

June 15, 1937.

W. G. WATKINS

2,084,231

SUPPORT AND PROTECTING DEVICE FOR FLUID DISPENSING CYLINDERS

Filed Sept. 3, 1936

2 Sheets-Sheet 1

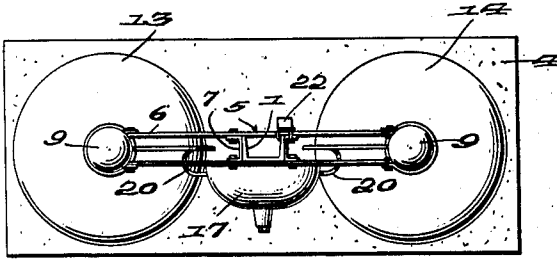
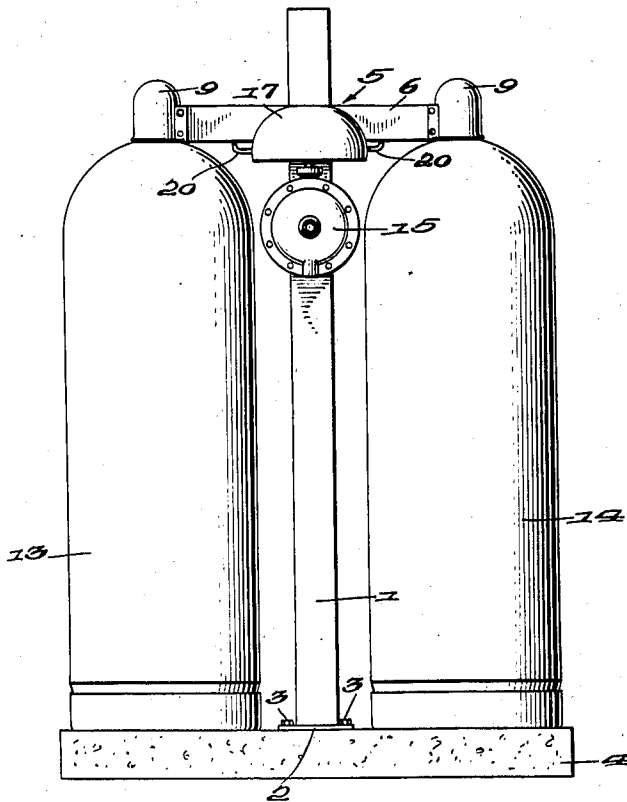
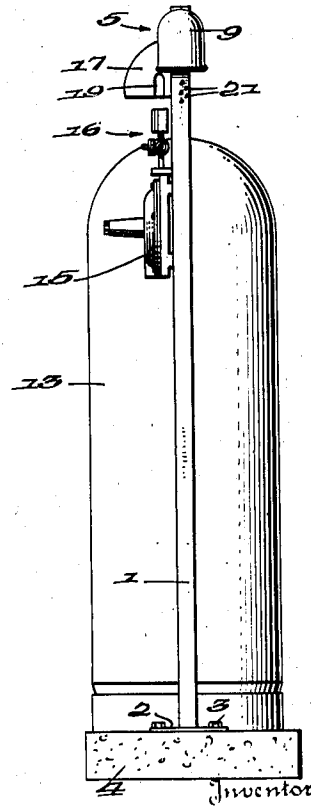


Fig. 2.

Fig. 1.

Fig. 3.



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2 Sheets-Sheet 2

Fig. 4.

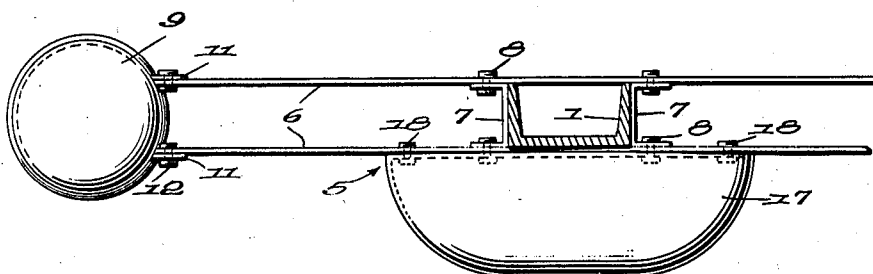


Fig. 5.

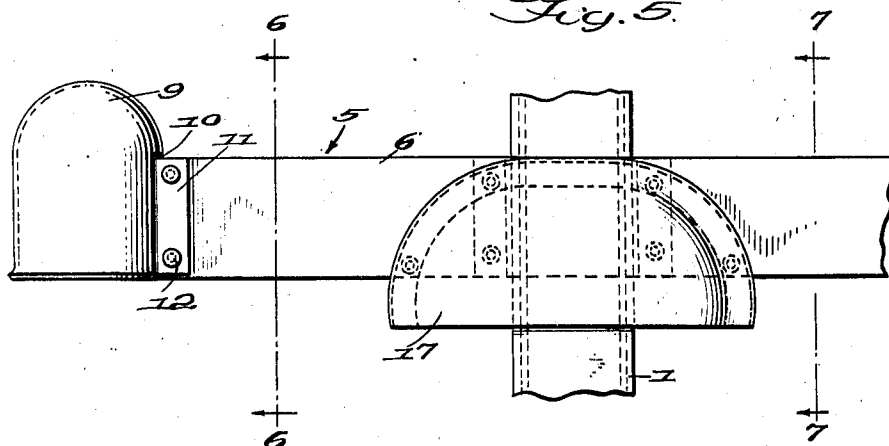


Fig. 6.

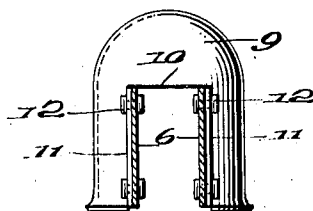
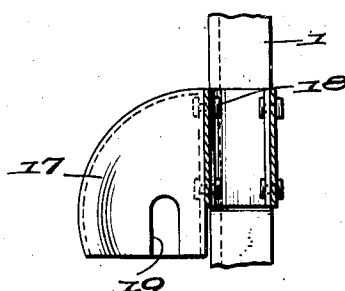


Fig. 7.



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UNITED STATES PATENT OFFICE

2,084,231

SUPPORT AND PROTECTING DEVICE FOR
FLUID DISPENSING CYLINDERSWalter G. Watkins, Kansas City, Mo., assignor
to Skelly Oil Company, Tulsa, Okla.

Application September 3, 1936, Serial No. 99,298

4 Claims. (Cl. 221—73.5)

My invention consists in new and useful improvements in a support and protecting device for fluid dispensing cylinders and relates particularly to that type of apparatus used in supplying liquefied petroleum gas or like fluids to consumers for heating and cooking purposes.

The present invention constitutes an improvement upon that described in my former Letters Patent No. 1,933,198, issued Oct. 31, 1933, and was designed to make use of the general principle embodied in said former patent in connection with installations requiring a plurality of gas supply cylinders.

The primary object of this invention is to provide an apparatus for supporting conventional fluid dispensing cylinders at a place convenient to the point of utilization, and having means for protecting the individual cylinder valves and the common pressure regulator unit against knocks or tampering.

Another object of my invention resides in the construction of these protecting members in a unitary assembly whereby a single padlock or other locking means may be employed to simultaneously lock the protectors in their respective positions.

A still further object of the invention is to provide a protecting assembly of this character which may be easily removed for inspection and adjustment of the valves and regulator, and readily locked in place.

Finally, it is my purpose to construct a support and protector which is durable, strong and efficient, and one which may be manufactured and installed with a minimum of effort and at a reasonable cost.

With the above and other objects in view which will appear as the description proceeds, my invention resides in the novel features herein set forth, illustrated in the accompanying drawings and more particularly pointed out in the appended claims.

Referring to the drawings in which numerals of like character designate similar parts throughout the several views,

Fig. 1 is a view in front elevation showing my improved support and protector with two supply cylinders installed.

Fig. 2 is a top plan view of the same.

Fig. 3 is a view in side elevation with one cylinder removed and with the protector assembly in elevated position.

Fig. 4 is an enlarged top view partly in section and partly broken away to illustrate the structure of the protector assembly.

Fig. 5 is a front elevation of the same, partly broken away.

Fig. 6 is a detail of one of the valve cap protectors, and

Fig. 7 is a detail view showing the regulator protecting hood and its mode of attachment.

In the drawings, 1 represents a vertical standard which preferably consists of a metal channel column provided with a base plate or support 2, welded or otherwise suitably secured at its lower end. The base plate 2 is drilled at predetermined points to receive bolts or the like 3 by means of which the standard is secured in place on a concrete base or foundation 4. The bolts 3 may be embedded in the concrete so as to provide rigid securing means.

My improved protector assembly is indicated generally by the numeral 5 and consists of cross-arm 6 made up of two metal strips secured together in spaced relation by a pair of oppositely disposed angles 7. These angles are located centrally of the cross-arm 6 and are so arranged as to slidably embrace the upper end of the standard 1, as clearly shown in Figs. 2 and 4, the legs of the angles being bolted as at 8 or otherwise rigidly secured to the strips forming the cross-arm.

At each end the cross-arm 6 carries a valve cap or bonnet 9 preferably comprising a metallic cylindrical member open at its lower extremity and rounded in a closed top. As will be seen from Figs. 5 and 6, each bonnet 9 has an opening 10 in its wall adjacent the cross-arm 6, the metal which is cut from said opening being bent outwardly to form a pair of vertical flanges 11. The bonnets 9 are secured to the ends of the cross-arm 6 by bolts or the like 12 which extend through the flanges 11 and the ends of the adjacent metal strips forming the cross-arm.

The cross-arm 6 is of sufficient length to span a pair of conventional fluid dispensing cylinders 13 and 14 when placed on the concrete base 4 as shown in Fig. 1 of the drawings, the bonnets 9 housing the valves of the respective cylinders.

Gas dispensing installations of this nature require the use of a pressure regulator which is arranged in communication with the cylinder valves of the respective cylinders, and in Figs. 1 to 3 of the drawings I have shown how my device accommodates this element of the installation. The regulator is represented by the numeral 15 and is secured to the standard 1 by any suitable means with the regulator valve, adjuster and

gauge extending upwardly as at 16 in Fig. 3, on the front face of the standard 1.

In order to protect this regulator against knocks and tampering, as in the case of the cylinder valves, I provide a hood 17 which is suitably shaped to house the regulator valve, adjuster and gauge assembly 16. This hood as will best be seen from Figs. 4, 5 and 7, is bolted on the outer face and at the central portion 10 of the cross-arm 6, by means of bolts 18, its opposite side walls being slotted as at 19 to accommodate the pigtails 20 connecting the cylinder valves with the regulator valve assembly 16.

The major portions of the pigtails are disposed 15 between the strips forming the cross-arm 6 when the protectors are lowered into position on the cylinder valves and regulator. The slots 19 permit the protector assembly 5 to be lifted for adjustment or installation of cylinders.

20 In order to facilitate the locking of the protector assembly in place, I provide a series of openings 21 in one side of the channel standard 1 to accommodate a padlock or other locking means 22 (see Figs. 2 and 3).

25 With the use of my invention, the installation and adjustment of the cylinder valves and regulator assembly is greatly simplified yet at the same time adequate protection is afforded against knocks and tampering. In order to replace one 30 or more of the cylinders 13 and 14, the service man simply removes the lock 22 and slides the protecting device 5 upwardly on the standard 1. The openings 10 and slots 19 in the valve bonnets and regulator hood, respectively, permit the upward movement of the protecting device 5. When 35 the fresh cylinder or cylinders are placed on the base 4, the protecting device is lowered on the standard until the valve bonnets 9 and hood 17 enclose the parts to be protected and the padlock is returned to the proper opening 21 in the side of channel 1.

40 It will be noted that the structural details of the protecting device are greatly simplified to the end of economy in manufacture and simplicity of assembly, it being of course understood that I do not intend to confine myself to these particular details, as various other arrangements may be employed with equal effect.

From the foregoing it is believed that the construction and advantages of my invention may

be readily understood by those skilled in the art without further description, it being borne in mind that numerous changes may be made in the details disclosed without departing from the spirit of my invention as set out in the following 5 claims.

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

1. A support and protecting device for fluid dispensing cylinder installations comprising an upright standard having at its upper extremity a protecting device for the valves of adjacent cylinders and for a pressure regulator assembly connected to said valves, said protecting device comprising a cross-arm, valve protecting bonnets carried at opposite ends of said cross-arm and adapted to enclose said valves, a regulator protecting hood carried by said cross-arm intermediate its ends adapted to enclose at least a portion of said regulator assembly, said protecting 20 device being movable with respect to said valves and regulator assembly, and means for locking said protecting device in place.

2. A unitary protecting device for the valves of a plurality of adjacent fluid dispensing cylinders comprising a cross-arm adapted to span the tops of at least two upright cylinders, valve bonnets carried by said cross-arm, adapted to enclose the valves of the respective cylinders, a hood carried by said cross-arm intermediate its ends, adapted to enclose at least a portion of a pressure regulator assembly connected to said valves, and means for securing said protecting device in place.

3. A protecting device for the valves of adjacent fluid dispensing cylinders comprising a plurality of valve bonnets, means extending between said bonnets for supporting the same as a unitary structure, a hood carried by said last named means, adapted to enclose at least a portion of a pressure regulator assembly, an upright standard adjustably supporting said protecting device, and means for locking said protecting device in place on said standard.

4. Apparatus as claimed in claim 3 wherein said valve bonnets and hood are provided with openings to accommodate the connections between said valves and said pressure regulator assembly.

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