

No. 797,124.

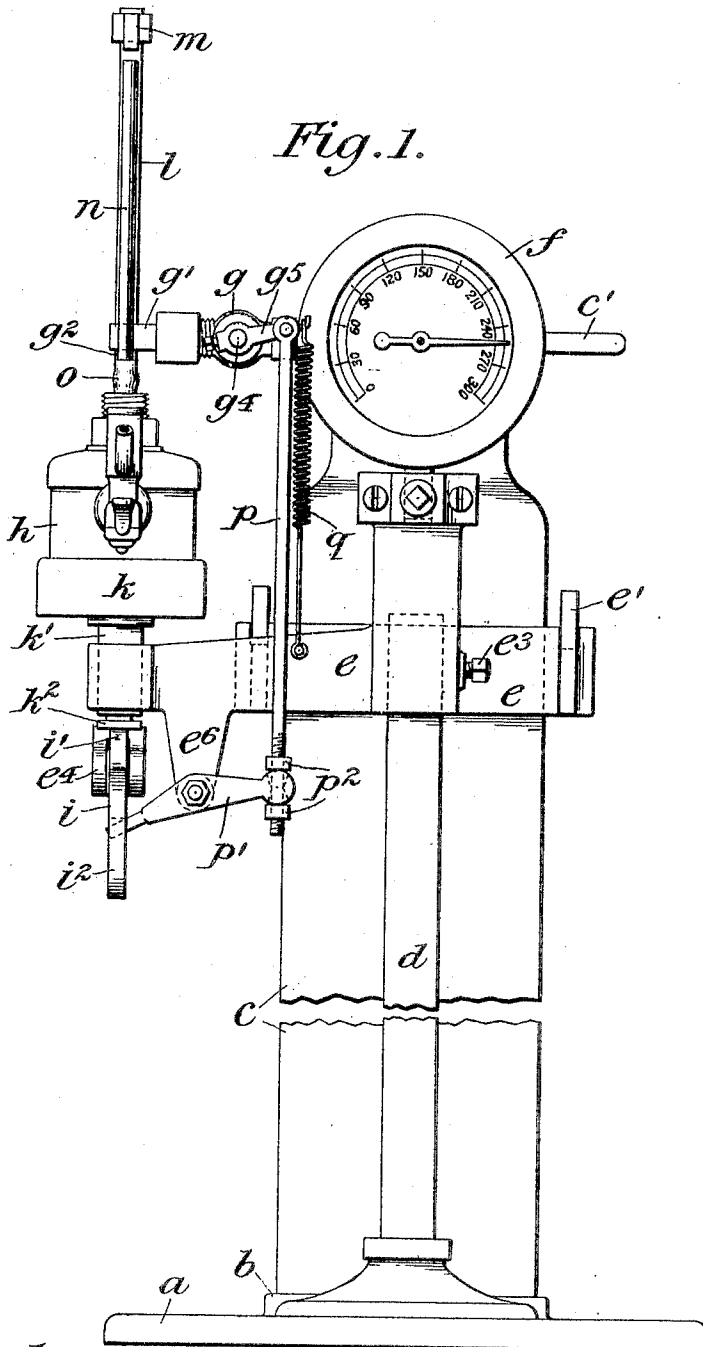
PATENTED AUG. 15, 1905.

A. KLEINFELDT.

APPARATUS FOR CHARGING GAS DOMES FOR SIPHONS.

APPLICATION FILED OCT. 17, 1904.

3 SHEETS—SHEET 1.



Attest:

A. N. Jesbera
M. A. Brayley

Inventor:

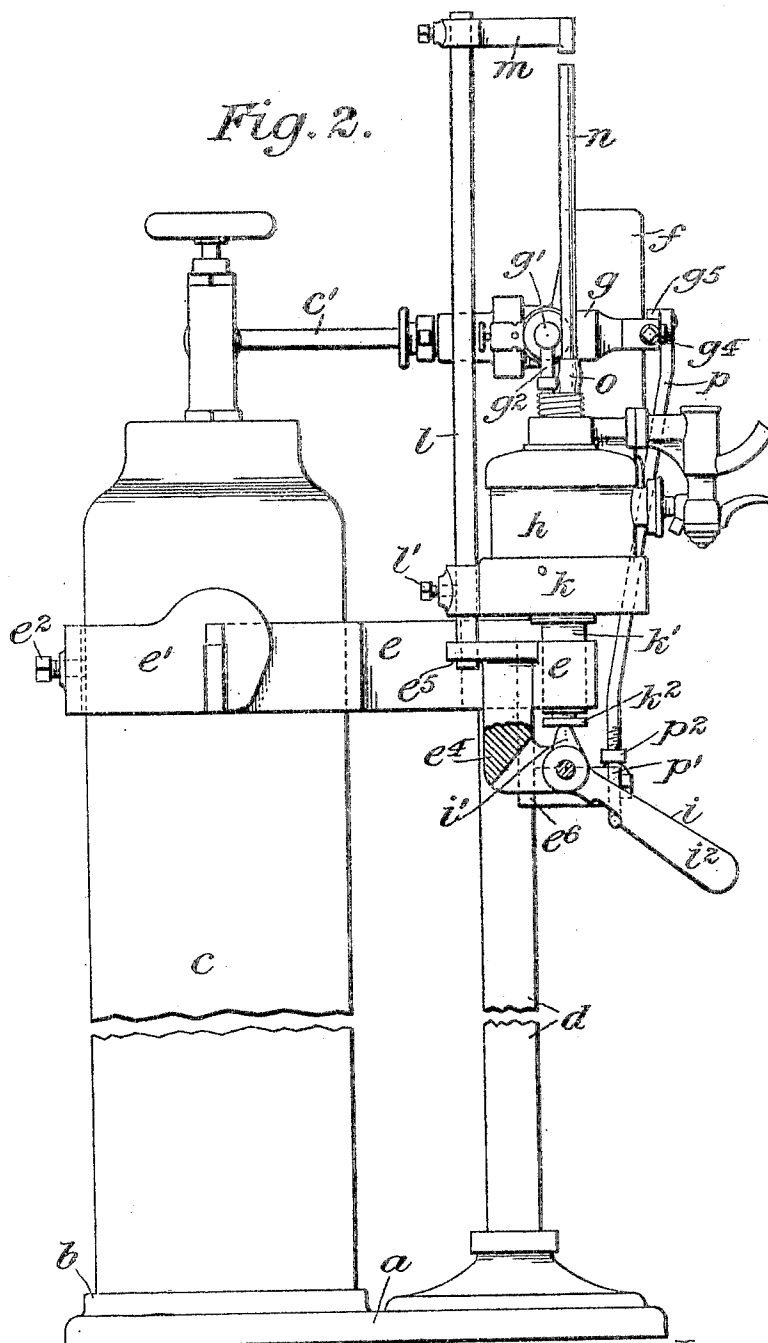
Arthur Kleinfeldt
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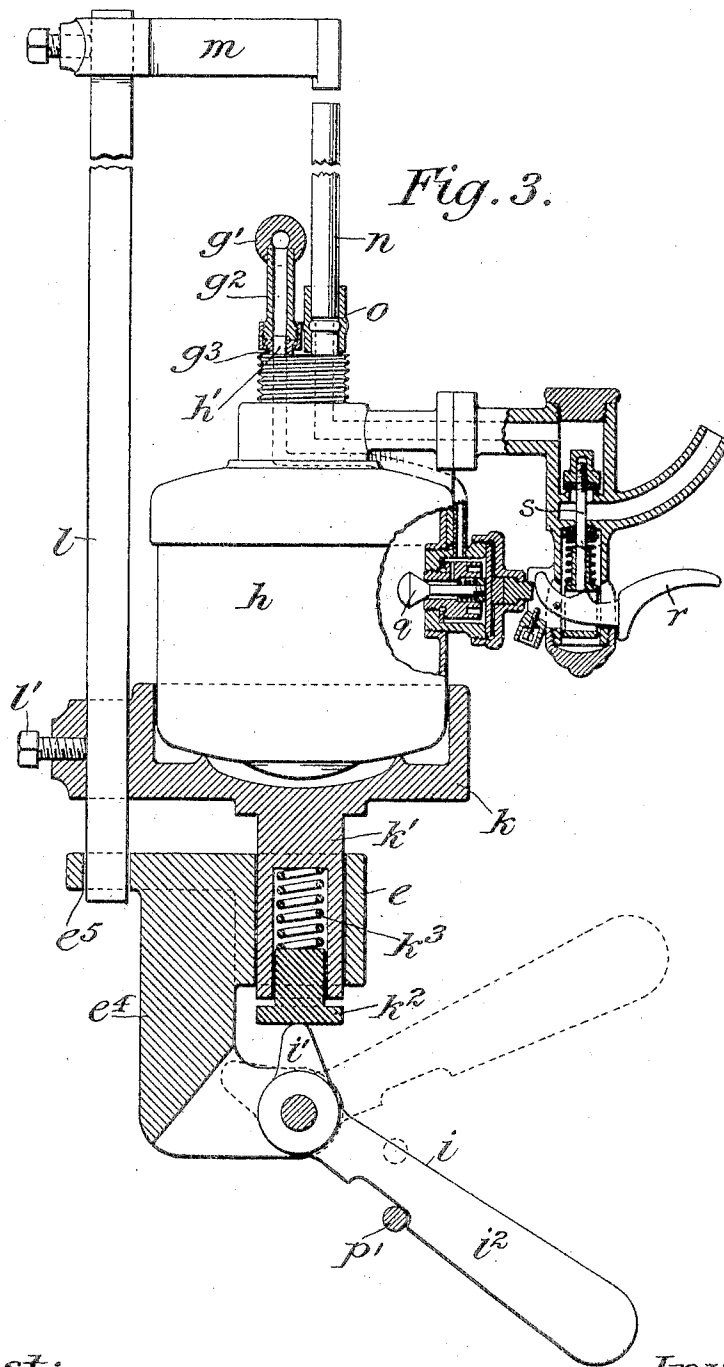
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A. N. Jasbora.
M. A. Brayley.

Inventor:

Arthur Kleinfeldt
by Redding, Kiddle & Freely
Attys.

UNITED STATES PATENT OFFICE.

ARTHUR KLEINFELDT, OF HOBOKEN, NEW JERSEY, ASSIGNOR TO UNIQUE SIPHON COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

APPARATUS FOR CHARGING GAS-DOMES FOR SIPHONS.

No. 797,124.

Specification of Letters Patent.

Patented Aug. 15, 1905.

Application filed October 17, 1904. Serial No. 228,839.

To all whom it may concern:

Be it known that I, ARTHUR KLEINFELDT, a citizen of the United States, residing at Hoboken, in the county of Hudson, in the State of New Jersey, have invented certain new and useful Improvements in Apparatus for Charging Gas-Domes for Siphons, of which the following is a specification, reference being had to the accompanying drawings, forming a part hereof.

This invention has for its object to provide an apparatus for conveniently and expeditiously charging with carbonic-acid gas the gas domes or reservoirs which are attached to siphons or other receptacles for charged water for the purpose of maintaining pressure of gas in such receptacles and for recharging them as required.

The apparatus comprises in its most approved form means for supporting the ordinary commercial cylinder in which compressed carbonic-acid gas is supplied, means for supporting the gas-dome to be filled, means for effecting the necessary connection between the cylinder and the dome, and means for controlling the admission of gas to the dome.

Various features of the invention will be fully described hereinafter with reference to the accompanying drawings, in which such an apparatus is illustrated, and in which—

Figure 1 is a view in front elevation of the complete apparatus, partly broken out to save space. Fig. 2 is a view in side elevation of the same apparatus, partly broken out to show details of construction. Fig. 3 is a detail view, on a larger scale and partly in section, illustrating further details of construction.

The apparatus illustrated in the accompanying drawings is designed for use in places where the gas-domes are to be filled with gas, and therefore comprises a suitable base *a*, having a seat *b* for the ordinary commercial container *c* for the compressed gas, and a pillar *d*, suitably secured to the base *a*. At a suitable height upon the pillar *d* is secured a frame *e*, which supports the working parts of the apparatus and holds the cylinder *c* firmly in position, being provided with a detachable clamping member *e'*, which carries a set-screw *e''* to impinge upon the cylinder. The frame *e* is preferably held in adjustable position upon the pillar *d*, as by means of a set-screw

e''', in order to permit adjustment of the frame to accommodate cylinders of different makes. Connection is made from the cylinder *c*, as by a pipe *c'*, as usual, with a regulating-valve *f* and thence through a stop-valve *g*, pipe *g'*, and depending nozzle *g''* with the gas-dome to be filled, all of these parts being firmly supported upon the frame *e*. The gas-dome *h* is likewise supported by the frame *e*, but is movable with respect thereto in order that communication may be conveniently and quickly established between the nozzle *g''* and the dome *h*, the latter being provided for this purpose with a nipple *h'*, which enters an elastic cap *g'''*, carried by the nozzle *g''*; whereby when the dome is pressed upward a tight joint is formed.

In a bracket *e''*, depending from the frame *e*, is mounted a cam-lever *i*, comprising a cam-nose *i'* and a suitable handle *i''*. Seated in the frame *e* above the cam-lever *i* is a holder *k*, having a stem *k'*, which is guided in and projects through the frame *e*. This rests normally upon the hub of the cam-lever *i* and is adapted to be raised by the movement of the cam-nose *i'* in order to effect a tight joint between the nipple *h'* of the gas-dome *h*, which rests in the holder *k* and the nozzle *g''*. In order that the action of the cam-nose *i'* may not rupture any of the parts, it is desirable that such action should be cushioned, and for this purpose the cam-nose *i'* is arranged to act upon a plug *k''*, which is seated upon a spring *k'''* in a recess in the stem *k'*. The spring *k'''* is sufficiently stiff to insure a tight joint between the dome *h* and the nozzle *g''*, but yields upon excess of pressure to prevent the breakage of connected parts. For the purpose of insuring the correct position of the holder *k* with the dome *h* thereon a rod *l* is secured to the holder *k*, as by a set-screw *l'*, which permits adjustment of the rod and moves freely in an opening *e''*, formed therefor in the frame *e*. The rod *l* also serves as a support for an adjustable guide-arm *m*, by means of which the operator may quickly and exactly correct the position of the siphon-tube *n*, which is usually secured to the dome *h* by means of an elastic sleeve *o*. As is well understood, it is necessary that the tube *n* shall be vertical in the siphon in order that the contents of the siphon may be completely discharged. The flexible sleeve *o*, by which the tube is con-

nected to the dome, permits the tube to get out of position somewhat at times; but the arm *m* furnishes a guide by which the operator can quickly aline the tube preparatory to replacing the dome on the siphon.

In order to permit the rapid manipulation of the apparatus and to prevent waste of gas, it is desirable that the opening and closing of the stop-cock *g* be effected automatically. Accordingly, to the stem *g*⁴ of the stop-cock is secured an arm *g*⁵. A link *p* connects the arm *g*⁵ with one end of a lever *p*¹, pivoted upon a bracket *e*⁶ of the frame *e*, the other end of said lever standing in the path of the cam-lever *i*, so that as the latter is operated to raise the holder *k*, and with it the gas-dome *h* to establish connection with the gas-supply, the valve-stem *g*⁴ is oscillated to open the valve and permit the flow of gas. The valve remains open while the gas-dome is in its elevated position, and as soon as the latter is lowered to permit its removal a spring *q*, connected to the arm *g*⁵ and to the frame *e*, operates to close the valve. Connection between the link *p* and the lever *p*¹ is preferably effected by nuts *p*², carried by the link on opposite sides of the lever *p*¹, so that adjustment can be effected to insure the opening of the valve at the proper instant.

As represented in Fig. 3 of the drawings and as fully described in Letters Patent of the United States No. 706,423, granted August 5, 1902, to me the wall of the dome *h* is provided with a valve *q*, adapted to regulate the passage of gas from the dome to the siphon and controlled by the handle *r*, which also controls the valve *s*, which regulates the outflow of liquid from the siphon.

It will now be understood that in the use of the apparatus the dome to be filled is placed in the holder *k* while the latter is in its lowermost position. As the holder is raised by the action of the cam-nose *i*' a tight joint between the gas-dome and the gas-supply is effected, and at the same time the gas-cock is opened to permit the flow of gas. While this is taking place the operator can correct the position of the siphon-tube *n* by bringing it into line with the end of the guide-arm *m*. When the dome is fully charged, the handle *i*² is raised, thus lowering the holder *k* and permitting the gas-dome to be withdrawn, while at the same time the gas-cock *g* is closed.

I claim as my invention—

1. An apparatus for charging gas-domes with gas, comprising a base having a socket for a gas-container, a pillar, a frame carried by said pillar and provided with a clamp to engage the gas-container, and devices supported by said frame for receiving the gas-dome and establishing connection between the same and the gas-container, substantially as described.

2. An apparatus for charging gas-domes with gas, comprising a frame, a gas-nozzle supported by said frame and connected to the source of supply, a dome-holder mounted movably on said frame and a cam-lever mounted below said holder and having a cam-nose to cooperate therewith, whereby the gas-dome in the holder may be moved into engagement with the gas-nozzle, substantially as described.

3. An apparatus for charging gas-domes, comprising a frame, a gas-nozzle supported thereby and connected to a gas-supply, a dome-holder mounted movably on said frame, a cam-lever to cooperate with said holder to raise the same, a gas-cock to control the flow of gas to the nozzle, and a connection between the stem of said gas-cock and said cam-lever, whereby the gas-cock is opened as the dome is raised into engagement with the gas-nozzle, substantially as described.

4. An apparatus for charging gas-domes, comprising a frame, a gas-nozzle supported by the frame, a dome-holder mounted movably on the frame, a cam-lever mounted below said holder, and a spring and plug interposed between the holder and the cam-lever to cushion the action of said cam-lever, substantially as described.

5. An apparatus for charging gas-domes, comprising a frame, a gas-nozzle carried by the frame, a dome-holder mounted movably on the frame, a cam-lever to raise and lower the dome-holder, a rod secured to said holder and moving at its lower end in an aperture in said frame to guide said holder, and a siphon-tube guide secured to the upper end of said rod, substantially as described.

This specification signed and witnessed this 13th day of October, A. D. 1904.

ARTHUR KLEINFELDT.

In presence of—

ANTHONY N. JESBERA,
M. A. BRAYLEY.