

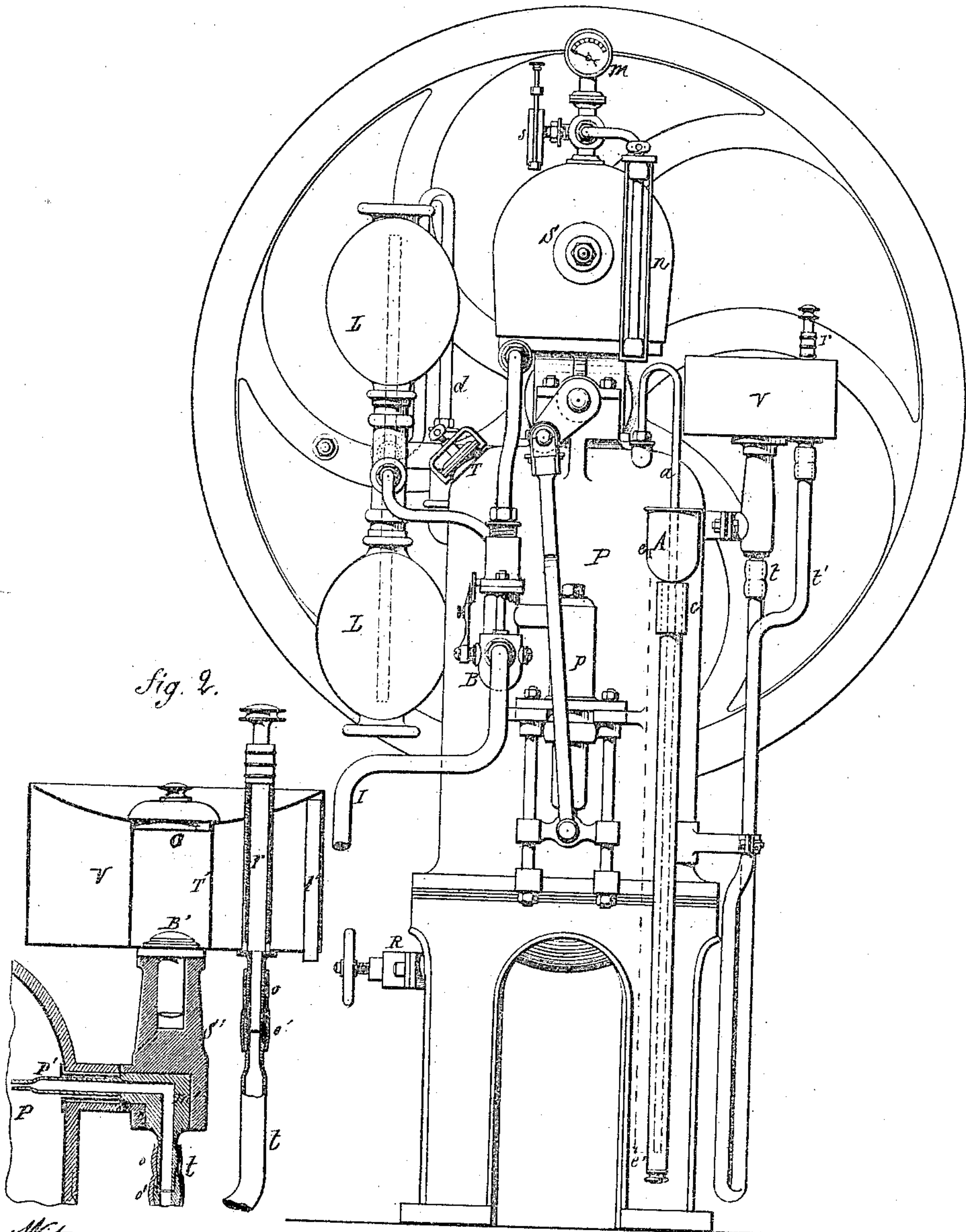
2 Sheets—Sheet 1.

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APPARATUS FOR THE MANUFACTURE OF GASEOUS-LIQUIDS.
No. 172 335

Patented Jan. 18, 1876.

fig. 1.



Witnessed.

G. Sumway.

Clara Broughton.

Augustus A. Mardollot
Per Atty. Inventor

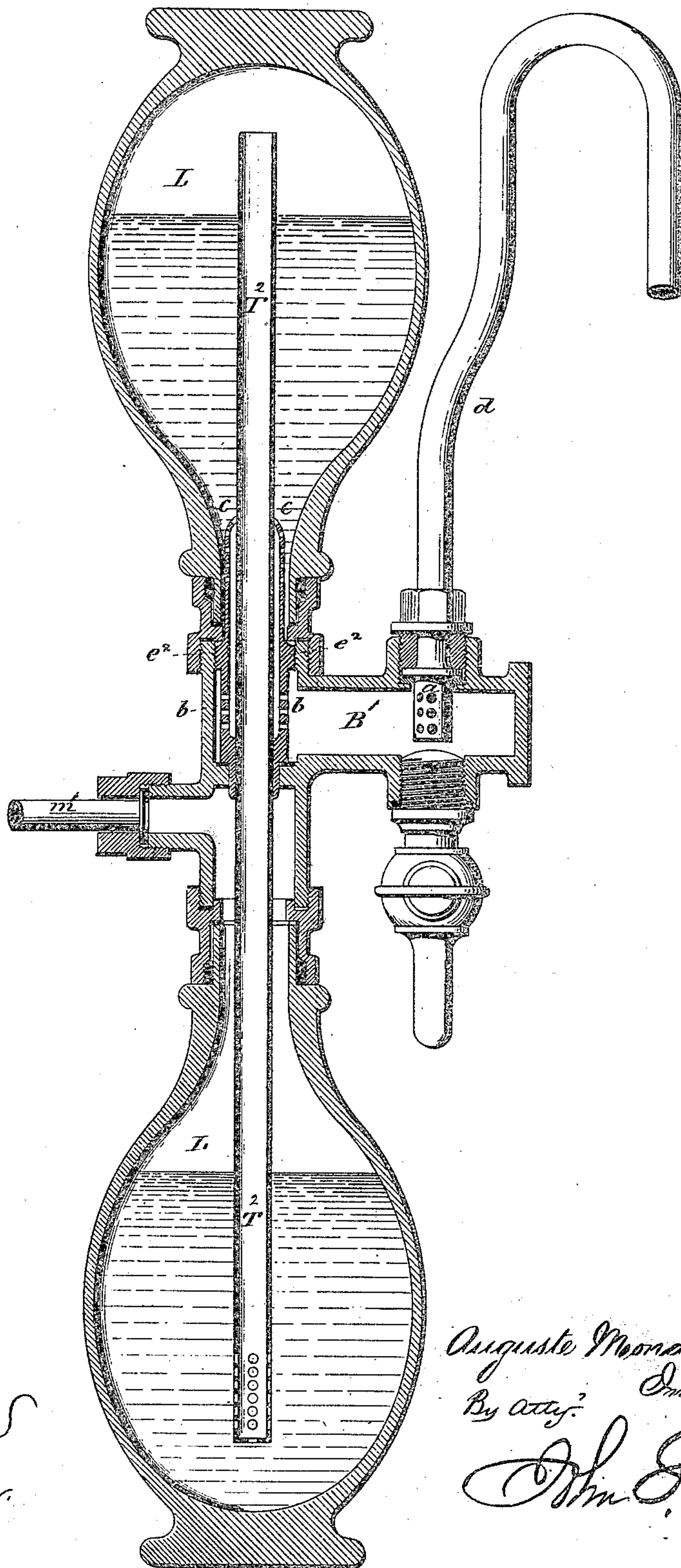
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APPARATUS FOR THE MANUFACTURE OF GASEOUS-LIQUIDS.
No. 172,335.

Patented Jan. 18, 1876.

Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

AUGUSTE A. MONDOLLOT, FILS, OF PARIS, FRANCE.

IMPROVEMENT IN APPARATUS FOR THE MANUFACTURE OF GASEOUS LIQUIDS.

Specification forming part of Letters Patent No. 172,335, dated January 18, 1876; application filed July 13, 1875.

To all whom it may concern:

Be it known that I, AUGUSTE A. MONDOLLOT, of Paris, in the Republic of France, have invented a new Improvement in the Manufacture of Gaseous Liquids; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, front view; Fig. 2, sectional view of the acid-vessel; Fig. 3, vertical central section of the washer enlarged.

This invention relates to an improvement in apparatus for charging liquids with gases, with special reference to carbonic-acid gas; and the invention consists in the mechanism as hereinafter described, and as specified in the claim.

P is a strong metal chamber, which constitutes the principal working chamber or generator of the apparatus, and also supports the mechanism. Into this generator, through an aperture, T, the diluted carbonate of lime is introduced. The generator is also provided with a cock, R, at the bottom for drawing off the spent material. V is the sulphuric-acid-vessel elevated above the generator P, and connected with the generator by a pipe, *t*. *p* is a force-pump, to which, through a valve arrangement, B, a pipe, I, leads a water-supply, and from this valve-chamber a pipe leads to the receiver S. This receiver S is provided with a manometer, *m*, with a safety-valve, *s*, and a water-level, *n*, and with the usual plug or device for the outlet of the charged water. The generator P is provided with the usual agitators, put in motion by a driving-shaft, and which also actuates the pump *p*. *a A e e'* is the safety apparatus or regulator for controlling the pressure in the generator, or any other known regulator may be applied instead. L L are two connected vessels, one above the other, with a central chamber, B, between the two. In this chamber is a cylinder, *e*², perforated as at *b*, opening into the chamber B', and with other perforations, *c*, above, opening into the upper vessel. Cen-

trally through this cylinder *e*² is a tube, T², extending from near the top of the upper vessel down to near the bottom of the lower vessel. The two vessels are partially filled with water, but only so that the upper end of the tube T² will be above the water in the upper vessel, and the lower perforated end below the level of the water in the lower vessel. From the generator P a tube, *d*, leads into the chamber B, and from the lower vessel above the water, a pipe, *m*¹, leads to the pump-valve chamber.

The operation of the apparatus is as follows: After having charged the generator P with diluted carbonate of lime, and the vessel V with diluted sulphuric acid, the cork *r* is opened, and the agitator in the generator P set in motion, together with the pump. The acid passes into the generator, and mingling with the carbonate of lime generates gas, which escapes through the tube *d* into the chamber B, which is filled with water; thence through the perforations *b c* up through the water in the upper vessel; thence down through the tube T², and up through the water in that vessel; and thence to the pump, which draws water from the reservoir and gas from the washer, and forces this gas and water into the receiver S, from whence it is drawn in the usual manner.

The acid vessel or chamber is shown in section, Fig. 2, enlarged.

I claim—

In combination with a gas-generating apparatus, substantially such as described, the double washer L L, the perforated cylinder *e*², between the receiving-chamber B' and the upper washer, and the tube T², leading from above the surface of the water in the upper washer to below the surface of the water in the lower washer, all substantially as set forth.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

A. A. MONDOLLOT, FILS.

Witnesses:

ROBT. M. HOOPER,
ARMENGAUD, Jeune.