

April 11, 1854.

JAMES SIMPSON, President,  
in the Chair.

THE discussion upon the Papers, Nos. 913 and 912, "On the Prevention of Smoke," &c., by Mr. J. SIMPSON, jun., and by Mr. C. W. WILLIAMS being renewed, was extended to such a length as to preclude the reading of any other communication.

---

LOYSEL'S HYDROSTATIC PERCOLATOR.

AFTER the Meeting, there was exhibited in the Library, a very simple and ingenious apparatus, designed by M. Loysel,<sup>1</sup> for extracting colouring matters from dye-woods, and also for obtaining infusions, or extracts of vegetable substances, for medicinal, or other purposes. (Figs. 1 and 2.)

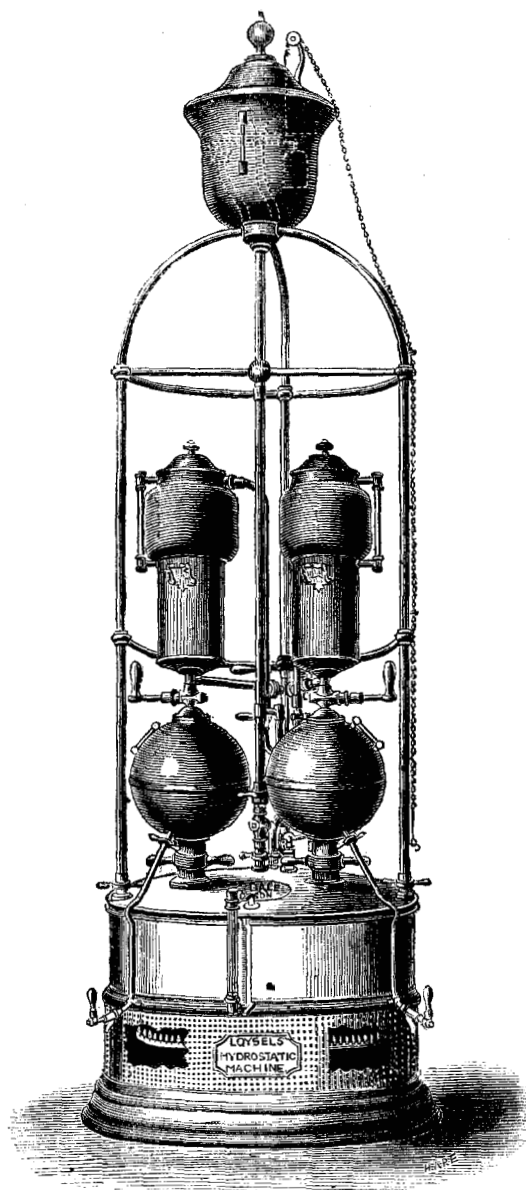
The principle of action was that of direct hydrostatic pressure, applied by a simple and inexpensive apparatus. The substance to be operated upon was placed within a cylinder, the bottom of which was finely perforated, and a similar pierced diaphragm was then placed over it, so as not to produce any pressure; the liquid, either cold, or hot, was poured into an upper reservoir, whence it descended, by a centre tube, to beneath the lower diaphragm, and was forced upwards, by the pressure, through the super-posed substance, every particle of which it saturated in its passage, expelling the air and carrying before it all the finest portions, to the upper strata, against the under side of the upper diaphragm. When a sufficient quantity of liquid had been passed, or the infusion was completed, a cock was opened, which permitted the infusion to return, from above, by its own specific gravity, through the substance already operated upon, thus completing the abstraction of any colouring, or other matter, not previously taken up, and at the same time, filtering the liquid. By a second and similar process, anything still remaining in the substance, could be extracted.

It was practicable, by varying the height of the column, to give any degree of pressure, and by the application of a lamp,

---

<sup>1</sup> Subsequently elected Associate of the Institution of Civil Engineers.

Fig. 1.

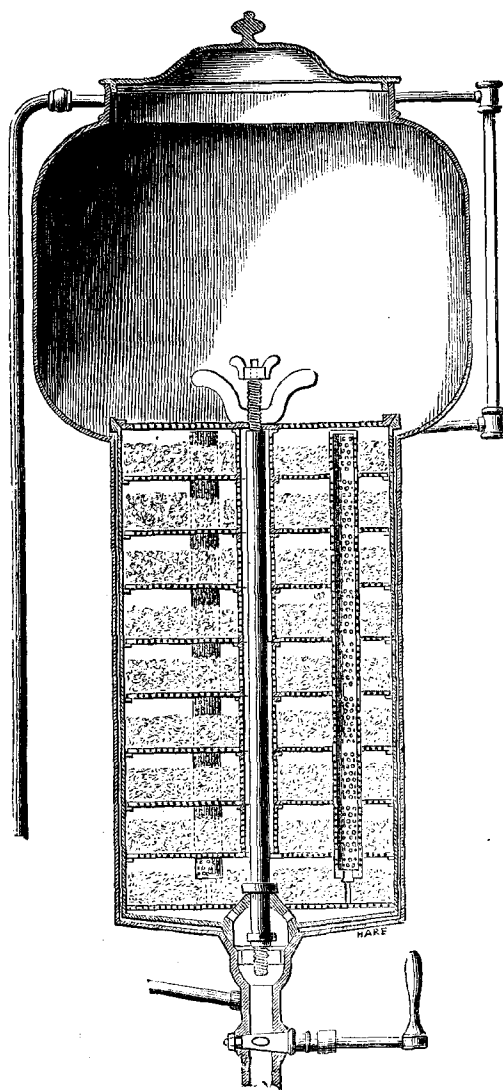


[1853-54.]

Hydrostatic Machine.

2 E

Fig. 2.

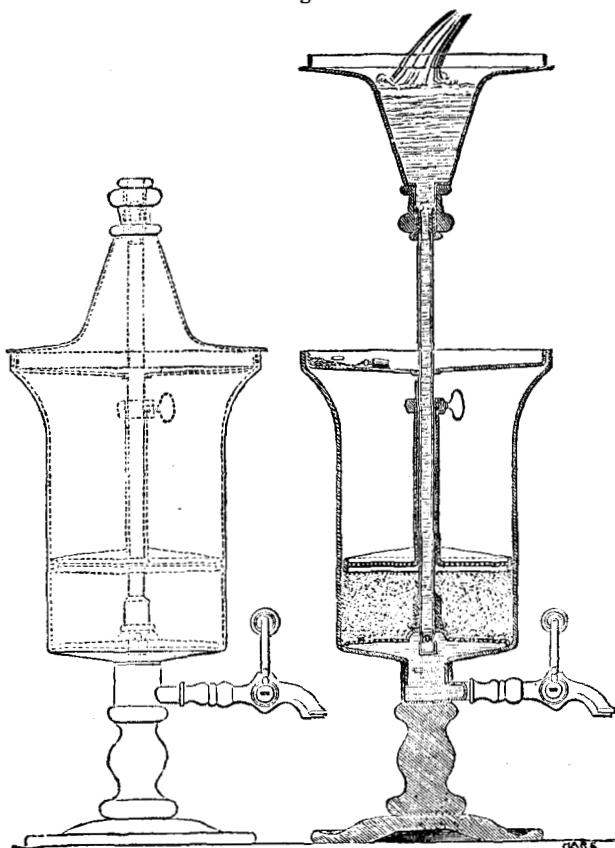


Extraction of colouring matter, or application to Brewing.

or of a gas jet, or, in a large apparatus, of a coke fire, the decoction could be maintained at such a temperature as might be desirable. By another modification, the steam generated in a small boiler, regulated the action of the apparatus.

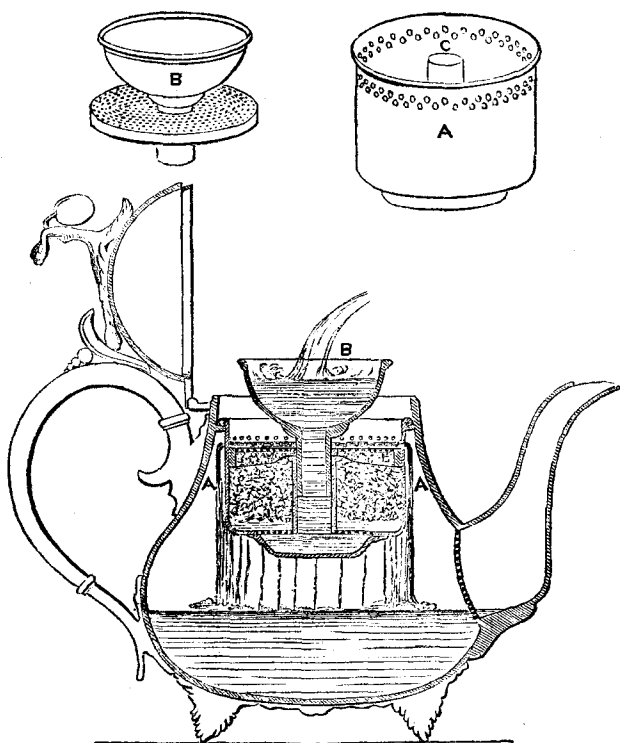
The system was described as being adapted to very numerous purposes, and the familiar application of it to making coffee, (Fig. 3,) and tea (Fig. 4,) was exhibited. The apparatus for making coffee consisted of a vase, either of glass, china, or metal, the cover of which, on being reversed, formed the reservoir and pressure column, and in a very few minutes, clear, strong coffee was produced. It was stated, that in an apparatus,

Fig. 3.



Application to making Coffee.

Fig. 4.



Application to making Tea.

adapted for a large establishment, four gallons of coffee had been made in twenty minutes. The apparatus appeared to possess the merits of great simplicity, of facility of management, and of being easily cleaned, and the infusion of the substance operated upon, was perfect.

---

April 25, 1854.

JAMES SIMPSON, President,  
in the Chair.

THE discussion upon the Paper, No. 910, "Account of the Deep-Sea Fishing Steamer 'Enterprise,' with Ruthven's Propeller," by Mr. D. K. CLARK, being resumed, was extended to such a length as to preclude the reading of any other communication.

---