Feb. 23, 1937. J. A. CRAIG ET AL 2,071,731

HOUSED FIRE HOSE REEL

Filed Sept. 18, 1935 2 Sheets-Sheet 1

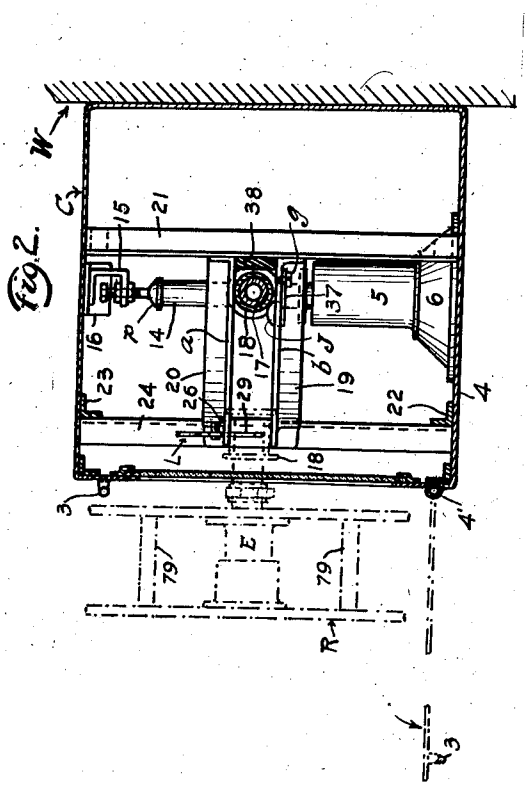


Fig. 2.

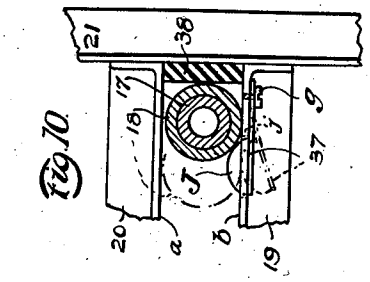


Fig. 10.

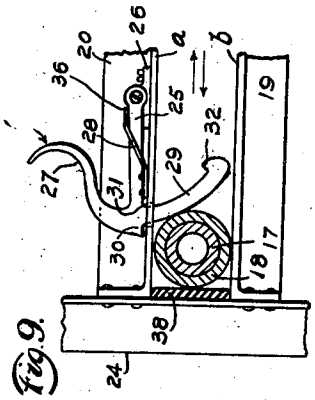


Fig. 9.

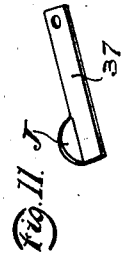


Fig. 11.

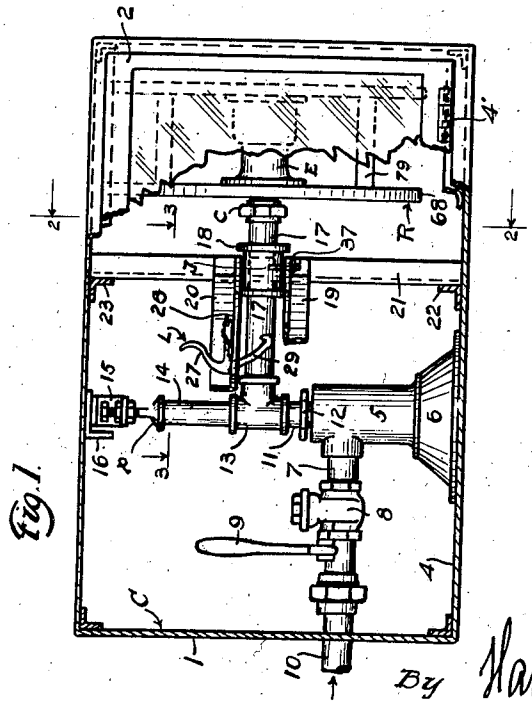


Fig. 1.

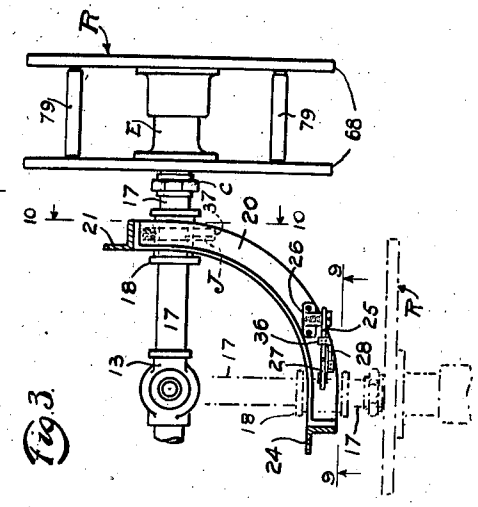


Fig. 3.

INVENTORS:
James A. Craig,
Ernest Davies,
By Harold D. Penner, ATTORNEY.

Feb. 23, 1937. J. A. CRAIG ET AL 2,071,731

HOUSED FIRE HOSE REEL

Filed Sept. 18, 1935 2 Sheets-Sheet 2

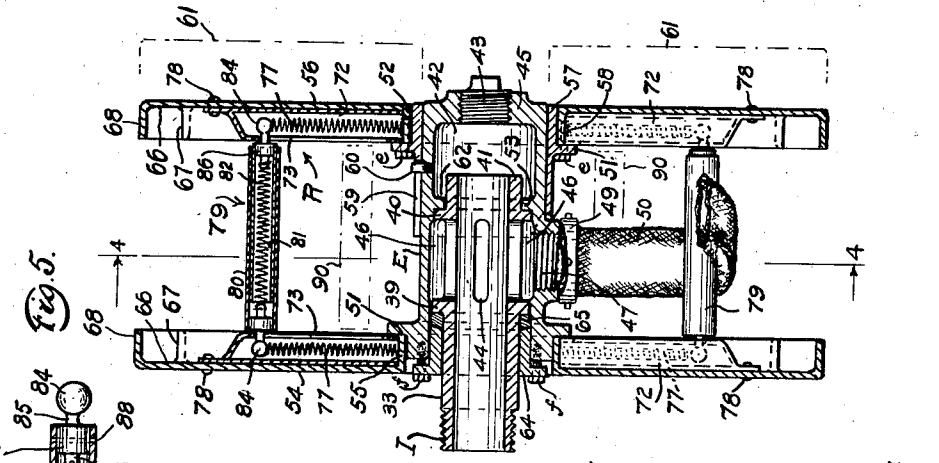


Fig. 5.

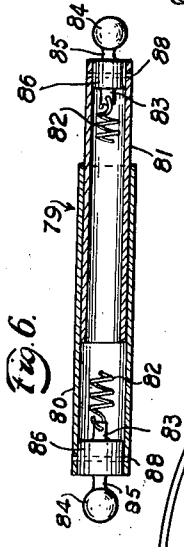


Fig. 6.

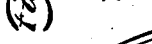


Fig. 8.

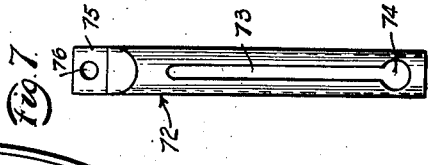


Fig. 7.

Fig. 4.

INVENTORS:
James A. Craig,
Ernest Davies,

By Harold D. Penney, ATTORNEY.

Patented Feb. 23, 1937 2,071,731

UNITED STATES PATENT OFFICE

2,071,731

HOUSED FIRE HOSE REEL

James A. Craig, Peekskill, and Ernest Davies, Beacon, N. Y.

Application September 18, 1935, Serial No. 41,042

13 Claims. (Cl. 299—78)

The present invention relates to expansible hose reels of the type disclosed in United States Patent #2,010,811, issued August 13, 1935, to James A. Craig, for Expansible hose reels.

The herein device contemplates an improvement of a hose reel and its mounting therefor, and wherein the reel is enclosed in a cabinet for protection against the elements, when mounted in exposed positions.

A further feature is in the provision of means whereby the cabinet may be quickly opened and the reel quickly moved, exteriorly of the cabinet, to operative position, for speedy operation, in the emergency of the occurrence of a fire.

Another feature is the provision of a locking means to firmly lock the hose reel in its outer operative position, but which means is manually releasable, when the reel is to be returned to non-operative, protected position, within the cabinet in which latter position it is also locked.

A further feature is in the provision of a rail guide, preferably wholly within the confines of the cabinet whereby to support the reel and its appurtenant hose in desired angular position of operation, thus to relieve the water connections and couplings of undue strains.

A further improvement is in the provision of a cushioning air chamber within, or associated with, the hub section of the reel, whereby to inhibit water hammer upon the first rush of water therein and to evenly control the initial outflow of water from the hose upon commencement of operation thereof.

A further feature is in the provision of improved means for permitting the automatic two way expansion of the reel, upon the distension of the collapsed hose thereon by the initial entrance of water pressure therein, when the water is admitted to the hose while still reeled upon the reel, thus enabling the water to reach the fire simultaneously with the approach of the nozzle thereto. This feature is a great time saving element in the emergency of a fire occurrence.

Further features of structural advantages will be noted as the herein description proceeds and it is obvious that modifications may be made in the structure herein without departing from the spirit hereof or the scope of the appended claims.

In the drawings,

Fig. 1 is a front elevation of a reel enclosing cabinet, with portions broken away to better show appurtenant parts;

Fig. 2 is a sectional view, taken on line 2—2, Fig. 1, looking in the direction of the arrows;

Fig. 3 is a partially sectioned plan view of the hose reel and support means, removed from the cabinet and sectioned on line 3—3, Fig. 1, looking in the direction of the arrows;

Fig. 4 is an enlarged sectional view of the hose reel, in elevation, taken on line 4—4, Fig. 5, looking in the direction of the arrows;

Fig. 5 is an enlarged sectional view of the hose reel, taken on line 5—5, Fig. 4, looking in the direction of the arrows;

Fig. 6 is an enlarged longitudinal section of one of the expansible hose supporting cross struts, removed from its operative position in the reel;

Fig. 7 is a view, in elevation, of one of the strut guides;

Fig. 8 is a plan view of Fig. 7; and

Fig. 9 is a fragmentary, enlarged view of the reel lock, showing details thereof; Fig. 10 is an enlarged sectional view, taken on line 10—10, Fig. 3, looking in the direction of the arrows; and Fig. 11 is an enlarged perspective view of the spring lock latch for holding the reel in the non-operative position within the cabinet or housing.

In Figs. 1 and 2, the reel, generally denoted by R, is shown as being mounted within an enclosing, four walled cabinet C, which may be made of sheet metal and be suitably affixed to a wall W, Fig. 2.

The cabinet has one of its walls in the form of a door 2, hinged upon one of its walls 4, Fig. 2, so as to drop downwardly, as shown dotted. A handle 3 near the upper edge of door 2, affords convenient means for manual manipulation of the door. The door may also be provided with snap catches along its upper edge, and these catches being well known, are not shown.

Within the cabinet interior is firmly located a pedestal water connection 5—6, its base 6 resting upon the floor wall 4 and may be riveted or bolted thereto. An inlet water pipe 10, passes from the exterior of the cabinet to the interior thereof, Fig. 1, by means of a bore in side wall 1, said pipe being coupled to a hand valve 8, said valve being in turn connected to the hollow interior of the pedestal 5, by a nipple 7.

In the top of the pedestal, as viewed in Figs. 1 and 2, is located a stuffing box joint 11, 12, which is packed therein for rotative movement, and which is in turn, connected to a T connection 13. The upper end of the T connection is closed by a capped pipe 14 the upper end of the capped pipe having rotatable connection with an adjustable screw pivot 15, which in turn is fixed-

ly held to the top wall of the cabinet by suitable fixed bearing means 16.

As thus described, the pedestal 5—6 is fixed and the adjustable pivot is fixedly mounted, and between these both is journalled the connection 11—13 and 14, for rotation, under water pressure within.

The T 13 is connected at its mid-portion to a radius pipe 17, the other end of which is threadedly connected to the thread inlet end I of the reel R, Fig. 5, by a coupling *c*, Fig. 1. All of the foregoing described connections from cabinet inlet 10 to reel inlet I are made in a water tight manner, and in some non-essential details, the mode of connection may be varied.

As thus described, however, the essential feature of the foregoing reel connection, is to permit the reel R, when the door 2 is opened and dropped, to be pulled out of the cabinet, instantly, to the external dotted position, as shown in Fig. 2, the pipe connection 17, acting as a radius arm, the pivot of the pedestal 5 and the stuffing box connection 12 acting as trunnions for the radial out-swing of the reel and hose.

A hand operated water line controlling valve 8, Fig. 1, located adjacent the pedestal and controlled manually by its handle 9, is fitted between the inlet pipe 10 and the pedestal portion 5, thus providing convenient means for instantly turning on the water pressure, when the reel is first pulled out for active operation.

Owing to the weight of the reel and its deflated, wound up hose and nozzle, the latter two not being shown, but are well known in this art, a supporting track has been provided, to care for the gravitational forces exerted by such weight and to relieve the rotatable pipe connections of these strains, and, to this end, two vertical uprights, 21 and 24, preferably of angle iron, are suitably affixed between the top and bottom walls of cabinet C, as in Figs. 1, 2 and 3. These uprights, as viewed in Fig. 3 are so positioned as to act as terminal posts for stopping the quarter, radial, swing of the reel at the ends of its operative and non-operative positions, within, and exteriorly to the cabinet.

Two angle iron quadrant rails, one bottom as at 19, and one upper, as at 20 are firmly affixed at their ends to the uprights 21—24, best seen in Fig. 3, the center of the radii of the quadrant rails being centered in the vertical axis of the pedestal 5—6.

The rails 19—20 are so bent, that one of webs thereof, as at *a* and *b*, Fig. 2, face each other flatwise to form a dual track guide of comparatively wide face.

Between said rails 19 and 20 is located a flanged spool 18, the flanges of which span the webs of the tracking guides, thus to keep the spool upon the webs.

The spool 18 is rotatively mounted upon the radius pipe 17, and as the reel is moved within the limits of the quadrant, it acts as a roller to reduce movement friction.

As in Figs. 1 to 3, and Fig. 9, the reel support is provided with a latch, generally denoted by L, Fig. 9, which is located on the web of upper quadrant rail 20, said latch being pivotally mounted, by its arm 25, to a pivot bearing block 26, which is firmly affixed to said upper rail 20. The latch L is substantially anchor or T shaped, as viewed in Fig. 9, the arm 25 having a downwardly depending latch arm 29 having a hook extension 32 on its lower extremity, said arm 25 having also an upwardly extending curved handle extension 27, with a stop extension 30 near its conjunction with arm 25. The web of rail 20 is provided with a slot 31, through which latch arm 29 extends. Stop extension 30 and hook extension 32 act to limit the drop and lift of the latch L, when manually operating the same in the slot 31.

In order to hold the latch arm L under downward tension, there is provided a flat, offset latch spring 28, one end of which is suitably affixed to the web of quadrant arm 20, adjacent and parallel to the latch arm 25, the other end of the spring being offset, Figs. 3 and 9 as at 36, to overlie the latch arm 25, and thus to hold the latch arm down firmly when subjected to pressure by the spool 18, when the reel R is at the dotted position of Fig. 2, with the spool caught behind latch L, as in Fig. 9. As thus described the reel R is caught and held in its outer operative position and is there held against the hose unreeling forces in the direction of either of the arrows in Fig. 9. The latch L is manually operated to latch lock or unlatch the reel by moving it by the curved handle extension 27 about its pivot point.

As in Fig. 9, a rubber cushion block 38 may be mounted between the quadrant rails 19—20 on one face of upright 24, to absorb the shock of outswing of the reel at its outer terminal movement.

The reel R as previously noted, has a threaded, cylindrical inlet extension 33 which is threaded at I, Fig 5, to be coupled to the outer end of the radius pipe 17, by a suitable coupling means C.

The cylindrical inlet pipe 33, Fig. 5, is provided with two spaced apart central flanges 39—40. The pipe 33 extends inwardly beyond the flange 40 as at 41, and is open ended, the open end extending part way into a cushioning air chamber 42, in the end of a reel trunnion E, the end of said pipe, at 45, being plugged with a threaded plug 43 to close said air chamber end.

The cylindrical inlet pipe 33, between the flanges 39 and 40 is provided with a plurality of peripherally located water outlet slots 44, Figs. 4 and 5, which open up into a surrounding chamber 46, this chamber opening up into a threaded water outlet 47, which connectably receives a hose coupling 49, Fig. 5, to which is attached the usual hose 50, which, normally is rolled upon the reel in collapsed condition.

The cylindrical inlet pipe 33 rotatably supports a reel trunnion, generally denoted by E, which is provided with an exterior, flanged reel-side seat 51 near one end thereof, adjacent the inlet end of pipe 33, Fig. 5, and upon this seat is fixedly located, or seated, a reel-side 54 by its flanged hub 55. The reel side 54 may be affixed to its seat by suitable screws between the flange of reel trunnion E and one flange of the channel hub 55, such as is illustrated at *e—e*, Fig. 5.

The opposite exterior end of reel trunnion E is cylindrical and slidably supports thereon a cylindrical reel-seat slide 57, which is provided with a flanged reel-seat 52, and into which latter is fixedly mounted the channel shaped hub flange 58 of reel side 56, said reel side being held to said reel seat 52 by headed screws *e—e*.

The reel seat slide is slotted longitudinally as at 59, Fig 5, and a screw 60, threaded into trunnion E, in said slot, acts as a radial key to prevent rotation of said slide on said trunnion, but permits of the sliding, outwardly of the reel side 56 to the position shown in dotted lines 61, Fig. 5, under exertion of hose water pressure.

As thus described, the reel sides 54—56 and trunnion E rotate as one piece upon the inlet pipe

33, and reel-side 56 can concurrently slide outwardly on trunnion E.

In order to permit the trunnion E to rotate without leakage and to hold the trunnion in operative position on pipe 33, the interior of trunnion is provided with an internal flange 62, which abuts one face of pipe flange 40, these flanges acting as a locating stop for the relative operating positions of pipe 33 and trunnion E.

On the opposite end of trunnion E, adjacent the inlet end of pipe 33, is located a flanged, interiorly fitted, packing gland 64, which fits between the inner cylindrical surface of trunnion E and the outer cylindrical surface of pipe 33, the angled, inner end of said gland compressively holding a compressible ring packing 65 against the side face of pipe flange 39, thus permitting of the rotation of the reel structure on the pipe 33, without leakage. Adjustment of packing compression is accomplished by tightening the headed adjusting screws *f—f* located between the flanged portion of gland 64 and threaded into the adjacent end of trunnion E. Gland 64 rotates with trunnion E on pipe 33. The bearing for trunnion E is formed by the cylindrical edges of flanges 39, 40, 62 and the gland 64.

The reaction thrust of the packing gland draws flange 62 in closer contact with flange 40.

The reel-sides 54—56, as in Fig. 4, are preferably of a cast metal, in one piece and in the form of wheels, with an outer rim, 66, a plurality of radial spokes 69, all integrally connected to each other and their flanged hubs 51 or 52.

On the score of lightness and strength, the cross section of the rims, spokes and hubs are channel shaped, the rims having relatively thin felly walls 66, Fig. 4, with flanges 67—68 inturned at right angles thereto, the spokes 54 and 56 having side faces 69, with flanged side walls 70—71. The flanges of the rims, spokes and hub of each reel are, naturally, all connected to each other to each form an integral, light and strong unitary reel structure.

On each spoke of each reel, there is operatively mounted a tubular guide 72, which is fitted between the opposite flanges 70 and 71 of each spoke, and held therein at the outer end thereof by a rivet 73, which engages between the side face 69 of each spoke and the outer flattened end 75 of each guide, Figs. 7 and 8, said flattened end 75 having a hole 76 to receive said rivet.

The lower end of the guide 72 may be left open, to allow of the introduction therein, before riveting in position, of a coiled compression spring 77. The lower ends of the guides 72, when in operative position, as in Fig. 5, rest upon and are retained by the channel sections of the hubs 52 or 55. Thus when the inner open ends of the guides are seated and the outer ends 75 are riveted, the guides are firmly held in fixed operative position between said sections 52—55 and the flanges 51—51. The spokes of each reel-side are located, in assembly, to be radially registered with each other, in opposing radial alinement, as in Fig 5.

The guides 72, are each provided on their exposed faces, when in reel position, as in Fig. 4, with a longitudinal slot 73, the lower end of which, as viewed in Fig. 7, terminates in an enlarged bore or aperture 74.

The purpose of this slot and bore is to operatively receive and hold therein, in conjunction with the spring 77, an expansible cross bar or strut, generally denoted by 79, and shown in enlarged section in Fig. 6, and shown also in reduced sectional views, in operative position in Figs. 4 and 5.

As in Fig. 6, each cross strut 79 comprises a pair of telescopic tubes, the outer one 80 slidably receiving therein an inner tube 81. Both tubes on their outer, exposed ends, are provided with plugs 86—86, which are pinned in with pins 88—88, and are further provided with integral ball ends 84—84 which are held to the plug ends 86—86 by cylindrical necks 85—85, the diameters of which are approximately the same as the width of slot 73 of tubular guide 72, Fig. 7, so that said necks will be slidable within said slot.

The plugs 86—86 are each provided with lugs 83—83 which project interiorly of the tubes 80—81, and these lugs are each bored at their ends to receive therein the hooked ends of a coiled tension spring 82, Fig. 6, and thus the telescopic tubes are always constrained into normally non-expanded position.

The cross struts 79, as above described are assembled to the reel R, as in Figs. 4 and 5, by having their ball ends 84—84 introduced into the apertures 74 of a pair of the tubular, slotted guides 72, after which the spring 77 is introduced, thus pushing the cross struts 79, to the upper part of the slot 73 of the guides 72, as viewed in Figs. 7 and 5. This cross strut assembly may be accomplished after the opposed registering guides 72 have been riveted to the reel-sides, but before the reel-sides have been assembled to their respective hub seats.

After the assembly of the reel structure as above described, the hose 50 is connected by a coupling 49 to the threaded end 47 of the reel nozzle, Fig. 5, and with its appurtenant nozzle, not shown, is wound, in a collapsed condition, around upon the cross struts 79, as partially indicated in Fig. 5, and the reel is then connected by its inlet pipe 33, to a source of water supply connection 10, by a coupling C, Fig. 1, and is thus in condition when housed as in Fig. 1, with the valve 8 closed, to be operated quickly in the event of a fire occurrence.

It takes but little time to open the door 2, pull out the reel R to the operative position shown dotted, in Fig. 2, pull the valve 8 open and grasping the nozzle, run to the origin of the fire. As the nozzle is taken to the fire water commences to issue from the hose and reaches its full force upon reaching the fire.

The hose as it is withdrawn from the reel is filled to its full capacity with water and this slidably expands the reel side 56 to position 61, Fig. 5, and contracts or inwardly compresses the cross struts 79 to dotted positions 90—90 and thus, while the nozzle is being carried to the fire point, the hose is expanded to its full capacity and the water issues at full pressure and volume from the nozzle before and by the time the nozzle has reached its operative position.

This device may be operated, successfully, between any intermediate points of the entire length of the hose, and is completely operative as soon as the hose is filled with water.

From the foregoing, it is obvious that considerable time is saved in the operation and two-way expansive action of the reel, as herein disclosed.

The purpose of the cushioning air chamber 42, as shown in Fig. 5, is to take up the shock of the first impact of the incoming water into the reel when the valve 8 is first opened, to relieve the initial water hammer effect of high water pres-

sure upon the hose, and to smooth the resultant stream of water as it leaves the nozzle.

A primary cushion chamber is also provided in advance of the cushioning chamber 42, and this air chamber is formed in the pivotal upright pivot connection 14, Fig. 1, the latter being connected to the T union 13. As the tubular pivot member is of pipe form, capped by a water-tight pivot cap *p*, the air in this upper sealed chamber takes the first full force of the water pressure, coming from source 10, and acts to break the hydraulic impact, before the water reaches the reel and its cushion chamber 42.

Upon occasion to return the reel to its housing, or cabinet, after use, after the hose has been emptied, dried and re-reeled, the reel is then swung inwardly into the cabinet, where the roller 18, on the radius arm 17, comes into contact with the spherically conformed cam blade J, Figs. 10 and 11, of the spring latch 37, which is held to the under side of guide rail quadrant 19, by a screw fastening *g*.

The head of the cam J projects upwardly through a slot *j* which is cut into the rail tracking web *b*.

When the reel is moved into or out of its interior non-operative terminal position, it cams the spring latch downwardly as shown dotted in Fig. 10. A shock absorbing bumper cushion 38, Fig. 10, performs the same function as that described for the cushion 38 of Fig. 9.

What we claim is:

1. An expansion reel comprising an inlet water connection, a reel hub rotatably mounted therein in operative connection therewith, a pair of opposed reel-sides non-rotatably affixed to said hub but rotatable therewith, one of said reel-sides mounted to move longitudinally of said hub and away from the other reel-side, telescopic cross struts connected to and between said reel-sides, radial guides on said reel-sides for supporting said struts for radial inward movement and means for resiliently maintaining said reel-sides and struts in normally non-moved position.

2. An expansion reel comprising a controlled inlet water connection, a reel hub rotatably mounted therein in operative connection therewith and connected to said water connection, a pair of opposed reel-sides non-rotatably affixed to said hub but rotatable therewith, one of said reel-sides mounted to move longitudinally of said hub and away from the other reel-side, resilient telescopic cross struts connected to and between said reel-sides, radial guides on said reel-sides for supporting said struts for radial inward movement, means for resiliently maintaining said struts against inward movement and means for resiliently maintaining said reel-sides in normally non-moved position.

3. An expansion reel comprising a valved inlet water connection, a reel hub rotatably mounted therein in operative water conducting connection therewith, an outlet in said hub, a pair of opposed reel-sides non-rotatably affixed to said hub but rotatable therewith, one of said reel-sides mounted to move longitudinally of said hub and away from the other reel-side, telescopic cross struts connected to and between said reel-sides, radial guides on said reel-sides for supporting said struts for radial inward movement, means for resiliently maintaining said reel-sides and struts in normally non-moved position, and a cushioning air chamber in said hub opposite said valved inlet.

4. In combination, a rectangular housing having one of its longer sides forming a door, the end walls of the housing being at opposite ends of the door, a hollow base within the housing at one end wall, water supply means communicating with said base and having thereon control means at the inner side of said wall, a vertical pipe pivotally mounted on said base and having a closed top, a hose reel adjacent the opposite end wall and having a tubular hub, tubular supporting means extending linearly from said hub and being in communication with the bore of said pipe, and an arcuate track disposed below said tubular means in supporting relation therewith.

5. The combination of a rectangular housing including a front door, a hollow base at one end of the housing adjacent the door, water supply means communicating with said base, a vertical pipe pivotally mounted on said base and having a bearing on the top wall of the housing, a hose reel disposed within the housing at the opposite end thereof and having a tubular hub, tubular supporting means extending from said hub and being in communication with the bore of the pipe, an arcuate track having one of its ends below said tubular means, the other end of the track being in front of the said pipe, and anti-friction means mounted on said supporting means and being movable on said track whereby to swing said reel out of the housing.

6. The combination of a housing including a floor and having a front door, a hollow base rising from the floor and having in communication with one side thereof water supply means; a vertical pipe including a top closed end and having its lower end pivotally mounted on said base, a hose reel disposed within the housing on the opposite side of said base and distant therefrom, rigid tubular means communicating with the bore of the pipe and being connected with the hub, said reel being supported on the said tubular means clear of the floor, a track disposed on an arc having its center on the axis of the pipe, vertical supports for the ends of the track, one of said supports being substantially in front of said pipe at the door, a hollow anti-friction roller mounted on said tubular means and being movably rested on the track, whereby said reel may be swung forwardly into exterior position, and cushioning means mounted on said supports at opposite ends of the line of travel of said roller.

7. In combination with a swingable hose reel, and a water supply line, said reel having a tubular hub; a housing enclosing said reel; means joining said line and the reel, said means including a vertical tubular pivot having a fixed base within the housing, said line being in communication with the base, a tubular T-connection having its head vertically disposed and incorporated with the pivot, the leg of said connection being horizontally disposed and in communication with said hub, a fixed arcuate guide positioned between the pivot and the reel, and a tubular traveling roller loosely mounted on said leg and finding a support on said guide.

8. In combination with a hose reel and a water supply line therefor, a normally closed housing having its front wall forming a door, the reel being disposed within the housing at one end thereof and the line being passed into the housing through its opposite end; a vertically disposed tubular pivot rising from the floor of the housing near the second mentioned end and having a fixed base, the line being in

communication with said base; valved control means on said line within the housing; a horizontally disposed pipe having one of its ends communicating with the pivot, said hose reel being in communication with the opposite end of said pipe and supported thereon; a track fixed in the housing and curved on an arc having its center on the axis of the pivot, a roller loosely mounted on said pipe and finding a path on said track, so that the reel may be swung out of the housing when said door is open, and locking means cooperating with said pipe and the track, whereby said reel may be held in the outer position.

9. In combination with a hose reel and a water supply line therefor; an elongated housing including a door and wherein, at one of its ends, the reel is disposed, said line being passed into the housing at the other end thereof; tubular pivot means rising vertically from the floor of the housing and including a fixed base having an upper axially turnable member, the line being in communication with said base; valved control means on said line within the housing; a horizontally disposed pipe having one of its ends rigid with said memer and communicating internally therewith, the reel being fixedly mounted on the opposite end of the pipe and the hose being in communication with the last mentioned end; an arcute guide track fixedly mounted in the housing and including upper and lower flanged rails, said rails being on opposite sides of the pipe, said track being adjacent the reel and having the center of its line of curvature on the axis of the pivot; a hollow traveling roller loosely mounted on said pipe and having opposed end flanges, said latter flanges being movably disposed on opposite sides of the flanges of the track, said track having one of its ends in front of the pivot, so that when said door is opened the reel may be swung forwardly and outwardly from the housing, and latch means carried by one of the flanges of said track at its forward end, said latter means cooperating with the pipe, whereby to operatively hold the said reel in the outer position.

10. In combination, a housing including a top wall, a floor having rising therefrom a fixed hollow base, said wall having on its inner face a bearing above the base, water supply means communicating laterally with the base, a vertically disposed axially turnable tubular member having its lower end mounted on said base and communicating internally therewith, said member having a closed top end journalled on the bearing, a hose reel disposed within the housing and having a tubular hub, and horizontally disposed tubular means extending from said hub and being in communication with said member, said means providing a support for the reel, whereby the latter may be swung out of the housing.

11. In a hose reel, a hub comprising in combination an outer revolvable tubular member or trunnion including a closed end and having an inner chamber thereat, an inner inlet member disposed in the passage of the trunnion and having in its wall around the central region of the hub discharge openings, said trunnion having thereon radially of the slots a discharge nipple, annular shoulders on the inner member at opposite ends of the slots, said shoulders forming a bearing for the trunnion, means rigid with said trunnion and cooperating with said shoulders for preventing relative endwise movement of said members, and an extension carried by said inner member and terminating substantially medially of said chamber.

12. In a hose reel, a hub comprising in combination an outer revolvable tubular member or trunnion including a closed end having a chamber thereat, an inner member or hose connection disposed in the passage of the trunnion and having in its wall around the central region of the hub discharge openings, said trunnion having thereon and disposed radially of the slots a discharge nipple; annular shoulders on said connection at opposite ends of the slots, said shoulders providing a bearing for the trunnion; internal annular flange means carried by the trunnion and cooperating with said shoulders; compressible sealing means disposed between part of the first means and one of the shoulders; and an extension projecting from said connection and terminating substantially medially of said chamber.

13. In a hose reel, a hub comprising in combination an outer tubular member or trunnion including a closed end and having a chamber thereat; an inner member or hose connection disposed in the passage of the trunnion and substantially spaced from the wall thereof, said connection having in its wall around the central region of the hub longitudinally disposed fluid discharge openings, said trunnion having thereon and disposed radially of the openings a discharge nipple; coacting annular flanges carried by said members at opposite ends of said openings, said flanges providing bearings for the trunnion; sealing means disposed in the space between said members and cooperating with certain of said flanges, said connection having its inner end terminating at the entrance to said chamber, so that as fluid enters said connection air may be compressed in said chamber whereby to cause uniform movement of the fluid through said nipple.

JAMES A. CRAIG.
ERNEST DAVIES.