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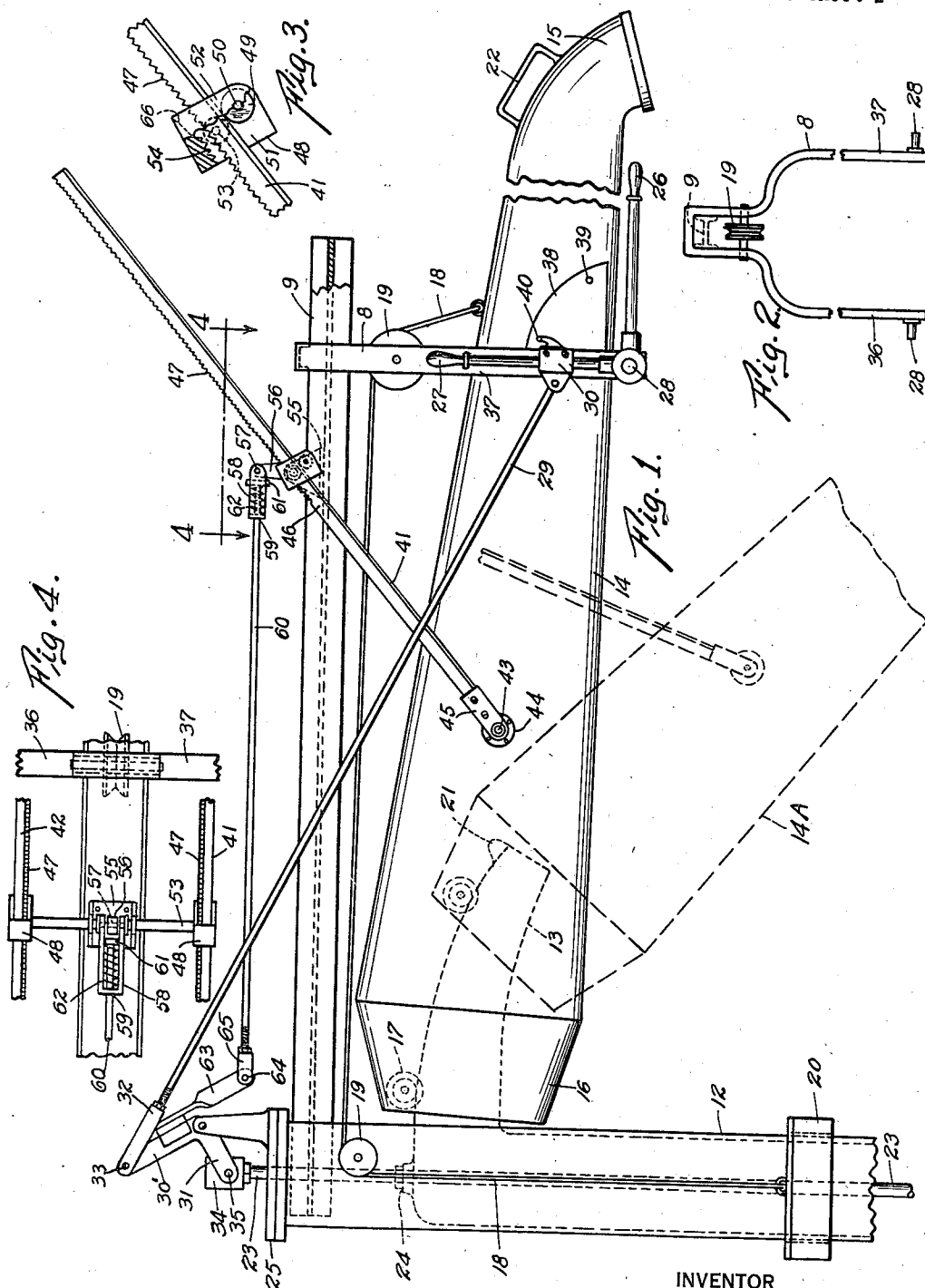
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2,286,560

WATER COLUMN

Filed April 4, 1941

2 Sheets-Sheet 1



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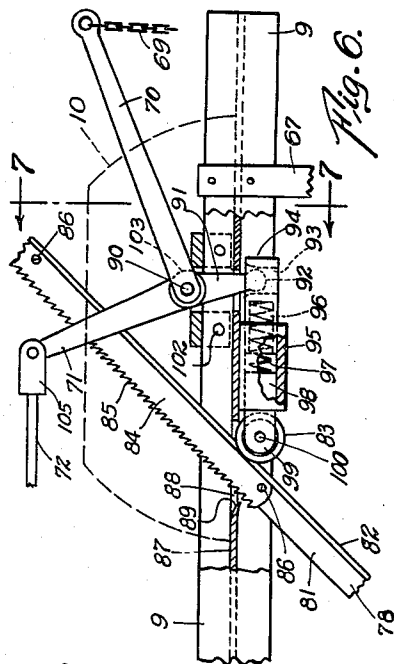


Fig. 6.

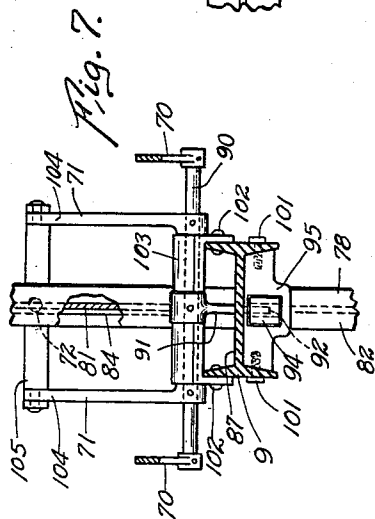


Fig. 7.

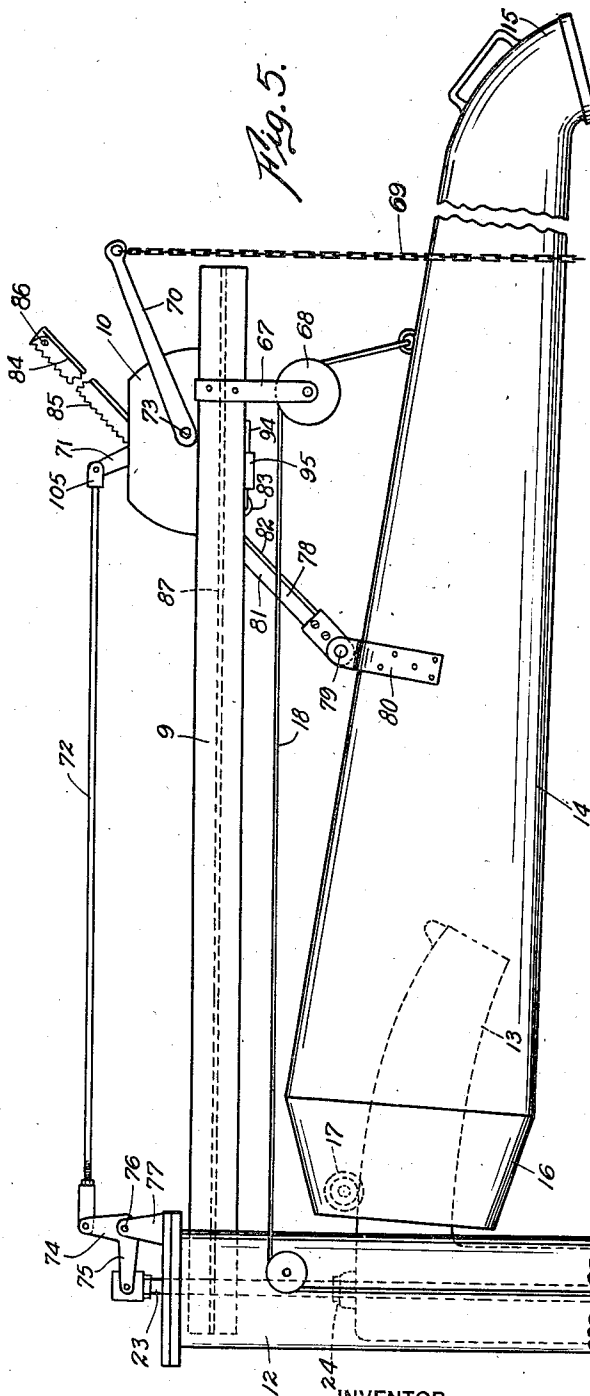


Fig. 5.

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WATER COLUMN

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20 Claims. (Cl. 137—21)

This invention relates to improvements in a water column or apparatus for the delivery of water to locomotive tenders. Water columns in railroad usage are located to one side of the track, at a distance sufficient to ensure normal unobstructed passage of rolling stock along the track. From the top portion of the water column, a spout normally extends laterally therefrom and in substantial parallelism with the rails of the track. To deliver water into the manhole in the top of a locomotive tender, it is necessary for an attendant to swing the spout over the tender, and sometimes over the coal pile of the tender, to a position at which the spout extends substantially at right angles to the rails. When introducing the delivery end of the spout into the manhole, and controlling the delivery of water, the attendant ordinarily stands upon the top of the tender where dirt, ice, or water will often render his foothold insecure. The tops of certain types of tenders are inclined, rather than horizontal, which increases the precariousness of the attendant's position. As an added hazard, the attendant finds that many water columns will deliver water at a high rate such that the force of water striking the down-turned nozzle end of the spout throws the spout upwardly out of the manhole, and unless the attendant is able and ready to hold the spout down, he may be thrown from the tender and injured.

One object of the present invention is to provide a water column with a safety device eliminating the hazardous behavior of the spout on a high capacity water column.

Another object is to provide means in a water column structure, which will enable water columns to safely deliver a great volume of water at a high rate, in order to greatly reduce the time required for filling the large modern tenders, and to thereby enhance railway transportation service by eliminating delays incident to water replenishment.

Another object of the invention is to facilitate, as well as expedite, the control of a water column in the interest of safety to the attendant operating the device.

A further object is to provide simple, durable, and effective means to achieve the foregoing objects, which means is so designed as to be applicable as an accessory to practically every water column presently in railway service.

The foregoing and other objects are attained by the means described herein and disclosed in the accompanying drawings, in which:

Fig. 1 is a side elevational view of the top por-

tion of a water column incorporating the invention, parts being broken away.

Fig. 2 is an elevational view, on a slightly reduced scale, showing the hanger 8 of Fig. 1 and its relationship to the beam 9.

Fig. 3 is a fragmental detail view, on a slightly enlarged scale, showing in partial cross-section a locking mechanism for the water column spout.

Fig. 4 is a cross-sectional view taken on line 4—4 of Fig. 1.

Fig. 5 is a side elevational view similar to Fig. 1, showing a modified form of the invention.

Fig. 6 is an enlarged side elevational view of a locking mechanism incorporated in the structure of Fig. 5, with the protective cover 10 removed and parts broken away for clarity of disclosure.

Fig. 7 is a cross-sectional view taken on line 7—7 of Fig. 6.

Fig. 1 of the drawings illustrates the upper end of a water column comprising a vertical hollow standard 12 through which water under high pressure is led to a laterally extending nozzle 13. The nozzle 13 is surrounded by a dirigible spout 14 which is open at both ends, the end 15 of which terminates in a downwardly directed discharge port or elbow. The opposite end 16 of the spout preferably is supported in such a manner as to permit both longitudinal and arcuate movements of the spout, so that the discharge end thereof may have a range of movement ample to reach the manholes of low and high locomotive tenders standing upon a track alongside of the water column. For the purpose of such dirigibility, the interior of the spout may be furnished with a flanged roller or spool 17 adapted to ride upon the top of the extension 13 between the limits of its length. The spout also fulcrums about the roller or spool so as to assume various inclinations, one of which is indicated by the broken lines at 14A.

The forward end of the spout may be supported by a cable, or the like, 18 which passes over pulleys 19—19, and may be counter-weighted by means of a spring or a weight 20. An abutment 21, or any other suitable means, may be employed to keep the spout associated with the extension 13. The spout may be guided by means of a handle 22 at its forward end.

At a location above the spout, the standard 12 has fixed thereto a supporting beam or arm 9. This beam or arm swings over the tender in a substantially horizontal plane as the standard 12 is rotated. The hanger 8, which is best illustrated by Fig. 2, is fixed to and depends from

said beam or arm 9, and its opposed arms may carry the shaft of one pulley 19.

The description up to this point should render evident the basic mode of operation of the device. Briefly stated, an attendant may rotate the column standard 12 for swinging the beam and the spout suspended therefrom, to a position at substantial right angles to the rail and over the locomotive tender. By grasping the handle 22, the attendant may lower the discharge end of the spout, and if necessary telescope it relative to the extension 13, for placing the spout in registry with the water intake port or manhole of the tender. This accomplished, there remains only the operation of opening the water valve which feeds the hollow standard 12, its extension 13, and the spout 14. The valve, which need not be illustrated, is located at the base of the standard and preferably below the frost line. A valve actuator, which may be in the form of a reciprocable rod or bar 23, performs to open the valve by way of an upward reciprocation, and to close it by way of a downward movement. This valve actuator rod may advantageously work within the confines of standard 12, and project through a stuffing box 24 to a location above the cap 25 of the standard.

To lift the actuator rod 23 for opening the water valve, the attendant grasps either of the hand levers 26 or 27, whichever is most convenient, and moves it in a clockwise direction of rotation about the pivot or stud 28 of Fig. 1. Through the medium of a connecting rod 29 pivoted to a bracket 30 on lever 27, the movement of the hand lever is transmitted to a bell crank 30—31 or its equivalent located atop the cap of the column standard. The arm 30' of the bell crank preferably has an adjustable clevis connection with rod 29, as indicated at 32, the point 33 being a pivot. A head 34 of the valve actuator rod has a pivotal connection 35 with the arm 31 of the bell crank.

It may here be noted that the connecting rod 29 and the multiple hand lever 26—27 may be duplicated at the opposite side of the spout 14, for the convenient manipulation of the valve from either side of the spout. Thus, it will be seen that the opposed arms 36 and 37 of the hanger (Fig. 2) both carry a stud or pivot 28 for the mounting of a hand lever assembly. As is obvious, the hand lever may be merely a singular lever, a multiple lever, or a spoked wheel, as desired.

A matter of primary importance, so far as the hand lever is concerned, is the fact that at least one part 26 thereof is located at an elevation such that it is within easy reach of the attendant when he is standing upright upon a locomotive tender. For practical purposes, the lever should be at an elevation below the level of beam 9, and preferably no higher than the spout guide handle 22.

If desired, means may be provided for holding or latching the hand lever assembly in the operative open-valve position. While any number of different means may be devised for this purpose, there is illustrated by way of example a very simple latch which consists of a segmental plate 38 having an opening 39 therein for receiving an extending pin 40 of lever bracket 30. The extending pin may be sprung from the opening 39 for disengagement of the latch, whenever the lever is to be moved to the closed valve position.

As was previously mentioned herein, modern

practice is to increase the rate of water delivery in order that the larger tenders may be filled without waste of time. This increase in delivery rate of the water column necessitates a greater water pressure at the valve, and a correspondingly greater nozzle pressure at the extension 13. Accordingly, when the spout 14 is lowered into delivery position, the force of water leaving the extension 13 and striking the elbow 15 is often so great as to kick the delivery end of the spout upwardly and out of the manhole. If the attendant is nearby, or if he is unable to hold down the delivery end of the spout, he may be struck by the spout and injured, or thrown bodily from the tender. In order to eliminate this hazard, a spout hold-down device is provided, which may be described as follows:

At opposite sides of the spout, intermediate its ends, a pair of lock bars 41 and 42 extend upwardly and forwardly from pivots 43 carried by the spout. Although Fig. 1 of the drawings shows but one such pivot, it will readily be understood that a similar pivot is located at the opposite or rear side of the spout. The pivots may each extend from a flange 44 which is bolted, riveted, or otherwise fixedly secured to the sheet metal of which the spout is constructed.

A socket or bracket 45 fixed on the lower end of each lock bar, is drilled or journaled to receive a pivot 43 in order that the lock bars may swing about the pivots. From a point 46 upwardly to the end of each lock bar, the lock bars are furnished with teeth or serrations 47 which form part of a clutching arrangement to overcome the upward kick of the spout when the water valve is opened.

It will be found convenient to form the lock bars from angle irons or T-irons; however, plain bar stock may be utilized if desired. Whatever may be the form of the lock bars, the serrations are to be exposed for cooperation with a clutch piece or clutch block presently to be described. Fig. 1 shows how the serrations may be formed directly upon an edge of the lock bar, whereas Fig. 6 illustrates an alternative arrangement wherein the serrations are formed upon a separate piece fastened to a web or leg of the lock bar.

Referring to Figs. 1, 3 and 4, it will be noted that the lock bar extends upwardly at an inclination from the spout, and enters a hollow clutch piece or block 48. Within the hollow interior of the block, a roller 49 may be supported upon a shaft 50 passing through the opposed legs 51—52 of the block, and this roller is adapted to furnish a frictionless support for the weight of the lock bar. From the disclosure of Fig. 3, it will be observed that the lock bar normally may be advanced back and forth through the block, while resting upon the roller 49.

The clutch blocks 48, two of which are required, are fixed to the opposite ends of a rock shaft 53, so that rocking of the shaft axially may cause the teeth or serrations 54 within the blocks to engage the teeth or serrations 47 of the lock bars, for the purpose of clutching the bars at selected locations along their length. As is most clearly illustrated by Fig. 3 this may best be performed by locating the rock shaft axis substantially centrally of each block, while the roller 49 thereof is offset toward one corner of the block. When the clutch block of Fig. 3, for example, is rotated in counterclockwise direction

by rocking the shaft 53, the serrations 54 of the block will engage the serrations 47 of the lock bar, thereby to preclude the longitudinal shifting of the latter through the clutch block. To release the lock bar, the shaft 53 is rotated in the opposite or clockwise direction of rotation.

Rock shaft 53 may be rotatably supported in opposed bearings of a bracket 55 attached to the beam 9. As herein illustrated the bracket is riveted, bolted, or otherwise suitably secured to the horizontal web of the beam. At substantially the middle point of the rock shaft, a lever 56 which is fixed thereto extends upwardly from the shaft and is pivoted at 57 to a bifurcated connector or clevis 58 which clevis at its forward end has an opening 59 through which the clutch rod 60 may be reciprocated. The clutch rod carries at its forward end a head 61 that slides between the arms of the clevis. Through the medium of a compression spring 62 placed about the rod between the head 61 and the apertured end of the clevis, the parts are made to cooperate for providing a lost-motion connection of a resilient character. Referring to Fig. 4, it will be understood that a pull applied to the rod 60, from right to left, will serve to rotate the rock shaft 53 quite promptly, but as soon as the clutch blocks are tilted sufficient to effect the clutching action, further pulling of rod 60 to the left will be taken up by compression spring 62. Movement of the clutch rod 60 in the opposite direction will serve to release the clutch blocks and return them to the Fig. 3 position at which the teeth are out of engagement. By preference, the spring is normally compressed to some extent, so that initial pulling of clutch rod 60 to the left will move the lever 56 and set the clutch blocks to clutching relationship with their corresponding lock bars.

By means of the lever arrangement at the top of the column, the movements of rods 29 and 60 are coordinated so that an attendant may not open the water supply valve unless the spout is locked to arrest the upward kick of the spout resulting from pressure of water striking the elbow at 15. To explain further it may be assumed that an attendant is required to charge a locomotive tender with water; he first swings the entire structure of Fig. 1 to a position at right angles to the rails, and then grasps the spout handle 22 for directing the discharge end 15 of the spout into the manhole. In doing this the attendant may find it necessary to not only lower the spout, but also to move it along the extension 13 as previously explained. In lowering the spout as explained, all movements thereof will be free since the clutch blocks will be in the normal inoperative position of Fig. 3, allowing the lock bars to ride upon their supporting rollers 49 without engagement of the clutch teeth.

The next step of the procedure is that of grasping one of the handles 26 or 27, and rotating them about the stud 28 in a clockwise direction of rotation. This manipulation of the levers actuates the bell crank 30-31 to lift the valve actuator rod 23 for opening the water supply valve, while at the same time the extension lever 53 exerts a pull upon the clutch rod 60 to set the clutch teeth to clutching condition. The pivotal connection 64 between the lever extension 53 and the clutch rod 60, preferably is effected by means of an adjustable clevis 65, the construction of which is well known. Extension 53 is fixed to the bell crank. Due to the provision of the clutch spring 62, full engagement of the clutches does not interfere with opening the

water supply valve to any extent desired. The clutch will always engage before the valve can be fully opened, so that the spout will be locked against accidental upward movement whenever the force of water flowing therethrough is sufficient to kick the spout out of registry with the manhole of the locomotive tender. As previously mentioned, the provision of means 39-40 for locking the hand levers in the open valve position, is optional.

The hand lever arrangement may be duplicated at the far side of the apparatus, as indicated by the fact that the hanger 8 shows a pair of lever pivots 28-28, Fig. 2.

At the location 66, Fig. 3, the connecting portion of the U-shaped clutch block may be cut away if necessary, in order that the lock bar may move freely through the clutch block whenever it is in the disengaged condition. It is necessary to provide ample space for normally free movements of the lock bar due to the fact that the lock bar changes inclination as the spout is lowered to the various use positions.

It is important to note that the hand lever arrangement 26-27 is mounted upon a pivot 28 which never changes elevation, regardless of the disposition of the spout, due to the fact that the hanger 8 that supports the pivot is fixedly mounted upon the beam 9. Moreover, the hanger and the hand levers are very substantially mounted and for that reason they furnish invaluable assistance to an attendant who might accidentally slip or lose his balance while standing on the locomotive tender. The hand levers, being mounted upon fixed pivots, may always be expected to remain within easy reach of the attendant, so that he may depend upon them for assistance as he stands upon the top of the tender. This is one of the primary considerations in locating the lever pivots 28 in a pendent condition beneath the level of the spout proper.

In that form of the invention illustrated by Figs. 5, 6 and 7 a somewhat different arrangement of elements is proposed. It will be seen that the combination of Fig. 5 retains the beam 9, spout 14, valve actuator rod 23, and the spout counterbalance cable 18, all related to one another in accordance with the previous explanation. The hanger 67, however, does not extend downwardly beyond the spout, but supplies merely a support for the counterbalance pulley 68. Moreover, instead of supplying the rigid hand lever arrangement of Fig. 1, the structure of Fig. 5 proposes the conventional depending chain 69 or its equivalent, to be grasped and pulled downwardly by an attendant for operating the bell crank 70-71 to open the water supply valve. Through the medium of a connecting rod 72, movement of the bell crank 70-71 about its pivotal mounting 73 in clockwise direction of rotation, effects a similar movement of a bell crank 74-75 atop the standard 12 of the water column. It will be understood that bell crank 74-75 is pivoted as at 76 upon a fixed bracket 77 and operates to lift the rod 23 for opening the valve in the manner explained previously in connection with the Fig. 1 structure.

The device of Fig. 5, like the device of Fig. 1 is furnished with means for locking the spout against any tendency to kick up whenever water under high pressure is fed thereto through the extension nozzle 13. The arrangement includes a single lock bar 78 extending forwardly and upwardly at an inclination from a pivot 79 provided at the top of the spout intermediate its ends.

The pivots 79 may be carried by a spout saddle 80, which is welded, riveted or otherwise fixed to the spout with the pivot passing through a vertical plane that includes the spout axis. The lock bar 78 is by preference, though not of necessity, in the form of a T-iron, and is so supported by the pivots 79 as to dispose one leg 81 in the vertical plane. The base 82 of the T-iron is adapted to normally ride upon a supporting roller 83, as best illustrated by Fig. 6. The leg 81 may carry a separate strap or plate 84 provided with teeth 85 along one edge thereof, or alternatively, the leg 81 may be notched or serrated as taught by the disclosure of Fig. 3. If a separate plate or bar is furnished, as in Fig. 6, it may be screwed, riveted, or otherwise secured to the leg 81 of the T-iron, as indicated at 86—86. The anti-friction roller 83 may be flanged like a spool, so as to afford lateral guidance for the lock bar.

Referring further to Fig. 6 it should be noted that the horizontal web 87 of the beam 9 is apertured at 88 so that the lock bar may extend therethrough. The edge 89 of the aperture serves as a tooth or abutment to engage the teeth 85 of the lock bar and thereby effect a clutching action to prevent upward projection of the lock bar under certain conditions. The function of the lock bar is the same as was explained in connection with the Fig. 1 form of apparatus.

In order to effect a clutching action between the clutch tooth 89 and the serrations or notches 85 of the lock bar it is necessary that the lock bar be urged toward the teeth or clutch element 89, by projecting the spool or roller 83. This may be accomplished by providing the bell crank 70—71 or its shaft 90 with clutch actuating lever 91 that extends downwardly through the web 87, for operating a resilient lost-motion device that incorporates the spool or roller 83. The free end 92 of the clutch lever may enter a socket 93 formed in a plunger 94 which has reciprocatory movement within a plunger housing 95. The plunger may be bored or drilled axially as at 96 to receive a compression spring 98 that bears against the rear end of a slide 98 that carries the roller or spool 83. The extending end 99 of slide 98 preferably is forked or bifurcated to provide spaced parallel arms spanned by an axle 100 that carries the roller or spool 83.

From the foregoing it should be understood that a downward pull on the arm 70 of the bell crank rotates shaft 90 and advances the clutch lever 91 for moving the plunger 94 to the left for compressing the spring 97 and, through the spring, resiliently advancing the slide 98. Since actuation of the bell crank as above explained never occurs until the spout has been lowered into the manhole of the locomotive tender, it should be understood that the lock bar 81 will assume a lowered position at which the advancing movement of the spool or roller 83 will shift the lock bar teeth into operative clutching engagement with the corresponding clutching element 89 carried by the beam. The length of spring 97 and its compressive force are such that an initial movement of the clutch lever 91 toward the lock bar will promptly project the slide 98 and its roller 83 to engage the clutch. Further movement of the clutch lever will serve merely to maintain the clutch engagement. It will accordingly be understood that crank arm 70 will move only a very limited distance before the clutching action takes place, so that it is impossible to release the forceful stream of water

into the spout before the clutch locks the spout against the up-kick resulting from impingement of the stream upon the down-turned end 15 thereof.

Referring to Figs. 6 and 7, it will be noted that the plunger housing 95 may be bolted to the beam 9 as indicated at 101, at a location beneath the web 87. By means of rivets, bolts, or other fastening means 102, the bearing bracket 103 for rock shaft 90 may be fixed to the beam above the web, and in spanning relationship thereto if desired. The bell crank arms 70 may be duplicated at the opposite ends of shaft 90.

In order that a single connecting rod 72 may be employed in the combination, it is considered practical to duplicate the bell crank arm 71, as illustrated by Fig. 7, and to connect their free upper ends 104 by means of a pivoted strut 105 the middle point of which has the connecting rod 72 fixed thereto. Fig. 7 shows that the arms 70, 71 and 91 are fixedly secured to the rock shaft 90.

It is to be clearly understood that many of the details of construction herein disclosed may be modified or altered in accordance with common engineering practice. This is particularly true of the clutching device, which has been herein exemplified in one of the simplest possible forms. In practice, it may be considered desirable to form the clutch teeth 85 directly upon the edge of the T-iron leg 81, rather than upon a separate plate fixed thereto, and moreover, the single clutch tooth 89 shown as being formed directly upon the web 87, may be formed in multiple upon a separate clutch block fixed to the web. Such alterations, among others equally obvious, are intended to reside within the scope of the invention and of the claims appended hereto unless the claims are expressly limited to the structure shown and described.

What is claimed is:

1. A water delivery structure which comprises in combination, a water discharge nozzle and means for supporting same, means including a valve actuatable for supplying water to said nozzle, a spout arranged to receive a forceful stream of water from said nozzle when the valve is opened, and to direct said stream to a reservoir, means supporting the spout for adjustment from a low elevation to a high elevation over the reservoir and means operative substantially concurrently with actuation of the valve, to lock the spout against any tendency of the water stream to alter the elevation of the spout from an adjusted discharging position.

2. A water delivery structure which comprises in combination, an upright water supply pipe including a lateral discharge extension, an adjustable hollow spout and means supporting said spout in position to receive a forceful stream of water from the discharge extension and to direct said stream to a reservoir, said spout supporting means being at a higher elevation than the spout in its highest position of adjustment, and means for controlling the water stream, including a hand grasp having a mounting on the supporting means located at a lower elevation than the spout when the spout is in its highest position of adjustment.

3. A water delivery structure which comprises in combination, an upright water supply pipe including a lateral discharge extension, an adjustable hollow spout and means supporting said spout in position to receive a forceful stream of water from the discharge extension and to direct said stream to a reservoir, said spout supporting

means being at a higher elevation than the spout in its highest position of adjustment, and means controlling the water stream, including a rigid hanger depending from the spout supporting means, a hand lever mounted shiftably upon the rigid hanger, and means operatively connecting the hand lever to the water stream controlling means.

4. A water delivery structure which comprises in combination, an upright water supply pipe including a lateral discharge extension, an adjustable hollow spout and means supporting said spout in position to receive a forceful stream of water from the discharge extension and to direct said stream to a reservoir, said spout supporting means being at a higher elevation than the spout in its highest position of adjustment, and means controlling the water stream, including a rigid hanger depending from the spout supporting means, a hand lever mounted movably upon the rigid hanger, and means operatively connecting the hand lever to the water stream controlling means, said hand lever being at all times disposed at a level beneath the supporting means for the spout.

5. A water delivery structure which comprises in combination, an upright water supply column including a lateral discharge extension, an adjustable hollow spout and means overhanging the spout for suspending said spout in position to receive a forceful stream of water from the discharge extension and to direct said stream to a reservoir, said spout suspending means being at a higher elevation than the spout in its highest position of adjustment, and means controlling the water stream, including a rigid hanger depending from the spout suspending means, and a hand grasp mounted for rotation upon the hanger at a lower elevation than the spout suspending means, and a disengageable latch for securing the hand grasp in at least one of its positions of rotation, to lock the water stream controlling means.

6. A water delivery structure which comprises in combination, an upright water supply pipe including a lateral discharge extension, an adjustable hollow spout and means supporting said spout in position to receive a forceful stream of water from the discharge extension and to direct said stream to a reservoir, said spout supporting means being at a higher elevation than the spout in its highest position of adjustment, and means controlling the water stream, including a rigid hanger depending from the spout supporting means, a hand lever mounted for movement relative to the rigid hanger, and means operatively connecting the hand lever to the water stream controlling means, the spout including means to resist vertical displacement thereof from an adjusted discharging position whenever the hand lever is moved to release the water stream controlling means.

7. A water delivery structure which comprises in combination, an overhead beam swingable over a railway car reservoir, a spout supported for movement with said beam, and including means for the adjustment of said spout vertically over said car reservoir, said spout having a down-turned discharge end and an opposed receiving end, a water supply pipe terminating within the receiving end of the spout and adapted for feeding a stream of water under pressure lengthwise into the spout, a valve for controlling the water of said supply pipe, means for opening and closing said valve, and means operative upon

opening of the valve, to lock the spout against kick-up displacement by the force of water fed thereto by the supply pipe and striking the down-turned discharge end of the spout.

8. A water delivery structure which comprises in combination, an overhead beam swingable over a railway car reservoir, a spout supported for movement with said beam, and including means for the adjustment of said spout vertically over said car reservoir, said spout having a down-turned discharge end and an opposed receiving end, a water supply pipe terminating within the receiving end of the spout and adapted for feeding a stream of water under pressure lengthwise into the spout, a valve for controlling the water of said supply pipe, means for opening and closing said valve, including a manipulating handle rockable in a vertical plane parallel to the spout adjustment movements, a normally disengaged clutch associated with the manipulating handle for the valve, operated by said handle whenever the handle is rocked to valve opening position, to lock the spout against kick-up movements produced by the force of water striking the down-turned discharge end of the spout.

9. A water delivery structure which comprises in combination, an overhead beam swingable over a railway car reservoir, a spout supported for movement with said beam, and including means for the adjustment of said spout vertically over said car reservoir, said spout having a down-turned discharge end and an opposed receiving end, a water supply pipe terminating within the receiving end of the spout and adapted for feeding a stream of water under pressure lengthwise into the spout, a valve for controlling the water of said supply pipe, means for opening and closing said valve, including a manipulating handle rockable in a vertical plane parallel to the spout adjustment movements, a normally disengaged clutch associated with the manipulating handle for the valve, operated by said handle whenever the handle is rocked to valve opening position, to lock the spout against kick-up movements produced by the force of water striking the down-turned discharge end of the spout, the clutch being disengaged upon moving the handle to the valve closing position, for restoring spout adjustability.

10. A water delivery structure which comprises in combination, an overhead beam swingable over a railway car reservoir, a spout supported for movement with said beam, and including means for the adjustment of said spout vertically over said car reservoir, said spout having a down-turned discharge end and an opposed receiving end, a water supply pipe terminating within the receiving end of the spout and adapted for feeding a stream of water under pressure lengthwise into the spout, a valve for controlling the water of said supply pipe, means for opening and closing said valve, including a manipulating handle rockable in a vertical plane parallel to the spout adjustment movements, a normally disengaged clutch associated with the manipulating handle for the valve, operated by said handle whenever the handle is rocked to valve opening position, to lock the spout against kick-up movements produced by the force of water striking the down-turned discharge end of the spout, the clutch being disengaged upon moving the handle to the valve closing position, for restoring spout adjustability, and means for latching the manipulating handle in the open valve position.

11. A water delivery structure comprising in combination a beam, a water supply pipe having a discharge nozzle beneath the beam, and a valve for controlling release of water from the supply pipe, a spout having a water discharge end and a water receiving end, the receiving end surrounding the supply pipe discharge nozzle, means supporting the spout for adjustment of its discharge end vertically toward and from a reservoir to be supplied, while the receiving end remains about the supply pipe nozzle, a lock bar pivoted upon the spout and having a free end extending upwardly therefrom beyond the elevation of the beam, clutch means on said bar between the pivot and the free end thereof, and complementary cooperative clutch means carried by the beam, and means under the control of an operator for engaging and disengaging said clutch means at various locations along the bar to selectively lock and release the spout adjustments.

12. A water delivery structure comprising in combination a beam, a water supply pipe having a discharge nozzle beneath the beam, and a valve for controlling release of water from the supply pipe, a spout having a water discharge end and a water receiving end, the receiving end surrounding the supply pipe discharge nozzle, means supporting the spout for adjustment of its discharge end vertically toward and from a reservoir to be supplied, while the receiving end remains about the supply pipe nozzle, a lock bar pivoted upon the spout and extending upwardly therefrom beyond the elevation of the beam, clutch means on the bar, and normally disengaged but cooperative clutch means carried by the beam, means including a manipulating lever for opening and closing the valve of the water supply pipe, and means associated with said lever including a resilient connector urging the clutch means into engagement prior to full opening of the supply pipe valve.

13. A water delivery structure comprising in combination a beam, a water supply pipe having a discharge nozzle beneath the beam, and a valve for controlling release of water under pressure from the supply pipe, a spout having a down-turned water discharge end and a water receiving end, the receiving end surrounding the supply pipe discharge nozzle, means supporting the spout for adjustment of its discharge end vertically toward and from a reservoir to be supplied, while the receiving end remains about the supply pipe nozzle, a longitudinal lock bar mounted at one of its ends upon the spout, and extending upwardly therefrom beyond the elevation of the beam, means on the beam to clutch and release the lock bar at various locations along its length depending upon the adjustment of the spout, a hanger rigidly suspended from the beam, a manipulating lever pivoted upon the hanger at an elevation beneath the level of the beam, said lever and hanger being substantial and rigid to the extent of providing a support for an attendant operating the water column, and means operated substantially in unison by the manipulating lever, for unseating the water control valve and advancing the clutch means into holding relationship with the lock bar.

14. A water column comprising a supporting standard and a shiftable spout extending laterally therefrom, and means cooperating to simultaneously release a charge of water to the spout and lock the spout against vertical movement while the water release means is in water releasing condition.

15. A water column comprising a supporting beam and an adjustable spout extending lengthwise of the beam, means for locking the spout at various degrees of inclination, and a water supply pipe discharging into the spout, including a water control means interconnected with the spout locking means to ensure locking of the spout concurrently with the act of manipulating the water control means.

16. A water column structure which comprises in combination, an overhead beam swingable over a railway car reservoir, a spout supported for movement with said beam, and including means for the adjustment of said spout vertically over said car reservoir, said spout having a down-turned discharge end and an opposed receiving end, a water supply pipe terminating within the receiving end of the spout and adapted for feeding a stream of water under pressure lengthwise into the spout, a valve for controlling the water of said supply pipe, means for opening and closing said valve, including a manipulating handle supported at an elevation below the level of the beam, a normally disengaged clutch associated with the manipulating handle for the valve, operated by said handle whenever the handle is rocked to valve opening position, to lock the spout against kick-up movements produced by the force of water striking the down-turned discharge end of the spout, the clutch being disengaged upon moving the handle to the valve closing position, for restoring spout adjustability.

17. A water delivery structure which comprises in combination, an upright water supply pipe including a discharge nozzle for directing a stream of water from the supply pipe, a valve controlling the passage of water through the nozzle, an adjustable spout arranged to receive the stream of water from the nozzle, and supporting means for the spout, a valve actuating mechanism selectively operable for opening and closing the valve, and means operative to lock the spout to the supporting means substantially concurrently with disposition of the valve actuating mechanism to open-valve condition.

18. A water delivery structure which comprises in combination, an upright water supply pipe including a discharge nozzle for directing a stream of water from the supply pipe, a valve controlling the passage of water through the nozzle, an adjustable spout arranged to receive the stream of water from the nozzle, and supporting means for the spout, a valve actuating mechanism selectively operable for opening and closing the valve, a lock bar attached to and movable with the spout to various positions of adjustment of the spout, a clutch element on the spout supporting means to clutch and release the lock bar, and operating means for the clutch element cooperating with the valve actuating mechanism, to establish a clutched condition of the clutch element upon the lock bar substantially concurrently with opening movements of the valve initiated by the valve actuating mechanism.

19. A water delivery structure which comprises in combination, an upright water supply pipe including a discharge nozzle for directing a stream of water from the supply pipe, a valve controlling the passage of water through the nozzle, an adjustable spout arranged to receive the stream of water from the nozzle, and supporting means for the spout, a valve actuating mechanism selectively operable for opening and closing the valve, a lock bar hinged to and movable with the spout to various positions of adjustment of the spout,

a series of teeth on the lock bar, a stationary clutch element on the spout supporting means and comprising tooth means to engage teeth on the lock bar, means normally supporting the lock bar adjacent to the clutch element with the co-operative teeth of the lock bar and the clutch element out of registry, and means associated with the valve actuating mechanism for moving the lock bar to place its teeth in locking engagement with the tooth means of the clutch element, upon each valve-opening manipulation of the valve actuating mechanism.

20. A water delivery structure which comprises in combination, an upright water supply pipe including a discharge nozzle for directing a stream of water from the supply pipe, a valve controlling the passage of water through the nozzle, an ad-

justable spout arranged to receive the stream of water from the nozzle, and supporting means for the spout, a valve actuating mechanism selectively operable for opening and closing the valve, a lock bar attached to and movable with the spout to various positions of adjustment of the spout, a series of teeth on the lock bar, a shiftable clutch element on the spout supporting means and including tooth means normally out of engagement with teeth on the lock bar, and means associated with the valve actuating mechanism to move the shiftable clutch element to engage and disengage its teeth with the lock bar teeth, as the valve is moved to open and closed positions, respectively.

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