LXV. Description of Mr. Phillips London's hydrometer; with remarks on the curing of mackerel for exportation or winter use

Phillips London

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every engineer in this mechanical country; the only real credit that can be acquired in this pursuit, will be given to those who do actually realize the invention, and this will be due to each individual in proportion to the liberality with which he supports the undertaking.

Large individual subscriptions however are not necessary to obtain 1500*l.* and in fact subscriptions of *one* guinea are often more productive than those of a *hundred*. But whatever gentlemen may think proper to subscribe, whilst the subject is before them, I would request them to give notice of immediately, as by that means, and *that alone*, can any further step be taken before the subject will be forgotten.

I remain, sir,

Your obedient servant,

Brompton, April 5, 1816.

GEO. CAYLEY.

P. S.—The sketch represents an end view of a hydrogen gas balloon with three tiers of wing to be worked by the steam-engine, or any other first mover; each wing to be divided into many stripes or portions, which are so constructed as to heel up and down by the alternate pressure of the air above and below them at each stroke of the engine, and thus by their oblique waft to propel the balloon.

LXV. *Description of Mr. PHILLIPS LONDON'S Hydrometer; with Remarks on the curing of Mackerel for Exportation or Winter Use*.*

SIR, — I HEREWITH send you a half barrel of mackerel, part of twenty-five thousand mackerel cured on my plan; also Mr. Cutler's certificate, that so many were cured at Ramsgate during the last season, most of which were shipped for Russia. They were all cured by immersion in brine of British solid salt, agreeably to the method I had the honour of communicating to the Society, and which is printed in the thirty-second volume of the Society's Transactions, p. 204. The whole were extremely fine, and full as beautiful as the specimen sent, which I hope will meet the approbation of the Society.

I am, sir,

Your obedient servant,

No. 57, Cannon-street, London,
Feb. 14, 1815.

PHILLIPS LONDON.

To C. Taylor, M.D. Sec.

* From *Transactions of the Society for the Encouragement of Arts, Manufactures and Commerce*, vol. xxxiii. for 1815.—The Society's silver medal set in gold was voted to Mr. London for this communication.

From

From Mr. London's statement at a meeting of the committee, it appears that the brine ought always to contain a redundancy of salt; in such case there is not the least danger of the fish putrefying or growing rancid, as the extra lumps of solid salt in the brine immediately act upon any watery or other liquors which proceed from the fish when inclosed in the cask. That the same process will also answer perfectly well for preserving beef or any animal food for sea store.

Certificate.

Mr. London cured by his new process under my immediate inspection upwards of 25,000 mackerel at Ramsgate, in Kent, during the last season.

JOHN CUTLER, Licensed Fish Curer,
at Ramsgate, Kent.

Sept. 28, 1814.

*Reference to the Engraving of Mr. LONDON's Hydrometer,
Plate IV. fig. 3.*

This instrument consists of a glass bottle, with a ground-glass stopper, to be filled with brine made from a solution of solid salt in water; within it are three glass bubbles, *a, b, c*, of different specific gravities, so graduated that, supposing the temperature of the air to be at sixty degrees of Fahrenheit's thermometer, and only one bubble floats on the surface, as shown in the engraving at *a*, it indicates the specific gravity of the brine to be 1,155, containing about 20 parts salt, and 80 of water, which is insufficient to cure animal matters with certainty by immersion in it.

When the second bubble, *c*, floats, it indicates the specific gravity of the brine to be 1,180, or about 24 parts salt, and 76 parts water, which may be used for the purpose of immersion.

But when the three bubbles, *a, b, c*, float, they indicate the specific gravity to be 1,106, or about 28 salt, and 72 water.

This brine will fully answer the purpose in the hottest weather in most climates, provided the rules be attended to which I had the honour to send to the Society last year, and the meat or fish always completely covered with the brine.

PHILLIPS LONDON.

Fig. 2.

Fig. 1.

*M^r Forster's
Atmospherical
Electrometer.*

Fig. 4.

Fig. 3.

M^r London's Hydrometer