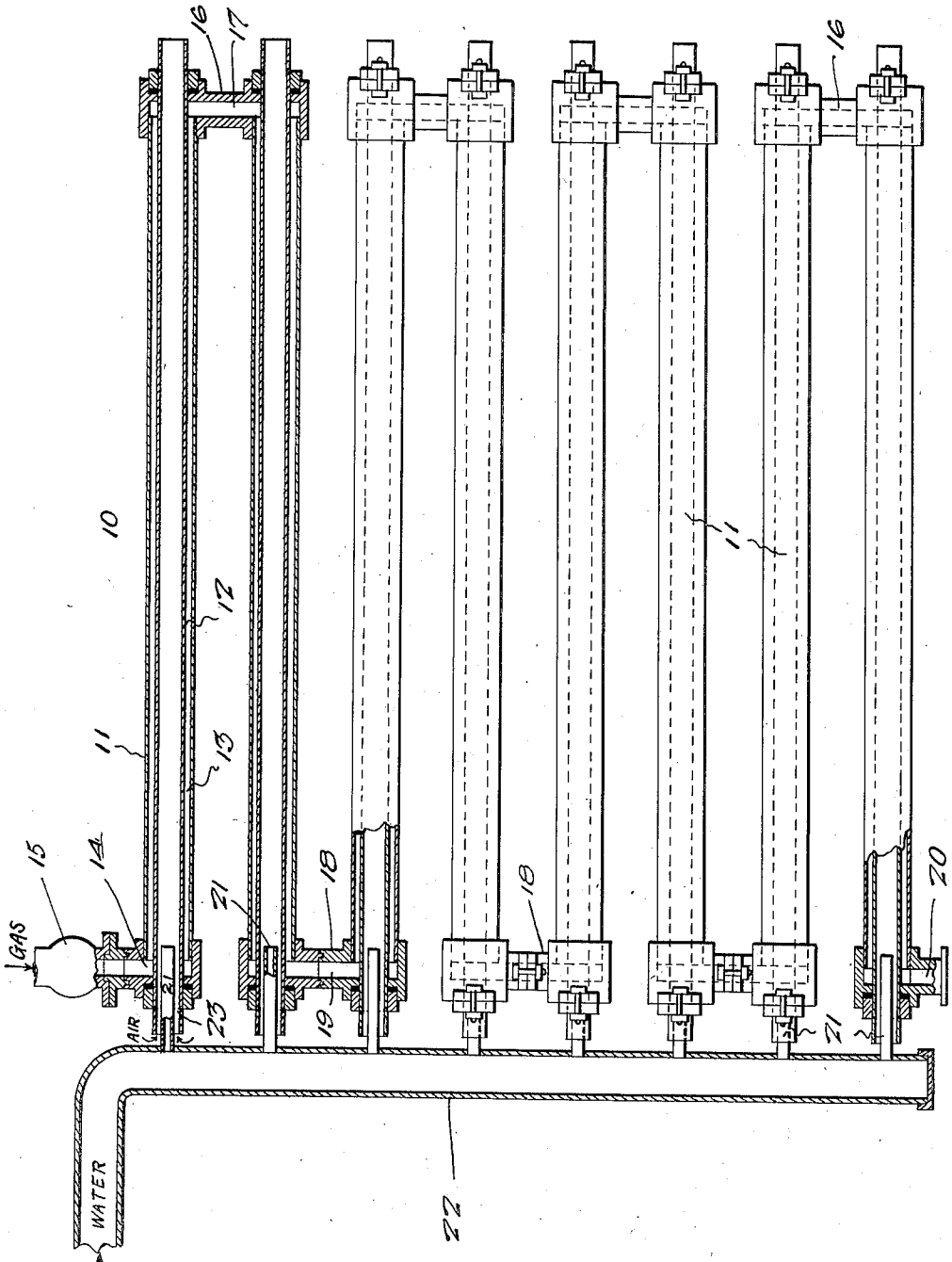
May 12, 1925. 1,537,890

S. C. SEITZ

AMMONIA CONDENSER

Filed Aug. 25, 1923



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WITNESS:

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UNITED STATES PATENT OFFICE.

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AMMONIA CONDENSER.

Application filed August 25, 1923. Serial No. 659,375.

To all whom it may concern:

Be it known that I, SAMUEL CLAYTON SEITZ, a citizen of the United States, residing at Towson, in the county of Baltimore and State of Maryland, have invented new and useful Improvements in Ammonia Condensers, of which the following is a specification.

This invention relates to improvements in ammonia condensers and has for an object the provision of novel means for cooling and condensing ammonia gases.

To this end, the invention includes means which may be used in connection with or independent of the usual cooling means, so as to more rapidly and effectually cool and condense ammonia gas.

More specifically stated the invention provides means for injecting and passing water into and through the condenser coils in such manner as to suck air into the coils and carry it through them, the water producing a suction, so that a stream of cool air and water will pass through the coils.

With the above and other objects in view, the invention further includes the following novel features, and details of construction to be hereinafter more fully described, illustrated in the accompanying drawings and pointed out in the appended claim.

In the drawings, the figure shown is a view partly in section and partly in elevation, illustrating a condenser coil with the invention applied thereto.

Referring to the drawings in detail, wherein like characters of reference denote the corresponding parts, the coil as shown comprises a plurality of spaced horizontal sections 10, the said sections including an outer pipe 11 and an inner pipe 12 so as to provide a space 13 for the circulation of the gases. Communicating with one end of the coil, that is, with the space 13, is a gas connection 14 which is controlled by a valve 15. The outer ends of the coil sections 10 are connected by fittings or connections 16 having passages 17 therethrough for communication with the space or passages 13. The opposite ends of the sections 10 are connected by fittings or connections 18 which are also provided with passages 19 for communication with the spaces 13. The fittings or connections 17 and 18 are so arranged that a continuous gas circulating passage is provided from the gas connection 14 to the opposite end of the coil, which end is provided with an outlet 20.

In the present invention, the pipes 12 of each horizontal section 10 are open at both ends and extending into one end of each of these pipes is an injector nozzle 21, the latter extending from a header 22 having communication with a suitable source of water supply. The nozzles 21 are spaced from the inner walls of the pipes 12 so that air inlets 23 surround the nozzles.

Water from the header 22 may thus be injected into the pipes 12 through the nozzles 21 and will pass through the pipes out at their opposite ends. By having the outer ends of the pipes open considerably less force is required for forcing the water through the pipes as no back pressure is present as would be the case were the outer ends of the pipes connected by return elbows. In addition, the injected water will create a suction so that air will enter through the inlets 23 and a mixture of cool air and water will thus pass through the pipes.

The invention is susceptible of various changes in its form, proportions and minor details of construction, and the right is herein reserved to make such changes as properly fall within the scope of the appended claim.

Having described the invention, I claim:—

In a condenser, a coil formed of a plurality of spaced horizontal pipe sections, hollow fittings connecting the alternate ends of the sections, an inner pipe extending throughout each section and through said fittings, said inner pipe being spaced from the first mentioned pipe to provide a circulating passage which includes the hollow fittings and said inner pipe being open at each end, a header located at one end of the pipes and nozzles extending from the header into the ends of and spaced from the inner walls of said inner pipes, whereby water under pressure may be forced through the pipes to draw air through said pipes and provide a combined water and air cooling agent.

In testimony whereof I affix my signature.

SAMUEL CLAYTON SEITZ.