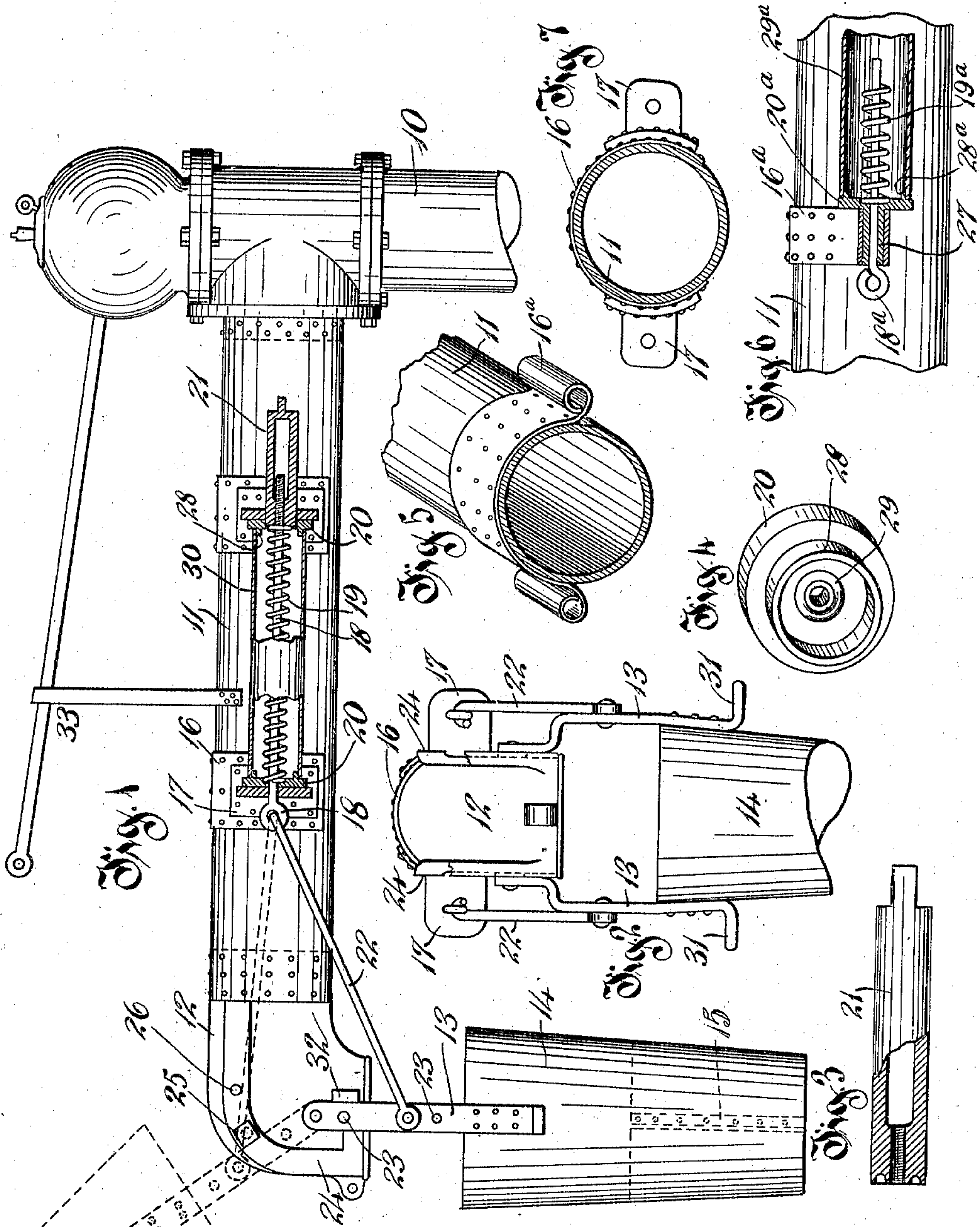


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SPOUT FOR WATER COLUMNS.
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SPOUT FOR WATER-COLUMNS.

965,849.

Specification of Letters Patent.

Patented Aug. 2, 1910.

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To all whom it may concern:

Be it known that I, FRANK C. ANDERSON, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Spouts for Water-Columns, of which the following is a specification.

My invention relates to improvements in spouts for water columns used for supplying railway engines with water, and more particularly to means whereby the discharge portion of the spout is lengthened when said spout is considerably higher than the tender of the locomotive.

The old method of fastening funnels or boot-legs to the end of the water spout to lengthen the downward portion of the spout in order to put the water in tenders of various heights without waste has many disadvantages. It consists of fastening funnels or boot-legs to the end of the spouts with a chain, or if canvas or leather are used they are fastened rigidly to the end of the spout, but in either case in swinging the spout to and from the tender in taking water the hanging funnels or boot-legs have to be dragged over the coal pile of the tender to their proper position. In doing this the hanging funnels or boot-legs are destroyed in a very short time and become detached from the spout, thus causing considerable care and expense in keeping them in repair and attached to the spout.

With my improvements for operating the funnels or extensions in combination with a spout to take water when the tenders are at various heights, I provide very simple and convenient mechanism to operate said funnels or extensions in order that they may be used without being dragged over the coal pile of a tender whereby they are put out of service, and at the same time my improvements do not affect the operation of the water column in any way. My improved funnel or extension being supplied with partitions forming what is termed anti-splashers, causes the water to pass from the funnel or extension in a straight line fully twenty-four inches from its lower end, and in this way I am able to drop the water from the lower end of the discharge nozzle fully five feet to the tender of the locomotive without any waste whatever.

The object of my invention is to provide

means whereby my improved water funnel, as it may be called, is automatically retained in a position above the water spout and entirely out of the way of the coal pile of the tender while being swung to or from its normal position over said tender.

My invention consists in a discharge nozzle of a water spout, a funnel shaped extension provided with partitions, arms extending upward from said funnel shaped extension and pivoted to said discharge nozzle, arms fastened to said arms on the funnel shaped extension and at the other end to a spring pressed rod suitably mounted upon the sides of the water spout, and in certain other parts and combination of parts as will be hereinafter described in the specification and pointed out in the appended claims.

In the drawing: Figure 1 is an elevation view of a water column and water spout equipped with my invention, certain parts being in section for the sake of clearness. Fig. 2 is an end elevation of the water spout equipped with my invention. Fig. 3 is a detail view of one of the essential parts of my invention, part of which is broken away. Fig. 4 is a perspective view of a plate used in my invention. Fig. 5 shows a slight modification of a bracket which may be used in carrying out my invention. Fig. 6 shows how the modified bracket shown in Fig. 5 is adapted to be used with the other mechanism of the device, parts being in section for the sake of clearness. Fig. 7 is a sectional view taken through the water spout and showing the brackets mounted on the water spout and adapted to support the spring pressed arm of the device.

Referring more particularly to the drawing, 10 indicates a common form of water column having a water spout 11 mounted thereon. The spout 11 has a discharge nozzle 12 having pivoted thereto arms 13, said arms 13 being secured at one end to an extension 14. The extension 14 in this case is preferably funnel shaped and has partitions 15, the purpose of which will hereinafter be described. Mounted upon the spout 11 is a suitable supporting member 16 having brackets 17 mounted thereon. The brackets 17 are more clearly shown in Fig. 7, and have suitable openings to receive the bar 18. The bar 18 is surrounded by a spring 19 and to form bearings for the spring 19 I provide

plates 20 more clearly shown in Fig. 4, the plates 20 having suitable openings to receive the rod or bar 18, and one of which has a suitable opening to receive a member 21.

5 The plate 20 has an annular extension 28 and an annular groove 29. The annular extension 28 forms a support for a pipe or covering 30 for the spring 19. The rod 18 is threaded at one end and is attached to a

10 cylindrical member 21, and the distance between the plate 20 and the cylindrical member 21 is thus lengthened or shortened, as desired, thereby strengthening or weakening the tension of the spring 19. Connecting

15 the rod 18 with the arms 13 fastened upon the funnel shaped extension 14 I provide an arm 22 which is pivotally connected to the arm 13 of the funnel shaped extension 14, and also pivotally connected to the rod 18.

20 I also provide openings 23 in the arm 13 in case the circumferential movement of the funnel shaped spout 14 requires regulating. Of course, the arm 22 may then be attached to the opening 23, or, if desired, the pivot

25 on the discharge nozzle may be clamped to one of the openings 23. Thus it is seen the length of the funnel shaped extension may be adjusted. On the discharge nozzle 12 I

30 provide a rib or bearing surface 24 for the purpose of forming a surface for the arm 13 to ride upon. Upon the rib 24 I mount a stop 25 which may be readily detached and placed in the hole 26 in the rib 24 in order that the extension 14 may be raised to its

35 uppermost position and appear vertical instead of at an angle shown in dotted lines. However, the uppermost position shown in dotted lines is preferable.

Referring more particularly to Fig. 5 of

40 the drawing, I show a modified form of a bracket 16^a which may be used on the spout 11 for the purpose of forming supports for the rod 18. In Fig. 6 I show the bracket 16^a in use with my new device. In this case a

45 plate 20^a corresponding to the plate 20 in Fig. 1 may be used, but having an extension 27 forming a sleeve. The sleeve-like extension 27 projects inside the rounded portion of the bracket 16^a and is thereby held firmly.

50 Of course, the sleeve-like extension 27 has a suitable opening therethrough to receive the rod 18^a and has a groove on its inner surface to receive the spring 19^a and also has an annular extension 28^a to receive the pipe

55 or covering 29^a for the spring. Thus, it is seen that this modification might be made slightly cheaper than the construction shown in Fig. 1. However, the construction shown in Fig. 1 is preferable.

60 The operation of the device is as follows: When it is desired to fill the tender of the locomotive with water and the tender of the locomotive has been placed under the discharge nozzle 12 of the water spout, the operator draws the funnel shaped extension

14 from the position shown in dotted lines to the position shown in full lines by taking hold of the handles 31 formed by bending the arms 13 in an outwardly direction, as best shown in Fig. 2. It is thus seen when

70 the funnel shaped extension 14 is moved from its uppermost position to its lowermost position that the spring pressed rod 18 having the member 21 fastened thereto is pulled outwardly with the funnel shaped extension

75 14 and thereby compresses the spring 19. It is also apparent that with this construction that the funnel shaped extension is either held in its lowermost position or its

80 uppermost position as desired, its lowermost position being limited by a stop 32 upon the discharge nozzle 12. After the extension 14 is in its lowermost position and above the tender of the locomotive the operator opens the valve by the usual method

85 shown at 33. The funnel shaped extension 14 having the partitions 15 therein causes the water to leave said extension 14 in a straight path and thus enables the operator to even drop the water to a suitable distance

90 below the extension 14.

With my improvements a column can be erected with the spout high enough for the discharge nozzle to clear the coal pile of the highest tenders, and will also reduce the

95 chances of knocking down the column to a minimum in case the engine should start before the spout has been pushed clear of the tender.

Many modifications may be made without departing from the spirit and scope of my invention, and I do not wish to be confined to the exact details shown.

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What I claim as new and desire to secure by Letters Patent is:

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1. A device of the character described comprising a water column, a water spout attached thereto, a discharge nozzle for said spout, a pair of spring pressed rods suitably mounted on opposite sides of said water

110 spout, a discharge extension pivoted to the end of the nozzle of said water spout, and arms connecting said pivoted extension with the spring pressed rods.

2. A device of the character described

115 comprising a water column, a water spout attached thereto, a discharge nozzle for said spout, a pair of spring pressed rods suitably mounted on opposite sides of said water spout, a discharge extension spaced away

120 from and pivoted to the end of the nozzle of said water spout, and arms connecting said pivoted extension with the spring pressed rods.

3. A device of the character described

125 comprising a water column, a water spout rigidly secured thereto and extending longitudinally therefrom, a downwardly projecting discharge nozzle on the end thereof, a pair of spring pressed rods suitably mount-

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ed on opposite sides of said water spout, a discharge extension pivoted to said discharge nozzle, and arms connecting said pivoted extension with the spring pressed rods.

5 4. A device of the character described comprising a water column, a water spout, an extension to said water spout pivotally connected to said water spout, means for regulating the circumferential movement of
10 said extension, an arm attached to said extension at one end and to a spring pressed rod at the other end, said spring pressed rod supported by suitable brackets consisting of a member fastened to said water spout
15 and shaped at the ends to receive the hollow cylindrical portion of a plate adapted to support a cover for said spring pressed rod, substantially as and for the purposes set forth.

20 5. A device of the character described comprising a water column, a water spout, an extension 14 pivotally connected to said water spout, means for adjusting and limiting its movement upon its pivotal mounting, means whereby it is held in either upper or lower position, an arm fastened to
25 an arm of the extension 14 at one end and fastened to a spring pressed rod at the other, and means for adjusting the tension of the
30 spring pressed rod, substantially as and for the purposes set forth.

6. A device of the character described comprising a water column, a water spout attached thereto, a funnel shaped extension,
35 arms fastened to the funnel shaped extension and pivoted on the ends of the main water spout, arms fastened to the arms of the funnel shaped extension and pivoted

thereto at one end and at the other end fastened to a rod which is parallel to the sides 40 of the main spout, a spring surrounding said rod and an adjustable member fastened at the end of said rod, brackets fastened to the sides of the main spout having suitable openings to receive operating spring
45 rods, plates placed adjacent said brackets having openings for operating spring rods, annular recesses in one of said plates to receive one end of the spring, the other plate having an opening to receive the adjustable
50 member of the spring rods, annular extensions on said plates for the purpose of supporting a covering for said spring, substantially as set forth.

7. A device of the character described 55 comprising a water column, a water spout attached thereto, a discharge nozzle for said water spout, an extension pivoted to said discharge nozzle at the end thereof, and an arm connecting said extension to a spring
60 pressed rod suitably mounted on said water spout, substantially as described.

8. A device of the character described comprising a water column, a water spout attached thereto, a discharge nozzle for said 65 water spout, an extension pivoted to said discharge nozzle, an arm connecting said extension to a spring pressed rod suitably mounted on said water spout, and means for adjusting and limiting the movement of the
70 extension relatively to the discharge nozzle, substantially as described.

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