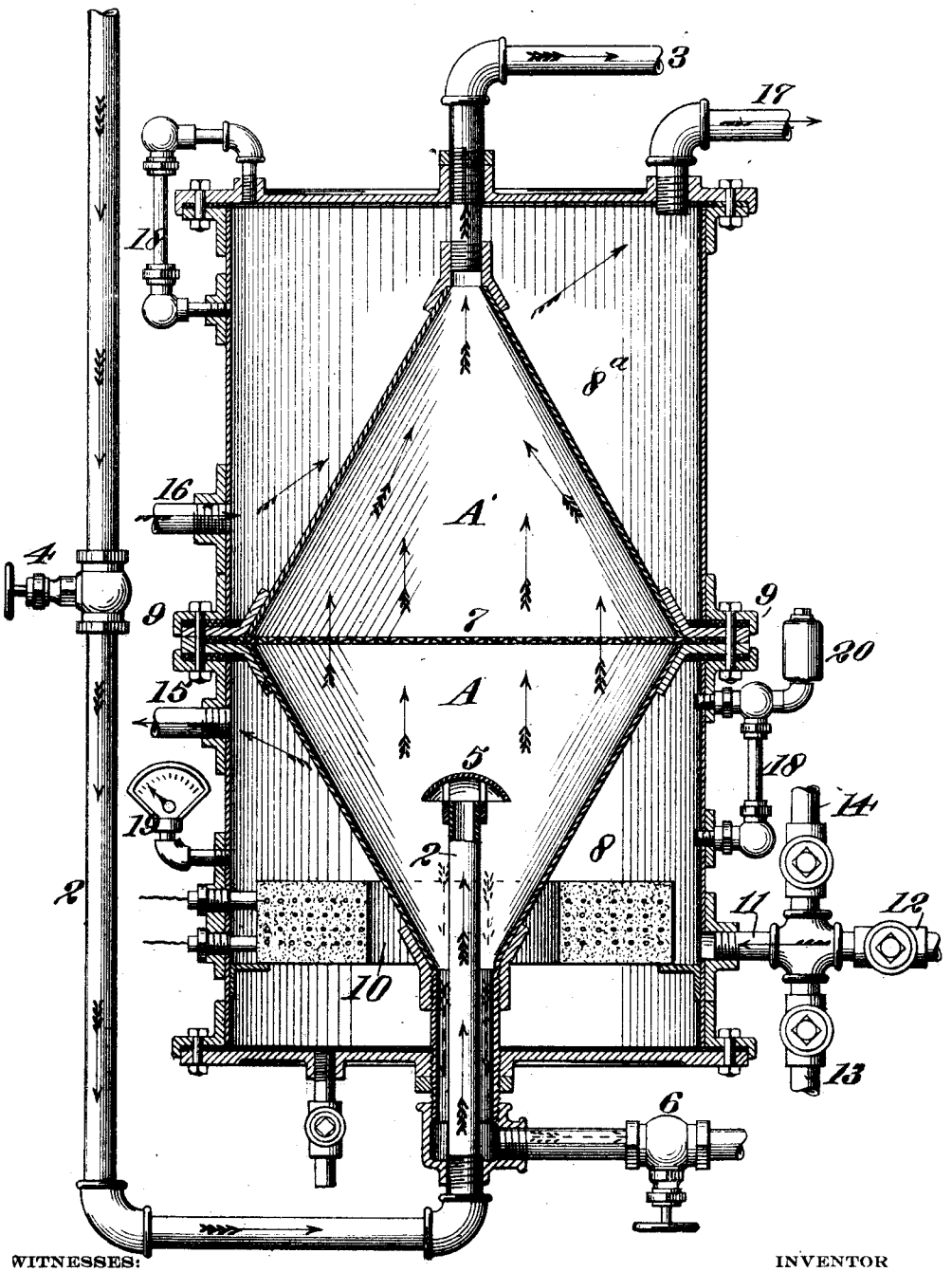
S. BRICKMAN.

PURIFIER.

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1,188,893. Patented June 27, 1916.



WITNESSES:

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PURIFIER.

1,188,893. Specification of Letters Patent. Patented June 27, 1916.

Application filed October 11, 1915. Serial No. 55,203.

To all whom it may concern:

Be it known that I, SAMUEL BRICKMAN, a subject of the Czar of Russia, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Purifiers, of which the following is a specification.

My invention relates to an apparatus for purifying liquids, and especially for separating gasolene, which has been used for cleaning purposes, from impurities which have thus become associated with the gasolene, and restoring the latter in a purified form for further use.

It consists of a two-part receptacle for gasolene, with inlet and outlet connections, an inclosing two-part chamber, with means to transfer a heated or tempered liquid therethrough and around the inner receptacle, and heating devices and connecting circulating pipes, and details of construction which will be more fully explained by reference to the accompanying drawing, in which the figure is a vertical section of the apparatus.

A—A′ is a chamber, here shown in the form of a double vertically supported cone, with an inlet pipe 2 opening into the bottom to admit the medium to be cleaned and a discharge pipe 3 at the top. The inlet pipe connects with a supply at such a height above the discharge that the contents may flow through and out of the discharge by gravitation. The supply may be controlled by a cock or valve 4.

The inner end of the pipe 2 has a segmental cap 5 forming a hood above it into which the medium first flows, and by which it is diverted downward toward the bottom of the lower cone, which is open around the inlet pipe to provide for a settling space for the heavier impurities, and these may be discharged from time to time through a discharge cock 6. The slow rise of the medium in the chamber practically creates no current, and thus facilitates the separation and settling of the heavier impurities.

7 is a screen or filter fixed across the chamber, betwen the divergent ends of the cones, and the lighter liquid flows up through the filter which arrests a further portion of the waste and allows only the most purified part to flow upward and escape through the pipe 3 in condition for re-use.

In order to assist the operation, I have employed an inclosing vessel 8—8ª, here shown as cylindrical in form and having central flanges 9, between which the flanges of the cones extend and all are bolted together so that the conical chamber is supported within the inclosing one. The lower part 8 of the exterior chamber serves as a heater and is provided with means for that purpose. Such means may consist of a resistance electrical heating coil 10, located in the lower compartment 8, or the heat may be produced by a hot fluid delivered into the compartment through a pipe 11. Such a pipe may have a connection with steam or hot water pipes 12—13, and with a cold water pipe, as 14, by which the temperature can be regulated.

15 is an exit pipe by which circulation and regulation of temperature may be maintained. By means of pipes 16 and 17 cold water may be circulated through the upper chamber 8ª to cool the medium passing through the upper cone A′ and before its discharge. Gages 18 indicate the contents of the chambers with which they connect. A temperature indicator 19 is connected with the lower chamber and an alarm 20 to call attention to any unusual interior conditions.

Having thus described my invention, what I claim and desire to secure by Letters Patent is—

1. An apparatus for purifying liquids, consisting of an interior chamber with inlet and discharge at the bottom and top respectively, through which the liquid flows by gravitation, a deflecting hood located above the open end of the inlet pipe, a receiver and a discharge pipe at the bottom to collect impurities, a filter screen located above the inlet, exterior inclosing chambers, means to circulate water therethrough, means to heat the lower chamber, means to cool the upper chamber, and controlling means therefor.

2. In a purifying apparatus of the character described, a double conical vertical chamber having a filtering screen across the abutting bases, an inlet pipe extending upward from the lower end of the lower cone, a downwardly deflecting hood mounted above the open end of the inlet pipe, a collecting chamber surrounding the lower part of said pipe and a discharge connection therewith, a heating chamber inclosing the lower cone, a cooling chamber inclosing the upper cone, and regulating gages therefor.

3. A liquid purifying apparatus consisting of a downwardly convergent separating chamber, an inlet pipe extending up through the apex of the cone, and having a downwardly deflecting cap above, a collecting chamber, and discharge below the cone, an upwardly convergent receiving chamber, and an apex discharge, a screen extending between said chambers, cylindrical chambers inclosing the cones and uniting flanges common to both chambers and screen, means for heating the lower-most inclosing chamber, and means to cool the upper-most chamber.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

SAMUEL BRICKMAN.

Witnesses:

JOHN H. HERRING,

ALBERT COHEN.