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DEVICE FOR PUTTING PIPE CONDUITS FOR GAS IN AND OUT OF CONNECTION WITH ONE ANOTHER.

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1,436,174.

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Fig. 1.

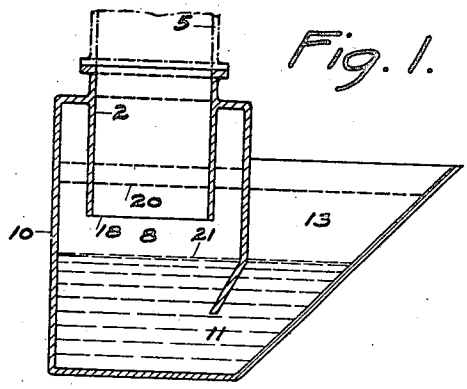


Fig. 2.

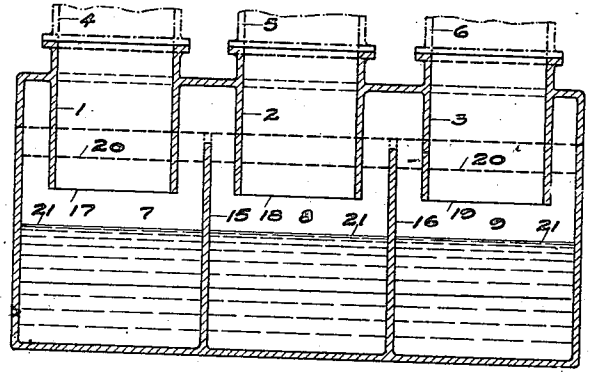
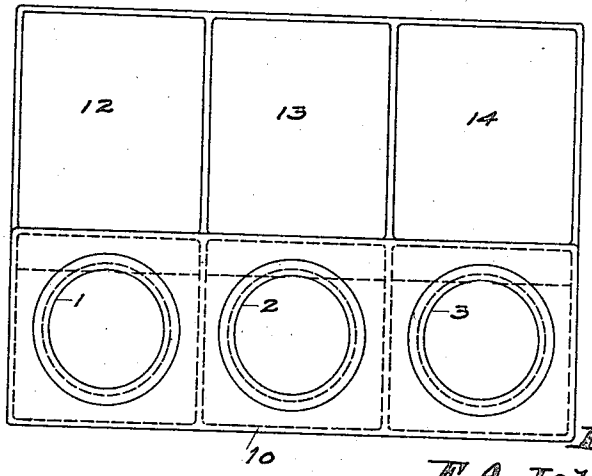


Fig. 3.



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UNITED STATES PATENT OFFICE.

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DEVICE FOR PUTTING PIPE CONDUITS FOR GAS IN AND OUT OF CONNECTION WITH ONE ANOTHER.

Application filed June 25, 1921. Serial No. 480,495.

To all whom it may concern:

Be it known that I, EDVIN ANDREAS JOHANSSON, a subject of the King of Sweden, residing at Stockholm, Sweden, have invented certain new and useful Improvements in Devices for Putting Pipe Conduits for Gas In and Out of Connection with One Another (for which I have filed an application in Sweden on June 11, 1918, No. 2240 of 1918, in the name Trollhättans Elektrothermiska Aktiebolag), of which the following is a specification.

The present invention refers to a device for conducting gases especially hot gases different ways without the employment of valves or dampers which are more or less difficult to treat in heat.

The invention consists in a number of fluid seals each connected with the gas conduit in question and which may be put in or out of connection with one another by withdrawing or filling in fluid in such a manner that the gas conduits are brought in or out of connection with one another in the manner required.

The accompanying drawing shows a construction of the invention. Fig. 1 is a vertical cross section. Fig. 2 a vertical longitudinal section and Fig. 3 is a plan of the device.

1, 2 and 3 indicate three pipes adapted to be connected each with a conduit 4, 5 and 6 for gas. The pipes emerge each in a compartment 7, 8 and 9 closed above a vessel 10 whereby each compartment through an opening 11 communicates each with a compartment 12, 13 and 14 open above the vessel 10. The walls 15 and 16 of the compartments 7, 8 and 9 stop at a distance below the roof of the compartments so that a connection between the compartments is received through the opening thus formed. Said side walls 15 and 16 extend above the lower edges 17, 18 and 19 of the pipes.

If fluid is filled in the compartments 7, 8 and 9 so that the pipes immerge in the fluid say to the level 20 a fluid seal is formed in each compartment closing the pipes 4, 5 and 6 from each other. If the pipe 1 is to be put in communication with the pipe 2 fluid is withdrawn from the compartments 7 and 8 in any suitable manner say through the compartments 12 and 13 to the level 21 so that the pipe ends 17 and 18 will be free. The gas can now flow from one of the pipes 1 or 2 over to the other whereas the communication between the compartments 7 and 12, 8 and 13 still is closed.

In a like manner the conduits 5 and 6 or 4 and 6 may be brought in connection with one another and by withdrawing fluid from all three compartments to the level 21 the conduits 4 and 6 may be brought in communication with the conduit 5.

Moreover the different conduits may be put in communication with one another in many different manners so that for instance one supply and one outflow may be employed or one supply and two outflows or two supplies and one outflow.

Having now described my invention and set forth the manner in which it is to be performed what I claim is:

1. In a device of the character described, a liquid containing vessel, a series of closed and open compartments provided at the upper portion of the vessel, partitions forming said compartments, the partitions forming the closed compartment terminating short of the top of said compartment, the partitions between the open and closed compartments terminating short of the bottom of the vessel and open ended pipes arranged through the tops of each of the closed compartments and having their lower ends terminating in a plane beneath the upper edges of the partitions providing said closed compartments.

2. In a device of the character described, a water containing vessel having the rear wall extended to provide a top partition depending from the outer end of the top and positioned medially of the front and rear walls of the vessel and terminating short of the bottom thereof, a series of transverse partitions coacting with the front and rear walls of the depending partition to form closed and open compartments, the said partitions terminating short of the top of the closed compartments and open ended pipes mounted in the tops of the closed compartments and terminating in a horizontal plane beneath the plane of the upper edges of the transverse partitions.

3. In a device of the character described, a liquid containing vessel, a series of closed compartments formed in the vessel, a corre-

sponding series of open compartments formed in the vessel and communicating at their lower ends with the adjacent closed compartments, and a plurality of pipes one of which is arranged through the top of each of the closed compartments and each pipe terminating in a plane beneath the upper edges of the sides of the compartments.

In testimony whereof I have signed my name to this specification.

EDVIN ANDREAS JOHANSSON.

Witnesses.

AGNES BIÖRCK,

STINA AHLINDER.