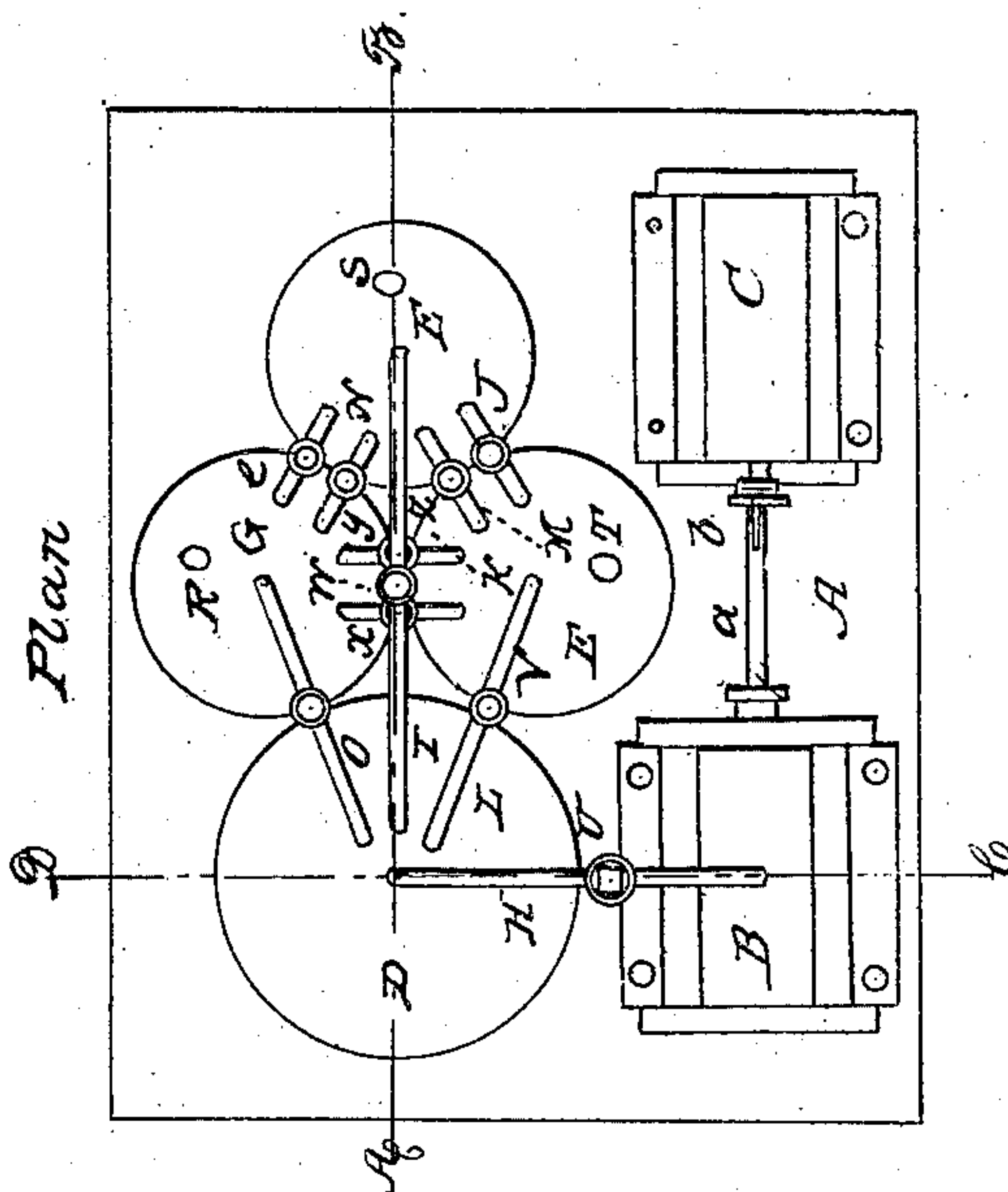
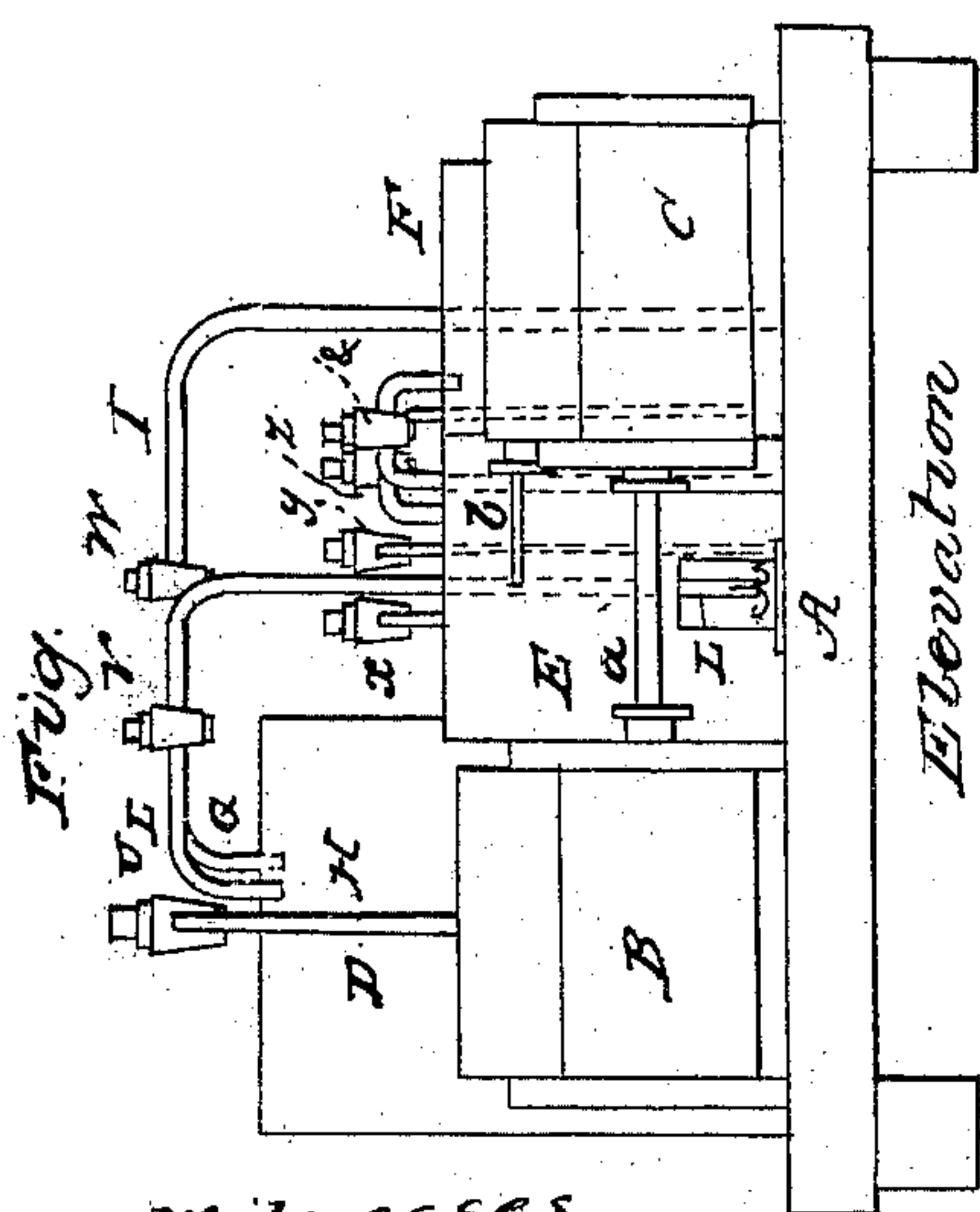
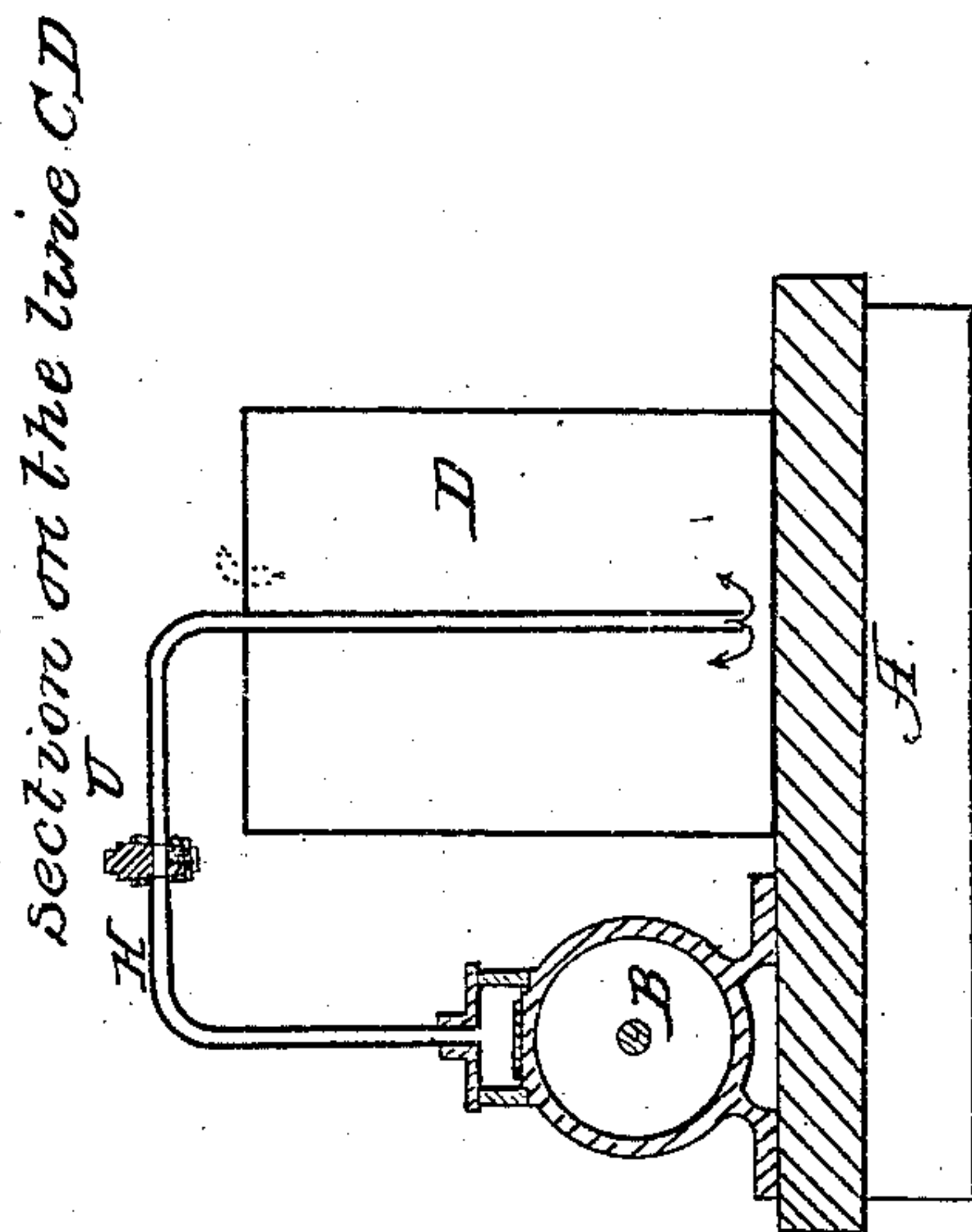
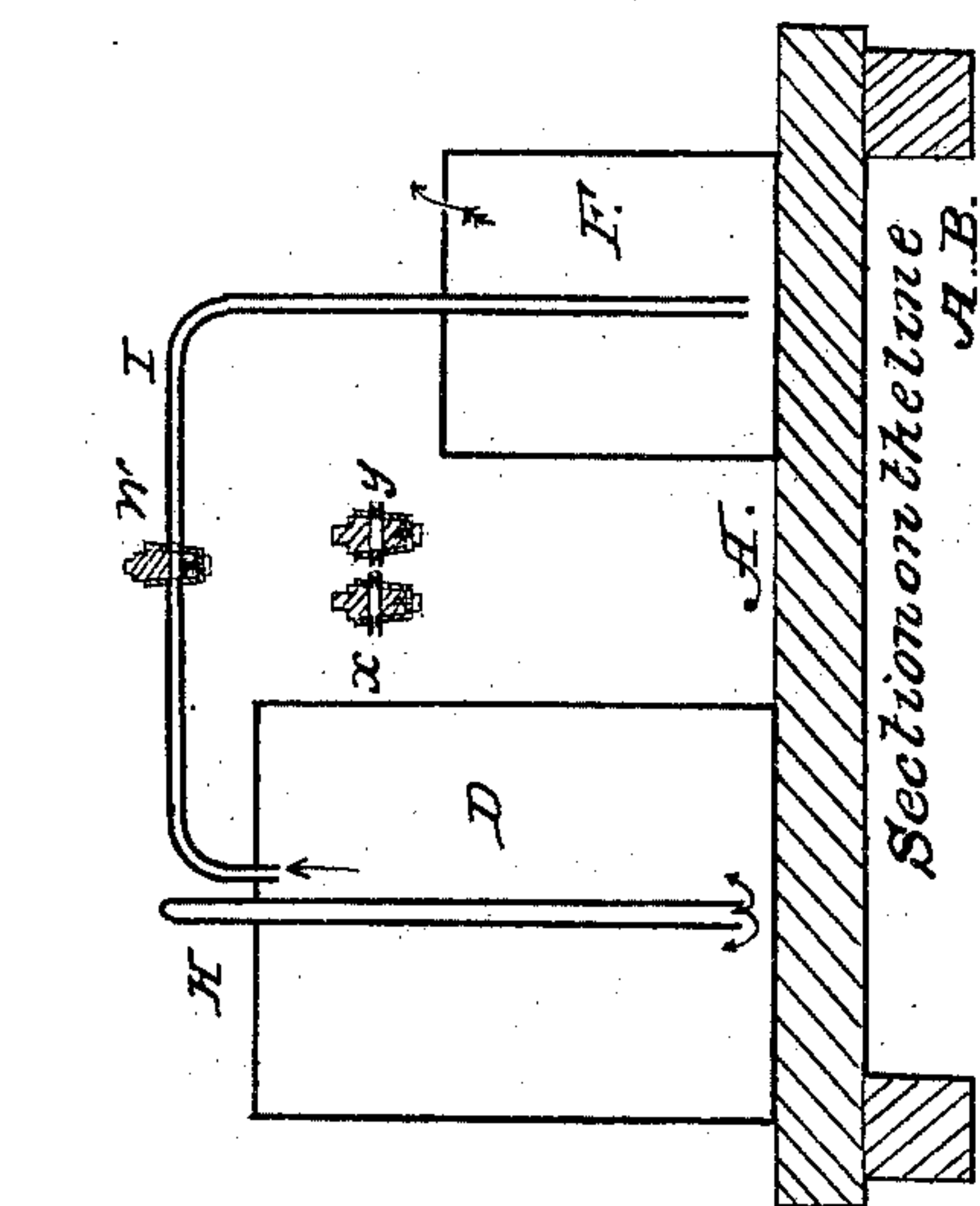


SPEED & SMITH.

Treating Spirits.

No. 35,900.

Patented July 15, 1862.



Witnesses
A. J. Baldwin
G. T. Smith.

Inventors
John James Speed
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UNITED STATES PATENT OFFICE.

JOHN JAMES SPEED, OF GORHAM, MAINE, AND FRANCIS BARTLETT SMITH,
OF BROOKLYN, NEW YORK.

IMPROVEMENT IN TREATING ARDENT SPIRITS.

Specification forming part of Letters Patent No. 35,900, dated July 15, 1862.

To all whom it may concern:

Be it known that we, JOHN JAMES SPEED, of Gorham, in the county of Cumberland and State of Maine, and FRANCIS BARTLETT SMITH, of the city of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in the Process of Rectifying Ardent Spirits, which we believe to be new and not heretofore known or used; and we declare the following to be a true description of our process and apparatus for accomplishing said purpose.

Our improved process consists in the use and forcing of atmospheric air through the spirits operated upon, and in saving the alcohol which the air takes up in the operation.

Our apparatus consists of a steam-engine or other power, an air-pump or its equivalent, a tight vat or cask to contain the liquor to be rectified, and three or more like vats or casks of smaller size to contain water, with tubes to conduct the air from one to the other, as hereinafter described, until it escapes from the last of the series into the open atmosphere.

The drawings, with the letters and figures hereunto attached, will more fully explain our invention.

C is a steam-cylinder. B is an air-pump. D is a tight cask to contain the liquor. E F G are water-casks. O I L M N P J K H are conducting-tubes. V W X Y are stop-cocks. R S T are openings in the heads of the water-casks for the escape of the air, and may be closed with a stop-cock or plug, when required, in the process hereinafter described. The air is forced through a tube to a point near the bottom of the liquor in cask D, and there escaping from the tube, it thence ascends through the liquor to a tube in the head of that cask, and through a continuation of this last tube it is forced to a point near the bottom of the water in cask E, and there escaping from that tube ascends through the water to another tube in the head of cask E, and through a continuation of this latter tube it is forced to a point near the bottom of the water in cask F, and there escaping from that tube ascends through the water to another tube in the head of cask F, and through a continuation of this last tube it is forced to a point near the bottom of cask G, and there escaping ascends through

the water in that cask to the surface, and hence escapes to the open air at the point R. In passing through the liquor in cask D the forced air becomes partially charged with alcoholic spirits, and in passing through the water in cask E is divested of a portion of that charge, which portion is retained in that water; and in passing through the water of each of the successive casks F and G the same effect of divesting the forced air of its remaining alcoholic charge is consummated, so that on the final escape of the air from cask G it is substantially purified of the alcohol, the whole of its charge being so retained in the water.

Instead of forcing the air through the liquor, as above described, the air may be exhausted from the last of the series of water-casks, when the atmospheric pressure will force the air through the liquor and water, thus accomplishing the same result. The spirits in cask D is by this process divested of its newness and raw properties, and mellowed, as by age, to any degree of mildness that may be desired, and thereby rendered both palatable and healthy as it is practicable to make it by the most protracted process of either time or other known agencies. When the water in cask E becomes charged with spirits, so that the water is about half the strength of proof-spirits, it should be drawn off and the cask again filled with pure water. The conducting-tubes should be so arranged with suitable stop-cocks that the air and alcohol with which it may be charged from the liquor in cask D can be forced into either of the water-casks at pleasure, always allowing the air to escape into the open atmosphere from the water-cask in which the water is the purest. None of the casks should be entirely filled; but a space should be left between the top of the liquor and water and the heads of the casks for an air-chamber and to prevent the liquor and water from being driven out of the casks into the tubes. The liquor in the water-casks is saved by distillation or by using the water containing the largest percentage of spirits to reduce other like spirits of high proof.

The advantage we claim for our said process is the destruction or neutralization of the deleterious properties of alcoholic liquor, rendering it pure, palatable, and healthy as any

amount of age is capable of effecting in it, and without the adulteration of it by the introduction of any foreign ingredients.

We have described above what we believe to be the most convenient form of apparatus for the purpose designed; but we do not confine ourselves to any particular form of apparatus. Any other arrangement substantially the same may be substituted.

We disclaim the dropping of ardent spirits through the air, as that is a well-known process and has been long in use.

What we claim, and desire to secure by Letters Patent, is—

The use and forcing of atmospheric air, hot or cold, into and through ardent spirits, and also, in combination with said process, the arresting in water and saving for use the alcohol which combines with the air, in the manner and by the combination of apparatus substantially as described above.

JOHN JAMES SPEED.
FRANCIS B. SMITH.

Witnesses:

J. A. BAILEY,
C. T. SMITH.