

W. GEE.

CONNECTIONS FOR SODA WATER APPARATUS.

No. 183,455.

Patented Oct. 17, 1876.

Fig. 1.

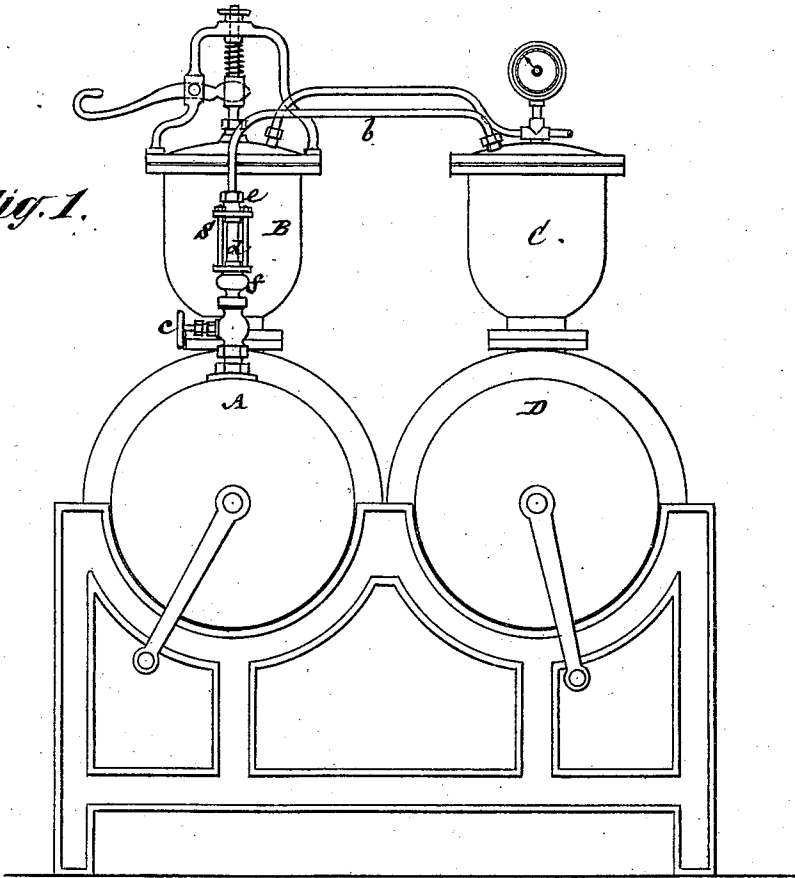
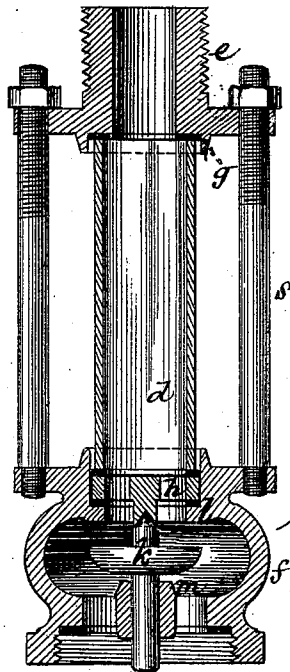


Fig. 2.



Witnesses

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IMPROVEMENT IN CONNECTIONS FOR SODA-WATER APPARATUS.

Specification forming part of Letters Patent No. **183,455**, dated October 17, 1876; application filed August 25, 1876.

To all whom it may concern:

Be it known that I, WILLIAM GEE, of the city, county, and State of New York, have invented certain new and useful Improvements in Connections for Soda-Water Apparatus; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, which forms part of this specification.

The invention consists in a transparent connection between the generator and purifier, for ascertaining the condition of the gas as it passes from the former to the latter, provided with means for automatically preventing the escape of gas, or gas and water combined, into the apartment containing the apparatus in case of breakage of the transparent connection. These self-closing means will here only be shown as applied to that end of the transparent connection which is nearest to the generator, to prevent the escape of gas, as such will serve all the purpose of illustrating the invention; but like means may also be applied, if desired, to the opposite end of the transparent connection nearest to the purifier, to prevent the escape of the gas-charged water from the purifier through said connection when broken. In either case the connection forms what I term a transparent self-acting or self-closing connection between the generator and the purifier, and operates to prevent waste and danger from sudden escape of the gas by breakage of the transparent portion of the connection.

Figure 1 represents a front elevation of a soda-water apparatus, in part, with my invention applied; and Fig. 2, a vertical section, upon a larger scale, of the transparent connection and means for closing escape from the generator in case of the breakage of said connection.

A is the generator of a soda-water apparatus, having the marble-dust supplied to it in the ordinary or any suitable manner. B is the acid-supplying chamber or vessel mounted on said generator; C, the purifier, and D the fountain. The generator A is connected with the purifier C by means of a pipe, *b*, controlled by a hand-valve, *c*, for opening or closing communication, as desired, to pass the gas as generated to the purifier, or to check or shut off such passage of the gas. This, so far, is an

ordinary construction or combination of parts, and is only here referred to for the purpose of explaining my invention, which is embodied in a connection, S, interposed between the generator and the purifier, and forming a portion of the gas-passage or communication between said devices, it being preferably arranged, as shown, between the valve *c* and the pipe *b*. This connection S is a transparent one, being formed of, for example, or including, a glass tube, *d*, through which the gas has to pass in its way from the generator to the purifier, and by which it can readily be seen whether the gas is passing off clear, or is so charged with marble-dust from the generator as to make it desirable to shut off, by means of the valve *c*, further supply of gas from the generator until such defect is removed or the surplus quantity of marble-dust is reduced. Thus said defect in the operation of the apparatus may be promptly remedied without waiting, as heretofore, to make the discovery by draft on the fountain, the contents of which (or it may be of a series of fountains in the same apparatus) are often so impaired by uncombined marble-dust as to involve serious waste by necessitating the clearing of the fountains of their contents, whereas, by the transparent connection, the defect may be discovered before reaching the fountains, and the requisite measures be taken to correct the defect, thereby saving both time and material, and preventing the choking of the purifier by marble-dust.

The glass tube *d* is here represented as exposed to view between hollow or tubular heads *e f* of a metallic frame portion of the connection, said heads connecting, respectively, with the tube *b* and valve *c*. Both heads *e f* may be similarly constructed and provided with means for instantaneously closing, by the pressure of the gas, communication through them, in case of breakage of the glass tube *d*, as hereinbefore referred to; but such means are here only shown as applied to the lower head *f*. Thus the upper end of the glass tube *d* has a fixed seat or bearing, *g*, of rubber or other suitable material, within the head *e*, whereas the lower end of said tube rests on a rubber or other suitably-faced open seat, *h*, which is fitted to rise and fall within the head *f*. This movable seat *h* also acts as a stop to

a lower valve, *k*, and, when the tube *d* is inserted and remains intact, serves, by being depressed, to keep the valve *k* open, so that the gas is free to pass from the generator, through the valve-seat *l*, the movable seat *h*, and tube *d*, to the purifier. The valve *k* has its downward motion restricted by a guide, *m*, applied to its stem beneath, and it is or may be guided above to keep it central by a male and female fit with the movable seat *h*.

Should the glass tube *d* break, then the movable seat *h*, being no longer held down by said tube, is lifted by the valve through the pressure of the gas on the back of the latter, and the valve *k* kept closed against its seat *l*, thus preventing escape of gas.

I claim—

1. The transparent connection or gas-conducting glass tube *d*, in combination with a valve applied to either of its ends, and held open by said tube when intact, but closing by the pressure of the gas on the breaking of said tube, essentially as and for the purpose or purposes herein set forth.

2. The combination of the gas-conducting glass tube *d*, the movable seat *h*, acting also as a valve-stop, applied to either end of said tube, and the valve *k*, substantially as and for the purposes specified.

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Witnesses:

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