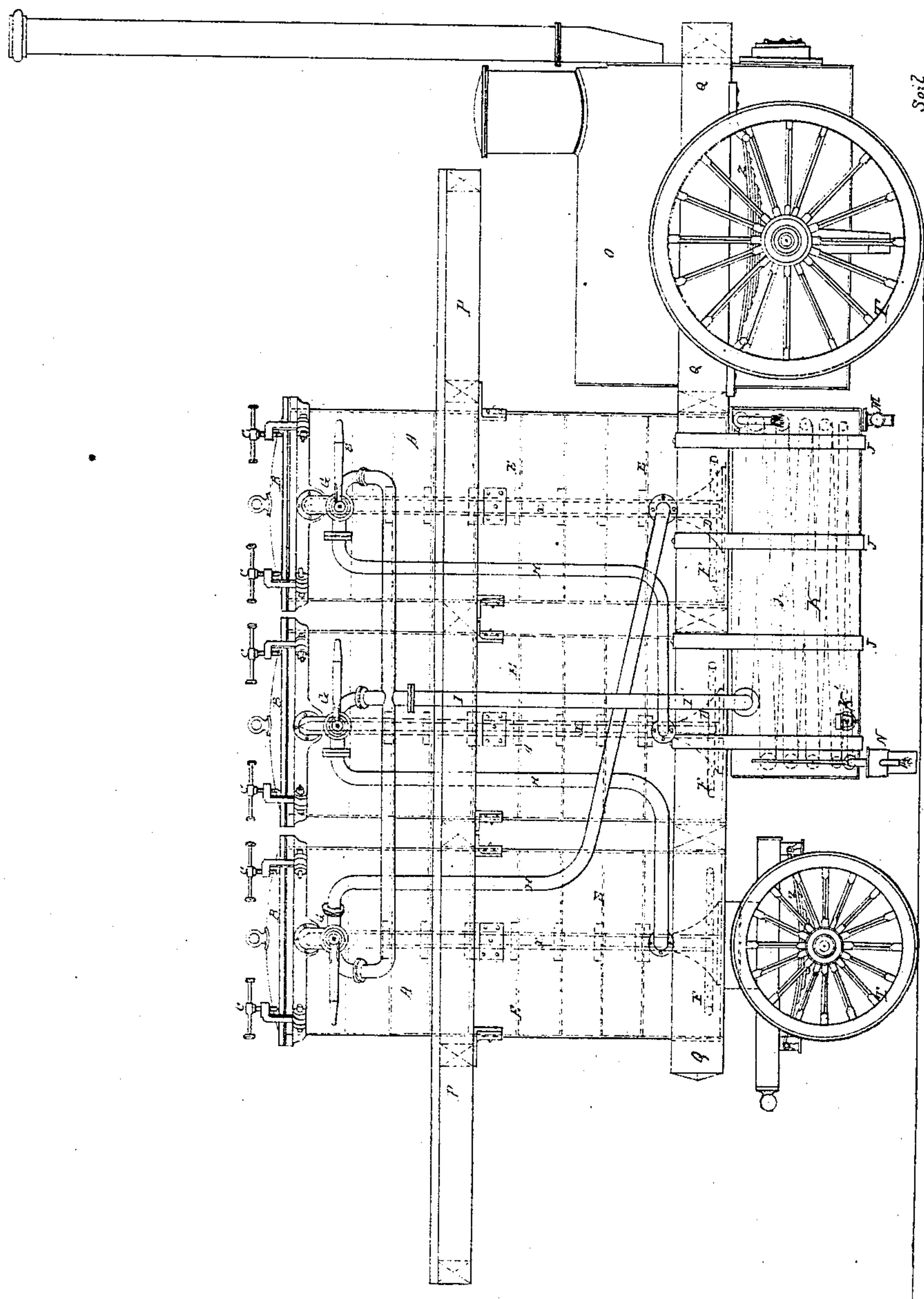


*L. A. DeLime,
Alcohol Still.*

No. 97058.

Patented Nov 23/1869.



Witnesses

F. Smith

J. H. Phillips

Inventor.

L. A. DeLime

United States Patent Office.

LOUIS A. DE LIME, OF ST. LOUIS, MISSOURI.

Letters Patent No. 97,058, dated November 23, 1869.

IMPROVED PORTABLE STILL.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, LOUIS A. DE LIME, of the city of St. Louis, in the county of St. Louis, and State of Missouri, have invented a new and useful Portable Still; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, in which—

A represents sheet-iron tubs, of four millimetres of thickness, the bottoms of six millimetres of thickness. The top of the tub is terminated by a circle of cast-iron, solidly riveted to the tub, the top of the circle dressed and turned very smooth, to obtain a hermetical sealing.

B, sheet-iron top, with iron circle, the whole riveted. This circle is dressed and turned, and a crank arranged on the centre of its circumference, to maintain an India-rubber ring, which presses between the two rings of the top by four press-screws, which make it perfectly air-tight.

C, four articulated and movable pressing-screws, fixed on each circle of iron.

D, a cast-iron support, perforated in the centre to receive the rod *x*, to which the several diaphragms E are successively keyed, and when the apparatus is full, the whole can be simultaneously removed with the rod *x*.

E, sheet-iron diaphragm, of four millimetres of thickness, pierced with a great number of holes, having fifteen millimetres of diameter. Each diaphragm is bolted on to a cylinder of cast-iron, hollowed in the centre. These cylinders play freely upon the iron-rod support, and keep the diaphragms at equal distance from each other.

F, copper coil, resting on the bottom of each tub. The coil must be of twenty millimetres of diameter externally, and pierced with little holes, to divide equally the steam. The quantity of steam to be introduced by the coil in each tub, in distillation, is regulated by a cock, placed externally, and connected with the steam-generator.

G, cock in bronze, with three apertures, allowing, when needed, to direct alcoholic vapors produced by the distillation operated in each tub, or in the refrigerating-coil, or from the top of the tub in the bottom of the corresponding one.

H, copper pipes, connected from one tub to another.

I, copper pipes, directing the alcoholic vapors to the refrigerating-coil.

J, refrigerator; is composed of a rectangular sheet-iron tub, in the centre of which is maintained a copper worm, surrounded with cold water, to condense the alcoholic vapors produced in the distilling-tubs as long as the distillation continues.

The cold water must run steadily into the tub K, arriving in this tub by the cock K', which is used to regulate its quantity.

This water runs off by the opposite upper side, by the pipe L, at a temperature of from 40° to 50° Reaumur.

M, cock used to empty the tub, which is supported on the movable cart by solid iron stirrups, J. A reservoir of cold water must be placed near by the top of the refrigerating-tub, and will provide for its alimentation.

N, copper hydrometer, to ascertain the proof of the distilled products, and the right time to send the alcoholic vapors from one tub to another.

O, steam-generator, used for the distillation of the alcoholic products contained in each tub. This generator can be alimented by the hot water coming out of the worm-tub by the use of a small force-pump.

P, floor, solidly built around the sides of still-tub. It is on it that workmen charge and discharge the apparatus. This floor can be made of several pieces, to be put on or taken off at pleasure, and with facility.

Q, cart, resting on springs, *z*, supported by four movable wheels, T.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. A portable apparatus, as described, for distilling alcoholic and other materials, consisting of tubs A, diaphragms E, coils F, refrigerator J, steam-generator O, the whole constructed and operated substantially as and for the purpose above specified.

2. The combination of a portable steam-boiler with a portable still, substantially as described.

This specification signed and witnessed, this 18th day of August, 1869.

L. A. DE LIME.

Witnesses:

T. C. CONNOLLY,
PETER F. WILSON.