

No. 625,582.

Patented May 23, 1899.

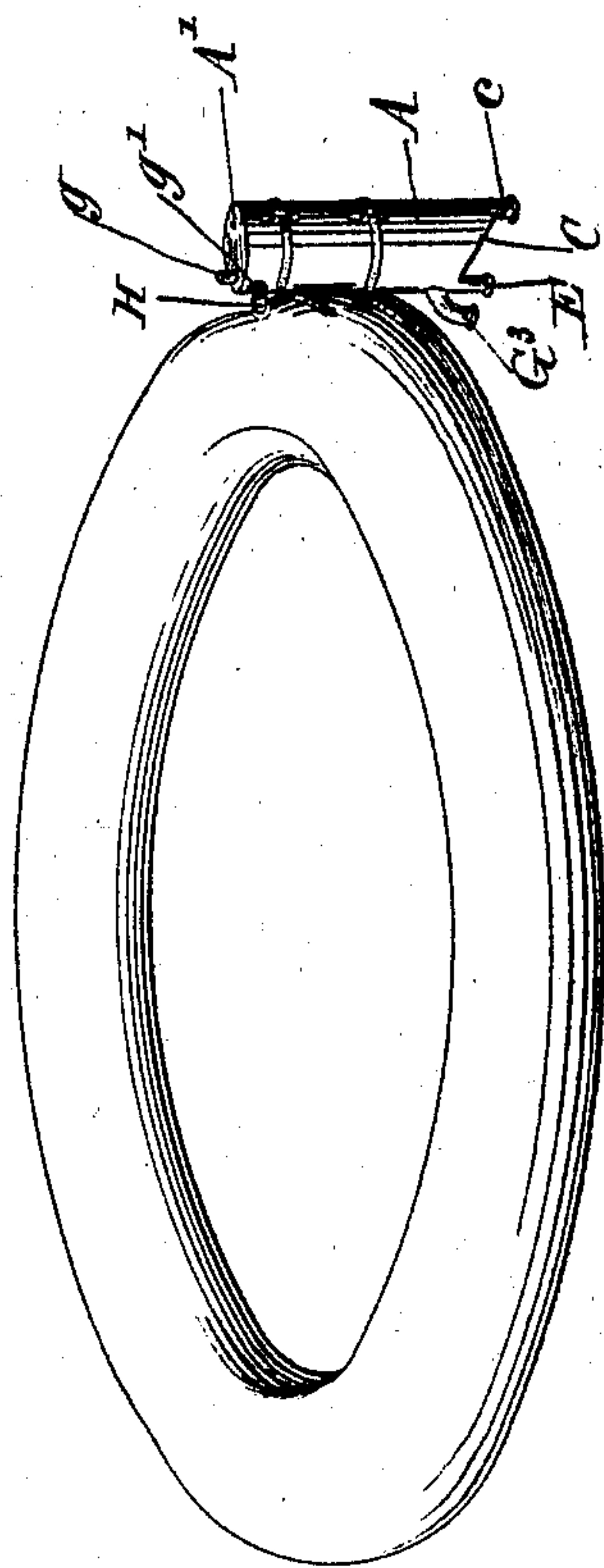
L. MATIGNON.
INFLATING ATTACHMENT FOR FLOATS, &c.

(Application filed Oct. 1, 1896.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.



Witnesses:-
Edward Vieser
George Barry Jr.

Inventor:-
Laurent Matignon
By attorneys
Brown & Howard

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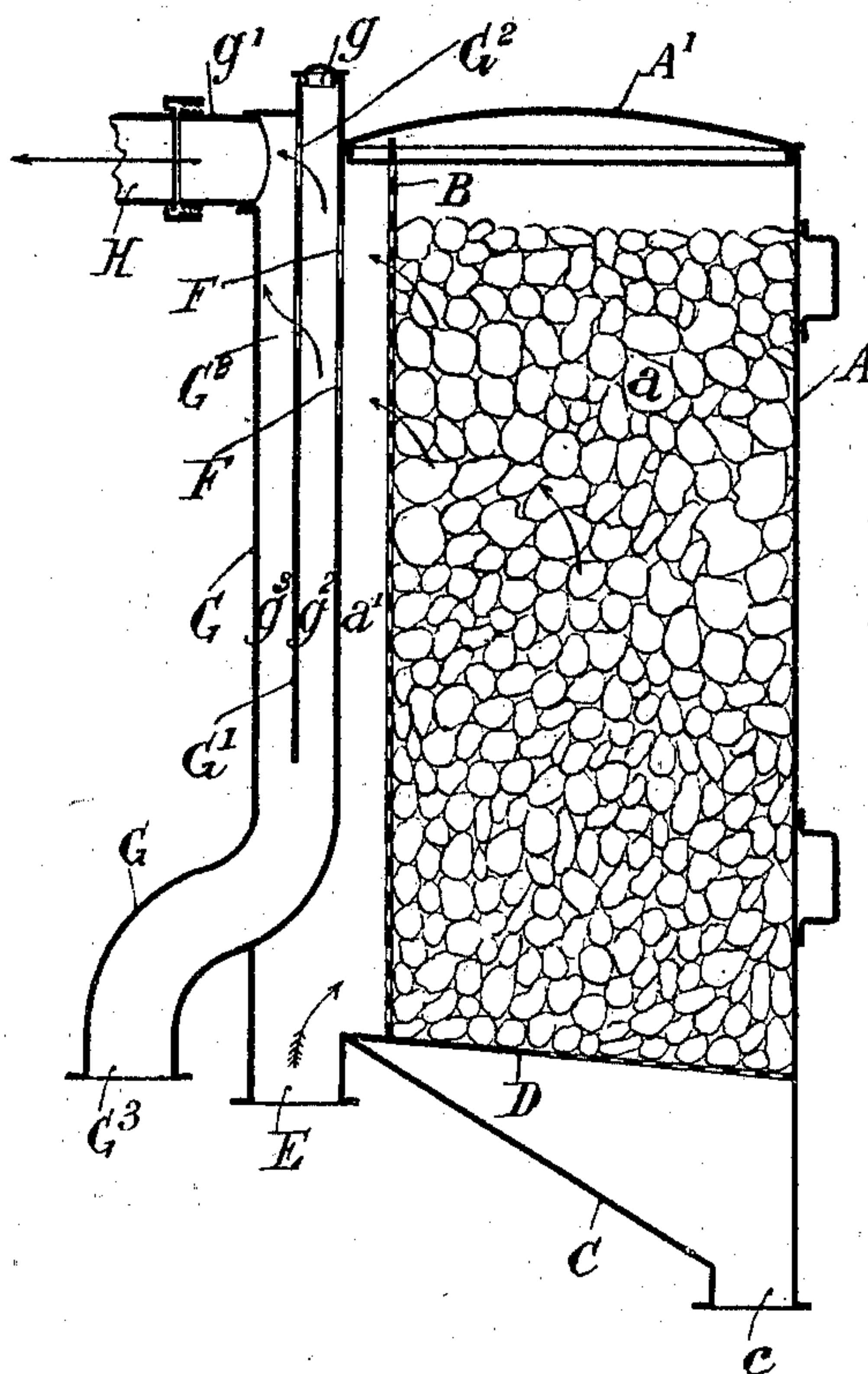
L. MATIGNON.
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(Application filed Oct. 1, 1896.)

(No Model.)

2 Sheets—Sheet 2.

Fig. 2.



Witnesses:-

Fred Haynes
George Barry, Jr.

Inventor:-

Laurent Matignon
by attorneys
Rownt & Oswald

UNITED STATES PATENT OFFICE.

LAURENT MATIGNON, OF LA GARENNE-COLOMBES, FRANCE.

INFLATING ATTACHMENT FOR FLOATS, &c.

SPECIFICATION forming part of Letters Patent No. 625,582, dated May 23, 1899.

Application filed October 1, 1896. Serial No. 607,602. (No model.)

To all whom it may concern:

Be it known that I, LAURENT MATIGNON, a citizen of the Republic of France, residing at La Garenne-Colombes, in the said Republic, have invented a new and useful Improvement in Inflating Attachments for Floats, of which the following is a specification.

The object of my invention is to obtain the automatic and instantaneous inflation of hollow collapsible and inflatable vessels or floats as soon as they are placed in the water for use.

The invention is especially applicable to apparatus such as life - belts, buoys, and floats intended to sustain heavy bodies in the water or to raise them therein, maritime signals, &c.

It consists, essentially, in the combination, with the inflatable pocket or pockets of such apparatus, of a receiver for carbide of calcium or other appropriate carbide which operates in such manner that when the apparatus is put in the water for use the water penetrates into this receiver and by attacking the carbide produces an immediate disengagement of the acetylene, which is delivered into the pocket or pockets and instantly inflates them.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a hollow and collapsible life-saving belt having an inflating attachment embodying my invention. Fig. 2 represents a vertical section of the inflating attachment on a larger scale than Fig. 1.

The inflating attachment represented consists of a receiver A, furnished with a removable cover A' and divided into two unequal compartments a and a' by a vertical perforated or grated partition B. The larger compartment or chamber a is furnished with an inclined bottom C, at the lower part of which is an evacuation-tube c . Above this bottom C is an inner bottom D, slightly inclined and of which the lower part is pierced with numerous holes. It is upon this inner bottom that the carbide is piled up. The smaller compartment a' is terminated at the bottom by a water-inlet tube E. It communicates in its upper part by orifices F F with a lateral tube G, open at the bottom, closed at the top by a cover g , and furnished with a tube g' to be connected with the tube H of the collapsible

belt or float P, Fig. 1, to be inflated. The tube G is divided into two compartments g^2 and g^3 by a partition G' , pierced with holes G^2 G^3 .

The generator must be of such capacity that when charged and attached by a tube to a float, as shown in Fig. 1, and the float is placed in water the generator will be supported in the water with its bottom and a portion of its depth immersed. When the float with the generator thus charged and attached is placed in the water, the water enters by the tube E into the compartment a' , whence it passes through the perforated partition B and arrives among the carbide, and so disengages acetylene, which, passing through the same partition, arrives in the compartment a' , whence it passes by the orifices F into the tube G and thence renders itself to the float by passing through the tube g' . The partition G' opposes a certain resistance to the passage of the gas, which facilitates the separation of the impurities and the moisture taken up with it, which are evacuated by the lower orifices G^3 of the tube G. On the other hand, the residues proceeding from the decomposition of the carbide are evacuated at c . The removable cover g is simply fitted with some friction into the upper end of the compartment g^2 of the tube G and permits the escape of the excess of gases by being blown off by excessive pressure, thus constituting a safety-valve.

In most cases and notably for life-saving apparatus, which should be ready for use instantly, the generator forms an integral part of the float device and is kept charged with carbide in advance in such manner that the said device may always be ready for use and that it will only be necessary to throw it into the water to start the disengagement of the gas, or, in other words, the tube g' is always connected with the device which is to be inflated. In this case the orifices c E G^3 and that of the tube g' are kept closed in such manner as to protect the carbide from the action of moist air when the device is not in use. This closing may be effected by means of removable corks or stoppers.

It is hardly necessary to remark that the generator should be ballasted, if necessary, in such manner that it will always assume in the water the position it should occupy therein to

insure the disengagement of the gas under the best conditions. It will be understood that the dimensions of this generator vary according to the especial application for which it is intended—that is to say, with the volume of the gas to be furnished. They may be easily calculated according to the quantity of acetylene disengaged by a kilogram of carbid. In case the generator is applied to a life-saving belt two hundred grams of carbid about suffices to produce the inflation of the belt. It will thus be seen that the generator occupies very little room.

Instead of applying the generator to a life-saving belt or float it may be applied to buoys with a sufficient volume to sustain on the water one or more persons. These buoys may consist of one or more bags or inflatable vessels of any form furnished each with a generator of a volume corresponding with the capacity of the bag.

What I claim as my invention is—

In an acetylene-generating attachment for

inflating floats, the combination of a receiver having a removable cover and divided by an upright perforated partition B into two compartments, one of said compartments having a perforated inner bottom D and an inclined outer bottom C from which there is an outlet *c* and the other of said compartments having a water-inlet at its bottom, a lateral tube G in communication by lateral openings F with the latter compartment and having an outlet at its lower end, a partition G' having openings G² in said tube G, a gas-outlet at the upper end of said tube on one side of its partition and a safety-valve *g* at the same end of said tube on the other side of said partition, all substantially as herein described.

In witness whereof I have hereunto set my hand in the presence of two subscribing witnesses.

LAURENT MATIGNON.

Witnesses:

EDWARD P. MACLEAN,
ALCIDE FABB.