vided for, if Sylley were not ſubdued as well as Cornwall.

VIII. *An Account of Mr.* Appleby's *Proceſs to make Sea-Water freſh; with ſome Experiments therewith; communicated to the* Royal Society, *by* W. Watſon, *F. R. S.*

Read Feb. 8, 1753.

THE making ſea-water freſh has been frequently attempted, and ſeveral accounts thereof, from time to time, been communicated to the Royal Society. I thought it therefore not improper to lay before you Mr. Appleby's proceſs for this purpoſe, in order to its being preſerved in the journal-books of the Society. To this I have ſubjoined ſome experiments upon the water prepared in Mr. Appleby's manner, made by Mr. Michael Clark, operator at Apothecaries Hall, a perſon extremely well verſed in the theory and practice of chemiſtry, at the deſire, and under the inſpection, of the cenſors of the college of phyſicians, to whom Mr. Appleby's proceſs was referred by the lords commiſſioners of the admiralty.

Mr. Appleby's proceſs.

INTO twenty gallons of ſea-water put ſix ounces of a fixed alcali, prepared with quick-lime as ſtrong as *lapis infernalis*, and ſix ounces of bones calcined to

to whiteneſs, and finely powder'd. With a ſlow fire, draw off in a common ſtill fifteen gallons.

Mr. Appleby conceives, that the alkali here employed is the beſt adapted to prevent the bituminous matter in ſea-water from riſing by the heat in diſtillation.

Mr. Clark's experiments.

INTO a ſpoonful of the diſtilled ſea-water he put twenty drops of a ſolution of ſilver in aq. fortis: He likewiſe did the ſame with the like quantity of common water diſtilled. There appeared no change in either, and both retained their tranſparency.

This demonſtrates, that the diſtilled ſea water is by the proceſs intirely freed from marine ſalt, or its acid ſpirit. For, if we take a ſpoonful of common diſtilled water, and add the leaſt particle of ſea-ſalt, with the point of a penknife, and then drop into the mixture one or two drops of the ſolution of ſilver, it will appear turbid and milky.

From the number of animal bodies conſtantly periſhing in the ſea, it may reaſonably be ſuſpected, that a volatile urinous ſpirit may be retained in this diſtilled water; and this is evident from the following experiment:

Into a ſpoonful of diſtilled ſea-water drop ten drops of a ſtrong ſolution of ſugar of lead, and the mixture immediately becomes turbid and milky.

Into another ſpoonful of common diſtilled water, with two drops of ſpirit of ſal ammoniac, add ten drops of a ſolution of ſugar of lead: and this mixture had the ſame appearance with the foregoing.

If

If into a ſpoonful of common diſtilled water is dropp'd one drop of oil of tartar *per deliquium*, and then added ten drops of a ſtrong ſolution of corroſive ſublimate, the mixture will immediately become turbid and brown, and with a few drops of the ſolution of ſilver, it will be precipitated, and turn milky. It is a volatile alkali therefore, and not a fixed one, that is contained in this water.

The ſolution of ſilver will not diſcover a volatile alkali contained in water, but very plainly a fixed one.

A ſolution of ſugar of lead will not diſcover a ſmall quantity of marine ſalt or ſpirit, till we add more.

A ſolution of ſublimate will manifeſt both a volatile and fixed alkali.

IX. *Extract of a Letter from Signor* Camillo Paderni, *to Dr.* Mead, *concerning the Antiquities dug up from the antient* Herculaneum, *dated from* Naples, Nov. 18, 1752. *Tranſlated from the* Italian.

Read Feb. 8, 1753.

THE things, of which I have the charge, are many, and extraordinary; conſiſting of

Metals; that is, bronzes, ſilver and gold of all kinds, of excellent workmanſhip.

Beautiful cameo's and intaglio's.

Glaſs of all ſorts.

Various