said nozzle, said latter means including a second nozzle secured to and oppositely directed to said first nozzle.

6. In a cellar pipe, a base, a nozzle carrier rotatably mounted therein and terminating in a yoke, a nozzle swivelly mounted in said yoke and rotatable about an axis at right angles to the axis of rotation of the nozzle carrier, means for rotating said nozzle carrier and for swivelling said nozzle independently of the rotation thereof, and means for nullifying the reactive effect of fluid emerging from said nozzle, said latter means including a second nozzle oppositely directed to said first nozzle and connected thereto for simultaneous movement therewith.

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