



LX. Description of M. Baruel's new apparatus for making gaseous oxide of carbon

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was of a costive habit. The wound has been dressed about every fourth day, and is now nearly healed; her general health is good; and she has been enabled to attend the domestic concerns of her family, without inconvenience, for the last three weeks.

The manner in which this case terminates will be noticed in a subsequent report, as the success of an operation at so late a period in this disease must always be doubtful, and highly interesting.

A cast has been taken of the disease, which is preserved in my anatomical museum.

On this occasion I am extremely happy in having the opportunity of acknowledging the humane attention of Mrs. F****, who, on my representation, kindly visited and administered every necessary comfort to the poor family while the parent was under confinement.

The following Report is extracted from the Minutes of the Committee for managing the Affairs of the City Dispensary, of January 1806.

Surgical Patients admitted into this Institution from the 1st of January to the 31st of December 1805, 917.

Cured	-	-	-	674
Relieved	-	-	-	73
Dead	-	-	-	17
Irregular	-	-	-	7
Not known	-	-	-	2
Under cure December 31	-	-	-	144
				<u>917</u>

364 have been visited at home, and 73 have undergone operations.

Greville-street, Hatton-garden,
January 15, 1806.

JOHN TAUNTON.

LX. Description of M. BARUEL's new Apparatus for making Gaseous Oxide of Carbon. By M. DRYEUX.*

IT is admitted on all hands, that for the progress that has been made in chemistry within the last thirty years, we are much indebted to the improvements that have been introduced into the apparatus employed. For example, before the apparatus which Woulf invented for obtaining the aëri-form fluids disengaged from various bodies when exposed to the action of fire, or presented to other agents susceptible

* From the *Annales de Chimie*, No. 157.

of uniting with them, chemists were obliged to employ large vessels difficult to be managed, and so inconvenient that it was even impossible to collect those fluids with certainty, the greater part of which were suffered to escape through the opening found necessary in practice to prevent a rupture of the vessels.

At present, with the apparatus of Woulf, we experience none of those inconveniences: the operations carried on during the disengagement of the gas can be made in vessels of very small capacity; we can divide the gases, and determine their quantity and quality very precisely: in fine, such an operation as was formerly very dangerous to the conductor, can now be continued for hours without risk or trouble.

To these advantages many others have been added; and all the world knows that they are owing to that perfection to which chemists have brought the apparatus of Woulf; and, above all, to the happy application which has been made of such apparatuses in a number of circumstances.

But although discoveries of this kind have been carried very far, it is probable that a great number more are yet in reserve; and much praise is due to those who make exertions for this important object, since the apparatuses which they contrive are so many new means put into the hands of chemists to collect an infinity of products, which often escape, and of which the knowledge might have an important effect on the perfecting of chemical science.

From such views, I have thought it would be useful to announce an apparatus invented by M. Baruel, lecturer in the School of Medicine in Paris. This young chemist, perceiving the difficulties and risks that are run in certain processes in which gases are liberated, or when it is necessary to present them for combination to different substances, has endeavoured to obviate the difficulties, and, after several attempts, has produced an apparatus the utility of which has far exceeded his hopes.

I have seen this apparatus employed with great success in the production of gaseous oxide of carbon. This gas, which before could only be obtained with difficulty, and but in small quantities, may now be procured with great facility and with little expense.

The same apparatus may also be used for the preparation of sulphurized hydrogen gas, carbonized and phosphorized hydrogen gas; and may be employed with equal advantage for saturating substances with any gas, especially when the saturation can only be made at a high temperature.

I shall

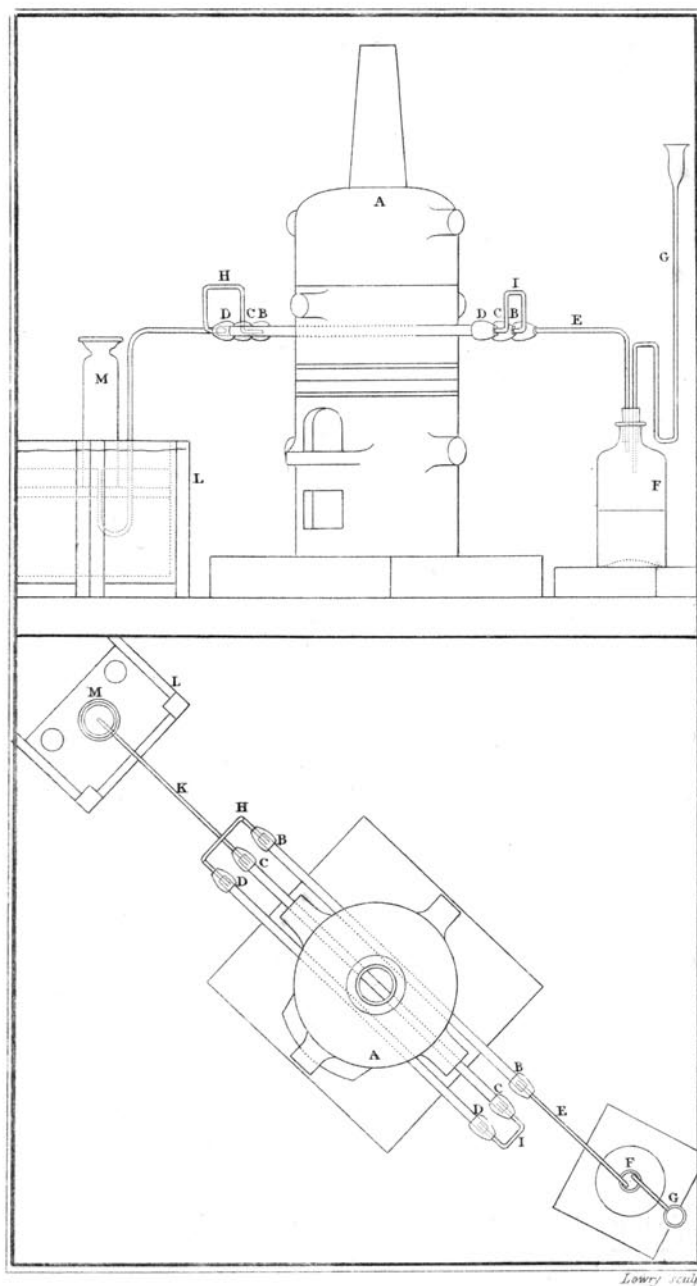
I shall here give the description of the apparatus as communicated by the author, and exhibit a view and plan of it, which will make its parts more intelligible. (See Plate X.)

If gaseous oxide of carbon is wished to be obtained, let there be first introduced into three gun barrels, B, C, and D, charcoal, very dry and well chosen, broken into small pieces. By means of a thin piece of iron bring the bits of charcoal, but without compressing them, to that part of the gun barrels which is to be exposed to the action of the fire. Place the barrels horizontally in the furnace A, one by the side of the other, leaving between each a distance of about two inches, secure them in their places with clay, and then put on the dome of the furnace. This being done, into one end of the barrel B insert the glass tube E, which is so curved as to allow its other end to be introduced into the neck of the bottle F, which must be large enough to admit also the pipe of the curved funnel G. In the other end of the barrel B is inserted one extremity of the bent tube H, the other end of which tube is fixed into the barrel D, making a communication between D and B. In the same manner, the barrel D is joined to the barrel C by another glass tube I; and lastly, the other end of C receives the tube K, properly bent to pass under the receiver M, placed on the shelf of the pneumatic trough L.

Things being thus disposed, put carbonate of lime mixed with water into the bottle F; lute with care all the joinings of the tubes, and put fire into the furnace. When the gun barrels have acquired a red heat, pour sulphuric acid into the funnel G, which, when it passes into the bottle F, will liberate a quantity of carbonic acid gas from the carbonate of lime. The gas is obliged to pass through the tube E and the barrel B, and by the tube H is conveyed to the barrel D, and thence by the tube I into the barrel C, and through the tube K into the receiver M. The intention of the process is to make the carbonic acid gas pass through among the pieces of ignited charcoal contained in the gun barrels, and thus to saturate itself with as much carbon as it can take up.

It is easy to conceive that this is a more sure and expeditious method than that before employed, in which the gas was made to pass only through a single barrel. It is true the gas was submitted a second, and even a third time, to the same operation; but this was always attended with a waste of time and a loss of gas, which does not take place when this apparatus is employed.

Apparatus for preparing Gaseous Oxide of Carbon.



Lowry sculp.