

No. 706,901.

Patented Aug. 12, 1902.

N. W. CONDUCT.

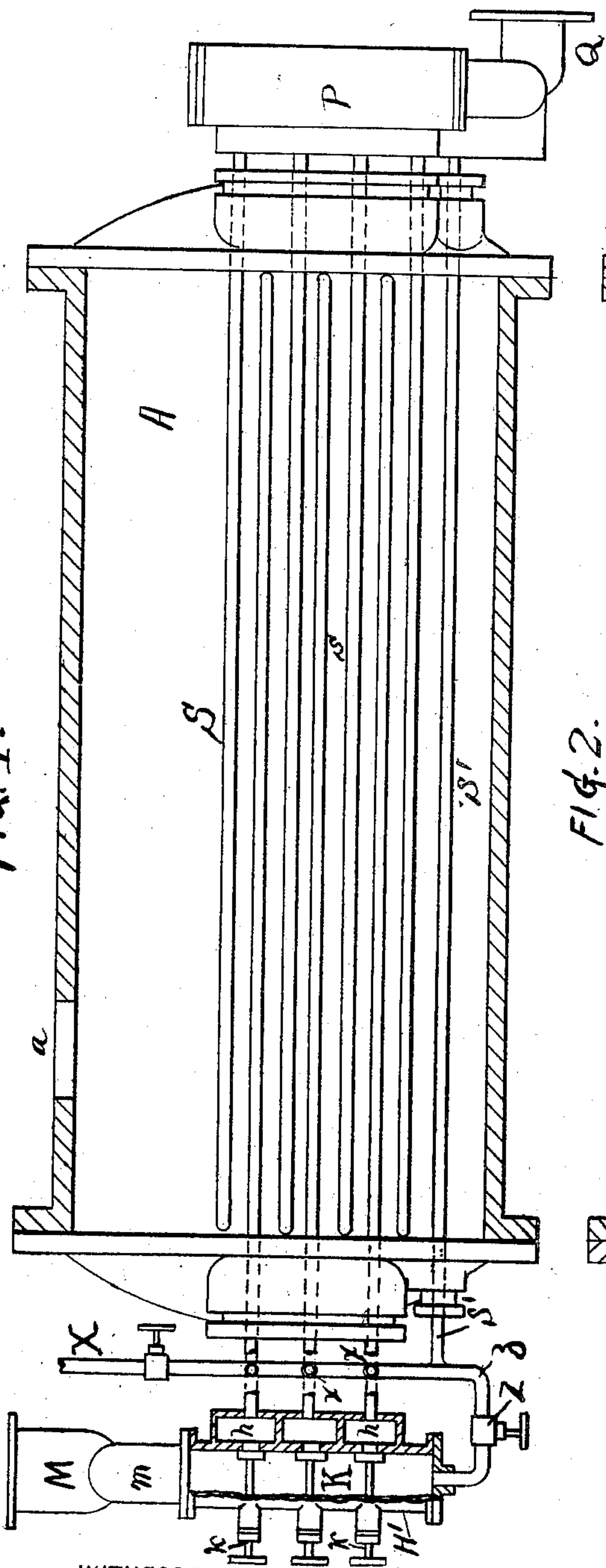
STILL FOR ABSORPTION REFRIGERATING APPARATUS.

(Application filed Nov. 16, 1901.)

(No Model.)

2 Sheets—Sheet 1.

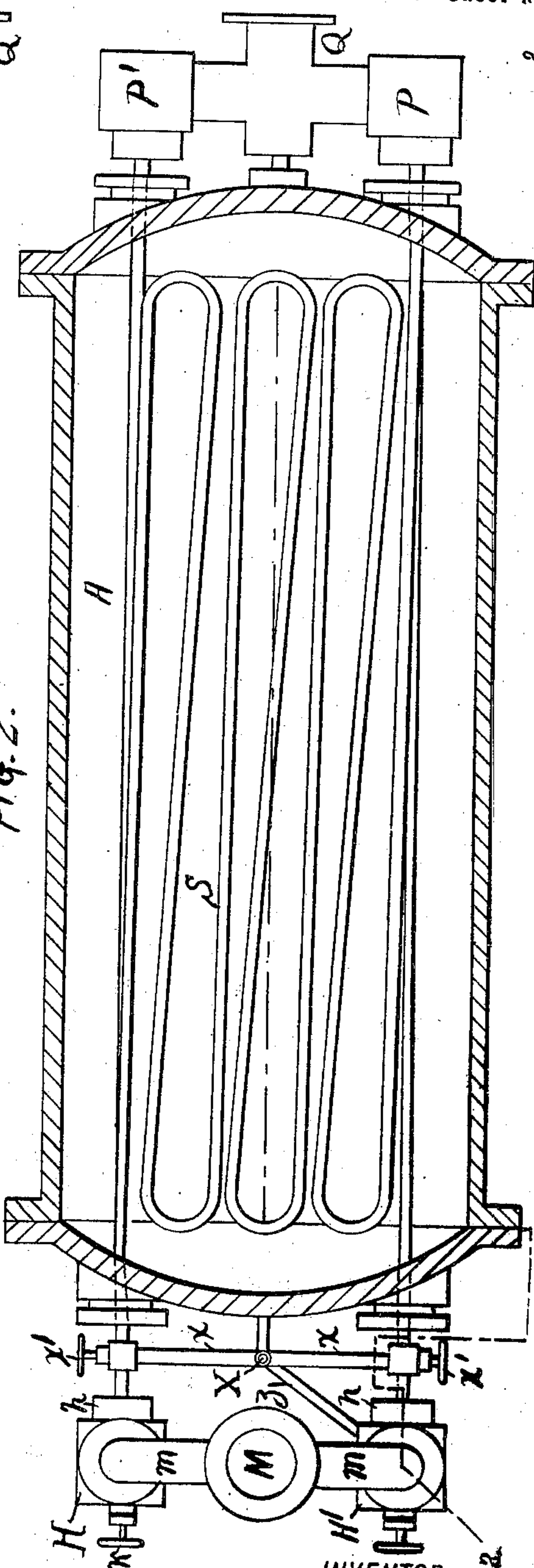
FIG. 1.



WITNESSES:

P. W. Wright
Nathan Abbe

FIG. 2.



INVENTOR

NATHAN W. CONDUCT

BY

Horton and Horton
HIS ATTORNEYS

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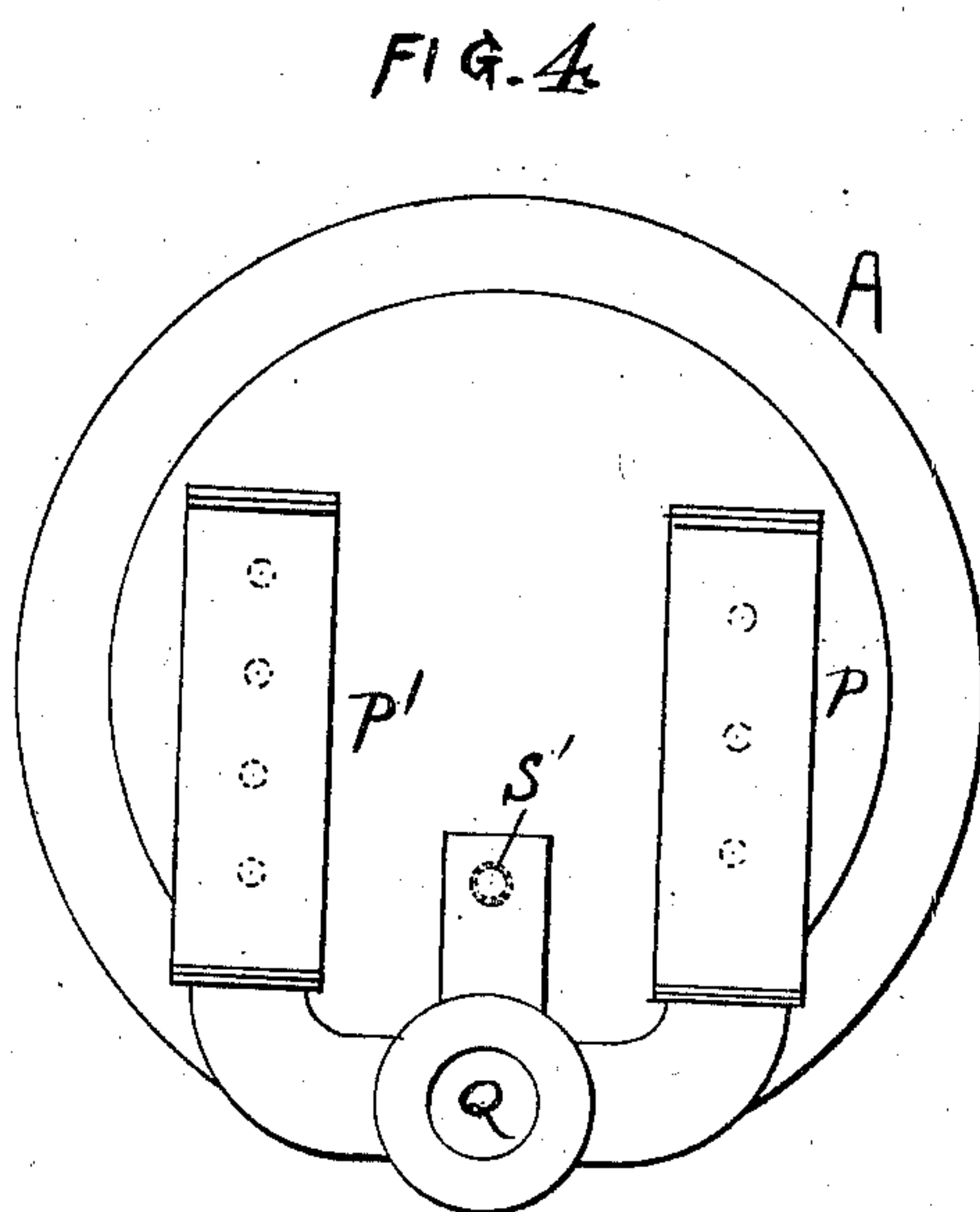
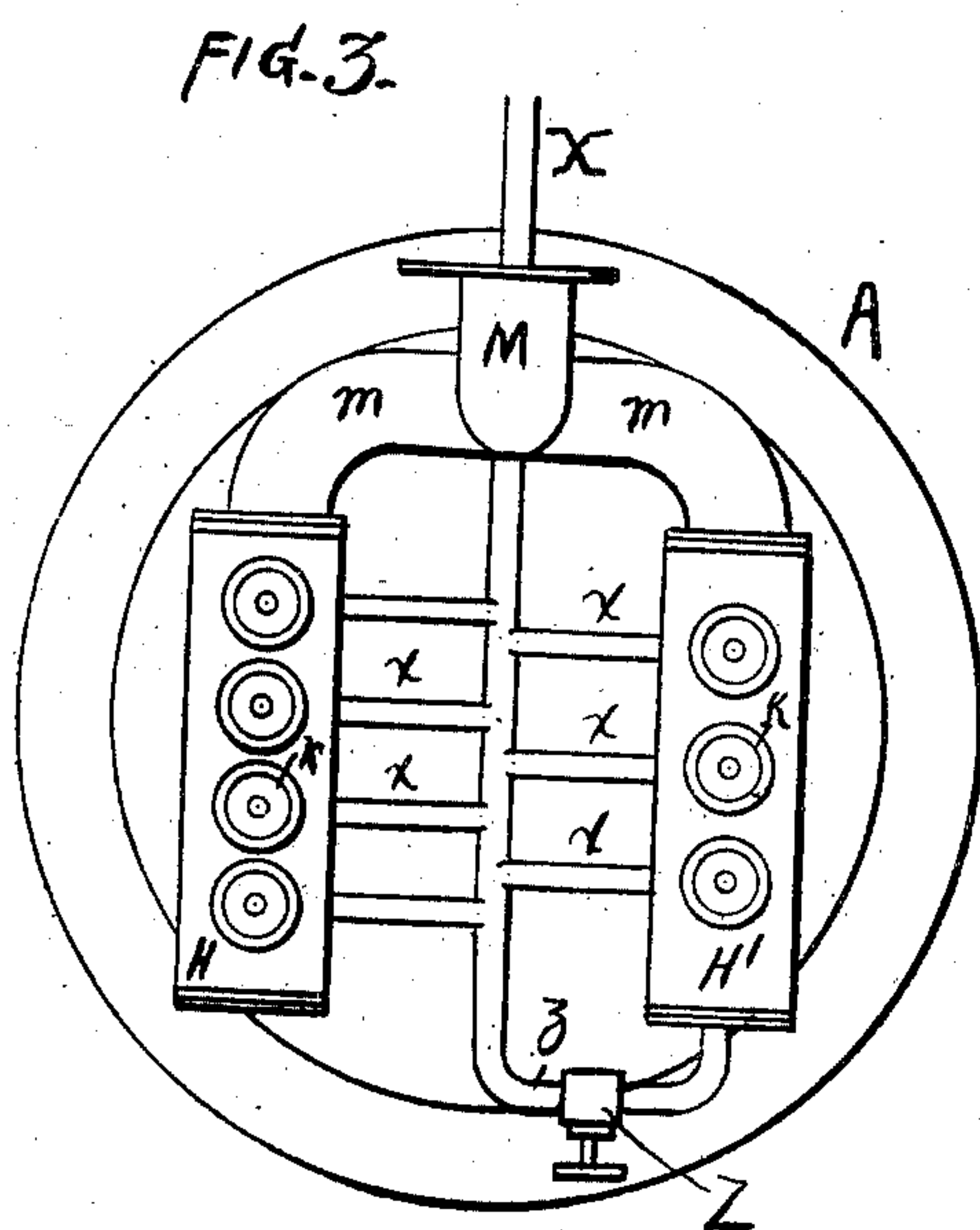
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WITNESSES:

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UNITED STATES PATENT OFFICE.

NATHAN W. CONDUCT, OF JERSEY CITY, NEW JERSEY.

STILL FOR ABSORPTION REFRIGERATING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 706,901, dated August 12, 1902.

Application filed November 16, 1901. Serial No. 82,535. (No model.)

To all whom it may concern:

Be it known that I, NATHAN W. CONDUCT, a citizen of the United States of America, residing in Jersey City, in the county of Hudson, State of New Jersey, have invented an Improved Still for Absorption Refrigerating Apparatus, of which the following is a specification.

My invention has reference more particularly to that class of refrigerating apparatus which works by the absorption process; and the main object of my invention is to so construct the apparatus as to improve the operation of generating the gas and also to enable the generation of the gas to be under more perfect control.

In the accompanying drawings, Figure 1 is a vertical section of my improved still on the line 2 2, Fig. 2. Fig. 2 is a sectional plan view taken through the still. Fig. 3 is an elevation of the front end of the still, and Fig. 4 is an elevation of the rear end of the same.

I prefer to make the main body or generating-chamber of the still in the form of a horizontal cylinder A. My still is so constructed that either exhaust-steam or live steam, or both, may be employed, as convenience may dictate. For this purpose I arrange the steam-coils S in the chamber A in several independent sets. In this case they are in horizontal layers, each layer being preferably coiled in the serpentine form shown in the plan view, Fig. 2. In the drawings I have shown eight of these horizontal serpentine coils over each other, each coil being connected at opposite ends to headers H H' and P P'. The upper seven superposed coils S are connected at the front end to the inlet-headers H H', the ends of four coils being connected to one header H, while the ends of the other four coils are connected to the other header H'. Each pipe end opens into its separate box *h* in the header, admission to which from the common steam-space K is controlled by an independent hand-valve *h*, Fig. 1. The common steam-spaces K of the two headers are connected to the inlet-pipe M for the exhaust-steam by branches *m*, so that by opening the appropriate valve or valves *h* the exhaust-steam can be admitted to any of the coils S in the still. In order

that live steam may be used, however, when desired, I provide a live-steam-supply pipe X, connected to the bottom coil S' and also connected by branches *x* to the inlet ends of the other coils or some of them between the headers H H' and the still. Valves *x'* are provided to control the admission of steam to the several coils. A branch *z* with valve Z from the live-steam pipe X can be used to admit live steam to the headers H H' when desired. When exhaust-steam is used, many of the sets of coils will be required; but when live steam is used but few of the sets of coils will be needed for the efficient operation of the apparatus.

The outlet ends of the coils S and S' pass through the rear of the still A into headers P P', leading to a common outlet Q. These coils S, which lead at the inlet end from the header H, have their outlet ends at the diagonally opposite corner connected to the header P, Fig. 3. In like manner the coils which have their inlets connected to the header H' have their outlets connected to the header P'. The successive superposed coils S are thus connected to the inlet-headers H H' at opposite sides of the still alternately.

The construction of the coils in horizontal serpentine form is not only convenient for manufacture, but gives an extended heating-surface, and in addition the construction of independent superposed coils has this further advantage that in case the level of liquor in the retort descends below the level of the top coil of pipe, for instance, (as shown by the gage,) such top coil can be cut out of the circulation and the desired proportion of heating-surface to the quantity of liquor be maintained.

I claim as my invention—

1. In an ammonia-still for refrigerating purposes, the combination of the generating-chamber of the still and steam-coils therein, with two connected headers at the inlet end and two connected headers at the outlet end, the headers at the inlet end having valves to control the admission of steam to the different coils and means for supplying steam from different sources to the inlet-headers.

2. In an ammonia-still for refrigerating purposes, the combination of the generating-chamber of the still with steam-coils in hori-

zontal serpentine layers, these successive layers having their inlets at opposite sides of the still alternately and valved headers controlling the admission of steam to the said
5 coils.

3. In an ammonia-still for refrigerating purposes, the combination of the generating-chamber of the still and steam-coils therein with headers having valves to control the admission of exhaust-steam to the coils, a live-
10 steam pipe and valved connections from the latter to the inlets of said coils.

4. In an ammonia-still for refrigerating purposes, the combination of the generating-

chamber of the still with steam-coils in independent sets and both a live-steam-supply pipe and an exhaust-steam-supply pipe and valves controlling admission therefrom to the several independent sets of coils, substantially as described. 15 20

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

NATHAN W. CONDUCT.

Witnesses:

F. WARREN WRIGHT,
HUBERT HOWSON.