J. H. TAUSSIG.

VERTICAL RETORT GAS APPARATUS.

APPLICATION FILED FEB. 1, 1908. RENEWED SEPT. 14, 1909.

951,856. Patented Mar. 15, 1910.

2 SHEETS—SHEET 1.

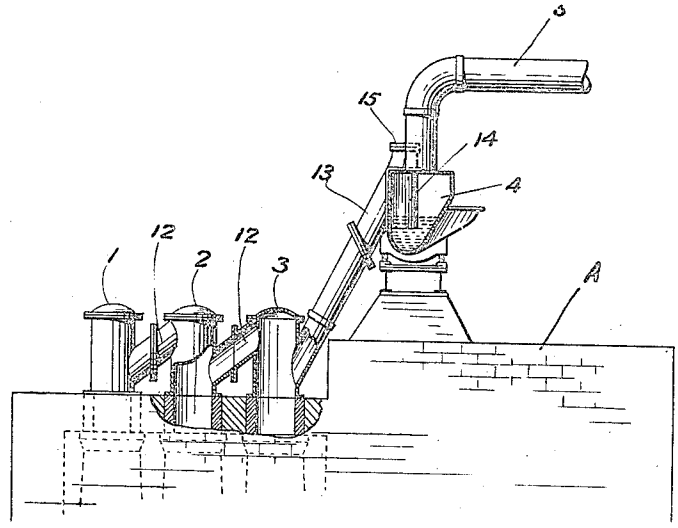

FIG. 1.

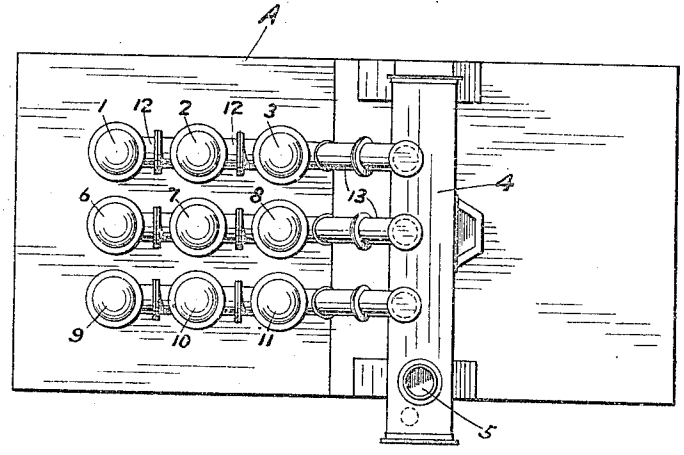

FIG. 2.

WITNESSES:

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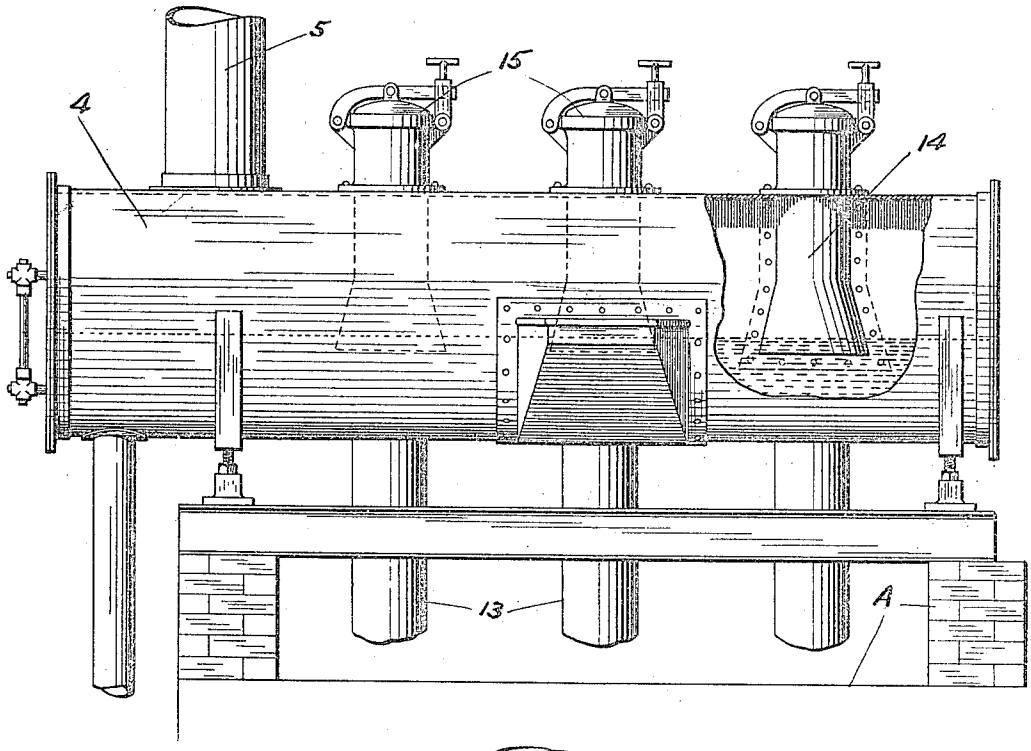

FIG. 3.

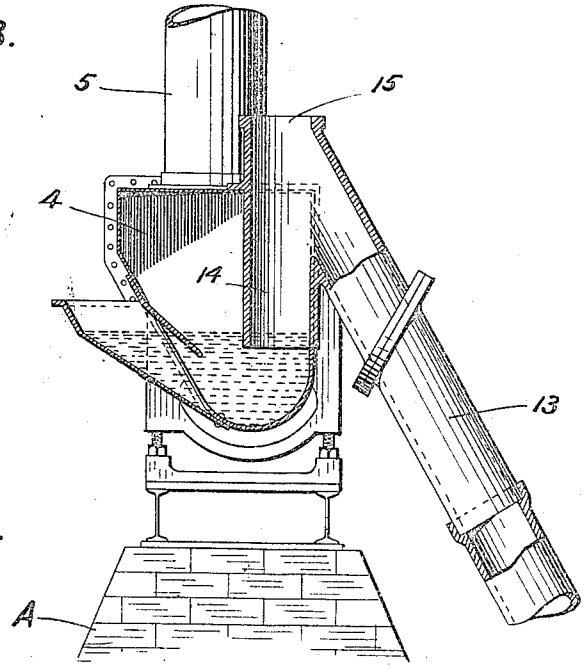

FIG. 4.

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UNITED STATES PATENT OFFICE.

JOHN HAWLEY TAUSSIG, OF PHILADELPHIA, PENNSYLVANIA.

VERTICAL-RETORT GAS APPARATUS.

951,856. Specification of Letters Patent. Patented Mar. 15, 1910.

Application filed February 1, 1908, Serial No. 413,786. Renewed September 14, 1909. Serial No. 517,748.

To all whom it may concern:

Be it known that I, JOHN HAWLEY TAUSSIG, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Vertical-Retort Gas Apparatus, of which the following is a specification.

The present invention relates more particularly to the arrangement of the mouth pieces of the vertical retorts and their accessories and its principal objects, are to provide an arrangement of connecting, take-off and dip pipes by which the vertical retorts may be spaced and arranged in any required position and by which a multiplicity of horizontally arranged pipes, of which many are of necessity curved, is avoided; to permit the hydraulic main to be placed on the setting without the use of curved take-off pipes; to effect a saving not only in the cost of construction, but also in operating expenses; and to provide for the ready cleaning of the connecting and take-off and dip pipes.

The invention will be first described and finally claimed and the description will be made in connection with the particular embodiment of the invention chosen for illustration in the accompanying drawings, in which—

Figure 1, is a side view of the mouth pieces of the vertical retorts showing their connections and also a part of the setting with the hydraulic main mounted thereon. Fig. 2, is a top or plan view of a group of retorts. Fig. 3, is a front view partly in section of the hydraulic main, and Fig. 4, is a transverse sectional view of the same.

In the drawings 1, 2, 3, are the mouth pieces of vertical retorts arranged in a suitable setting A, and from which gas is led to the hydraulic main 4, from which it is conducted by a pipe 5. The hydraulic main is arranged on the setting A, which in many instances, is an advantageous location for it. 6, 7, and 8, and 9, 10 and 11, are additional groups of mouth pieces. The number of retorts in each group is not material and the point is that the mouth pieces of each retort are connected from one to another and then to the hydraulic main. By this arrangement of connections, it is possible to space and arrange the retorts in any desired manner, which would naturally be in such manner that they occupy the minimum of space. The retort mouth pieces are usually arranged upon substantially the same level and the groups of mouth pieces and their connections may be all substantially alike, so that a description of the connections of one group will be sufficient.

The arrangement of the retorts and their mouth pieces having been selected and determined so as to best meet the conditions and requirements of the setting, the retort mouth pieces are divided into suitable groups and the connecting pipes 12 serve to connect the mouth pieces in each group. These pipes 12 are straight and as shown are arranged at such inclination to the axes of the retorts that their high ends are accessible for the reception of a cleaning tool through the opening at the end of one of the retorts. For example, the connecting pipe 12, between the retorts 1 and 2, can be cleaned by a tool introduced through the open upper end of the retort 2. There is a V-shaped pipe, of which one arm 13, is straight and constitutes the take-off pipe which connects the interconnected group of retorts with the hydraulic main and rises at an inclination to the axes of the retorts, and of which the other arm constitutes a dip pipe and dips into the hydraulic main. The described construction of this combined take-off and dip pipe fitting permits the hydraulic main to be placed upon the setting and it does not involve any curved pipes.

15, is an opening at the point of the V-shaped fitting and it is usually closed, but it can be opened so as to insert through it a tool which may be used for cleaning the dip and take-off branches.

What I claim is:

1. In combination vertical retorts divided into groups and having mouth pieces, and straight connecting pipes communicating with adjacent retorts of each group and arranged at an inclination thereto so as to be accessible through a retort mouth piece, substantially as described.

2. In combination vertical retorts divided into groups and having mouth pieces, straight connecting pipes communicating with adjacent retorts of each group and arranged at an inclination thereto so as to be accessible through a retort mouth piece, a hydraulic main, and a V-shaped pipe having one of its arms in communication with the water seal and the other of its arms in communication with the group of retorts and

having an opening at the union of its arms through which they can be cleaned, substantially as described.

3. In combination vertical retorts having mouth pieces in the same horizontal plane, connecting pipes laterally arranged in respect to the mouth pieces and interconnecting said retorts in groups, and a take-off pipe for each group of retorts, substantially as described.

4. In combination a setting including vertical retorts having mouth pieces at the top thereof, a hydraulic main mounted on the setting, connecting pipes connecting said retorts in groups, and angularly arranged dip and straight take-off pipes, substantially as described.

In testimony whereof I have hereunto signed my name.

JOHN HAWLEY TAUSSIG.

Witnesses:
CLIFFORD K. CASSEL,
KON. GILLIGAN.