
THUS FAR
BRIAN FOTHERGILL

JOHN FOTHERGILL.

Published as the Act Directs Jan.y 12 1782 by K. Leveray

THE

WORKS

OF

John Fothergill, M. D.

MEMBER OF THE ROYAL COLLEGE OF PHYSICIANS, AND FELLOW OF THE ROYAL SOCIETY, OF LONDON;

FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS IN EDINBURGH;

AND CORRESPONDING MEMBER OF THE ROYAL MEDICAL SOCIETY OF PARIS,

AND OF THE AMERICAN PHILOSOPHICAL SOCIETY AT PHILADELPHIA.

WITH

SOME ACCOUNT OF HIS LIFE.

By JOHN COAKLEY LETTSOM.

Ιητρὸς γαρ ἀνηρ πολλῶν ἀντάξιος ἄλλων.

Hom. Iliad, xj. 514.

LONDON:

Printed for CHARLES DILLY, in the POULTRY.

M.DCC.LXXXIV.

CUI SUAS ARTES, SUA DONA LÆTUS
ET HERBAM ET VENÆ SALIENTIS ICTUM
SCIRE CONCESSIT, CELEREM ET MEDENDI
DELIUS USUM.

PREFACE.

IT is by no means requiſite to apprize the Public of the importance of the following Eſſays: the general eſtimation of the writings of the late Dr. FOTHERGILL, is ſuch, as to preclude any apology for giving a complete edition of them; and the detached manner in which they have been publiſhed in different works, while it augments the difficulty of collecting them together, will doubtleſs render ſuch a collection more acceptable to the Public.

The Eſſays are not arranged exactly in the order of time, in which they were originally written; as they were diſperſed in various works, the Editor was more ſolicitous of extracting them from each publication collectively, than of preſerving chronological order, as they admit in ſome reſpects of diſtinct diviſions: thus, after the Inaugural Theſis, the Meteorological Pieces from the Gentleman's Magazine are introduced; theſe are ſucceeded by others from the Philoſophical Tranſactions, chiefly comprizing Natural Hiſtory; the Practical Eſſays from the Medical Obſervations and Enquiries, follow next; and afterwards the Biographical and Miſcellaneous Diſſertations: and it happens at the ſame time, that this arrangement does not materially interrupt the chronological order, and where it does, it may be reſtored at pleaſure, by referring to the title of each article, in which is ſpecified the time of its publication. But to remove any inconvenience or objection from the circumſtance alluded to, a complete Chronological Table of Contents is prefixed, including the poſthumous eſſays, which, with thoſe addreſſed to the Editor, conſtitute a conſiderable part of the preſent collection.

By the partiality indeed of correſpondents, much more has been communicated to him than he has ventured to publiſh. Few men wrote

more than Dr. FOTHERGILL has done, or more uſefully; and were all his letters and manuſcript eſſays, of which the Editor could enumerate upwards of one hundred in his own poſſeſſion, laid before the public, perhaps the importance of the Doctor's life, and the utility and magnitude of his employments, would appear ſuch, as might even elevate his character, and give it additional luſtre. But fearful leſt the partiality, which the veneration of an individual entertained for his character, might bias his judgment, and excite an over officiouſneſs in communicating to the public, what that public might not place in the ſame favourable point of view; he has been induced to do violence to his own feelings, rather than ſubject himſelf to the cenſure of doing any thing that could poſſibly tarniſh the character of a man, who paſſed through life with unſullied reputation, and died in the zenith of glory.

Whilſt the Editor thus avows his diffidence, and the cauſe of that diffidence, they, whoſe ſentiments of poſthumous character coincide with his own, will be the laſt to cenſure him for this conſideration: he is, however, gratefully prompted to acknowledge the important communications, and the kind aſſiſtance of many reſpectable individuals; and particularly, of David Barclay, of Youngſbury; Dr. Cuming, of Dorcheſter; Joſeph Cockfield, of Upton in Eſſex; Thomas Collinſon, of Southgate; Dr. Dobſon, Dr. Falconer, and Dr. Anthony Fothergill, of Bath; John Nichols, Printer of the Society of Antiquaries; John Payne, Accomptant General of the Bank of England; Thomas Pennant, Eſq; the Britiſh Linnæus; Dr. Percival, of Mancheſter; Henry Smeathman, Author of the Hiſtory of the Termites; Dr. Whitehead, of London, particularly for his aſſiſtance through the whole edition; Dr. Zouch, an eminent Clergyman and Juſtice of the Peace, of Sandal in Yorkſhire; and of the Family of the Deceaſed, as well as of the Relations of the late Dr. Ruſſell.

CHRONO-

CHRONOLOGICAL
TABLE OF CONTENTS.

SOME ACCOUNT OF THE LATE JOHN FOTHERGILL, M.D. &c.

Experiments

DIRECTIONS *for the* PLATES.

Plate I. HEAD of Dr. Fothergill, to front the Title-page.

II. *Arbutus Andrachne* — — to front Page 228
III. Magnetical Machine — — — — 227
IV. *Winterana Aromatica*, or *Cortex Winteranus* — — 321
V. *Mimosa Japonica*, or Tree producing the *Terra Japonica* — 335
VI. *Coffea Arabica* — — — — — 387
VII. Head of the late Peter Collinson, F.R.S. &c. — — 415
VIII. Head of the late Dr. Russell, F.R.S. — — — 427
IX. Elevation of Ackworth School — — — 461
X. Plans of Boxes for conveying Plants by Sea — — 495
XI. *Vesica Urinaria* — — — — 649

SOME

SOME ACCOUNT

OF THE LATE

JOHN FOTHERGILL, M.D. F.R.S. &c.

For my own part, when I recollect what I have loſt in him, the ſenſible, firm, and upright friend, the able, honeſt, and experienced phyſician, the pleaſing inſtructive companion of a ſocial hour, expreſſion fails me.

FOTHERGILL'S LIFE OF RUSSELL.

Amiſi enim, amiſi vitæ meæ Teſtem,
Rectorem, Magiſtrum.

PLIN. SEC.

SOME ACCOUNT

OF THE LATE

JOHN FOTHERGILL, M.D. F.R.S. &c.

Read before the MEDICAL SOCIETY of LONDON, July 17, and October 23, 1782.

THOUGH the admiration which an elevated character excites, may be diminiſhed by familiar intercourſe; yet that affection which virtue begets, and that reſpect which mental ſuperiority inſpires, are as permanent as the cauſes which produced them. You, Gentlemen, who ſo lately enjoyed the converſation of our late Preſident, will call to mind the dignity with which he conveyed eaſy communication that never tired, becauſe it always improved; and regret, with painful recollection, that our honoured aſſociate is no more!

But he that feels the loſs of a friend to whom he owed the obligation of uſeful inſtruction, or remembers the ſalutary aid that renewed the vigour of health, or that generoſity which averts the miſery of families and individuals, naturally wiſhes, and wiſhes with ardour, to revive in the page of hiſtory, thoſe virtues which were inceſſantly directed to the advantage and happineſs of mankind. In attempting before you this grateful taſk, whilſt I feel with concern how unequal my abilities are to my own wiſhes, or may be to your expectations, I truſt to your indulgence, where biographical relation muſt be ſo inadequate to the zeal of friendſhip.

JOHN FOTHERGILL, the father of the deceaſed phyſician of the ſame name, was born in Wenſleydale, in Yorkſhire, in the year 1676, and was a member of the religious ſociety now generally denominated Quakers. He reſided at Carr-End, the family eſtate of a preceding generation, where our late Preſident Dr. JOHN FOTHERGILL was born, on the eighth of March 1712: he was one of many children; though not the only one, who in early life exhibited inſtances of genius and ſuperior underſtanding.

His mother was the daughter of Thomas Hough, a perſon of fortune, who reſided near Frodſham, in Cheſhire, from under whoſe care he was placed at ſchool in the ſame town, where he continued till his twelfth year, and was afterwards removed to Sedberg School, in Yorkſhire, then and ſince famous for claſſical literature and mathematics. That his progreſs here was conſiderable, I may ſafely aſſert; as the late Gilbert Thompſon, near Warrington, whoſe memory I have many motives to value, and whoſe learning and judgment no perſon who has been under his tuition can doubt, told me, that he was his ſchool-fellow, and in the ſame claſſes, but that he never was able to riſe above him, though conſtantly excited by emulation to obtain that ſuperiority.

About his ſixteenth year, when his ſchool education was finiſhed, he was placed with Benjamin Bartlett, an eminent apothecary at Bradford, in Yorkſhire; who before had been the tutor of Dr. Hillary, and ſince of Dr. Chorley; and whoſe amiable manners and exemplary conduct had conferred upon him the character of a good man, whilſt his medical abilities and inſtructions had rendered his houſe the ſeminary of many diſtinguiſhed phyſicians.

The youth, who was deſtined at a future time to become one of the firſt phyſicians of the age, ſoon afforded ſuch inſtances of ſuperior ſagacity, as induced his intelligent maſter to permit him, at an early period, to viſit and preſcribe for his patients; and this he did with ſo much approbation, that his contemporaries in that neighbourhood have always ſpoken, in terms of reſpectful recollection, of his aſſiduity and practical ſucceſs.

When his apprenticeſhip expired, he removed to Edinburgh, to ſtudy phyſic

phyſic in the colleges of medicine, prior to his ſettling in the country as an apothecary, in which capacity he was originally deſigned to act. At this time the profeſſorial chairs were filled with the Doctors Monro, Alſton, Rutherfoord, Sinclair, and Plummer, all of whom had iſſued from the Boerhaavian School, and whoſe eminent abilities their pupil lived to commemorate, in his "Account of the Life of the late Dr. "Ruſſell," at this early period his fellow ſtudent and intimate aſſociate.

The firſt of theſe profeſſors, that great anatomical oracle, Monro, attended to his numerous pupils with ſo much ſedulous care, as juſtly denominated him the Father of the College; and no man knew better how to diſcriminate the genius of his pupils. Dr. FOTHERGILL early caught his attention, in whom he diſcovered ſuch powers of mind, as promiſed the moſt fertile expanſion in maturity, and induced the venerable maſter to urge his pupil to enlarge their cultivation by a longer reſidence at the univerſity than was at firſt propoſed. He that is born with genius, and an inclination to attempt great things, is generally endowed with vigour of mind to perform them:

——*Poſſunt, quia poſſe videntur**. VIRG.

Great natural powers, however, are often combined with great diffidence, which was certainly the ſituation of Dr. FOTHERGILL at this time, who has often told me, that his opinion of his own abilities was ſuch as reconciled his mind to move in a more ſubordinate ſphere. It may therefore be primarily attributed to the diſcernment of this eminent profeſſor, that his pupil was at once deſtined to occupy a higher ſtation, to redeem apparent victims of diſeaſe by his ſkill; and he ſurvived long enough to ſee that he had not made a falſe eſtimate of his genius, while his induſtry of application, and ardour after inſtruction, tended to confirm the profeſſor's ſagacity; for as he advanced in knowledge, he found daily excitements to further progreſs.

At this period ſome of the profeſſors delivered lectures in Latin, and others in Engliſh. Dr. FOTHERGILL adopted a method of im-

* For they can conquer, who believe they can.
DRYDEN.

proving

proving upon both, which it may not be improper to mention here: it is what he has ſince recommended to me; and whoever follows his example, will be apt to recommend it to others; for much is due to him who firſt breaks the way to knowledge, and leaves only to his ſucceſſors the taſk of ſmoothing it. He took notes of the heads of each lecture, and on his return to his lodgings, he tranſlated thoſe into Latin which had been given in Engliſh, and then carefully conſulted and compared the opinions both of the ancients and moderns upon the ſubject of the lectures, with the lectures themſelves; after which he added ſuch remarks on each, as his reading and reflection furniſhed: by this means he gained a knowledge of the ancients, as well as the moderns; he enlarged his ideas, and acquired the early habit of examining opinions, and diſcriminating between thoſe merely ſpeculative, and thoſe which reſulted from fact and experiment;—in a word, he hereby neceſſarily acquired new powers of reflection, and an encreaſed energy of judgment *.

A mode, not diſſimilar, he followed in his ſtudies: when any medical caſe occurred worthy of remark, and there are few caſes but to a ſtudent of medicine are important, he examined various authorities upon the ſame ſubject, and from theſe combined means drew a comparative reſult: what he had adopted with ſo much ſucceſs, he recommended many years afterwards, in an epiſtolary addreſs with which he condeſcended to favour me †, wherein he concludes with recommending the "careful peruſal of Hippocrates, and alſo of Aretæus and "Celſus; one can never," he adds, "be too well acquainted with "the knowledge contained in the firſt, nor with the elegant ex-"preſſions of the laſt."

Soon after he had finiſhed his ſtudies at Edinburgh, the celebrated profeſſor I have already mentioned, who was completing the fourth edition of his great work of Oſteology, which has ever ſince been deemed the moſt perfect performance in this branch of anatomy, and whoſe genius led him to enliven his ſubject with ample reflection,

* This relation I had from the Doctor himſelf; and ſince his deceaſe, I ſaw his Materia Medica Lectures, which were ſent to me by my ingenious friend J. Cockfield, of Upton.

† Letter to the Editor.

and various philoſophical and practical facts, apprized of the inquiſitive ſpirit of his pupil, not only condeſcended to aſk, but to adopt his opinions in ſome inſtances. It muſt have been highly grateful to the Father of the college, to ſee the rays which had iſſued from his mind, thus reflected with encreaſed emanation *.

We ſee not unfrequently ingenious youths, diverted by the ardour of imagination into irregularities, which length of time, and the ſtrength of mature reaſon, with difficulty correct; but in the preſent ſubject of biography, we ſearch in vain for the ſeaſon of youthful indulgence: as he adopted by his conduct, ſo he claimed an hereditary portion of his father's virtues, and has left us to judge of his youth, by numbering his years, rather than by recounting his purſuits †.

It was in the year 1736 that he graduated at Edinburgh, and printed his Theſis "de Emeticorum uſu;" ſoon after which he came to London, and attended the practice of St. Thomas's hoſpital. Here he was at once furniſhed with the moſt ample opportunities of examining the doctrines of the ſchools, by a ſeries of facts drawn from diſeaſe and diſſection; and I have heard it related by ſome of his contemporaries, that his application here was unremitting, and his remarks on the caſes were often liſtened to by his ſeniors. Objects of poverty have all thoſe

* The firſt edition of Monro's Oſteology was printed in the year 1726; a ſecond edition was given to the public in 1732, and a third about ſix years afterwards: it was the fourth edition, which appeared in 1746, that he referred to Dr. FOTHERGILL; and I am informed that he paid the ſame reſpectful compliment to Dr. Cuming, and gratefully acknowledged the aſſiſtance theſe intimate friends afforded him.

† Beſides his other uſeful engagements at Edinburgh, Dr. FOTHERGILL kept a diary of his actions, and of ſuch occurrences as happened to him, in claſſical Latin, as I have been informed by a gentleman who once had a glimpſe of it, on the following occaſion: The Doctor requeſted his company in a viſit to one of the profeſſors, with whom he was more particularly acquainted; they breakfaſted with the profeſſor, who received them in an eaſy and gracious manner, as they went to *hear*, and left the choice of the converſation in a great meaſure to the profeſſor, who was chearful, in good ſpirits, and talkative; but the principal part of his converſation conſiſted of ſome lively entertaining adventures, that befel him while he was a ſtudent of London, Paris, and Leyden. The gentleman ſaw the inſertion of this viſit in the Doctor's diary, in which his account of the profeſſor's converſation was related in theſe few words, "*Multa dixit, non multa didicimus.*"

feelings

feelings alive, that can rightly eſtimate the aſſiduity and the ſympathy of thoſe to whom they look up for ſuccour; they are equally jealous of apparent neglect, and grateful of ſeeming tenderneſs; and however unremitting the diligence of the Doctor might have been, his humanity to the poor was ſtill more conſpicuous to them: to be diligent was his intereſt, to be humane was the ſpontaneous effuſion of a good heart: this the patients ſaw and felt; and when he left the hoſpital, he ſoon experienced the pleaſing confirmation of their deciſion.

However dark ſome may repreſent the propenſities of mankind, ample knowledge of the poor has confirmed me in an opinion, that they are leſs inclinable to complain of injuries, than to acknowledge obligations: private injuries affect individuals, and mankind are more addicted to hearken to the relation of general good, than partial evil; and his humanity having become a ſubject of diſcuſſion to the miſerable tenants of a ſick ward, ſuch as were diſcharged, not quite reſtored to health, found the way to the houſe of this amiable phyſician. Comfort of mind is a powerful reſtorative to a weakened conſtitution, and he who divides our miſeries by his ſympathy, proportionally adds to our conſolation. Change of air, doubtleſs, contributes much to reſtore the fibre that has been debilitated by grief, penury, and ſickneſs; and the ſame gratitude which impels the mind to dwell on virtuous rather than on vicious actions, would determine the eye of gratitude to him, who laſt ſaw us emerge from miſery; to him is attributed all the merits of his predeceſſors, as the artiſt who caſts the metal is leſs valued than him who poliſhes its ſurface.

Ὁ ἄνθρωπος εὐεργέτης πεφυκώς *.

ANTONIN. Lib. ix.

It is, however, certain, that the poor who applied to him for relief, were loud in proclaiming the ſucceſs of his practice, and gradually raiſed him to more lucrative employment. I mention this ſource of his early introduction, becauſe Dr. FOTHERGILL himſelf has often told me how much he was indebted to this claſs of grateful though pennyleſs ſupplicants; and in his turn he acknowledged the obligation,

* Man is naturally beneficent.

by

by humanely continuing to give advice gratis to the poor, as long as he lived, long after their ſuffrages could tend to elevate his reputation: his perſevering benevolence could then alone be actuated by the innate goodneſs of his heart.

About this time, before he could have been eſtabliſhed in any degree of general practice in his profeſſion, he was ſollicited to accompany a few friends in an excurſion to the Continent; they were perſons of too many engagements at home, to admit of long reſidence in any one ſpot, and conſequently could not poſſibly acquire an extenſive or accurate knowledge of the places they viſited in the compaſs of this excurſive tour. I am perſuaded, however, that it was not fruitleſs; for long afterwards, when I was in company with the Doctor, a gentleman who was concerned in the conveyance of ſome merchandize through Germany, was deſirous of knowing the communications by land and water, the inland duties, and other particulars; to which he replied with a preciſion and detail, that evinced the inquiſitiveneſs of the traveller, and the uſeful manner in which he had employed his moments. Of the parts traverſed in this excurſion, the Doctor, on his return, communicated an account to his friend Dr. Cuming of Dorcheſter, in a Latin letter *, which the latter entruſted to me; and theſe places are enumerated in ſo conciſe and claſſical a manner, that I have taken the liberty to adopt the language of the original on this occaſion:

" ‡ Luſtratis aliquibus *Flandriæ* urbibus munitiſſimis, per magnam " *Brabantiæ* partem migravimus; relicto quippe *Gandavio*, ad *Bruxel-* " *lenſem* ſpatioſam ſplendidamque urbem noſmetipſos contulimus, per " oppidulum olim valle et muro vel potius aggere munitum, nomine " *Aſk*, (*Iſca*) notiſſimum quidem *Brabantiæ* incolis, quoniam exindè " primò Lupulos, horumque colendi modum mutuati ſunt *Angli*, in " maximum

* Dated London, anno 1740.

‡ Having examined ſome well-fortified cities of Flanders, and travelled through great part of Brabant; leaving Ghent, we paſſed on to Bruſſells (a ſpacious ſplendid city), through a little town called Aſk, formerly fortified with a mote and wall, or rather a bank of earth: it is well known to the inhabitants of Brabant, becauſe the Engliſh had their hops firſt from this place, and here learnt the method of cultivating them, to the

" maximum totius *Brabantiæ* damnum; utpote olim in hoc mercaturæ
" genere ſatis celebris. A *Bruxellis* itur ad *Leodiam* hodie *Liege* An-
" glorum, *Luttich* Germanorum, incolarum vero *Luich*, urbem ob arcis
" obſidionem diuturnam ſatis celebrem, deinde ad oppidulum *Spadanum*
" et *Aquiſgranum*, loca quidem toto orbe notiſſima. Ibi aquas mine-
" rales, hic thermales potavi, guſtavi, aliqua inſtitutus ſum experi-
" menta, ſed vulgaria quidem, ob defectum apparatûs ad hanc rem
" idonei. Trajectum ad *Moſam*, *Sylvam Ducis* (*Bois le Duc*,) *Dor-*
" *drechtum*, iter ad celebre emporium *Rotterdamum* tenentes, viſitavi-
" mus; urbem *Delphenſem*, villam ſplendidiſſimam *Hagenſem*, urbem
" *Leydam*, *Haerlemam* pertranſivimus ad nobiliſſimam Batavorum civita-
" tem *Amſtelodamum*; urbe deinde perluſtratâ, per fretum vulgo dictum
" *Dee Zuyder Zee* navigamus ad oppidum dictum a Batavis *Worcum* in
" *Weſtfriſia*, diſtans viginti præter propter milliaria a *Leuwardia*, nitidâ
" ſatis et bene munitâ hujus provinciæ urbe primâ.

" Hinc tendimus ad *Groningam*, et demum per arenoſas incultaſque
" regiones, per que urbem *Oldenburgum*, et villam unam alteramque
" longe a ſe invicem diſſitam accedimus ad liberam civitatem *Bremen-*
" *ſem*, celebre ſatis emporium atque dives: hìc in cella ſub templo
" maximo cathedrali, corpora aliquot exſiccata, (humana intellige),
" dura firmaque, naturâ conſervata, peregrinantibus oſtenduntur, nullo
" condimento

great loſs of the whole country, which was formerly famous for this branch of commerce. From Bruſſells we went to Liege, called by the Germans Luttich, but by the inhabitants Lüich, a city celebrated for the long ſiege of its caſtle. From hence we paſſed on to the Spa and Aix la Chapelle, places known to every one. At the firſt of theſe I obſerved the mineral waters, and at the latter the hot ſprings: I drank of them, and made ſome experiments upon them, common ones indeed, for want of a proper apparatus. We next viſited Maeſtricht, Bois le Duc, Dordrecht, and continued our journey to that celebrated emporium Rotterdam. We paſſed through the city of Delft, the Hague, a very ſplendid village, the cities of Leyden and Haerlem, to the moſt noble of the Dutch cities Amſterdam. Having taken a view of it, we ſailed through the ſtrait commonly called Dee Zuyder Zee, to a town called by the Dutch Worcum, in Weſtfrieſland, diſtant about twenty miles from Leuwarden, the firſt city of this province, neat and pretty well fortified.

From this place we went to Groningen, and travelling through a ſandy, uncultivated country, we came to Oldenburgh, and paſſing through ſeveral villages a good diſtance one from another, we came to Bremen, a free city, a great emporium, and wealthy: here they ſhew to travellers, in a cellar under the great cathedral church, ſome human bodies, dried, hard and firm, preſerved by nature, and the mere antiputreſcent quality of the cavern, without

" condimento vel arte qualibet tractata, ſed merâ quæ cellæ inſit virtute
" conſervatrice; eſt locus non admodum profundus, et ex uno latere
" vento perflabilis, ſicca eſt admodum, tota quippe circumcirca regio
" arenoſa eſt. Sed licet plurimæ aliæ ſunt ſub eodem templo hujuſ-
" modi cavernæ, et etiam ſub aliis et vicinis templis, nulla adhuc
" invenitur quæ eâdem dote potitur. Corpora circa duodecem habent
" integra, ex quibus unum ducentos circiter annos habet; alterum,
" centum et quinquaginta, reliqua, diverſarum ætatum et temporum;
" penitus ex ſucca videntur et levia, firma tamen adeo ut impoſitâ ſub
" capite manu totum corpus abſque minima flexura facile poſſis erigere.
" Magnam nitri copiam cauſam eſſe aſſerunt incolæ, quod in tanta
" quantitate erui poteſt, ut ſingulæ libræ terræ hujus cavernæ exhi-
" bent uncias duas nitri puriſſimi *."

This epiſtle contains reflections equally pertinent and ingenious, on the manners of the people whom he viſited; and concludes with juſt and animated praiſes of mental liberty, and the moſt cordial profeſſions of friendſhip for his correſpondent.

After this excurſion on the Continent, he returned to London, and took up his reſidence in Gracechurch Street; we may therefore date the commencement of his practice in the year 1740, for though he graduated in 1736, the intermediate time was chiefly employed in attending the hoſpitals, and laying that foundation, upon which was afterwards to be raiſed a diſtinguiſhed ſuperſtructure. His Theſis, as it was never before the preſent time tranſlated into Engliſh, with all the merit it certainly poſſeſſes, could not excite the public attention, or acquire popular

out any preparation or aſſiſtance from art whatever. The place is not very deep, is expoſed to the wind on one ſide, and exceedingly dry, as the whole country round about is ſandy. But, although there are ſimilar caverns under the ſame church, and alſo under other neighbouring churches, none has yet been found, that poſſeſſes the ſame virtue. There are twelve whole bodies compleat, one of which is about two hundred years old; another, one hundred and fifty; the reſt are of different ages: they ſeem perfectly dry and light; but ſo firm, that, placing the hand under the chin, one may eaſily raiſe up the whole body, without the leaſt flexure in any part. The inhabitants ſay, that the great quantity of nitre is the cauſe of theſe phænomena, which may be dug up in ſuch plenty, that every pound weight of the earth of this cavern contains two ounces of the pureſt nitre.

* Since more fully enlarged upon by Wraxall, in his Travels.

approbation, and conſequently could not materially contribute to extend his reputation: the ſame might be admitted reſpecting his "Re-"marks on the neutral Salts of Plants, and on Terra Foliata Tartari," publiſhed in the ſame year in the Edinburgh Medical Eſſays, as ſubjects merely reſtricted to medical diſquiſition.

In 1744, his "Eſſay on the Origin of Amber," and his "Obſer-"vations on the Manna Perſicum," were inſerted in the Philoſophical Tranſactions: and likewiſe, in 1745, his "Letter to Dr. Mead," and his "Obſervations on a Caſe of recovering a Man dead in Appearance." In the ſubſequent year he was admitted a licentiate of the Royal College of Phyſicians.

Men of great talents do not always employ them on temporary or popular ſubjects; but on the other hand, their works, like the precious metals, are not injured by their antiquity: the preceding performances were rather ſolid than brilliant; calculated rather to enſure future reputation, than preſent emolument; and will be read now with as much pleaſure as when they were firſt publiſhed. What he endeavoured to prove, to illuſtrate and enforce, reſpecting the recovery of drowned perſons, has been ſince attempted in moſt maritime ſtates of Europe; and he enjoyed the pleaſure of living to ſee thoſe rules adopted with ſucceſs in this metropolis, by the ardour of Dr. Hawes and others, which upwards of thirty years before he had recommended by his pen. To whatever merit theſe Obſervations were juſtly entitled, the ſubject at that time excited no popular attention, though ſince proſecuted with a zeal that does honour to humanity; it could not, therefore, have contributed, in any conſiderable degree, to elevate his character; yet at this time he had acquired a large ſhare of employment in his profeſſion, and his emoluments were then ſuperior to what many phyſicians of long ſtanding at this time can boaſt. He was ever averſe from ſpeaking of the pecuniary emoluments of his profeſſion; and excepting what he intimated in the preſent inſtance, he never, to my recollection, mentioned the ſubject; and upon this occaſion it was collected from collateral circumſtances, and not from immediate information. Nothing hurt his feelings more, than eſtimating the profeſſion of phyſic by its lucrative advantages; the art of healing, he conſidered

in

in that ſacred point of view, which connected it with a conſcientious principle of action. " My only wiſh," he declares, " was to do " what little buſineſs might fall to my ſhare, as well as poſſible; and " to baniſh all thoughts of practiſing phyſic as a money-getting trade, " with the ſame ſolicitude, as I would the ſuggeſtions of vice or intem- " perance *." And when the ſucceſs of his practice had raiſed him to the ſummit of reputation and emolument, he ſeemed actuated by the ſame ſentiment: " I endeavour," ſays this conſcientious phyſician, " to follow my buſineſs, becauſe it is my duty, rather than my intereſt; " the laſt is inſeparable from a juſt diſcharge of duty, but I have " ever wiſhed to look at the profits in the laſt place, and this wiſh " has attended me ever ſince my beginning †."

If this language is foreign to the man of the world, it is at leaſt worthy of a man of principle; and no phyſician will be worſe for its peruſal or imitation, nor of what he afterwards communicated upon the ſame ſubject. " I wiſhed at my firſt ſetting out," he obſerves, " I " wiſhed moſt fervently, and I endeavour after it ſtill, to do the buſineſs " that occurred, with all the diligence I could, as a *preſent duty*, and " endeavoured to repreſs every riſing idea of its conſequences; know- " ing moſt aſſuredly that there was a hand, which could eaſily overthrow " every purſuit of this kind, and baffle every attempt, either to acquire " fame or wealth. And with a great degree of gratitude, I look back " to the gracious ſecret preſerver, that kept my mind more attentive to " the diſcharge of my preſent anxious care for thoſe I viſited, than " either to the profits or the credit reſulting from it: and I am ſure, " to be kept under ſuch a circumſcribed unaſpiring temper of mind, " doing every thing with diligence, humility, and as in the ſight of the " God of healing, frees the mind from much unavailing diſtreſs, and " conſequential diſappointment ‡."

There are many incidental circumſtances which tend to introduce a phyſician into practice, independent of any intrinſic merit, and religious profeſſion is not one of the leaſt: whoever acquires the foremoſt repu-

* Letter to the Editor, dated Lea-hall, anno 1769.

† Ditto, dated anno 1770.

‡ Ditto, dated anno 1773.

tation

tation with the leaders of a ſect, is by them naturally conſidered and proclaimed as the firſt of the medical profeſſion at large; but as there were two phyſicians of the ſame religious ſentiments with Dr. FOTHERGILL, previouſly ſettled in the metropolis, his early reputation could not be deduced from his religion; neither could family connexion operate in a ſtronger manner, becauſe the reſidence of his relations was principally in the north of England. Whatever reputation is acquired, unconnected with literature or medical ſkill, is precarious at all times: if patients are not cured; if ſucceſs does not follow practice; a ſpecious importance acquired or ſupported by partial or ſuperficial pretences, is ſeldom permanent. In concerns of ſuch magnitude, where health and life are at ſtake, partial attachments will vaniſh, and a conviction of ſuperior ſagacity and ſkill will at length predominate. Whether we conſider Dr. FOTHERGILL's early acquiſition of reputation, or its future accumulation, we cannot heſitate to aſcribe it to his ſuperior merit, or to that ſingular combination of vigorous powers of mind, and chaſte integrity of manners, which for a ſeries of years conciliated the affections, and claimed the unreſerved confidence, of the public.

Sunt verba et voces, quibus hunc lenire dolorem
Poſſis, et magnam morbi deponere partem. HOR*.

Highly flattering as his ſucceſs muſt have been, at this early period, it bore very little proportion to that blaze of character which ſucceeded his "Account of the Sore Throat attended with Ulcers," publiſhed in 1748, and ſince deſervedly tranſlated into every European language. Not long before this time, the diſeaſe which he now elucidated, in its general havock in London, had ſwept away indiſcriminately, the hopes of ſome noble families, and particularly the two ſons of the late Henry Pelham, brother to the late duke of Newcaſtle, and had hence excited very general alarm; the diſcovery therefore of a new and ſucceſsful treatment of ſo formidable and fatal a diſeaſe, was critically fortunate for the public, as well as for the author. Medical eſſays which promiſe improvements in the art of healing, are uſually offered to the public

* The pow'r of words, and ſoothing ſounds, appeaſe
The raging pain, and leſſen the diſeaſe. FRANCIS.

in

in a ſtate of imperfection, as long and repeated experiment is requiſite to mature the offspring of a luxuriant genius; but this performance was exempted from the imbecillity of a haſty birth, and the revolution it produced in the treatment of this diſeaſe, has obtained the ſanction of the ableſt phyſicians from that period to the preſent time, with leſs deviation perhaps than has attended the management of any other acute diſorder.

As the alarm among perſons of faſhion, long ſubſiſted, the Doctor's reputation rapidly increaſed. Whoever aſtoniſhes the public with new diſcoveries upon any popular diſeaſe, the reputation of ſagacity in every other, will be annexed. He was now introduced into the firſt families in the metropolis; and he was rarely ever employed, but in emergencies he was ſought for again.

But whoever deviates from a routine of practice familiarized by long habit, will encounter oppoſition; or if truth is too brilliant to be eluded, that oppoſition takes the form of envy, armed on all ſides with detraction; the diſcovery is anticipated by ſome previous deſcription, or vague ſuggeſtion, which at the time gained no influence, nor deſerved any attention. Such inſinuations have been urged againſt the merits of the preſent performance, upon ſuch a foundation indeed as does not deſerve the trouble of refutation. The very general and almoſt invariable attribution of the diſcovery to Dr. FOTHERGILL, by his contemporaries, weighs with me much more forcibly, than the ſlight ſuggeſtion, that a phyſician had previouſly found out the diſeaſe, its ſymptoms and its cure, in writers, which are themſelves obſcure. Nobody could doubt the ſagacity of Dr. Letherland; but beyond the obligation which Dr. FOTHERGILL has candidly acknowledged to him, I ſee no reaſon to detract from the merit of the latter, who uniformly, without reſerve, always ſpoke of it as his own production; and without the conſciouſneſs of deſert, no perſon that knew him, could be ignorant, that his modeſty and his integrity would equally revolt at any unworthy plagiariſm.

Had Dr. FOTHERGILL's Account of the Sore Throat been merely a publication of doctrines previouſly known and adopted, ſuch a plagiariſm muſt have been notorious to every medical man in the city; and

the performance which announced a ſuppoſed diſcovery, would have met with general contempt, inſtead of that eclat which it conferred upon the writer, and which ſuddenly ſwelled the current of his buſineſs, and conſequently of his emolument: the firſt induced him to ſeek for ſome moments of retirement, and the laſt enabled him to effect it, as far as a phyſician in extenſive practice could command moments of leiſure. The natural bias of the mind is moſt apt to ſhew itſelf in a ſtate of independence, when unreſtrained by exterior concerns: in an active and multifarious genius, with which the Doctor was endowed, it would be difficult to aſcertain his warmeſt excitements: individuals themſelves are not always the moſt competent judges of the cuique voluptas; actions conſtitute a more certain criterion, and by this ſtandard we may conclude, that he did not make a falſe eſtimate of his own propenſities; as long before he was able to command that leiſure which he never choſe to allow himſelf, he obſerved, that "chemiſtry and natural "hiſtory would be his entertainments, were he wholly at leiſure; "he could not, however, loſe ſight of the cui bono, in any reſearches: "there is ſtill room enough for diſcoveries; many points that we "believe, rather than know; and ſome of theſe he could wiſh to de- "termine by experiments *."

In thoſe departments of ſcience, where fact alone depends upon the reſult of experiment, that leiſure, that ſedulous perſeverance is demanded, which is incompatible with the ſudden and unexpected avocations of a phyſician. In chemiſtry, where demonſtration has ſuperſeded vague hypotheſis, this ſtudious attention is particularly requiſite: however ſtrong therefore, the Doctor's propenſity to chemical reſearches might have been, the practice of medicine, and a judicious mode of preſcribing, were not calculated to amplify its boundaries: this department of ſcience was not then either ſo generally or ſo ſucceſsfully cultivated: Hales, and other philoſophers, had laid down a wide field for inveſtigation, and experiments have been ſince multiplied, more particularly relative to medicine, diet, and the animal œconomy. The *Air* which we breathe, as one homogeneous fluid, was now analyzed by

* Letter to Dr. Cuming, dated London, anno 1744.

new

new experiments in the North; but it was reſerved for a Prieſtley to develope the *Aerial Syſtem*, to embody ſhades inviſible to former ages, and place them in ſyſtematic light: but long before this period of aſtoniſhing elucidation of air, Dr. FOTHERGILL had ſuggeſted experiments upon this really heterogeneous fluid: ſo early as 1744, he communicated to his friend Dr. Cuming *, not only his doubts reſpecting the real contents of the air, but the proceſs of experiment he meant to inſtitute. How far he purſued a deſign ſo worthy of an ingenious mind, I am uncertain; but the ſtate of his health, which he afterwards introduces as an obſtacle to his purſuit, and the encreaſe of various avocations, probably terminated theſe enquiries. The method he propoſed to adopt, he thus deſcribes: "I have ordered ſome large glaſs bells "to be made, but of a more conical figure, capable of holding ſeveral "gallons: theſe in warm weather will be placed upon proper ſupports, "the apex loweſt, the broad open baſe above: the coldeſt water will "be poured into them, and rendered ſtill colder by ſal ammoniac and "ſal communis; on the outſide, the moiſture of the air will be con-"denſed in large quantities, and afterwards ſubjected to chemical "analyſis."

Although a natural bias for experiment, does not now appear in many inſtances of his chemical inveſtigations, yet it obviouſly pervaded the whole compoſition of his preſcriptions. It is well known, that the mere exterior ſurface of bodies is no criterion of their component parts, when analyzed by chemical proceſſes: the moſt ſimple and innocent articles uſed in diet, conſiſt of parts, which, developed and ſeparated, become highly corroſive; culinary ſalt, applied to ſo many uſeful and dietetic purpoſes, contains, as well as nitre and common ſulphur, an acid, which is deſtructive to the hardeſt ſubſtances: other combinations may be formed, of bodies inoffenſive and inert in their diſtinct ſtates, which on union, become noxious to animal life. Chemiſtry is hence abſolutely requiſite to form a phyſician, who muſt have daily reference to it in his practice: yet in this department of medicine, phyſicians are not unfrequently deficient; by which compoſitions have

* Letter dated London, anno 1744.

been recommended, and from thence combinations have reſulted, which the preſcriber neither propoſed nor ſuſpected. This was not the fate of Dr. FOTHERGILL; there was ſuch a well-directed ſelection in all his compoſitions, as happily united ſimplicity, elegance, and utility; and as the influence of his practice extended, his mode of preſcription was proportionally imitated in the metropolis, and at length ſo generally adopted, that I may hazard the aſſertion, that he principally contributed to bring about a revolution, that ſubſtituted elegant ſimplicity in the place of multifarious and diſcordant compound.

Materia Medica is that department of medicine moſt immediately allied to natural hiſtory, and to which he had devoted no little attention; having collected a cabinet of materia medica, ſeldom, if ever, exceeded for its extent or ſelection. He had even encouraged the idea of delivering lectures upon this entertaining and uſeful branch of medicine; but an encreaſe of employment, joined with a diffidence of his own abilities, which none but himſelf entertained, diverted him from this intention; and his valuable collection was generouſly preſented to the college of Edinburgh, for the uſe of the public profeſſor of Materia Medica in that univerſity. The handmaid to this branch of medicine is Botany, a department of natural hiſtory, which affords the greateſt inſtruction and recreation with the leaſt exerciſe of the mind: it is, therefore, well adapted to the purſuit of a medical man, whoſe moments of ſecluſion are rather ſnatched from time by watchful diligence, than enjoyed from actual leiſure.

As a rational means of unbending his mind, and affording at the ſame time collateral advancement in the healing art, Botany acquired his patronage. On the Surrey ſide of the Thames he had noticed a ſpot of land, the ſituation of which ſheltered it from the ſeverity of the north wind, and in the ſoil of which vegetables grew luxuriantly; its vicinity was convenient, and its extent rendered its purchaſe eaſy, as the proprietor was inclined to ſell it: the price was ſtipulated, and one obſtacle alone remained to make it his own; it was let to a tenant at will, whoſe little family ſubſiſted on its produce, and whoſe miſery was inevitable, had he expelled him from this fruitful ſoil: the moment he was made acquainted with the circumſtances of the family, he refuſed the offer, adding,

adding, " that that could never afford gratification to him, which en-
" tailed miſery on another;" and when he relinquiſhed this projected Eden, he made the family a preſent of the intended purchaſe-money, as I was informed by a relation of the tenant, and had it in part confirmed by the preſent proprietor.

Not far diſtant from this admired ſpot, he had afterwards a garden *, which he occaſionally viſited; but he never furniſhed it with that profuſion of exotics which he ſince collected from every quarter of the globe, and introduced into his garden at Upton, near Stratford. The whole eſtate was extenſive; the ſeat was formerly called Rooke-hall, from the name of the perſon who poſſeſſed it in 1566; and in 1666, it deſcended to Sir Robert Smyth, from whoſe family it was purchaſed, almoſt a century afterwards, by Admiral Elliot; and in Auguſt 1762 it became the property of Dr. FOTHERGILL †. The walls of the garden incloſed

* That learned phyſician and ingenious botaniſt Dr. William Watſon, informed me, that a beautiful Acacia, formerly planted by Dr. FOTHERGILL, and one of the laſt remains of his horticulture there, was ignorantly cut down about two years ago.

† In the year 1762, when Dr. FOTHERGILL purchaſed of Admiral Elliot his eſtate at Upton, it conſiſted of the houſe, garden, and lands adjoining, to the amount of about thirty acres.

There were at that time growing in a part of the garden called the Wilderneſs, five large Virginia cedars, not leſs in diameter than ten inches one with another, and which were probably ſome of the firſt of the kind planted in England.

A year or two after, Dr. FOTHERGILL purchaſed of Peter Bigot, Eſq; a parcel of land, extending from the premiſes bought of Admiral Elliot to the Ilford road; and in the ſame year began the plantation along the ſaid road.

Not long after, viz. about the year 1764 or 5, he agreed with the proprietor of the large field called Lady Margaret's field, to the eaſt of this new purchaſe, to run a ſtraight line between their reſpective grounds; the old fence being no other than a broad ſandy bank, and extremely crooked. When this was ſettled, and the fence made, a plantation was begun on that ſide, principally conſiſting of oaks of a very uſeful kind, the acorns of which were brought from the mountainous parts of Portugal, and the timber is thought to be ſecond to none, in reſpect to durability.

Likewiſe ſome Spaniſh cheſnuts, raiſed from the nuts, in a plantation upon the premiſes.

In the garden there was a fine bay hedge; and in the Wilderneſs, one ſide of which is incloſed by this hedge, ſome very large laurels. Excepting theſe, a Larch, an Acacia, and the Virginia cedars above-mentioned, ſome large Abeiles, and the fruit-trees againſt the walls, there was not one foreign plant or ſhrub in the whole garden.

incloſed above five acres of land; a winding canal, in the figure of a creſcent, nearly formed it into two diviſions, and opened occaſionally on the ſight, through the branches of rare and exotic ſhrubs, that lined the walks on its banks. In the midſt of winter, when the earth was covered with ſnow, evergreens were clothed in full verdure: without expoſure to the open air, a glaſs door from the manſion-houſe gave entrance into a ſuite of hot and green-houſe apartments of nearly 260 feet extent, containing upwards of 3,400 diſtinct ſpecies of exotics, whoſe foliage wore a perpetual verdure, and formed a beautiful and ſtriking contraſt to the ſhrivelled natives of colder regions. In the open ground, with the returning ſummer, about 3,000 diſtinct ſpecies of plants and ſhrubs vied in verdure with the natives of Aſia and Africa. It was in this ſpot that a perpetual ſpring was realized; where the elegant proprietor ſometimes retired for a few hours, to contemplate the vegetable productions of the four quarters of the globe united within his domain; where the ſpheres ſeemed tranſpoſed, and the arctic circle to be joined to the equator *.

Et nunc omnis ager, nunc omnis parturit arbos,
Nunc frondent ſilvæ, nunc formoſiſſimus annus.

VIRGIL.

But

Whatever there is in the garden, or adjoining fields, of this kind, were planted by Dr. FOTHERGILL, ſoon after theſe grounds came into his poſſeſſion: which circumſtance is here mentioned for no other purpoſe, but that if this memorial ſhould be preſerved, it may be known to a ſucceeding generation, what progreſs the ſeveral ſhrubs and trees have made.

Some of the trees were not leſs than fifteen feet high when they were planted; eſpecially thoſe on the weſt ſide of the field adjoining to the garden.

The large trees, among which are many rare oaks, were brought out of the firſt great nurſery of North American trees in England at Fulham, belonging to —— Gray, an eminent gardener; and the firſt who, being aſſiſted by Peter Collinſon, Mark Cateſby, and other curious collectors, ſupplied England with the vegetable treaſures of America.

* The preſident of the Royal Society, who has circumnavigated the globe, and is acquainted with moſt of the gardens in Europe, ſpeaks of Dr. FOTHERGILL's in the following manner.

" At an expence ſeldom undertaken by an individual, and with an ardour that was " viſible in the whole of his conduct, he procured from all parts of the world a great " number

But in the midſt of this enchanting combination of nature, he never loſt ſight of the *cui bono:* " In theſe, as in every other purſuit, he " had always in view the enlargement and elevation of his own heart; " having formed early habitudes of religious reference, from the diſplay " of divine power and wiſdom in the beauty, the order, and the har- " mony of external things, to the glory of their Almighty Former.— " From the influences of theſe habitudes, his mind was always preſerved " in a diſengaged and independent ſtate, enjoying, but yet adoring *."

" number of the rareſt plants, and protected them in the ampleſt buildings which this " or any other country has ſeen. He liberally propoſed rewards to thoſe, whoſe circum- " ſtances and ſituations in life gave them opportunities of bringing hither plants which " might be ornamental, and probably uſeful to this country, or her colonies; and as " liberally paid theſe rewards to all that ſerved him. If the troubles of war had permitted, " we ſhould have had the Cortex Winteranus, &c. &c. introduced by his means into this " country; and alſo the Bread-fruit, Mangaſteen, &c. into the Weſt Indies. For each of " theſe, and many others, he had fixed a proper premium. In conjunction with the Earl " of Tankerville, Dr. Pitcairn, and myſelf, he ſent over a perſon to Africa, who is ſtill " employed upon the coaſt of that country, for the purpoſe of collecting plants and " ſpecimens.

" Thoſe whoſe gratitude for reſtored health prompted them to do what was acceptable to " their benefactor, were always informed by him that preſents of rare plants chiefly " attracted his attention, and would be more acceptable to him than the moſt generous " fees. How many unhappy men, enervated by the effects of hot climates, where their " connections had placed them, found health on their return home at that cheap pur- " chaſe!

" What an infinite number of plants he obtained by theſe means, the large collection " of drawings he left behind will amply teſtify; and that they were equalled by nothing " but royal munificence, at this time largely beſtowed upon the botanic gardens at Kew. " In my opinion, no other garden in Europe, royal, or of a ſubject, had nearly ſo many " ſcarce and valuable plants.

" That ſcience might not ſuffer a loſs, when a plant he had cultivated ſhould die, he " liberally paid the beſt artiſt the country afforded to draw the new ones as they came " to perfection; and ſo numerous were they at laſt, that he found it neceſſary to em- " ploy more artiſts than one, in order to keep pace with their increaſe. His garden was " known all over Europe, and foreigners of all ranks aſked, when they came hither, per- " miſſion to ſee it; of which Dr. Solander and myſelf are ſufficient witneſſes, from the " many applications that have been made through us for that permiſſion."

Sir Joſeph Banks's Note in Dr. Thompſon's Memoirs of Dr. FOTHERGILL, p. 37.

* Dr. Hird's Affectionate Tribute to the memory of Dr. FOTHERGILL, p. 13.

In the ſuperficial cultivation of many departments of natural hiſtory, expence is often laviſhed without benefit either to the collector or to the public, where the object is rather to gratify curioſity than to augment and diffuſe knowledge: in the enjoyment of horticulture, the mind that was elevated to ſublime contemplation, could not be reſtrained by the partial motive of a mere collector; and he that in his purſuits enlarges his ſpeculation to the *cui bono*, will never want ample occaſions of promoting general good in the ſtudy of vegetable nature, which teems with ſo many bleſſings to mankind: whoever conſiders the importance of clothing, of houſehold furniture, and of his daily bread, cannot but view it as one of the moſt uſeful, and conſequently one of the moſt rational purſuits of an enlightened underſtanding. Of this we ſhall be convinced, if we reflect what benefit would accrue to mankind, could another dietetic article like the common potatoe be diſcovered! How great a benefactor to his fellow-creatures would that man prove, who ſhould find out another grain like wheat, or pulſe like the common pea! or an article of clothing and manufacture ſuperior to cotton or flax!—Such conſiderations influenced Dr. FOTHERGILL; and where he could not produce objects of equal importance, he exerted himſelf to accompliſh others of leſs, yet of great public utility. What he effected, and what he contributed to do, would fill a volume, were a grateful biographer to enlarge upon them: he pointed out what would ſuit different ſoils, and formed a balance in the productions of the globe: from America he received various ſpecies of Catalpas, Kalmias, Magnolias, Firs, Oaks, Maples, and other valuable productions, which became denizens of his domain, ſome of them capable of being applied to the moſt uſeful purpoſes of timber; and, in return, he tranſported green and bohea teas from his garden at Upton, to the ſouthern part of that great continent, now riſing into an independent empire: he endeavoured to improve the growth and quality of coffee in the Weſt India iſlands; the Bamboo cane (Arundo Bambos) calculated for various domeſtic uſes, he procured from China, and purpoſed to tranſplant it to our iſlands ſituated within the tropics. The laſt time I was with him at Upton, I introduced Governor Nugent, who deſervedly poſſeſſed the chief adminiſtration of Tortola, to whom he expreſſed the pleaſure

he

he ſhould experience in being the means of furniſhing the Caribbæan Archipelago with this uſeful Aſiatic; the very ſhoots of which were marked for this deſign. The elegant vegetable is now in my poſſeſſion; and I recollect with grateful pleaſure, as often as I ſee it, the wiſh of its former proprietor, hoping, when the tumult of war ſhall have ſubſided, to carry his deſign into execution *.

The Nutmeg-tree now flouriſhes in the Iſle of France, and Clove-trees have been tranſplanted from thence to Cayenne †. The true Cinnamon is a tree we have not hitherto been able to cultivate out of Aſia, though the Doctor uſed many endeavours to introduce it into our Weſt India colonies. The Canella cinnamomæa I had from his garden; and the true cinnamon-tree would have arrived here in health, had not the alarm of an enemy's ſhip induced my friend to throw it overboard, with other articles deſigned as a preſent: the war, however, may ultimately extend the cultivation of theſe exotics, which, like the inhabitants of a ſeraglio, are cautiouſly excluded from the eye of ſtrangers ‡.

Intent as he was to promote ſo many articles of commerce, manufacture, and convenience, he could not loſe ſight of thoſe departments of natural hiſtory, which were more immediately connected with medicine, in order to aſcertain the knowledge of what was already acquired, and to expand it by experiment where deficient. Though he was not the firſt who adminiſtered Hemlock internally, he was the firſt who accurately diſcriminated its virtues: by him we were made acquainted with the Gummi rubrum aſtringens Gambienſe; and by his endeavours, and the ardour of minds ſimilar to his own, we know that Terra

* Since I penned the above ſentence, I have been informed that the Bamboo cane has been tranſplanted to Jamaica, where it thrives luxuriantly, and has been already applied to many uſeful purpoſes.

† Dr. Juſſieu obligingly informed me, by letter, of the circumſtances reſpecting the nutmeg and clove trees.

‡ I am indebted to Dr. Vicq D'Azyr, and Dr. De Juſſieu, for information on this ſubject, that Cinnamon has been tranſplanted to the French Weſt India iſlands, and particularly to Guadaloupe, where it is greatly increaſed: (Le Cannelier, tranſplanté depuis long-temps dans les iſles d'Amerique, et ſur-tout à la Guadaloupe, s'y eſt très multiplié.) It grows likewiſe in St. Vincent's.

Japonica

Japonica is a vegetable extract *; and to him and Dr. Ruſſell we are indebted for the flouriſhing of genuine Scammony † in our ſoil, as if indigenous to it. He attempted to procure the tree which affords the Peruvian bark ‡; and is ſaid to have at length ſo far ſucceeded, as to have had one plant in his garden, but which I believe died with its poſſeſſor. This invaluable tree, which is ſo common in Peru and Chili, would doubtleſs thrive on the North American continent, and in the larger Weſt India iſlands; it is perhaps already indigenous to the mountains of Jamaica §; and by ſucceſſive endeavours it may hereafter be cultivated in the colonies of different European ſtates: we have ſeen in how ſhort a period of time the true Rhubarb (Rheum palmatum) has been naturalized to our ſoil, furniſhing us at home with ſo important an acquiſition to the Materia Medica. If we have not already cultivated it ſo ſucceſsfully as to rival the foreign, it is at leaſt nearly equal in medicinal qualities; and future experiments may enable us to ſupply all our own conſumption. Much depends upon the nature of the ſoil, and much upon the manner of drying the root after it has been taken up: to promote its growth, and the improvement of its quality, Dr. FOTHERGILL carefully exerted himſelf; and his directions reſpect-

* Since Dr. FOTHERGILL's deceaſe, I have received ſeeds of the true mimoſa Japonica, or tree producing Terra Japonica, and have diſtributed portions of them to ſeveral eminent botaniſts in different parts of Europe, as well as placed ſome in my hot-houſe at Grove-hill. They were ſent by Dr. Kerr, an ingenious phyſician reſident at Calcutta.

† Dr. FOTHERGILL obſerves, that with no ſmall trouble Dr. Ruſſell ſucceeded in procuring us the ſeeds of the true Scammony. They were raiſed by my two botanical friends, the late Peter Collinſon, and the indefatigable James Gordon. Seeds were likewiſe ſent over to the ſouthern colonies of America, in hopes that in a ſimilar ſoil and latitude, in ſome future time we might from thence have this valuable drug unadulterated. LIFE of Dr. RUSSELL, p. 15.

‡ He likewiſe offered a premium of one hundred pounds each to two captains of ſhips, for a plant in vegetation of the true Winter's Bark, (Winterana aromatica.)

§ A friend of Dr. Clarke's, of Jamaica, (Alexander Roberts) has lately found a ſpecies of the Cinchona with racemoſe flowers, very ſimilar to thoſe of the Cinchona Carribæa of Jaquin and Linnæus, and to the Cinchona Jamaicenſis of Dr. Wright, deſcribed in the Philoſophical Tranſactions, vol. lxvii. p. 504. In the year 1781, a periodical publication, entitled the Jamaica Magazine, commenced; and in the third, fourth, and fifth numbers, the Jamaica Cinchona is particularly deſcribed.

ing

ing the method of drying it, I ſhall give in his own words: "There "is one circumſtance, relative to the drying of this root, that I have "long thought of, and if not practiſed, would recommend to thoſe "who cultivate this article.

"The large holes which we commonly meet with in the Turkey "Rhubarb, are not the effect of accident, but deſign: they are ab- "ſolutely neceſſary; for, by opening a paſſage for the air to the center "of theſe pieces, they not only dry ſooner, but retain their colour, "and perhaps their medicinal virtues, the better.

"After having waſhed, and cut the root into large pieces, let a "large hole be bored through the center with ſome inſtrument that "makes a large excavation. Let a rope of well-dried ruſhes, or ſtraw, "as large as the cavity will receive, be inſtantly drawn through it: "this will prevent the drying root from contracting, whilſt the "porous rope admits the air to paſs through, and carry off the central "moiſture. Several pieces may be hung up together, taking care "that they do not come into contact; and I ſhould think (though "experience muſt determine this) that it would be beſt to take "up the roots, when the leaves early in autumn die away, rather "than in the ſpring: they will be leſs ſucculent in autumn, but "their pieces will be more active and efficacious *."

A man

* Letter to Dr. Falconar, of Bath. The public is, however, highly indebted to the amiable Dr. Hope, profeſſor of botany in the college of Edinburgh, for his introduction of Rhubarb into theſe kingdoms. See Philoſ. Tranſact. art. xxxii. vol. lv. ann. 1765. This diſtinguiſhed profeſſor informs me †, that he is of opinion, and his opinion on ſuch a ſubject no one will doubt, that the Rheum Palmatum is the ſame with the Ruſſian, which formerly was called the Turkey Rhubarb; and differs ſo much in its ſenſible qualities from the China Rhubarb, as to induce him to think with Sir Joſeph Banks that they are different ſpecies. The farina of one ſpecies, operates upon the ſeeds of another, and thereby produces high-bred plants, which hitherto have not produced fertile ſeeds in the botanic gardens in Scotland, where the experiment has been made.

"At firſt," obſerves the profeſſor, "depending on the information received from books, "we kept the root ten or twelve years in the ground, and thought that the longer we kept "it ſo, the better quality would the Rhubarb poſſeſs; but experience has taught us, that "the root ſhould not remain above four years in the ground. The Rhubarb of this

† Letter to the Editor, dated Nov. 18, 1782.

A man of ſcience, confined by a local profeſſion, like the practice of phyſic, which occupies the moſt precious moments of time, may ſuggeſt more to others, than he can himſelf have an opportunity to effect; but, like the genial rays of the ſun, his influence may extend to the moſt remote regions of the globe: and thus it was that Dr. FOTHERGILL promoted the inveſtigation of Nature, and excited enquiries after her curious productions, as far as navigation and commerce had diffuſed arts and ſciences. Men of more genius than fortune found in him a liberal patron; he contributed to ſupport them while they explored diſtant regions, and amply rewarded their diſcoveries. As he ſtudied moſt departments of natural hiſtory, as he patronized its ingenious cultivators, he neceſſarily became poſſeſſed of a valuable collection of its rare objects: next to the Ducheſs of Portland, he had the beſt cabinet of Shells in the kingdom *; his collection of Ores and Minerals, dug out of different parts of the earth, were diſtinguiſhed for their rarity rather than for their number. Of Reptiles and Animals, the gratitude of thoſe he had patronized furniſhed him with a curious variety: in the ſame manner he became poſſeſſed of an elegant cabinet of Inſects, which was greatly enlarged by the exertions of the ingenious Smeathman. His Corals, from whence Ellis, that indefatigable and microſcopical naturaliſt, delineated his ſyſtem, and created a new ſpecies of animal beings, was the foremoſt in Europe †. Thoſe objects of

" country is equal in quality to the beſt Ruſſian. As there is now ſcarcely a garden in " Scotland without a Rhubarb plant in it, the conſumption of the foreign Rhubarb is " conſiderably leſs, and annually a ſmall quantity is ſent to London.

" The late Earl of Hopetoun made ſome intereſting diſcoveries reſpecting its cultivation, " and the late Duke of Athol had very large plantations of it.

" Sir Alexander Dick early received a gold medal from the Society of Arts in London, " for producing the largeſt quantity of well-dried rhubarb."

* The verſality of Dr. FOTHERGILL's genius was remarkable:—Few were acquainted with his accurate knowledge of Conchology, for he made no oſtentation of it, and yet Da Coſta is indebted to him for many important remarks in his ingenious Hiſtory of Shells, and for moſt of the notes with which it is enlarged and improved. The MS. notes, in Dr. FOTHERGILL's writing, were preſented to me by Da Coſta himſelf, with a modeſty which reflects additional credit upon this eminent naturaliſt.

† Theſe and other curious ſubjects of natural hiſtory were purchaſed by Dr. Hunter for £. 1,500.

nature,

nature, which were too bulky to tranſport, or too periſhable to preſerve, he ordered to be delineated by the pencil of artiſts, that he might give bread to a ſet of ingenious men, whom he wiſhed to partake of his beneficence, whilſt he rationally gratified his own taſte, and enlarged the boundaries of the knowledge of nature: of ſuch elegant ſpecimens, whoſe value it is difficult to eſtimate, he did not poſſeſs leſs than twelve hundred*; and his collection of Engliſh Heads, which included thoſe purchaſed of the late John Nickolls†, formed a treaſure in this particular department, which was perhaps inferior to none.

In

* Theſe drawings were chiefly on vellum, by Ehret, Taylor, Harris, Miller, and Ann Lee, and were lately purchaſed for the Empreſs of Ruſſia for 2,300 pounds.

† I am obliged to the ingenious antiquary John Nichols, of the ſame name, though no relation of the deceaſed, for the following communication, from his Anecdotes of Mr. Bowyer, not yet publiſhed. The tracts hinted at, are depoſited in the Meeting in Peter's Court.

" Mr. John Nickolls, F. R. and A. SS. a Quaker, in partnerſhip with his father of the ſame name, a capital mealman at Hertford, and of Trinity pariſh, near Queenhith, London. He was choſen F. A S. Jan. 17, 1740; and poſſeſſed the eſteem of a reſpectable number of friends, who were deprived of him by a fever, at the age of 34, Jan. 11, 1745. His remains were depoſited in the burial-ground at Bunhill Fields on the 16th. Mr. Nickolls publiſhed " Original Letters and Papers of State, addreſſed to Oliver Cromwell, " concerning the affairs of Great Britain, from the year 1649 to 1658, found among the " Political Collections of Mr. John Milton; now firſt publiſhed from the Originals‡; " 1743," folio, inſcribed to Arthur Onſlow, Eſq. He was the firſt § regular collector of Engliſh Heads ‖. His noble collection of about 2,000 Heads, four volumes in folio, and

‡ The originals of theſe Letters were long treaſured up by Milton; from whom they came into the poſſeſſion of Thomas Elwood, a perſon who for many years was well acquainted with, and eſteemed by Milton. From Elwood they came to Joſeph Wyeth, citizen and merchant of London; and from Wyeth's widow, they were obtained by Mr. Nickolls; after whoſe deceaſe they were preſented by his father to the Society of Antiquaries, as appears by their minutes.

§ Anthony Wood, in his account of E. Aſhmole, tells us, " In his library I ſaw a large thick paper " book near a yard long, containing on every ſide of the leaf two, three, or more pictures or faces of emi- " nent perſons of England, and elſewhere, printed from copper cuts, paſted on them, which Mr. Aſhmole " had with great curioſity collected; and I remember he has told me, that his mind was ſo eager to obtain " all faces, that when he could not get a face by itſelf, he would buy the book, tear it out, paſte it in his " blank book, and write under it from whence he had taken it." An admirable portrait this of our modern portrait-collectors, who have ſent back many a volume to the bookſeller's ſhop ſtript of its graven honours. A moſt noted Collector told a perſon at Cambridge, who now and then ſells a head, " That " his own collection muſt needs be large and good, as it reſted on ſix points: 1. I buy; 2. I borrow; " 3. I beg; 4. I exchange; 5. I ſteal; 6. I ſell."—Mr. Aſhmole's book was conſumed with the reſt of his library.

‖ See the virulent cenſure of Mr. Rowe Mores on this ſpecies of collectors: Diſſertation on Engliſh Founders, p. 85.

In the practice of Phyſic, it is as difficult to command leiſure, as it is to govern the voice of Fame; they both depend ſo much upon the opinion of the public, that the phyſician who expects to enjoy the former, or controul the latter, will meet with daily diſappointment: to acquire popular reputation, however, there muſt be ſucceſs, and when acquired, under the ſame circumſtances, it muſt be continually accumulating. Sickneſs, which is always unwelcome, is not reſtricted to ſtated times; and, in like manner, the leiſure of thoſe whoſe profeſſion it is to remove it, is uncertain; hence it was, that Dr. FOTHERGILL never could command that reſpite from employment, which was requiſite to the relief of a mind ſo inceſſantly exerted. It may be obſerved in general, that the future is purchaſed by the preſent: "It is not "poſſible to ſecure diſtant or permanent happineſs, but by the forbear- "ance of ſome immediate gratification."

Ad quæ non veniunt præſentis gaudia vitæ,
Nec currunt pariter capta, et capienda voluptas *. PRUD.

It is true, that a phyſician of independent fortune, determined to indulge in leiſure, may refuſe the ſolicitations of his patients; but if there be not a principle of honour, which impels him to the exerciſe of his art when requeſted, there is of humanity; and this ever was a ſufficient impulſe to the Doctor to ſacrifice his own gratification to the relief and happineſs of the ſick, and his health to that of his patients: this led him, as often as his friends requeſted him to contract his practice, to reply, "I cannot deſert thoſe who have once placed "their lives in my hands; if I ſuffer, it is in my duty."

ſix in quarto, neatly let-in (which furniſhed Mr. Ames with his valuable catalogue), came ſoon after his death into the library of Dr. FOTHERGILL, who purchaſed it for eighty guineas. Dr. FOTHERGILL purchaſed likewiſe a pretty large collection of Tracts which Mr. Nickolls had picked up in his purſuit of Heads, written by thoſe of his own perſuaſion from their firſt appearance; which the benevolent poſſeſſor has left to the Meeting to which he belonged, in Peter's Court, Weſtminſter. Beſides theſe collections, he had ſeveral views by great maſters; ſome of which fell alſo into the hands of Dr. FOTHERGILL. The catalogue of his library, in his own hand-writing (including 332 volumes of tracts in folio, 4to. and 8vo.) is in the poſſeſſion of Mr. Tutet."

* For baffled mortals ſtill attempt in vain,
Preſent and future bliſs at once to gain. F. LEWIS.

But

But in the ſummer, there are much fewer reſidents in the metropolis, and in proportion ſtill leſs ſickneſs; prevented, therefore, as he was, by the mutual influence of his fame, and of his ſenſibility, from the enjoyment of any relaxation at Upton, (whither, if he went, meſſages frequently intercepted him) he choſe to retreat, for a few weeks, at this ſalubrious ſeaſon of the year, to Lea-Hall, in Cheſhire, a ſeat belonging to the Leiceſter family, about 18 miles from Warrington, where two of his brothers reſided in the year 1765, when he firſt ſought this ſecluded ſpot. Two ſummers I ſpent with him here, and I never ſpent any with more advantage. Men who have ſedulouſly attended to the profits of trade, and who by induſtry and penury are enabled to retire on their fortunes, are more generally objects of compaſſion than of envy: if they live, it is to themſelves; for want of early and rational cultivation of the mind, they have acquired one ſolitary ſordid idea, and when they have placed themſelves out of the enjoyment of it, life becomes a burthen, and retirement painful. It was not ſo with Dr. FOTHERGILL; he had numerous important duties to diſcharge, which inceſſant occupation in town had obliged him to defer: here he attempted to leſſen the applications of the wealthy, who followed him for his advice, by refuſing any gratuity; they had it in their power to apply elſewhere: the poor he never relinquiſhed; and in this place of retreat he devoted one day in the week, to attend at Middlewich, the next market-town, and to give his advice gratis to them without heſitation; when he ſometimes favoured me in being the Amanuenſis of what he dictated, and made me a witneſs of his philanthropy, as well as medical ſkill.

From his garden at Upton, he ſent duplicates of plants to Lea-hall, and there revived and extended Horticulture, where it had long lain dormant. Here he arranged his medical obſervations; for which his memory will be reſpected, as long as fact and rational experiment direct the profeſſors of the healing art. From hence he maintained a communication with moſt parts of the civilized world: Europeans, whom the ſpirit of commerce had prompted to viſit diſtant regions, conveyed to him, through various channels, the rare productions which occurred in the courſe of their travels. Few maritime perſons of this country

country but had experienced his ſalutary aſſiſtance; our trans-atlantic brethren in particular, both on the American continent and in the iſlands, had either immediately, or by their friends, been acquainted with his medical character; for in caſes that had proved rebellious to domeſtic aid, and which admitted of delay, no perſon was more frequently conſulted: and though in his language there was a preciſion, with conciſeneſs, that contained much in few words, yet the multitude of applications with which he was ſurrounded admitted of no leiſure, for his leiſure was only the variation of uſeful employment. His domeſtic correſpondence, or conſultations within the kingdom, were alone ſufficiently extenſive for ordinary occupation; but great as theſe avocations might be, and great they certainly were, they bore but a ſmall proportion to the time and attention conſtantly devoted to the Society at large, of which he was a member, and which, though united in principle amongſt each other, admitted of contingencies that demanded attention, influence, and abilities; which few men combined in a more ample degree than Dr. FOTHERGILL did, or exerted them more ardently upon all intereſting occaſions: at the ſame time, he never neglected the tender offices of private friendſhip in the moſt enlarged and beneficent ſenſe. Among his familiar correſpondents, beſides his own relations, Dr. Percival of Mancheſter, Dr. Falconar of Bath, Dr. Dobſon of Leverpool, Dr. Haygarth of Cheſter, Dr. Aſh of Birmingham, Dr. Anthony Fothergill late of Northampton, Dr. Prieſtley, Henry Zouch of Sandal, Dr. Johnſtone of Kidderminſter, Profeſſor Hope of Edinburgh, the late Dr. Pemberton of Warrington, enjoyed an honourable place; and I may add, that I conſider it as one of the moſt pleaſing circumſtances of my life, that I have the privilege of introducing myſelf in this diſtinguiſhed group. But among all his contemporaries, Cuming, the learned Dr. Cuming of Dorcheſter, ſhared his moſt unreſtrained confidence: they had been colleagues at the college of Edinburgh, and intimate fellow-ſtudents, and parted with reluctance to occupy different ſtations in the kingdom; but their frequent communication by writing was interrupted only by death: their correſpondence was long maintained in eaſy and claſſical Latin, for which few were better qualified than theſe twin friends. The departed Ruſſell,

the accurate author of the Hiſtory of Aleppo, was their early aſſociate, and continued the chain of friendſhip to the time of his deceaſe; it was then that Dr. FOTHERGILL, in the loſs of Ruſſell, wiſhed to have his ſurviving aſſociate nearer his boſom, and urged Dr. Cuming to remove to the metropolis, to enter into that ſcene of buſineſs, and amplitude of emolument, which his abilities muſt ſoon have commanded. After the warmeſt invitation from Dr. FOTHERGILL, *his Cuming**, for with this tender expreſſion he addreſſed him, with a calm philoſophy, that knew how to eſtimate the *ſummum bonum* of life, diſintereſtedly condeſcends to enjoy the comparatively private but tranquil ſcenes of life, in preference to hurry and pecuniary advantages; a phyſician, who has been for a ſeries of years converſant with the complaints and diſtreſſes of thouſands of families, muſt neceſſarily have acquired many intimate ties.—And here I may particularly introduce a name, which, like Dr. FOTHERGILL's, had long been diſtinguiſhed for virtue and ample generoſity: David Barclay, a deſcendant of the great Apologiſt, was his boſom friend, to whom the Doctor entruſted his neareſt and deareſt concerns; and he could not have ſelected any perſon more worthy of his confidence and friendſhip †.

It would be difficult to trace his pen through all the various ſubjects of utility on which it was employed, during the time, which was about two months, that he appropriated to leiſure in his annual retreat into Cheſhire: he has to my knowledge wrote ſix hours ‡ in the day ſucceſſively, and he ſeldom wrote but for private information or public inſtruction: even his journies into the country, and his returns to the city, preſented ſome ſtriking obſervations to his inquiſitive mind, that

* I am much indebted to this learned and amiable phyſician, for numerous anecdotes of the ſubject of my biography; but with a modeſty characteriſtic of true greatneſs of mind, he has ſuggeſted his remarks with a diffidence, which I believe no one has leſs occaſion to plead: in one letter with which I was favoured, when ſpeaking of his deceaſed FOTHERGILL, he claſſically enjoins me "always keep in view that you are deſcribing "the magnitude, denſity, diſtance, and orbit of a *primary planet*; and when *my* name is "to be introduced, let me appear only as an *attendant ſatellite*."

† I am likewiſe particularly obliged to David Barclay for many very important communications reſpecting Dr. FOTHERGILL.

‡ Letter to the Editor, 14th September 1771.

afforded

afforded improvement in agriculture, or uſeful reflections on life and manners. On his return from one of his lateſt excurſions to Lea-hall, by the way of Buxton, partly on account of his ſiſter's health, his mind was here, as in every other ſituation of life, intent on promoting ſchemes of public good; he ſuggeſted the means of rendering theſe celebrated Waters more beneficial, by pointing out improvements in the uſe of them, with more eaſe and convenience to the patients *, and I believe they are now carrying into execution.

With North America his correſpondence was extenſive †; his name was dear to the inhabitants: his father had thrice traverſed that continent

* Letter to the Editor, 4th October 1779.

† Among theſe may be enumerated Benjamin Franklin; Cadwallader Colden, formerly governor of New York; Dr. Chalmers, of Charles-town; the Pembertons, of Philadelphia; and the late Major John Pickering, of Tortola: and now I mention him, I may be indulged to ſhed a tear to his memory. He was in early life brought up to a mechanical employment, but by ſtrength of genius, and dint of ſelf-exertion, he acquired a competent knowledge of Engliſh, and an extenſive acquaintance with mathematics; by induſtry he became poſſeſſed of a large tract of uncultivated land, and by perſeverance he covered it with Canes and Cotton, and gradually roſe to be one of the wealthieſt planters in the Weſt Indies. He was about his fortieth year made governor of the iſland of Tortola, and held the rank of major in the inſular militia: at length he publicly profeſſed the religious principles of the Quakers, and relinquiſhed all his civil and military honours and employments. He afterwards rarely attended the courts of judicature, unleſs he thought ſome poor perſon, ſome orphan or widow, was oppreſſed by ſome more powerful neighbour; when he voluntarily attended, and publicly pleaded the cauſe of the weak, if he deemed them oppreſſed; and his juſtice and weight were ſuch as generally preponderated.

I frequently accompanied him to his plantations; through which as he paſſed, his numerous negroes ſaluted him in a loud chorus or ſong, which they continued as long as he remained in ſight. I was alſo a melancholy witneſs of their attachment to him after his death: he expired ſuddenly, and when few of his friends were near him: I remember I had hold of his hand when this fatal period arrived; but he had ſcarcely expired his laſt breath, before it was known to his ſlaves, and inſtantly about 500 of them ſurrounded his houſe, and inſiſted upon ſeeing their maſter: with this they commenced a diſmal and mournful yell, which was communicated from one plantation to another, till the whole iſland was in agitation, and crowds of negroes were accumulating around us. Diſtreſſed as I was with the loſs of my relation and friend, I could not be inſenſible to the danger of a general inſurrection; or if they entered the houſe, which was conſtructed of wood, and mounted into his chamber, there was danger of its falling by their weight, and cruſhing us in its ruins. In this dilemma, I had reſolution enough to ſecure the doors, and

tinent in the ſervice of religion; and his brother Samuel, whoſe memory I deeply reverence, had followed the pious example of their once venerable parent. Many families, from the fame of his medical ſkill, croſſed the Atlantic, to place themſelves under his care: by ſuch opportunities he gratified his inquiſitive mind, and acquired a minute acquaintance with the diſpoſition of the inhabitants, and the qualities of their ſoil, which enabled him to ſuggeſt various improvements in Horticulture, Rural Oeconomy, Agriculture, and Commerce. With his friend Peter Collinſon, he encouraged the cultivation of the Vine, with the introduction of ſuch exotic vegetables as might be uſefully tranſplanted to different regions of that extenſive continent: he laboured, with others, for a ſeries of years, and at length ſucceſsfully, to aboliſh the Slave-Trade among their own brethren: no man valued perſonal Liberty with more commendable enthuſiaſm, and few exerted their influence more ſtrenuouſly for it, in favour of the miſerable captives of Africa. On the North American continent, negro ſlavery will be gradually annihilated; but in the Weſt India iſlands, where there are few Europeans, and where the heat, which is intenſe, conduces to indolence, the traffic of rational beings is purſued with vigour, and will probably be continued till the pecuniary intereſts of Europeans can be diverted into another channel. To effect this, he ſuggeſted the cultivation of the Sugar-Cane upon the continent of Africa, where it ſeems to have been indigenous, and thrives luxuriantly; and that the natives ſhould be employed as ſervants for hire, and not as ſlaves compelled to labour by the dread of torture. Such a plan, indeed, was formerly ſuggeſted by one of the moſt powerful princes of Guinea. After the king of Dahomè had conquered the kingdom of Whidah, in the year 1727, he was ſo bent upon the execution of his plan, as to ſend Bullfinch Lambe,

and thereby prevent ſudden intruſion; after theſe precautions, I addreſſed them through a window, aſſuring them, that if they would enter the houſe in companies only of twelve at a time, they ſhould all be admitted to ſee their deceaſed maſter, and that the ſame lenient treatment of them ſhould ſtill be continued: to this they aſſented, and in a few hours quiet was reſtored; but it affected me to ſee with what ſilent, ſullen, fixed melancholy, they departed from the remains of this venerable man: he died in 1768, aged about 60 years. His only ſurviving ſon, an amiable young gentleman, reſides in England.

his priſoner, whom he had loaded with favours, to the court of Great Britain, to engage its commerce and ſupport. Upon this occaſion, he preſented his ambaſſador with 80 ſlaves, and 320 ounces of gold, to bear his expences, and to induce him to return; but Lambe, after he had poſſeſſion of ſo much wealth, ſettled in Barbadoes, and never reached Europe, or further intereſted himſelf in the project of his generous benefactor. The richneſs of the ſoil, the plenty of proviſions, the convenience of carriage, and many other conſiderations, ſtrongly ſupport the opinion of cultivating the Cane on the African continent *.

A man who could thus act with a principle of tenderneſs which realized the Roman precept, *Homo ſum, et nihil humani à me alienum puto*, could not be inſenſible to the near and ſocial endearments of friendſhip: a phyſician, in particular, whoſe time and powers are devoted to reſtoring health to his fellow-creatures, removing grief and miſery, and ſubſtituting comfort and happineſs, muſt naturally have his mind humanized to the moſt tender ſenſibilities, and animated with thoſe joys which Nature annexes to the power of doing good: his regard to his friends is expreſſed with officious and watchful care, and is returned with thoſe lenient endearments which conſtitute unaffected friendſhip, and thoſe felicities of life which remove or ſoften its pains.

"A phyſician," ſays Dr. Gregory, (who might be ſuppoſed to have

* On a ſubject ſo very intereſting, let it not be thought oſtentatious, if I take the liberty of communicating the ſentiments I could not avoid feeling in my own caſe, and the conduct which, as their natural and neceſſary conſequence, they no leſs irreſiſtibly produced. It is an inſtance given, not to ſupport a claim to peculiar merit, but merely to ſhew what every one, whoſe heart is not hardened by acts of oppreſſion, nor actuated by the love of money, muſt be diſpoſed to feel, and think, and act, in a ſimilar ſituation.

The repeated proofs of fidelity and love which I received from my own people, gave me at length ſo ſettled a confidence in their integrity, that, without the leaſt apprehenſion of danger, I have frequently found that I had left not only my liberty, but my life, entirely at their diſpoſal. The beneficence of power, and the gratitude of dependence, form an union of intereſts that never fails to heighten mutual regard: my own happineſs became at length ſo cloſely connected with the happineſs of my negroes, that I could no longer withhold from them the natural privilege of freedom, which Heaven had conferred upon me; I therefore delivered them from bondage, and thus reſtored them to the character of beings, into whom the Author of Nature, and Giver of all Good, has breathed the breath of life. See Benezet's Hiſtorical Account of Guinea, &c. Philadelphia, 1771. London, 1772. 12mo.

 drawn

drawn his picture from Dr. FOTHERGILL, had not his own afforded the ſame excellent model) " has numberleſs opportunities of giving that relief to diſtreſs, not to be purchaſed by the wealth of India. But beſides the good which a phyſician has it often in his power to do, in conſequence of ſkill in his profeſſion, there are many occaſions that call for his aſſiſtance as a man, as a man who feels for the misfortunes of his fellow-creatures. In this reſpect he has many opportunities of diſplaying patience, good-nature, generoſity, compaſſion, and all the gentle virtues that do honour to human nature."

" I come now to mention the moral qualities peculiarly required in the character of a phyſician. The chief of theſe is, humanity; that ſenſibility of heart, which makes us feel for the diſtreſſes of our fellow-creatures, and which of conſequence incites us in the moſt powerful manner to relieve them. Sympathy produces an anxious attention to a thouſand little circumſtances that may tend to relieve the patient; an attention which money can never purchaſe: hence the inexpreſſible comfort of having a friend for a phyſician. Sympathy naturally engages the affection and confidence of a patient, which in many caſes are of the utmoſt conſequence to his recovery. If the phyſician poſſeſſes gentleneſs of manners, and a compaſſionate heart, and what Shakeſpeare ſo emphatically calls " *the milk of human kindneſs*," the patient feels his approach like that of a guardian angel miniſtering to his relief; while every viſit of a phyſician who is unfeeling, and rough in his manners, makes his heart ſink within him, as at the preſence of one who comes to pronounce his doom *."

It is an adage, that friendſhip exiſts only among the virtuous: if virtue confers a preſumptive claim to friendſhip, Dr. FOTHERGILL's title to it could not be controverted, and at this altar alone he lighted the ſacred paſſion. " Sovereign benevolence," he obſerved †, " is " more widely extended than the particular attachment, however reci- " procal, that we call friendſhip. That the beloved diſciple, that " Lazarus, that others ſhared a peculiar regard from the Saviour of " mankind, is evident; but ſtill the principle was extended much

* Lectures on the Duties and Qualifications of a Phyſician, pp. 8, 9; 19, 20.

† Letter to Dr. Percival.

" farther: ' *Ye are my friends, if ye do the will of him that ſent me.*' " This was the friendſhip, it is moſt evident, that the Goſpel recom- " mended—Loving the Great Creator above all things, our fellow- " creatures for his ſake, and, in peculiar ſituations, individuals for his " and their own.—The friendſhips of Tully are beneath this kind of " friendſhip; they did honour to human nature, and to its Author " in a certain degree: a wider ſphere was unknown to them; and as the " attachments they formed were on the beſt foundations they knew, " more was not to be expected. The Goſpel amities are unlimited, " they flow to all, in proportion to that dilated benevolence which the " Goſpel only divulges. It ſtates, that we are friends to one another, " friends to the great Author of our deareſt knowledge, in proportion " as our lives are devoted to that great Will which conſtitutes the " nobleſt part of the Chriſtian character."

A mind actuated by theſe ſentiments of amity, could not be deficient in actions of beneficence. Introduced by his profeſſion into ſcenes which equally excite ſympathy, and demand ſuccour, he was ever acceſſible to diſtreſs. To the inferior clergy Dr. Hird gives the following examples of his generous philanthropy, whom he conſidered as more particularly the objects of his liberality and attention: " Being brought up in that line of education, which, in the opinion of the world, precludes bodily labour, and to which the idea of the gentleman is annexed, without a competency to ſupport the character; to many of theſe I am an evidence he was a kind friend and a private benefactor; not only by his advice in perſonal diſtreſs, but by his purſe on ſeverely trying occaſions.—Nay, ſo cordial was his humanity towards theſe, that, on a friend's hinting to him, whilſt he was in the country, that his favours were not marked by propriety of diſtinction (the gentleman from whom he had refuſed his fee being placed in high rank in the church, with an independent fortune) he returned a ready explanation of his principle of action: " I had rather," ſaid the Doctor, " return the fee of a gentle- " man with whoſe rank I am not perfectly acquainted, than run the " riſk of taking it from a man who ought perhaps to be the object " of my bounty." Such was the noble ſtyle of this moſt excellent man's way of thinking.

" The

" The humane reader will feel the fineſt ſprings of his affections moved by the following anecdotes, given me by a clergyman of high rank, who reveres the memory of Dr. FOTHERGILL, and places his obligations to him, in a very trying ſeaſon, near to his heart. A friend of his, a man of a worthy character, who has at this time an income of about one hundred pounds a year, church preferment, was, in the early part of his life, ſeated in London upon a curacy of fifty pounds per annum, with a wife and a numerous family.—An epidemical diſeaſe, which was at that time prevalent, ſeized upon his wife, and five of his children: in this ſcene of diſtreſs his heart was inſtantly turned to the Doctor, but dared not apply for his aſſiſtance, from a conſciouſneſs of his being unable to reward him for his attendance. A friend, who knew his ſituation, kindly offered to accompany him to the Doctor's, and give him his fee: they took advantage of his hour of audience, and after a deſcription of the ſeveral caſes, the fee was offered, and refuſed; but a note was taken of his place of reſidence. The Doctor called aſſiduouſly the next, and every ſucceeding day, till his attendance was no longer neceſſary. The curate, anxious to return ſome grateful mark of the ſenſe he entertained of his ſervices, ſtrained every nerve to accompliſh it; but his aſtoniſhment was not to be deſcribed, when, inſtead of receiving the money he offered, with apologies for his ſituation, the Doctor put ten guineas into his hand, deſiring him to apply to him without diffidence in future difficulties.

" Although, amidſt the diffuſion of his favours, he too frequently met with ungrateful returns, yet he could never allow inſtances of this ſort to check the ardour of his mind in doing all the good he could to others; and even to thoſe who returned ingratitude for kindneſs, his charity continued ſtill patient, hoping all things. It was his common expreſſion, when he found his favours miſapplied, or himſelf impoſed upon, " I had much rather that my favours ſhould fall upon many " undeſerving objects, than that one truly deſerving ſhould eſcape " my notice *."

That charity which is not influenced by the motive of human praiſe, and that beneficence which adminiſters preſent relief to obviate preſent

* Affectionate Tribute, page 7, 8, and 9—with ſome little variation in the language.

miſery,

miſery, wait not for thoſe occaſions only, where their conſequences are moſt extenſive, leſt ſubordinate afflictions, which are the moſt frequent, ſhould remain neglected and unſuccoured. Of little acts of charity, which he daily exerciſed, volumes might be tranſcribed; for death, which encreaſes our veneration for the good

(*Virtutem ſublatam ex oculis quærimus invidi*)

and diſpoſes the living to warmer expreſſions of gratitude, has brought me acquainted with innumerable inſtances of his generoſity. There is more miſery than affluence, and more affluence than liberality; and wherever the latter unite, there will be expectation: ſituated, therefore, as he was, in a conſpicuous point of view, where his character for liberality was univerſally known, various ſpecies of importunity augmented the channels through which his bounty flowed.

There is a condition of people, whoſe diſtreſſes are much greater than are generally imagined, and whoſe patience under ſuffering makes them leſs conſpicuous, though no leſs deſerving of protection, than the importunate poor. They have known better days, and conſequently feel more poignantly the reverſe of their condition; their reluctancy in complaining, often reduces them very low in health and ſpirits before they are diſcovered, and thereby diſeaſe is accumulated upon want. From the retreats of anxiety flow an infinitude of bodily diſtreſſes; of this he was tenderly ſenſible; and while this modeſt indigence intereſted his ſympathy, it had acceſs to his bounty, in ſuch a manner as was moſt likely to blunt the acuteneſs of diſtreſs; for obligations are more grateful from the manner in which they are conferred, than from their magnitude. To preclude the neceſſity of acknowledgment in ſuch minds, he endeavoured to ſuggeſt ſome motive for his bounty, that might afford the receiver the merit of a claimant, and the liberal donor that of diſcharging a debt: after preſcribing for ſuch individuals, he remembered that there is ſuch a diſtemper as hunger, in the catalogue of human infirmities, and not unfrequently conferred his bounty under the pretence of defraying the expence of their medicines; for that charity which is not exerciſed to make uſury of fame, ſilently diffuſes the

the oil of gladneſs over the troubled commotions of the heart, and enjoys the private retreat of unmixed happineſs.

One inſtance, among numbers, I am urged to communicate here, as death now equally precludes the power of beſtowing, and the gratitude of acknowledging, future bounties: Captain Carver's is a name known in the annals of miſery, to which he was reduced by long-continued want: diſeaſe, its natural conſequence, gave him acceſs to Dr. FOTHERGILL; and I am informed by his widow, that as often as he applied for medical relief, the Doctor as often accompanied his preſcription with a liberal donation. But Captain Carver was not an importunate ſolicitor; the mind not hardened by familiarity of refuſal, or that hath not acquired, by frequent ſtruggles, the art of ſuppreſſing its emotions, poſſeſſes that diffidence which is the inſeparable aſſociate of worth. Betwixt diffidence and want, many were the ſtruggles of Captain Carver; but, overcome at length by the repeated acts of the Doctor's generoſity, a jealous ſuſpicion of becoming troubleſome to his benefactor, determined him to prefer that want, and the deprivation of the neceſſaries of life, which put him out of the power of choice; for death ſoon triumphs over famine.—What a conflict of ſullen greatneſs does this tragedy exhibit! When his fate was communicated to the Doctor, how tender was his expreſſion! "If I had known his diſtreſs, he ſhould "not thus have died*!"

He that is cordially diſpoſed to do good, will not find his beneficence diſappointed for want of occaſions to exerciſe it; for diſtreſs appears in a thouſand ſhapes, and affords the affluent as many opportunities of augmenting their own happineſs, by enlarging that of others. Were there no miſery in the world, there would be few occaſions for the exerciſe

* The king has ſince graciouſly condeſcended to allow the widow Carver a liberal annuity. The unfortunate huſband was only known to me on his death-bed. In the early ſtages of his diſeaſe, he was able to wait upon Dr. FOTHERGILL; but in the progreſs of it, being confined to his bed, the Doctor requeſted me to viſit the Captain at his lodgings; and my firſt interview was within three days of his deceaſe. It was after his funeral that I felt myſelf more immediately intereſted in the ſuccour of the widow and orphans. As the Captain died pennyleſs, he was buried, to avoid expence, in the poor's ground, a part of the church-yard uſually appropriated to the abject poor. When I reflected upon the utility of his Travels, I conſidered him as a public loſs, and his offspring

exerciſe of thoſe generous virtues, which beget gratitude and thankfulneſs on one hand, and the tender emotions of ſympathy and humanity on the other. Conſcious as we are, that no one is exempt from the painful viciſſitudes of life, and that the bleſſed to-day may to-morrow experience a bitter reverſe, the diſtreſſed are ever objects of commiſeration, and ſhould raiſe in our hearts that kind of compaſſion, and obtain that aid from us, which we ſhould look for were ſuch afflictions ſuffered to overtake us.

So Dr. FOTHERGILL reflected, and ſo he conſiſtently acted; for he was almoſt inceſſantly ſuggeſting methods of mitigating, not only abject poverty, but likewiſe that ſpecies of poignant ſenſibility which the reverſe of better days naturally inflicts. Feelings of this nature preſented to him a plan for relieving the diſtreſſes of the lower claſſes of the people, by leſſening the price of proviſions. Where the profit of labour is barely adequate to the expence of ſubſiſtence, from unfavourable ſeaſons, or from whatever cauſe a temporary ſcarcity of the neceſſaries of life may originate, the ſeverity is peculiarly felt by the poor: when land fails of its uſual product in any one general article of diet, every other being proportionally more demanded, the price of the whole will be enhanced. Such a national ſcarcity can only be obviated by importation from another country, at the expence of money or ſome other equivalent value, and hence conſtitutes only a partial remedy; but could a ſubſtitute for national ſcarcity be found, which is not the product of land, ſuch a ſubſtitute would afford the moſt effectual means of obviating impending diſtreſs; and this the ocean affords, which barters its produce for labour alone. If the inhabitants of a country, ſurrounded by a ſea abounding with fiſh, were accuſtomed to live upon

offſpring as the children of the public; and I preſented the widow with a few pounds, to clothe and feed herſelf and children: but the money, thus deſigned to ſatisfy her hunger, ſhe employed otherwiſe; ſhe had the corpſe of her huſband taken out of the poor's ground, and buried in ground containing the aſhes of higher company, and over it ſhe raiſed a decent monument to his memory. His Travels, however, will prove a more durable monument than ſtone; and, though the duſt with which we are mixed avails not to the living or to the dead, yet I was ſenſibly touched with this inſtance of poſt-mortuary affection, and have ſince endeavoured to mitigate the miſeries of a mind endowed with ſuch tender ſenſibilities.

this

this food one day in the week, it is evident that the ſame land would ſupport one ſeventh more inhabitants, without enhancing the neceſſaries of diet. If our fiſheries contributed to ſubſiſt the inhabitants of Spain, Portugal, and Italy, whilſt our own poor were at times wanting bread, was it not true policy to encourage the more general uſe of this cheap and dietetic article?

At the approach of the ſevere winter of 1767, Dr. FOTHERGILL propoſed a ſcheme, and liberally contributed to raiſe a fund for enſuring its ſucceſs, to purchaſe fiſh at a wholeſale cheap price, and to diſpoſe of them at a ſmall loſs, till the whole ſubſcription was expended, for the benefit of the poor and middle ranks of houſekeepers. The ſociety, who ſupported this ſcheme, which was continued to the year 1770, in the ſame manner purchaſed potatoes in Lancaſhire, or other cheap markets, and conveyed them by water to the metropolis, where there is more poverty, as well as more wealth, than in any other part of the kingdom; and, to countenance this diet, he purchaſed from the warehouſes, opened for the ſale of theſe articles, the proviſions of his own table, once at leaſt a week. If this conduct deſerves to be recorded as an example for poſterity, I ſhall be approved for introducing likewiſe the reſpectable names of David Barclay, John Barclay, Daniel Mildred, Samuel Hoare, Oſgood Hanbury, Capel Hanbury, John Harman, John Strettell, Iſaac Walker, Zachary Cockfield, Thomas Corbyn, and William Archer, as examples of beneficence, who co-operated in this patriotic and humane undertaking.

To break a monopoly which had highly enhanced the price of freſh fiſh in all the markets about London, he firſt ſuggeſted the ſcheme of bringing fiſh by land-carriage; and though it did not ſucceed in every reſpect, it tended to deſtroy a ſuppoſed combination, which has never ſince ariſen to the ſame alarming extent; and may probably long be remembered, as a project which, though now ſuſpended, may be renewed at a future time, ſhould the ſame complaint again occur.

To render bread much cheaper to the poor, though equally as wholeſome as the beſt wheaten, Dr. FOTHERGILL propoſed a method of making it with one part of potatoes, and three parts of houſehold flour; and to encourage its uſe, he cauſed proper directions to be diſtributed

among the bakers and others in the city. I have often eat this bread, and were it dearer, I ſhould prefer it to that made of the fineſt flour.

A wholeſome bread may likewiſe be made, by mixing the fine flour of Indian corn with that of wheat, in equal proportions; which, if rightly managed, the colour will be about the ſame as the ſtandard wheaten bread, and, before the preſent conteſt with America, might have been ſold about two-pence in the quartern loaf cheaper than the fine wheaten, when that may be at eight-pence per quartern; and, ſhould days of peace return, will doubtleſs be again equally cheap.

No ſubſtance, uſed as aliment, has been more fully and ſatisfactorily proved to be nutritious than this corn, which was once imported hither in conſiderable quantities from North America, where it forms a large ſhare of the diet of both the rich and the poor: it is light and eaſy of digeſtion, and at the ſame time affords much nouriſhment, as thoſe moſt addicted to it endure exerciſe and labour with ſuperior eaſe; and it has likewiſe been particularly remarked, that horſes fed with it will travel farther, and bear the fatigues of a long journey much better, than when fed with any other food whatever. It was formerly much uſed about London for the feeding of hogs, and it has rendered their fleſh whiter, ſweeter, and better flavoured, than when fed with any thing elſe hitherto uſed; and for black cattle, deer, and poultry, there is no food ſuperior to this grain.

The people of North America dreſs the flour into various forms, which it is as well calculated for as that of wheat; in the Weſt Indies it conſtitutes a large ſhare of the food of the negroes, who, perhaps, undergo as much hardſhip and labour as moſt of the ſons of men.

The flour of this corn poſſeſſes, to moſt, an agreeable ſweet flavour; ſo that ſome perſons, who have accuſtomed themſelves to eat the bread made of it, find a difficulty in returning to the uſe of any other. Great care is requiſite in grinding the corn, as a part of the interior edge of the grain is compoſed of a ligneous ſpongy ſubſtance, the middle of which is of a dark brown colour, and of a bitter taſte, which, if ground into the flour, produces a diſagreeable taſte; to avoid which, the mill-ſtones ſhould be ſet ſo wide as but juſt to burſt the thick

thick or farinaceous part of the grain, which ſhould be paſſed through a ſieve, in order to ſeparate the above-mentioned bitteriſh ſubſtance; the grain ſhould then be ground with the ſtones ſet to render it ſufficiently fine: by this precaution the flour is as white as that of the fineſt wheat, and full as pleaſant to eat; it poſſeſſes, like potatoes, the quality of preſerving the bread, made from a mixture of it, in a moiſt ſtate for many days, which, at leaſt in warm weather, is no inconſiderable advantage *.

Though numerous rivulets, when united, conſtitute a conſiderable current; yet, various as were the channels of the Doctor's bounty in the minor departments of beneficence, they formed but a ſmall proportion of the ample income which flowed from the extenſive exerciſe of his profeſſion. Thoſe acts of beneficence, where, like the oak which germinates from an acorn, great effects ariſe from ſmall cauſes, may be claſſed under minor departments, when referred to him, whoſe liberality flowed into ſo many wide and diſtant channels: ſeldom was any uſeful ſubſcription ſet on foot, either in this kingdom or its dependencies, without his name ſtanding foremoſt in the liſt, as many of the ſchools at home and abroad can gratefully evidence: in public calamities, as in inſtances of private diſtreſs, but in a more enlarged manner, the ſympathy of his heart expanded the bounty of his purſe—

> His boſom Truth's fair palace; and his arms
> Benevolent, the harbour of mankind!
> BROOKE's Guſt. Vaſa.

A man who devoted his labour and fortune to public good, without oſtentation, may have raiſed many monuments of public benefit, that are too remote to be clearly recollected, or too recent to be fully aſcertained. In the late war, when the ſucceſs of our arms had filled the priſons with captives, and reduced our enemies to a ſtate too abject to adminiſter ſupport adequate to the miſery of their own people, a

* Whilſt I am conſidering the means of relieving the poor by a healthy ſubſtitute for wheaten bread, I cannot but recommend the peruſal of a performance lately publiſhed, intitled, Obſervations on ſuch nutritive Vegetables as may be ſubſtituted in the Place of ordinary Food, extracted from the French of M. Parmentier. 8vo. Murray. London, 1783.

national ſubſcription was inſtituted, to feed and clothe theſe unfortunate victims of war; for a brave people, like the Perſian Cyrus, deemed thoſe no longer enemies whom they had vanquiſhed *. In this noble undertaking Dr. FOTHERGILL bore a conſiderable ſhare: the Society of Quakers, who ſcarcely conſtitute the two hundredth part of the nation, raiſed above one fourth of the whole ſubſcription; towards which he was an ample contributor, and was appointed one of the Committee † for conducting and appropriating this national bounty; of which no inſtance of equal urbanity, was ever recorded in the heroic ages of Greece or Rome ‡.

* Norborn Berkeley, afterwards Lord Botetourt, then colonel of the militia who guarded the French priſoners at Wincheſter, was ſtruck with their diſtreſs, and was the firſt who propoſed a ſubſcription for their relief.

† The benevolent Thomas Corbyn, with the late Richard How, were likewiſe of this Committee.

‡ Dr. Johnſon, in his noble preface to the Report of the above Committee, juſtly remarks, that "new ſcenes of miſery make new impreſſions; and much of the charity which produced theſe donations, may be ſuppoſed to have been generated by a ſpecies of calamity never known amongſt us before. Some imagine that the laws have provided all neceſſary relief in common caſes, and remit the poor to the care of the public; ſome have been deceived by fictitious miſery, and are afraid of encouraging impoſture; many have obſerved want to be the effect of vice, and conſider caſual alms-givers as patrons of idleneſs. But all theſe difficulties vaniſh in the preſent caſe: we know that for the priſoners of war, there is no legal proviſion; we ſee their diſtreſs, and are certain of its cauſe; we know that they are poor and naked, and poor and naked without a crime.

"But it is not neceſſary to make any conceſſions. The opponents of this charity muſt allow it to be good, and will not eaſily prove it not to be the beſt. That charity is beſt, of which the conſequences are moſt extenſive: the relief of enemies has a tendency to unite mankind in fraternal affection; to ſoften the acrimony of adverſe nations, and diſpoſe them to peace and amity: in the mean time, it alleviates captivity, and takes away ſomething from the miſeries of war. The rage of war, however mitigated, will always fill the world with calamity and horror: let it not then be unneceſſarily extended; let animoſity and hoſtility ceaſe together; and no man be longer deemed an enemy, than while his ſword is drawn againſt us."

"The effects of theſe contributions may, perhaps, reach ſtill further. Truth is beſt ſupported by virtue: we may hope from thoſe who feel or who ſee our charity, that they ſhall no longer deteſt as hereſy that religion, which makes its profeſſors the followers of HIM, who has commanded us to "do good to them that hate us."

The

The preſent unnatural war in America * afforded a freſh example of popular miſery, and another inſtance of Dr. FOTHERGILL's beneficence; for his bounty flowed copiouſly into the channels of miſery, wherever it exiſted. As the contention in America was embittered by reciprocal injuries, each contending party was more and more ſtimulated to acts of violence, till reiterated diſtreſſes had level'd moſt ranks of people into penury and want. To obviate theſe ravages of inteſtine war, a ſubſcription was opened among the Quakers of Europe, for the ſervice of their fellow-ſubjects beyond the Atlantic. If Dr. FOTHERGILL did not firſt propoſe, he was certainly one of the moſt early and liberal advocates for this generous ſubſcription. Its application was not confined to any ſect; it was extended to the miſerable of every denomination; for, under affliction, we ought to be brethren by ſympathy. But to deſcribe the Doctor in every act of his beneficence, would conſtitute an epitome of human woe counteracted by godlike generoſity.

I hope it will not be deemed a partial attachment to ſect, ſhould I indulge myſelf in a digreſſion not immediately connected with the object of my narrative. Conſidering the general philanthropy of a Society of which Dr. FOTHERGILL was a diſtinguiſhed member, it may ſeem ſtrange that it ſhould have obtained the obloquy and invidious reflections of perſons of all denominations, when a little enquiry would have afforded ſufficient reaſons for adopting more favourable ſentiments. A cauſe, and one of the moſt difficult to eradicate, is the impreſſions imbibed in early life, prejudicial to this Society. No book, perhaps, is at preſent more generally read in ſchools than Guthrie's Geographical Grammar; and, ſo far as it reſpects the religious principles of the Quakers, it is compoſed of errors and miſrepreſentations, with which the writer would have been aſhamed to have charged any of its members: but early impreſſions being moſt permanent, and theſe prejudices being interwoven in ſchool education, become familiar to youth, and grow up with them, and conſequently poſſeſſing no novelty, they excite no future inveſtigation; and thus opinions, founded upon miſrepreſen-

* Whilſt this ſheet was in the preſs, the Preliminary Articles of Peace were ſigned, on the 20th of January 1783.

tation,

tation, are admitted as habitual and eſtabliſhed truths. What is different from the general habitude of mankind, will not acquire general applauſe: it is not flattering to ſelf-love to admit, much leſs to approve, opinions which controvert its own; and thoſe of the Quakers conſiſt of ſuch as were calculated to obtain popular obloquy. The whole tenor of their principles being contrary to war, they could not therefore raiſe the eſteem of the military; as they had no prieſts, and conſidered the exerciſe of the Goſpel to be free, they could not conciliate the affections of the clergy; in like manner, as they diſcouraged going to law, they could not expect the favour of the profeſſors of law: and thus the principal ſources, upon which the public opinion muſt depend, were naturally adverſe to a Society, whoſe principles counteracted their views and their emoluments.

Whoever is bold enough to diſſent from popular opinion, is reprobated as obſtinate or fanatic by popular deciſion; but, however ſudden paſſion may controvert a general poſition, mankind are ſeldom long and deliberately obſtinate againſt private intereſt. But the ſyſtem on which I am adverting, as it admitted not of oaths, it debarred itſelf from all emoluments under government; as it repreſſed pomp and ceremonious addreſs, it could neither court the great nor flatter the gay. From ſuch a ſyſtem of ſelf-denial the Society could never be numerous; and, as might be naturally imagined, would rather have excited pity than perſecution: but, unenviable as their religious opinions might appear, ſo natural is it for the ſtrong to oppreſs the weak, that they were compelled to ſeal thoſe opinions with their blood. Time, however, which is the meaſure of actions, has placed men and opinions in new points of view:

Opinionum commenta delet dies, naturæ judicia confirmat. CIC.

Perſecution drove the Quakers to America, where they founded a government unknown in modern times; where the world beheld a people in power, the only people recorded in hiſtory, who never exerciſed that power to oppreſs and perſecute the weak!

What is familiar and near us, excites little ſcrutiny or inveſtigation; but the time may come, when a wiſe legiſlator may deſcend to enquire,

by

by what medium a whole Society, in both the Old and New World, is made to think and act with uniformity for upwards of a century! By what polity, without emolument from government, they have become the only people on earth free from poverty! By what œconomy they have thus prevented beggary and want among any of their members, whilſt the nation groans under taxes for the poor! Then perhaps their fanaticiſm may not appear to the public in a worſe point of view than has been exhibited by a modern writer on the continent, whoſe ſentiments are as follow. After giving a view of their religious principles, he ſays, " * Après cela qu'on range tant qu'on voudra les " Quakers parmi les fanatiques; ce ſont toujours des fanatiques bien " eſtimables. Je ne puis m'empêcher de déclarer, que je les eſtime un " peuple vraiment grand, vertueux, plein d'induſtrie, d'intelligence, et " de ſageſſe. Ce ſont des gens animés des principes les plus étendus " de beneficence, qu'il y ait jamais eu ſur la terre. Leur charité ſe " porte ſur toute la race du genre humain, ne refuſant à perſonne les " miſéricordes des dieux. Ils reconnoiſſent publiquement que la li- " berté univerſelle eſt due à tout le monde. Ils condamnent les impôts, " et neanmoins ils les payent, et s'y ſoumettent ſans murmure. Enfin, " c'eſt peut-être le ſeul parti chez les Chrétiens, dont la pratique du " corps entier reponde conſtamment à ſes principes. Je n'ai point de " honte d'avouer que j'ai lu et relu avec un plaiſir ſingulier l'Apologie " du Quakériſme par Robert Barclay; il m'a convaincu que c'eſt, tout " calculé, le ſyſtême le plus raiſonnable et le plus parfait qu'on ait " encore imaginé." Encyclopedie Fr. T. 13. p. 648.

* Let thoſe, who pleaſe, conſider the Quakers as fanatics; they are ſuch fanatics as always merit eſteem. As to myſelf, I cannot but acknowledge, that I conſider them as a great and virtuous people, induſtrious, intelligent, and wiſe, and animated with the moſt extenſive principles of beneficence that have ever yet appeared. Their charity is extended to the whole human race, denying no one a godlike compaſſion. They publicly acknowledge that liberty is due to all; and though they condemn impoſts (eccleſiaſtical taxes, and thoſe for carrying on war) they ſubmit to them without murmuring. They are, perhaps, the only Society of Chriſtians, whoſe practice and principles amongſt all its members conſtantly correſpond. I am not aſhamed to own, that I have repeatedly peruſed, with ſingular pleaſure, Robert Barclay's Apology for the Quakers; and I am convinced, take it all together, that it is the moſt rational and perfect ſyſtem that hath ever yet been conceived.

He that ſo arduouſly and ſucceſsfully exerted his abilities and fortune in promoting private and public good, was, upon numerous occaſions, a generous patron of Literature: though above courting the adulation of authors, he endeavoured to direct the genius and improve the writings of perſons of uſeful talents: without leiſure to arrange and publiſh ſo much of his own experience as the public deſired, he ſought opportunities of ſuggeſting to others ſuch objects of enquiry as might prove moſt beneficial to the community. Thoſe who are the moſt capable of inſtructing mankind, are oftentimes, from a diffidence which aſſociates with true excellence, moſt backward of imparting inſtruction. Cleghorn, the ingenious and inquiſitive Cleghorn, who practiſed long and ſucceſsfully at Minorca, returned to England without having arranged his important hiſtory of the diſeaſes of that iſland, which he afterwards did at the ſuggeſtion of Dr. FOTHERGILL *. Theſe phyſicians, to whom the world has been ſo much indebted, as they had been early colleagues in ſtudy, ſo they continued intimate friends, emulating each other in medical reſearches. The latter, when he firſt read what Cleghorn had effected, ſpeaks of his labours with that liberal ſpirit of approbation, which envies not the laudable actions of another: "† Miraberis proculdubio Cleghornii noſtri induſtriam; in orbis etiam "angulo ſitus majores facit progreſſus quam noſtrorum quivis, quibus "etiam non deſunt idonea ſtudiorum adminicula. Alius itaque alium "excitemus, ut ejus inſequamur veſtigia, tantoque viro dignos evademus "amicos."

To Dr. Ruſſell, his early aſſociate, and afterwards his correſpondent

* The moſt material parts of Dr. Cleghorn's excellent publication were communicated to Dr. FOTHERGILL, in letters from Minorca, dated in the years 1742 and 1744, methodically digeſted, and written in pure, elegant, and claſſical Latin, which language he wrote with great fluency. Theſe letters Dr. FOTHERGILL tranſmitted to Dr. Cuming, who was likewiſe an intimate correſpondent of Dr. Cleghorn's, as well as of Dr. Ruſſell's.

† Thou wilt no doubt admire the induſtry of our friend Cleghorn; who, ſituated in a corner of the world, has made greater progreſs than any of us, who even do not want the proper aids of ſtudy. Let us therefore ſtimulate one another, that we may follow his footſteps, and become the worthy friends of ſo great a man.

Letter to Dr. Cuming, 14th Auguſt 1742.

at

at Aleppo, and whoſe life he has commemorated with the tenderneſs of fraternal affection; to the amiable Ruſſell, he urged the importance of an hiſtorical narrative of that city and its environs; and which the latter executed, with a perſpicuity that will hand down the work, and the reputation of its author, to diſtant poſterity *.

Within the extent of my knowledge, ſimilar inſtances might be largely multiplied; and they equally point out his generous ardour in the promotion of uſeful knowledge: in many literary performances, indeed, his aſſiſtance has acquired public acknowledgment, as the reſpectable names of a Rutty, a Macbride, a Falconar, and many others, will teſtify. Few men of diſtinguiſhed reputation paſs through life with merely ſilent admiration; gratitude or reſpect will at length ſingle them out as patrons of ſcience; and dedications of juſt applauſe, or miſapplied adulation, will follow: but as Dr. FOTHERGILL was uniformly more deſirous of doing good, than of having it known, he was averſe to dedications, and conſidered them as a ſpecies of literary pageantry, more productive of envy to the patron, than of advantage to the author. I was once with him at Lea-hall, when a gentleman, whoſe reputation juſtly afforded him the moſt honourable diſtinction, requeſted to addreſs a work of intrinſic merit to the Doctor, and I well remember his reply:—"My friendſhip will not be augmented by "ſuch a public inſtance of reſpect: apply therefore to ſome eminent "perſon, whoſe friendſhip may thus be conciliated; whereby," added he kindly, "an old friend may be preſerved, and a new one gained."

That immenſe work of Botany, wherein the pencil of Miller illuſ-

* From the time he left England, to his return in February 1755, we had maintained, ſays Dr. FOTHERGILL, a regular correſpondence. I could not forbear mentioning to him repeatedly, how acceptable a more accurate account of Aleppo would be to this nation, and to all Europe; that no perſon would probably ever ſtand a chance of ſucceeding in it ſo happily as himſelf; that his long reſidence there, his knowledge of the language, the manners, cuſtoms, diſeaſes of the place, the great credit he had acquired amongſt all ranks, by an able, diligent, and diſintereſted exertion of his faculties, his influence over the Paſcha, and the reſpect paid him by the Turks themſelves, would facilitate every enquiry. He viewed the propoſal in the ſame light, collected materials, made ſuitable enquiries, and has erected a laſting and honourable monument to his memory.

Life of Dr. Ruſſell.

trated, in a ſtyle of unprecedented elegance, the ſexual ſyſtem of Linnæus, chiefly from the originals at Upton, was actually dedicated to the Doctor; and afterwards, with no little difficulty in recalling the copies, cancelled at his expreſs ſolicitation. Though he delighted to encourage ingenuity, he diſliked to be told of it.

PURVER, the indefatigable tranſlator of the Bible and Teſtament, by wonderful ſelf-exertion, acquired an extenſive knowledge of the languages requiſite for this arduous labour; and at length effected, by the patronage, and ſolely by the patronage of Dr. FOTHERGILL, a literal tranſlation of the Sacred Scriptures*: and though a tenaciouſneſs in the learned author for provincial idiom, rendered this valuable tranſlation leſs read and eſteemed, yet, independent of idiomatic objections, it may juſtly be eſtimated among the principal productions of the century.

In the proceſs of this narrative, I have often had occaſion to reflect, that what is known cannot be immediately told. There are circumſtances connected with the living, which delicacy forbids to record; or with the dead, whoſe aſhes it were cruel to the ſurviving friends to moleſt: hence many a good man's actions are buried in oblivion. Such muſt be the lot of many a noble inſtance of Dr. FOTHERGILL's munificence. I ſhould even have paſſed over in ſilence that which the late Dr. Knight afforded, had it not been generally known, and recently revived by the claſſical pen of a reſpectable phyſician †. The Librarian of the Britiſh Muſeum, whoſe character was deſervedly eſteemed, by ſome ſpeculations in mining, more plauſible than productive, became ſo far involved in his circumſtances, as to be obliged to apply to thoſe he deemed his friends for pecuniary ſupport; but his application was received with coolneſs. In this dilemma, though he had enjoyed the perſonal acquaintance of Dr. FOTHERGILL, he could not have preſumed upon making ſuch a requeſt, but from the compulſive motive of neceſſity. The ingenious Knight, with diffidence, told the Doctor what would render him once more a happy man. The anſwer given by the

* In two volumes folio, anno 1765.

† Memoirs of the Life, and a View of the Character of the late Dr. FOTHERGILL; by G. Thompſon, M. D.

phyſician

phyſician of philanthropy, whoſe heart never felt the diſtreſs of another without wiſhing to remove it, was ſhort but expreſſive,—"*I will then make thee happy**." His was not that drop-like bounty, which pauſes in its progreſs; it was full, flowing, and benign†; for I am informed, that in this inſtance it amounted to about a thouſand guineas.

Nullus argento color eſt avaris,
Abdito terris—— ‡ HOR. lib. ii. od. 2.

Perſons, whoſe moments are devoted to employments of profit, are rarely diſpoſed to ſacrifice private emolument to public good. Time, to a medical character of high reputation, is a lucrative reality; and he that devotes a ſhare of it to the benefit of the community, in that proportion ſacrifices his private intereſt. It is rarely, indeed, that phyſicians depart from the routine of profeſſional practice; but Dr. FOTHERGILL, whoſe enlarged mind was capable of embracing every object of utility, was an exception: the punctuality of his conduct, and the perſpicuity of his reflections, gave an activity to his mind to promote improvement and perfection in every thing around him. The crouded ſtreets of the Metropolis, its ſuperb edifices, and perpetual traffic, excite admiration in the moſt indifferent, whoſe attention may not have been attracted by more minute inveſtigation; but the active mind of our Aſſociate, unreſtrained in its ſurvey of utility, was often engaged in detecting error and pointing out improvement in this ſplendid city, which he communicated to thoſe concerned in its government, either immediately, or by letters in the public prints. His letters on ſubjects of police, and in other departments, could they be collected together, would conſtitute an ample and uſeful volume, calculated to inſtruct the magiſtrate, and inform the architect and tradeſman. He

* The immenſe artificial loadſtone, deſcribed in Dr. FOTHERGILL's Works, was the invention of Dr. Knight, and preſented by the former to the Royal Society.

† See Dr. Hird's Affectionate Tribute, page 7.

‡ Gold hath no luſtre of its own;
It ſhines by temperate uſe alone. FRANCIS.

condeſcended even to exert his influence in the improvement of the common pavement; to widen the ſtreets, and open new communications for the health and convenience of the citizens.

As he conſidered the eaſy and cheap conveyance of merchandize, and other articles of conſumption, from various parts of the nation to and from the Metropolis, as of immenſe importance to the manufactures, trade, exports, and wealth of the city, he ſuggeſted the plan of bringing the northern navigations, which already unite Liverpool, Briſtol, and Hull, into the vicinity of London, by new canals, the grand reſervoir of which he projected to riſe in Cold-bath-fields. In his fertile imagination, I have liſtened with pleaſure to the familiar manner in which he delineated the facility of this important intercourſe; and probably, when the great tendency of trade towards the north of this kingdom, from the advantage of navigable canals, ſhall have rouſed the citizens of London to protect and proſecute their own intereſts, ſuch a project may be ſeriouſly revived, and effectually executed *.

Thoſe only, who have acquired the habit of doing much in a little time, know how to eſtimate its value; and the œconomy of time, applied to the various concerns of trade and commerce, admits of the moſt profitable balance in favour of induſtry and traffic. In this uſeful point of view, among many others, he conſidered eaſy communication through the ſtreets of London as of ſingular importance in a mercantile city, and lamented the obvious deficiencies in this reſpect, which occurred in almoſt every part of London. From the great northern road the city is chiefly acceſſible only by Smithfield and Biſhopſgate-ſtreet; and from the former of theſe to the latter, there is no communication that conveniently admits of more than one carriage to paſs at a time; whilſt ſuitable avenues, with little expence, might have been formed, by an ample entrance from Moorfields to the Manſion-houſe, and from Iſlington to Black-friars-bridge, in ſtraight lines: this he projected; and, by the exertions of Charles Dingly, who conſtructed the ſaw-mills at Limehouſe, in imitation of thoſe at Sardam, it was near being accompliſhed.

* See a judicious pamphlet, juſt publiſhed, intitled, Conſiderations on the Idea of uniting the Rivers Thames and Severn, 4to. 1782.

Black-

Black-friars-bridge, one of the firſt ſtructures of the kind that human induſtry and judgment ever executed, and which covers the wealthieſt ſtream in the univerſe, certainly deſerves an avenue of ſome elegance, eſpecially where elegance would neceſſarily be joined with utility.

Many other parts might be gradually improved, by ſeizing the opportunities of caſual conflagrations, or the ſlow but more certain dilapidations of time; to widen the ſtreets, or to improve the ſtructure of new edifices; and few opportunities of this kind eſcaped the Doctor's attention, and his conſequent recommendation to the magiſtracy*.

Indeed, one of the moſt dreadful conſequences of a large and cloſe-built city, is the conflagrations which ſo frequently break out, and againſt the devaſtation of which no remedy of the legiſlature has yet been adequate; nor perhaps ever will be, whilſt, under the privilege of freedom, ſtructures are raiſed, and employments carried on, in ſituations which true policy would interdict. Of theſe, ſugar-houſes, and the operations in them, where much fuel is neceſſarily expended, afford ſtriking examples; and in this point of view engaged the attention of the Doctor, who at different times propoſed various modes of prevention. When the Minories was laid open, by pulling down the old houſes, the ſituation appeared to him as very eligible for the conſtruction of theſe and ſimilar hazardous buildings, where the uſe of fire in quantity might endanger houſes in their vicinity. Two letters upon this ſubject, though printed without his name, he told me were his productions; which I have inſerted, as inſtances of his regard to objects of general utility†.

A cauſe

* After the conflagration of Langdale's diſtillery, at the bottom of Holborn-hill, the Doctor took much pains to have the buildings, to be conſtructed on their ruins, thrown back, in a line with thoſe on Holborn-hill; but, laudable as his endeavours were, he laboured in vain.

† GAZETTEER, December 30, 1768.

"IN the compaſs of one week two ſugar-houſes, in the moſt populous parts of the city, have been deſtroyed by fire, and have ſpread deſolation and terror in the neighbourhood.

"I conſider theſe edifices as built for deſtruction; there being more ſugar-houſes burnt down than any other houſes of manufactory.

"Whether

A cauſe of deſtruction, almoſt peculiar to great cities, and perhaps equally frequent and fatal as the foregoing, is the mode of interment of the bodies of the dead, and particularly thoſe of the poor; and which is ſtill continued in this metropolis. In ſome burying-grounds the graves are made ſufficiently wide to contain three or four wooden coffins abreaſt,

" Whether this is owing to any fault in their conſtruction, or to the ignorance, neglect, and ſtupidity of thoſe who are employed in this buſineſs, I know not.

" Ought a well-governed city to permit ſuch buildings to be erected as are attended with ſuch dreadful conſequences? Moſt certainly it ought not.

" A gentleman, whoſe life is of great conſequence to many, as well as to his family, lay extremely ill of a dangerous diſorder: the terrible alarm of fire within a few doors made it neceſſary to take him out of his bed, and to carry him, half naked, to the firſt hoſpitable door where the family could think of getting admittance. His recovery was extremely doubtful before; this event will not leſſen the hazard.

" Shall families be ſtripped of their ſupport, ſhall the public be deprived of uſeful members, ſhall diſtreſs and ruin be ſpread through a neighbourhood unneceſſarily, and without any endeavour to prevent the like inconvenience for the future? Humanity, at leaſt, ſpeaks another language. Perhaps hearts, obdurate to every other ſenſation but that of gain, would paſs through the ruins of the metropolis itſelf, without a ſigh, or a wiſh for the prevention of ſuch fatal accidents!—

" The city ſhews, in many reſpects, an inclination for improvement; and I wiſh that no more ſugar-houſes might be ſuffered to be built in the city, nor thoſe that are built tolerated beyond a certain time, that is, their preſent leaſes.

" I would not preſume to direct where theſe now neceſſary edifices ought to be built; but, as I think no perſon ought haſtily to find fault with any thing, unleſs he propoſes a remedy, I take the liberty to ſuggeſt the following to the conſideration of the public.

" In the tract of ground that lies between the Minories and Poor Jewry-ſtreet, I think there is ſpace enough now vacant, or likely to become ſo, on which as many ſugar-houſes might be erected as there are in the city.

" Let an act of parliament be obtained to prohibit the future erection of any ſugar-houſes, except in this particular part. The ſcite would be very advantageous to the ſugar-bakers themſelves; it is near the water-ſide, and the conveyance to all parts of the town eaſy. Their fuel, their ſugars, would coſt leſs to be laid in here, than in moſt other places. Beſides, the city would be eaſed, by this means, of one of the greateſt nuiſances that attends it, the ſugar-carts; the unloading and loading of which coſt more time to the paſſengers in carriages, than the brewers drays themſelves; for moſt of the ſugar-houſes in the city are in narrow ſtreets, yet in ſtreets and paſſages much frequented: Bow-lane, Knight-rider-ſtreet, and ſome others, might be mentioned.

" As the parliament is ſitting, and the city of London may have occaſion to apply on divers accounts, I wiſh they would be pleaſed, in conjunction with the inſurance-offices,

abreaſt, and deep enough to hold twice as many in depth: theſe pits, after each burial, are covered with a few looſe boards, and a little mould, to hide the coffin from common view; but they are never filled up till the whole complement of corpſes has been interred. When this is done, a ſecond grave is opened upon the ſame plan, cloſe to the firſt, leaving the ſides of the former coffins ſtill expoſed; by which means

whoſe intereſt is at ſtake, to take the premiſes into conſideration, and apply for an act to prevent the building or rebuilding of any more ſuch works in the heart of the city, as in every reſpect they are prejudicial; for the vaſt quantity of ſmoke they produce, and the filth attending them, are as injurious to the health, as the fatal accidents of fire are deſtructive of the ſafety of the inhabitants."

GAZETTEER, January 19, 1769.

"THE ſame motives that induced me firſt to take notice of the recent calamities occaſioned by the ſugar-houſes lately burnt down, incite me to revive the ſubject.

"In ſcenes of hurry, and perpetual calls to new objects of pleaſure, profit, party, and perhaps diſtreſs, it is not to be wondered at, if remarks, even that all approve, are read and forgot.

"Mention was made in the paper referred to, of the dangers to which the ſick in the neighbourhood of fires were peculiarly expoſed. I have met with ſeveral inſtances of this nature, ſince thoſe accidents. One of them was a woman with child, and then within two months of her time: the fire being in the ſame ſtreet, her ſurprize was exceſſive; and ſhe was ſeized with a diſorder that ſeems to threaten the life of the mother and the child, and to deprive a young family of their comfort and ſupport.

"No doubt but ſuch accidents occur in the vicinity of all fires. Let us, however, ſecure ourſelves from the hazard as much as we can.

"Within the circuit of a mile and an half, in the moſt populous part of the city of London, there are not leſs than eighteen ſugar-houſes. Five or ſix of theſe have been burnt down within the laſt twenty years, and ſome of them twice, as I am credibly informed.

"Can the magiſtrates, can the repreſentatives of this great city, vindicate their ſupineneſs, in expoſing ſuch a number of their fellow citizens to all the calamities ariſing from theſe houſes, devoted, as it were, to the flames, and to ſpread terror, death, and ruin, through the neighbourhoods in which they are erected?

"It is ſufficient for a private man to have pointed out the evil. It now becomes the duty of the public, and of thoſe particularly whom the public choice has raiſed to dignity and honour, to take care that the commonwealth ſuffers no loſs.

"To theſe I call; I call likewiſe to the inhabitants in the neighbourhood of theſe buildings, to rouſe their repreſentatives in common council, in the great council of the nation likewiſe, to ſecure them from impending danger."

theſe

theſe wholeſale receptacles of the dead become ſo offenſive, as frequently to oblige the miniſters, and others upon funeral duty, to ſtand at a conſiderable diſtance, to avoid the ſtench ariſing from them. The inſalubrity of ſuch a practice is confirmed by the teſtimonies of many writers*. It was what Dr. FOTHERGILL uniformly diſcouraged; and, to ſupply the defect of burying-places within the city, he propoſed the ſite of Moorfields, as lying on the north ſide of the town; ſouthern winds being more ſultry, and likely to convey to the inhabitants any noxious exhalations, the diffuſion of which, it is well known, northern winds tend rather to check than promote. That this, however, might be executed with decent elegance, he formed the idea of conſtructing Cemeteries in this large ſpace of ground, formed into diſtinct regular rows, ſuitable for every degree of citizens, and appropriated to families, in the ſame manner as vaults in general are.

In a large and crouded city, where the free circulation of the air muſt neceſſarily be greatly obſtructed, every means conducive to the preſervation of health ſhould be ſtudiouſly promoted; and, next to bodily exerciſe, and the enjoyment of the open air, nothing perhaps contributes more to it than cleanlineſs by bathing, which the inhabitants of warm climates, both in ancient and modern times, conſidered likewiſe as the higheſt gratification, as the multitude of their Baths, and the ſtupendous ſtructures raiſed for private and public accommodation, fully teſtify.

The wealthier citizens of the preſent time are, indeed, in the habit of enjoying this ſalutary luxury; though, from the revolution in dreſs, and the frequent change of cloathing, unknown to the ancients, they have neither the neceſſity of former times, nor the occaſions which the poor

* I have known inſtances of the hoſpital-fever, ſays Sir John Pringle, beginning in a ward, when there was no other cauſe but one of the men having a mortified limb. Diſeaſes of the Army.

He adds, amongſt the cauſes of malignant fevers, burials within the towns, and the bodies not laid deep. Ibid.

Foreſtus ſays, he was an eye-witneſs to a plague which aroſe from the ſame cauſe.

Diodorus Siculus obſerves, that the putrid ſteams ariſing from the bodies of thoſe who lay unburied, was one of the cauſes of that dreadful diſtemper that broke out among the Carthaginians at the ſiege of Syracuſe. And numerous other authors atteſt the ſame facts.

at

at preſent labour under, of waſhing themſelves from the impurities incident on manual employments, and the want of change of cloathing.

In converſation, Dr. FOTHERGILL has repeatedly mentioned to me the importance of public Baths, for the convenience of the lower claſſes of the people; and the annexed letter evinces, that he took ſome active ſteps towards the accompliſhment of this eaſy, ſafe, and ſalutary gratification*.

In

* "To the DIRECTORS of the New River Company.

"GENTLEMEN, "HARPUR STREET, Nov. 16, 1780.

"I take the liberty to mention a circumſtance, which I think is of ſome importance to the ſalubrity of your water, and therefore not unworthy of your conſideration.

"Returning lately from the North, and paſſing through Ware, I was ſtruck with obſerving the quantity of leaves falling into the New River from the trees growing along its banks; at the ſame time reflecting, that in the whole of its courſe to Iſlington, the quantity muſt be ſuch as could not fail, by rotting in the current, to render the water leſs pleaſant and leſs wholeſome. Whether this circumſtance has occurred to you, I know not; but I am very certain it muſt have a conſiderable effect on the water; and it appears, from late experiments, that the ſun has much influence in meliorating the water. For both theſe reaſons I imagine you will think it expedient to give particular inſtructions to thoſe who have the immediate care of the river committed to them, to take care to have as many of the trees removed from the verge of the river, as poſſibly can be done, without creating too much oppoſition; to prevent, every where, any new ones from being planted ſo near the river, as to injure it either by their ſhade or the falling leaves. It is of no ſmall importance, and I doubt not but the matter will be properly attended to.

"Another circumſtance I have long wiſhed to communicate to you, which I think is an affair deſerving your conſideration: I need not mention the trouble you have annually on account of people bathing in the New River, and the diſguſt it gives to thoſe who are witneſſes of the facts, as well as to thoſe who drink the water and hear of it. The only means I can ſuggeſt to prevent this double miſchief, is to make it the intereſt of thoſe who do it, to do otherwiſe. It ſeems to me, that you would render an eſſential ſervice to the community at large, and to the proprietors, if you would either build a few bathing-houſes in convenient places, or encourage others to build them, where people might be permitted to bathe at low prices; ſix-pence, three-pence, a penny each, &c. Begin with a few, extend them as occaſion requires; ſome for men, ſome for women; ſome for boys, others for girls; and a peace officer or two to be on the ſpot, to ſee that no irregularities are committed. On vacant ſpots in the Spaw Fields, and other parts in the vicinage of populous places, they might be built conveniently, and let to advantage, limiting the tenants to low rates, for the accommodation of ſervants, and others, who cannot afford a ſhilling a time; and many for this reaſon go into ponds and rivers beyond their depth, to the loſs of ſeveral lives.

In large communities vice has ever abounded, though the wiſeſt legiſlators have uſed endeavours to prevent and reſtrain it, by the encouragement of induſtry, and by the infliction of puniſhments on the commiſſion of crimes. Liberty, the birthright of man, the poſſeſſion of which he cannot be too ſolicitous to maintain, has, in moſt ſtates, been denied to criminal members of ſociety; and, in ſome inſtances alſo, where the breach of ſocial regulations has been the effect of unavoidable misfortune, rather than of actual vice: it has, however, always been the wiſh of humanity, that puniſhments could be ſo applied, as to be ſtrictly adequate to the degrees of offence. Certain it is, that the indiſcriminate confinement of many perſons together, is productive of two unhappy inconveniences; the firſt, as it affects the body, by generating infectious diſeaſes; and the other, as it contaminates the mind, by hardening the vicious, and, by their example, depraving thoſe not already abandoned. All Europe is acquainted with the benevolent, the godlike exertions of HOWARD, whoſe memory will ever be dear to the miſerable tenant of a priſon, and to whoſe labours that elegant ſtateſman, BURKE, has borne the moſt honourable teſtimony *.

This

" As I am perſuaded that by this means you might prevent, or be enabled to puniſh with due ſeverity, tranſgreſſors, and do a public benefit, I have no doubt but you will excuſe me for ſuggeſting theſe conſiderations; in the execution of which I ſhall readily communicate every thing that has occurred to me reſpecting it.

" I am, with much reſpect,

" Your Friend,

" J. FOTHERGILL."

[Communicated to my valuable friend, John Scott, Eſq; of Amwell, well known in the literary world; by the late Amie Garnault, Eſq; of Bull's Croſs, Middleſex, who was an active member of the New River Company.]

* I cannot name this gentleman (Mr. Howard) without remarking, that his labours and writings have done much to open the eyes and hearts of mankind. He has viſited all Europe,—not to ſurvey the ſumptuouſneſs of palaces, or the ſtatelineſs of temples; not to make accurate meaſurements of the remains of ancient grandeur, nor to form a ſcale of the curioſity of modern art; not to collect medals, or to collate manuſcripts:—but to dive into the depths of dungeons; to plunge into the infection of hoſpitals; to ſurvey the manſions of ſorrow and pain; to take the gage and dimenſions of miſery, depreſſion, and contempt; to remember the forgotten, to attend to the neglected, to viſit the forſaken, and to compare

This HOWARD was the intimate friend of Dr. FOTHERGILL; they were the friends of humanity; and both were employed in leſſening the miſeries of human life, though in different ſpheres; but in attempting to prevent thoſe injuries and diſeaſes which human contagion produces, they united their labours. The legiſlature, juſtly alarmed at repeated inſtances of infection, which priſoners diſſeminated in courts when brought before their judges, was diſpoſed to receive the beſt advice for obviating ſuch baneful effects. Dr. FOTHERGILL and his friend were deſired to attend the Houſe of Commons; before which they gave ſuch information, as induced the legiſlature to paſs a Bill, intitled, "An Act for preſerving the Health of Priſoners in Gaol, and preventing the Gaol Diſtemper," anno 1774; and afterwards to recommend the building of detached or Penitentiary houſes *, as a mode of puniſhment calculated to reſtrain indolence and vice. Theſe two diſtinguiſhed perſons, with George Whatley, Eſq; were appointed, by the king, Com-

compare and collate the diſtreſſes of all men in all countries. His plan is original; and it is as full of genius, as it is of humanity. It was a voyage of diſcovery; a circumnavigation of charity. Already the benefit of his labour is felt, more or leſs, in every country: I hope he will anticipate his final reward, by ſeeing all its effects fully realized in his own. He will receive, not by retail, but in groſs, the reward of thoſe who viſit the priſoner; and he has ſo foreſtalled and monopolized this branch of charity, that there will be, I truſt, little room to merit by ſuch acts of benevolence hereafter.

Burke's Speech at the Guildhall in Briſtol, 1780.

* J. Clitherow, Eſq; the brother-in-law of the late Judge Blackſtone, in the preface to his Reports, containing memoirs of his life, attributes, in a great meaſure, the origin of theſe houſes to his amiable brother. "In theſe houſes," ſays he, "the convicts are to be ſeparately confined during the intervals of their labour,—debarred from all incentives to debauchery,—inſtructed in religion and morality,—and forced to work for the benefit of the public. Imagination cannot figure to itſelf a ſpecies of puniſhment, in which terror, benevolence, and reformation, are more happily blended together. What can be more dreadful to the riotous, the libertine, the voluptuous, the idle delinquent, than ſolitude, confinement, ſobriety, and conſtant labour? Yet what can be more truly beneficial? Solitude will awaken reflection; confinement will baniſh temptation; ſobriety will reſtore vigour; and labour will beget a habit of honeſt induſtry: while the aid of a religious inſtructor may implant new principles in his heart; and, when the date of his puniſhment is expired, will conduce to both his temporal and eternal welfare. Such a proſpect as this is ſurely well worth the trouble of an experiment."

miſſioners for directing ſuitable buildings to carry into execution this new ſyſtem of correction.

The firſt of theſe, our Preſident, did not live to ſee this uſeful deſign completed, though he had laboured aſſiduouſly in digeſting it, and had previouſly inſerted ſome uſeful remarks on the puniſhment of convicts, in the public prints, which I think too important to be omitted in his Works.

To obviate, however, and repreſs the firſt eruptions of vicious propenſity, is an object of the greateſt importance to the welfare and happineſs of the community. In ſome inſtances, more might be effected by lenient means than by ſevere puniſhments: one begets gratitude, and a deſire to retrieve reputation; the other hardens the mind, excites the paſſions of revenge and cruelty, and confirms a more abandoned profligacy of conduct. There are even vices, which ſeem to vibrate from a falſe ſhame, or miſtaken integrity: the impoveriſhed huſband, upon whom the ſuſtenance of a family depends, may privately ſteal, or boldly rob, from the cogency of domeſtic ſenſibility, without any vicious deſign to injure another: and ſuch individuals are not irreclaimable; for ſuch, to my knowledge, have been reclaimed.

In vitium ducit culpæ fuga—— *

HOR. Ars Poet. l. xxxi.

But the moſt effectual barrier againſt corruption of manners, and the influence of vicious example, is an early and guarded education. As the ſun is to the external, ſo is learning to the intellectual eye; it enables the mind to diſtinguiſh truth from error, endows it with ſtability and ſtrength to combat vicious propenſities, and renders it ſuſceptible of enjoying the felicities of life, without adopting its follies, or entailing its miſeries. For the promotion of this uſeful education, Dr. FOTHERGILL was a liberal advocate. How much he contributed towards the ſeminaries of learning inſtituted at Williamſburg, New York, and Philadelphia, I am not particularly aſſured; but if the extent of his

* ——whilſt one fault they ſhun,
Into its oppoſite extreme they run.

liberality

liberality may be eſtimated by the degree of gratitude and reſpect with which his memory is revered throughout America, it muſt have been ample.

In the wide ſtream of public good, he did not overlook the ſituation of his own religious perſuaſion; where his influences were moſt powerful, and where congenial minds were more united in promoting his laudable views. He had long endeavoured to inſtitute an extenſive eſtabliſhment for the education of the children of the Society not in affluence; but nothing was effectually done, until, as Dr. Hird obſerves*, "by one of thoſe fortunate events, on which hangs the fate "of many great undertakings, the whole of his deſign became eaſy "and practicable. On his return from Cheſhire, through Yorkſhire, "in the year 1778, he did me the favour of being my gueſt a few "days, during which time he was viſited by many of his friends in "thoſe parts. In one of theſe interviews, the converſation turned on "an inſtitution at Gilderſome, a ſmall eſtabliſhment for the education "of poor children amongſt the Society: the Doctor was inquiring into "its ſtate and management, and how far it might ſerve as a model for "a larger undertaking: a juſt deſcription being given of it, with the "following remark, that not only this, but all others, however laud-"able the motives from which they took their riſe, muſt fail of ſucceſs, "without a conſtant ſuperintending care and unremitting attention to "the firſt great object of the inſtitution. This idea was exemplified "by the then preſent ſtate of the Foundling Hoſpital at Ackworth; "which, although originating from the moſt humane principle, and "erected at a vaſt expence, was, from repeated inattentions to the firſt "deſign, in danger of dilapidation, and ready for public ſale. This "relation ſtruck the Doctor forcibly: 'Why may not this,' ſaid he, "ſerve the very purpoſe I am in purſuit of?' To be ſhort, the building, "and an eſtate of 80 acres of land, were purchaſed, improved, and "furniſhed by ſubſcription. The Doctor ſet a generous example by "his own contribution, and an endowment by his will in perpe-"tuity."

* Affectionate Tribute, page 21, 22.

I have

I have inſerted this quotation, as it explains the incident which brought Dr. FOTHERGILL acquainted with this eligible ſituation, reſpecting which he afterwards expreſſed his warmeſt approbation, in a Letter to a Friend, which I have preſerved in his Works. "Though I had not ſeen the building," he obſerves, "I had ſeen and conſidered a plan of the houſe, and learned from that, and from the report of many who had been on the ſpot, that the building, the ſituation, the healthfulneſs of the country, the plenty of proviſions, and the vicinity of many valuable friends, were ſuch, that if it could be purchaſed, and properly endowed, it might, in many reſpects, anſwer the intention of friends, and lay the ground-work of an uſeful and permanent eſtabliſhment. The children of friends not in affluent circumſtances, are the objects of Ackworth School; the children of ſuch perſons, as muſt either provide for their offſpring a very cheap education, or none at all. And there is great reaſon to believe, that the inability of many friends to make ſuch proviſion, or to find any means of obtaining a ſafe education, has been the occaſion of keeping their children at home, where it was impracticable to keep them at all times from corrupt company." The human mind, it has been obſerved, muſt have ſome object in view; and if virtue and propriety do not engage it, vice and folly will: whatever, therefore, buſies the mind, without corrupting it, has at leaſt this uſe, that it reſcues the day from idleneſs; and he that is never idle, will not often be vicious: and when habits of induſtry are confirmed by uſeful meditation, virtuous ſentiments will be more eaſily inculcated; for, if Virtue could be ſeen, ſhe muſt be loved; and if Truth could be heard, ſhe muſt be obeyed.

Oderunt peccare boni virtutis amore *.

HOR. Epiſt. 16. l. i. v. 52.

The ſucceſs of this School rewarded Dr. FOTHERGILL's well-grounded expectations. That ingenious writer, whoſe authority I have repeatedly appealed to, is particularly acquainted with the preſent ſtate of this extenſive eſtabliſhment, as he reſides in its vicinity, and has

* The good, for virtue's ſake, diſdain to ſin.

thought

thought it ſo far an object of his attention, as perſonally to viſit it; and his deſcription, communicated in 1781, affords a pleaſing proſpect of its utility and probable permanency; and I may add, that its improved ſtate, at the preſent time, affords further confirmation of its ſucceſs. "There are," he obſerves*, "above three hundred children, "of both ſexes, under the roof, furniſhed with all the neceſſary con- "veniences and comforts of life, properly cloathed, and educated in "every branch of knowledge ſuitable for the ſtation in which it is "preſumed they may be placed. And, to the ſatisfaction of every "benevolent heart, it may be truly ſaid, that the inſtitution is at "preſent in a moſt flouriſhing ſtate, fully anſwering the deſign of "its founders; being conducted under the care of a number of choſen "guardians, of ability, and of exemplary conduct, with an exactneſs "of order, decency, and propriety, extremely ſtriking, and perfectly "pleaſing to all who have viſited it, though not of the ſame Society. "—The children are taught habits of regularity, of decency, and re- "ſpectful ſubordination to their ſuperiors; of forbearance, affection, "and kindneſs towards each other; and of religious reverence towards "their Maker; and, I may farther add, thoſe habits of ſilence and "recollection, taught and practiſed in the ancient ſchools of philo- "ſophy, inculcated in the Scriptures, and moſt emphatically called, "*the true door of entrance into the ſchool of wiſdom.*"

If Dr. FOTHERGILL's life had not been diſtinguiſhed by a ſeries of illuſtrious actions, this noble inſtitution at Ackworth was alone ſufficient to endear his name to poſterity, by conferring upon ſubſequent generations the means of an uſeful education, which places out the virtues of youth to the beſt uſury, where the intereſt is, of all others, the moſt productive and permanent; for education, when it works on an amiable diſpoſition, draws out to view every latent virtue and perfection, which might otherwiſe lie dormant, or remain obſcured; for

* Dr. Hird's Affectionate Tribute, page 22, 23.—I am ſorry to add here, that this excellent phyſician and agreeable companion did not long ſurvive this Tribute to his honoured friend and relation. At the time of his deceaſe, he was phyſician to the Leeds Infirmary; in which office he has been ſucceeded by my friend and univerſity colleague, Dr. Walker, a phyſician of diſtinguiſhed abilities and humanity.

not to have reaſon, and to have it uſeleſs and unemployed, is nearly the ſame. This public action was conſiſtent with the tenor of his life, and conſtituted one uniform ſyſtem of philanthropy, where the heart melted with benevolence, and where the hand ſhowered liberality*.

Gratum eſt, quod patriæ civem, populoque dediſti,
Sic facis ut patriæ ſit idoneus, utilis agris,
Utilis——pacis rebus agendis.
Plurimum enim intererit, quibus artibus, et quibus hunc tu
Moribus inſtituas—— Juv. Sat. xiv. l. 70.

In the days of ſuperſtition and ignorance, when perſons of extenſive literature were deemed extraordinary phenomena, whoever excelled in letters was diſtinguiſhed from the common claſs of mankind, and viewed with that veneration which ſuperior knowledge and endowment inſpire; but as literature was diffuſed, men of letters having many equals, the peculiar diſtinction or pre-eminence of primæval times was leſs diſcernible. In the profeſſors of phyſic, at preſent, not only the learning of the ſchools, but ſcience in general, is a part of medical accompliſhment. In an extent of ſcience, equally diffuſe and unlimited, it would be impracticable, as well as indelicate, to draw a compariſon of living characters; nor could a certain criterion be deduced from ſuppoſitious reputation, which muſt always be partial: to eſtimate it by pecuniary emolument would be inadequate, becauſe the product of the profeſſors of phyſic cannot be accurately known; and if it could, the degree of practice could not thence be aſcertained, as the liberality of individuals not only varies, but the moderation likewiſe of the faculty in accepting gratuities. That Dr. Fothergill acquired much in the line of his profeſſion, we know by the amplitude of his generoſity; but the exact extent he never diſcloſed. Calculations ſometimes have been formed from the time that has been devoted to buſineſs: with in-

* It muſt afford ſatisfaction to every friend of humanity to know, that in the eſtabliſhment of Ackworth School, many congenial diſpoſitions aided Dr. Fothergill whilſt he was living, and perſevere to promote it ſince his death. In David Barclay particularly, whoſe name I have already mentioned, equal ardour is exerted, as there was before equal philanthropy and beneficence.

dividuals

dividuals, whoſe moments are conſtantly employed, he will accompliſh the moſt who is the beſt œconomiſt of time; and no time can certainly be better employed, than that which is devoted to ſick and helpleſs friends. But were medical character to be decided by the œconomy of time, no man had a more decided claim to pre-eminence than Dr. FOTHERGILL: he made every moment important, by a wonderful regularity in his manners and in all his concerns, and his domeſtics had acquired a ſimilar punctuality; and thus, by general order and ſyſtem, not a moment ſeemed with him to be loſt in relays, nor in his movements from one object to another. If ſome people live out half their days without numbering one, he eſtimated time too highly to ſay with the Roman Titus, *Diem perdidi.* If the length of time is to be meaſured by the quick ſucceſſion of ideas, no man lived longer every day, or I may indiſputably add, lived more uſefully.

Ampliat ætatis ſpatium ſibi vir bonus, hoc eſt
Vivere bis, vitâ poſſe priore frui. MART.

Sometimes indeed it happens, that phyſicians have acquired much city practice, without any extent of reputation out of the vicinity of their reſidence; but with reſpect to Dr. FOTHERGILL, it may be ſafely aſſerted, that if he had not attained the firſt rank in town, he certainly had the moſt general reputation through the kingdom and colonies, of any contemporary phyſician. Whenever he went down to Lea-hall, or to any diſtance out of town, he was as conſtantly intercepted by a concourſe of Valetudinarians, who had found means to get information of his route. In the year 1769, my excellent guardian, his brother Samuel, was indiſpoſed during his viſit in London; and as he was deſirous of returning homewards, I was requeſted to accompany him to Lea-hall, and the Doctor propoſed to follow us down ſoon after. I was then a ſtudent of medicine; but I could not avoid remarking the numerous applications made to us to aſcertain the time of his paſſing through different ſtages. I think he once informed me, that he had upwards of fifty applications at one place in his journey: I have been his Amanuenſis repeatedly for at leaſt twenty patients at one ſitting. At home, indeed, the preſent generation will not require to be told

that he had the confidence of the public as a phyſician; of his patients, likewiſe, as a near and confidential friend; and of the literary, as a reſpectful aſſociate. He was choſen, in 1754, a Fellow of the Royal College of Phyſicians at Edinburgh, as he had early been of the Medical Society* inſtituted there, and ſince incorporated by royal authority; and in 1763, he was elected a Fellow of the Royal Society of London; and was one of the earlieſt members of the American Philoſophical Society, inſtituted at Philadelphia.

Thus conſpicuous as a phyſician in the firſt city in Europe, his character could not but be known on the continent, where ſcience is cultivated with the ſame commendable ardour: Linnæus, the late botanical luminary of Upſal, had diſtinguiſhed a ſpecies of Polyandria Dyginia

* Near fifty years ago, ſeveral ſtudents of medicine formed this Society, for their mutual inſtruction and advancement in their ſtudies. "Every ſtudent of a certain ſtanding, who diſtinguiſhed himſelf by his diligence, capacity, and conduct, was initiated into this little aſſembly. Here the opinions of the ancients, of their contemporaries, nay the doctrines of their maſters, were frequently diſcuſſed; and two of the members were always charged with the taſk of providing inſtruction and entertainment for the next meeting of the Society. Queſtions, no doubt, were here diſputed and decided, which long experience would have declined. But it exerciſed their faculties, gave them both ſides of arguments, taught them to doubt, and habituated them to obſervation." Dr. FOTHERGILL's Life of Dr. Ruſſell, page 432 in this edition of his Works.

When one conſiders the utility, as well as high reputation of a Society, begun and conducted by ſtudents, curioſity is naturally excited to date the commencement of this ſingular and uſeful inſtitution; which I am enabled to do, by the information of one of its firſt and moſt reſpectable members. In the latter end of Auguſt 1734, the under-written Gentlemen †, then fellow ſtudents in the Schools of Medicine at Edinburgh, who had

† *Dr. Cleghorn.* *Dr. Cuming.* *Dr. Ruſſell.*

Dr. Hamilton, ſon to the then Profeſſor of Divinity at Edinburgh; who having finiſhed his ſtudies, took his Degree there, publiſhing on that occaſion a Theſis, *De Morbis Oſſium.*—He afterwards ſettled at Annapolis, in North Carolina, where he died many years ago.

Mr. Archibald Taylor, brother to a phyſician of that name at Edinburgh; an ingenious young man, who died a few years after in the Eaſt Indies.

Dr. James Kennedy; who after having taken his Degree in Phyſic, was invited to accompany a young gentleman of fortune in the Tour of Europe.—On his return home, after having ſpent three years in this employment, he purchaſed a commiſſion in the army, and was for many years ſenior captain of dragoons. —Why *Doctor* FOTHERGILL was not aſſociated into this little band, cannot now be recollected; but he was known to, and highly eſteemed by, every one of the members.

been

Digynia by the name of Fothergilla Gardeni. In 1776 he was choſen an honorary member of the Royal Society of Medicine at Paris; for men of true ſcience, of every nation, in the tumult of empires, are united in endeavouring to render mankind wiſer and happier; they are always of one party; and the French, whoſe literary exertions reflect honour on the nation and on the age, inſtituted, in 1776, a Royal Medical Society; and, to render it more extenſively beneficial, they have choſen honorary or correſponding members from the ingenious of all nations. Of the number in this kingdom, whoſe characters acquired the ſuffrages of this Society, was our late Preſident: their addreſs to him upon that occaſion is marked with a ſpirit of true philoſophy, which is not reſtricted within the limits of empires; and its inſertion here muſt be acceptable to every liberal mind.

been long familiarly acquainted, and entertained a reciprocal regard for each other, after having employed themſelves, during the three preceding weeks, in the diſſection of a body in the Anatomical Theatre, agreed to ſpend a ſocial evening together at a tavern.—After ſupper it was propoſed, by one of the company, that this little Society ſhould meet once a fortnight, early in the evening, at their reſpective lodgings; that a diſſertation, in Engliſh or Latin, on ſome medical ſubject, at the choice of the Society, ſhould be compoſed, and read at each of theſe meetings, to which ſuch objections as occurred to the reſt of the company ſhould be made, which the author was to obviate in the beſt manner he could. This propoſal was cordially aſſented to by all preſent; and Dr. *Cuming* was appointed by the other members to prepare a diſſertation for their firſt meeting, on the ſigns, cauſes, and method of cure of the *Rabies Canina:* this he accordingly did, and read to the Society on the 20th of December following. *Dr. Ruſſell* followed in one, *De Gonorrhœa virulenta:* then came *Dr. Cleghorn*, *De Epilepſia*; *Kennedy*, *De Fluxu Menſium*, &c.—This aſſociation continued during that winter, and the enſuing ſpring; but, in the ſummer of 1735, the members of this little Society were diſperſed, and *Cleghorn* alone remained to continue, with his reſpected FOTHERGILL and ſome others, this aſſociation during the ſubſequent winter. This was the humble and fortuitous commencement of a Society, that has ſince become highly reſpectable by its obvious utility, and the names of many learned and eminent phyſicians which it records in the liſt of its members, and it is now incorporated by Royal Charter.

* " DOCTOR ILLUSTRISSIME,

" QUAS hodie conſociationis litteras offert tibi Regia Societas Medica Pariſienſis, ego tantò libentius ad te mitto, quod dulciſſimum et utiliſſimum epiſtolare commercium nobis procul dubio concedes, quodque mihi jucundiſſima maximè que proficua talis erit confraternitas. Inſtitutionis edictæ diſpoſitiones, inauguralemque ſimul orationem benignè cum hac epiſtolâ recipias velim. Plurimarum jam Academiarum codices condecorat immortale nomen tuum; ſed in Academiâ ferè medicâ conſcribi à conſodalibus ſummæ exiſtimationis teſtimonia recipere, tua famâ non indignum fore credidimus; ego que præſertim, vividiſſime gaudeo, quod locus ille quem in noſtra Societate mihi concedit Rex Chriſtianiſſimus Galliarum, frequentiæ meæ totius ergà te obſervantiæ ſpecimina redditurus ſit, iſtaſque multiplicabit occaſiones, in quibus me dicam ſemper,

" Doctor illuſtriſſime,

" Obſequentiſſimum tui ſervum

" et cultorem,

" VICQ. D'AZYR."

LUTETIÆ PARISIARUM,
die menſis Decembris 1776.

P. S. Tantam

* " ILLUSTRIOUS DOCTOR,

" I the more willingly ſend you the letters of admiſſion into membership, which the Royal Medical Society of Paris this day offers you, becauſe we ſhall doubtleſs gain a moſt agreeable and uſeful literary correſpondence with you, and becauſe ſuch an aſſociation and brotherhood will be extremely pleaſant, and particularly uſeful to me. The edicts of the inſtitution, the forms of it, and the inaugural oration, I wiſh you kindly to receive, together with this letter. Your immortal name is already an honour to the regiſters of many academies; but to be enrolled a member of an academy almoſt wholly medical, by the Fellows of it, and to receive the higheſt teſtimonies of their eſteem, we thought would not be unworthy of your reputation; and I eſpecially feel a very ſenſible pleaſure in it, becauſe the place aſſigned me in our Society by the Moſt Chriſtian King, will enable me to render frequent proofs of my entire eſteem for you, and will multiply thoſe opportunities in which I ſhall always ſubſcribe myſelf,

" Illuſtrious Doctor,

" Your moſt devoted ſervant

" and admirer,

" VICQ. D'AZYR.

P. S. The

" P. S. Tantam tibi offert vovetque Regia Societas ut quales illi correſpondentes, numerandos eſſe in tua provinciâ judicabitis, tales acceptura ſit et libentiſſime pro ſuis ſit habitura: ſi ergo inſtitutionis noſtræ fructus et commoda augere non recuſes omnia quæcunque Societatis gratiâ facies, jucundiſſima et rectiſſima reputabimus. Age igitur, co-operatores inter amicos doctiſſimos que collegas quorum merita non noſcimus, elige nobis, optima quæ detexerunt, quæque detexiſti ipſe ſedulo communica medicæque correſpondentiæ per te creſcat utilitas et amplitudo, nos conſocios, eidem philoſophiæ ſtudentes, ejuſdemque veritatis amantes et æmulos reddat nova confederatio. Seſe noſcunt à longo tempore cæteri viri Litterati mediantibus academiis, medici vero nullo ferè nexu junguntur, celeberrimorum que tantum vix nomina callemus. Fiamus autem mutuis epiſtolis ex omnibus Europæ finibus correſpondentes. Dein utinam, amici et quidquid éveniat uniti: medicina que tandem ſit una ut Hippocrates, nec amplius, ut eſt hodie multiplex. Hæc ſunt quæ ſperat à te academica illa Societas, quam *tuam* dicere poſſumus quippe qui Socius ab eâ jam a plurimis menſibus denunciatus fuiſti."

" P. S. The Royal Society places ſo much confidence in you, that the perſons you ſhall judge proper for their correſpondents, within the ſphere of your acquaintance, they will receive, and very readily eſteem them as ſuch: if, therefore, you do not refuſe to augment the fruit and advantages of our inſtitution, we ſhall eſteem whatever you do for the good of the Society as highly agreeable, and to be depended upon. Let me entreat you then to chuſe out for us aſſiſtants and copartners amongſt the moſt learned of your friends and colleagues whoſe merits we do not know, and diligently to communicate their beſt diſcoveries, and what you yourſelf have diſcovered, that ſo the uſefulneſs and extent of medical correſpondence may be encreaſed, and a true confederacy render us brethren, ſtudents of the ſame philoſophy, and zealous lovers of the ſame truths. The living Literati in other arts and ſciences have for a long time, by means of academies, been acquainted with each other; phyſicians are ſcarcely connected by any tie, the bare names of the moſt illuſtrious among them being hardly known. But let us eſtabliſh correſpondents by mutual letters in every part of Europe. And laſtly, I wiſh that we may be friends, and united together, whatever may happen *: medicine then would be uniform, and but one in all places, as Hippocrates wiſhed it to be, and not as it is at preſent, divided into parties. Theſe are the things this academic Society wiſhes to promote, and which we may now call your Society, ſeeing you have been declared a Fellow of it for ſome months."

* Probably referring to the commencement of the war.

Dr. FOTHERGILL had now attained the zenith of medical reputation: in national concerns, or public calamities from diſeaſe, his opinion was ſought after, and as uniformly adopted. When the Britiſh Houſe of Commons was informed of the dreadful fatality of the gaol diſtemper, among the French and Spaniſh priſoners confined in Wincheſter, Dr. FOTHERGILL's opinion was inſtantly taken upon the ſubject, and he recommended Dr. J. Carmichael Smith to ſuperintend the priſon, to avert, if poſſible, the ſpreading contagion;—the ſingular ſucceſs of whoſe attendance, whilſt it did honour to Dr. Smith's medical knowledge, reflected no leſs upon Dr. FOTHERGILL's diſcernment in the choice of an able phyſician, as the following report from the Office for Sick and Wounded Seamen will fully juſtify.

A Weekly progreſſive State of the Sickneſs and Mortality among the Spaniſh Priſoners, confined in the King's Houſe at Wincheſter; from the firſt Appearance of the Jail Diſtemper, until the 8th of July 1780.

Date of Weekly Accounts.	Number of Spaniſh Priſoners.		
	In Cuſtody.	Sick.	Dead.
March 26, 1780	1247	60	1
April 2, ——	1243	106	4
9, ——	1475	150	10
16, ——	1457	172	18
23, ——	1433	142	21
30, ——	1412	171	21
May 7, ——	1388	191	25
14, ——	1351	197	27
21, ——	1523	205	30
28, ——	1494	226	31
* June 3, ——	1461	262	33
10, ——	1437	212	26
17, ——	1426	173	9
24, ——	1420	167	5
July 1, ——	1414	143	5
8, ——	1433	122	2

* The time of Dr. Carmichael Smith's going to Wincheſter.—It would prove highly uſeful to the public, were this ingenious phyſician to communicate his method of treatment, which was attended with ſuch obvious ſucceſs. A priſoner is an object of compaſſion in every point of view.

Long before this period, it is well known that the Empreſs of Ruſſia, with a ſpirit of freedom and reſolution, which added luſtre to her dignified ſtation, reſolved to receive the ſmall-pox by inoculation; and having heard of the Suttons as celebrated in this department, ordered her ambaſſador at the Britiſh court to ſend an experienced perſon to Peterſburgh to perform the operation. When this order arrived, Dr. FOTHERGILL was conſulted; and by his influence, and by his alone, the life of the empreſs was entruſted to a phyſician (Doctor, afterwards Baron Dimſdale) whoſe experience entitled him to this diſtinguiſhed employment. When Dr. FOTHERGILL related this circumſtance to me, he mentioned it merely as a matter of confidential information, without appearing ſenſible of the influence and importance of his extenſive reputation.

But a life thus ſpent in the conſcientious diſcharge of every duty, and the uniform practice of every virtue, could not ſhield him from the miſrepreſentations of envy, malevolence, and avarice, as the accuſations of two perſons, at different periods of time, amply proved. Thoſe who have been acquainted with Dr. FOTHERGILL, during the laſt ten or twelve years of his life, muſt know that I allude to the proſecution commenced againſt him by one, for a ſuppoſed injury; and to the partiality of which he was accuſed by the other, in adjuſting a difference between him and a reſpectable Baronet. Of theſe tranſactions it is unneceſſary here to enter into a minute detail: the decree, pronounced on the former caſe by that learned and ſagacious judge, the Lord Chief Juſtice of England, moſt honourably juſtified the character of our late Preſident from every imputation of wrong*; and his own pen † not only entirely vindicated him from every aſperſion of partiality and injuſtice thrown upon him by his accuſer, but alſo exhibited moſt exemplary inſtances of candour, liberality of ſentiment, and generoſity.

Perſons, whoſe ſtated employments preclude the enjoyment of leiſure, naturally acquire a habit of brevity in the diſpatch of their concerns: in converſation they apply immediately to the ſubject of diſcuſſion;

* See Gentleman's Magazine, November 1781.

† Introductory Remarks on the Preface of Parkinſon's Journal of a Voyage.

in

in writing, they compreſs much in a ſmall ſpace. In addition to this kind of compulſive diſpatch, acquired by the urgency of important tranſactions, Dr. FOTHERGILL poſſeſſed a remarkable quickneſs of perception; and, what is unuſual with vivacity of mind, united ſolidity of judgment. Thoſe who did not perſonally know him, muſt form the ſame opinion of him, from the diſplay of genius and ſagacity in his early publications. Some of theſe I have already adverted to; and to them I might add his early eſſays in the Gentleman's Magazine for 1751, and the three ſubſequent years.

His pieces in the Medical Enquiries, a publication which commenced in June 1757, and is ſtill continued, have been read by the Faculty univerſally, and always with approbation, as they contain facts that cannot be too well known; and wherever they are known, they will be adopted, with as little exception, at leaſt, as can be ſuppoſed to ariſe in an improving art. If his language was not always minutely correct, probably owing to want of time, it was eaſy and fluent, and, what in ſuch compoſitions is more valuable, it was accurately deſcriptive.

His epiſtolary writing was inſtructive and ſprightly. As he was not confined to the didactic ſolidity of medical diſquiſitions, where knowledge is paſſive, and genius ſuperfluous, and where facts and experiments, rather than ornament and elegance, are the leading objects, his language was leſs reſtrained; it was more brilliant, but leſs correct; it was more varied and amuſing, and at the ſame time it was chaſte and inſtructive; and, like his converſation, the ſame ſentiments were conveyed, in a livelineſs of colouring and frankneſs of expreſſion, that in any other point of view might have afforded no emotion of pleaſure, or proof of ſuperior endowment. There was indeed a charm in his converſe and addreſs, as hath been ingeniouſly remarked, that affected ſome with a tranſport of admiration, and commanded the high regard and opinion of thoſe who employed him; whilſt, by a diſcreet uniformity of conduct, he ſo fixed the capriciouſneſs of mankind, that he was not apt to forfeit the eſteem he had once acquired. His mind was of that happy verſatility, that he could eaſily break off from important concerns, and enter into a familiar and pleaſant converſation, with all the indifference

of

of a man of leiſure; and as eaſily reſume the variety of his ſerious engagements, as if they had never been interrupted *.

Hilariſque, tamen cum pondere, virtus. STAT.

As the higheſt ſtations are expoſed to peculiar inconveniences, ſo the brighteſt genius is not unfrequently clouded with a counterpart: the mind that is endowed with the quickeſt perception, whilſt intereſted in multifarious concerns, is not only liable to acquire a habit of deciding haſtily, but a tenaciouſneſs of its deciſions. In this epitome of Dr. FOTHERGILL's character, I have endeavoured to delineate the outlines with impartiality, to appreciate his faults as well as his virtues: and, though the brilliancy of the latter hath ſhone through the clouds of the former, I conſider this promptitude of adopting an opinion, and tenacious retention of it, as the moſt cenſurable part of a life (ſo far as I know, and I knew it well) otherwiſe blameleſs. Perfection is ſcarcely the lot of humanity; and in extenuation of this diſpoſition it might be argued, that whilſt he formed a haſty, his ſolidity of judgment prevented a wrong, determination: like the ballaſt of a ſhip, it kept ſteady the ſails that were expoſed to the ſudden guſts of a ſtorm. This failing, however, ſuch as it was, has been ſometimes remarked by the Faculty, in conſultations with the Doctor, and remarked with cenſure; and whoever has been honoured and conſulted for a ſeries of years as a medical oracle, muſt have attained that experience, which affords the beſt preſumption for firmneſs of opinion: but were the cenſure well founded, happy is the man, and happy the patients of that phyſician, who paſſeth through life with ſo much undeviating rectitude!

In this place, I cannot but gratefully recall to mind how much I owed to my deceaſed friend, when I left Europe to reviſit my native iſland: it muſt be admitted, that though after ſeventeen years abſence, I returned to the boſom of my relations and of my friends; yet, as a medical man, my character was ſolely reflected from the patronage of

* Dr. Thompſon's Life and Character of Dr. FOTHERGILL, page 29, 30.

Dr. FOTHERGILL, whoſe name was as familiar throughout North America, and the Antilles, as in London.

With reſpect to political affairs, as connected with thoſe of North America, he had long formed a decided opinion. "Whether we look at the well-being and content of near two millions of Engliſh ſubjects on that continent, deſcended from and connected with ourſelves; or weigh the effects which their diſcontent and unhappineſs muſt unavoidably produce on this country, ſcarce a more important object can preſent itſelf to an Engliſhman."

Without entering into the cauſes and effects of a conteſt, which it is now our irretrievable misfortune to lament in vain, it was from its commencement the ſtrenuous advice of Dr. FOTHERGILL, to treat our trans-atlantic brethren with a leniency due to fellow-ſubjects, whoſe rights and privileges being the ſame, entitled them to ſhare in the proſperity and the enjoyments of the whole empire. "If we enquire," he obſerved, "into the conduct of the wiſeſt ſtates to their diſtant colo-"nies, we ſhall find it always to have been, to treat them with kind-"neſs and indulgence, to engage them to look back to the mother "country with duty and affection, and to recompenſe the protection "they have enjoyed by the produce of their labours, their commerce, "and, when needed, their aſſiſtance. We meet not with many in-"ſtances, comparatively, even of diſtant conquered countries revolting, "till cauſes of ſtrong diſguſt had ſown the ſeeds of diſcontent, and "ſucceeding acts of oppreſſion and injuſtice had ripened them into "rebellion."

"Colonies ſprung from Britain," he obſerved, "will bear much: "but it is to be remembered, that they are the ſons of freedom; and "what they have been early taught to look upon as virtue in their "anceſtors, will not ſoon be forgotten by themſelves: nay, they will "the ſooner be apt to vindicate their wrongs."

As he was of opinion, that whatever the motives of their migration may have been, the effects of this migration have undoubtedly been ſignally beneficial to this country; and therefore, if any diſtinction were to be made, a particular diſtinction was due to theſe diſtant ſubjects, whilſt harſh and ungracious treatment would make them deſirous

of

of forgetting that they are of Engliſh deſcent, leſſen their duty and allegiance, and induce them impatiently to look forward to that independency, which their ſituation favours; and this the more eagerly, in proportion to the prejudices they have imbibed againſt a government they think oppreſſive.

Unfortunately for this country, thoſe meaſures which the Americans deemed oppreſſive, were eagerly purſued; and what Dr. FOTHERGILL, and moſt men who were acquainted with the continent and its inhabitants, early predicted, he lived to ſee realized.

Uniform as he was in opinion reſpecting the political objects which ſo long convulſed the empire, he was either miſrepreſented or not underſtood. He was ſo accurately informed of the power of America, and with the wiſhes of ſome of the principal of its inhabitants, that, long before the fatal tranſaction at Lexington, he foretold, as probable conſequences of the projected meaſures, many of the great events which time has ſince evolved. If a man is cenſurable for the accompliſhment of his predictions, Dr. FOTHERGILL was certainly ſo; but were ſuch reaſoning admiſſible, all the great characters of ſacred and general hiſtory, whom we have been hitherto accuſtomed to reverence, muſt fall under a ſimilar predicament: if their ſagacity, or their ſuperior information, had enlarged their views, and enabled them with preciſion to eſtimate the reſult of certain actions, the rulers to whom they communicated their obſervations, and who, poſſeſſing the power, but being perhaps otherwiſe informed, did not take adequate precautions to prevent what had been foretold, have been deemed anſwerable for the event. I can venture to aſſert, that no man laboured more anxiouſly than Dr. FOTHERGILL did, to prevent what he predicted as eventual from the proſecution of certain meaſures—the diſmemberment of the empire.

As he had acceſs, by his profeſſion, to families of the firſt diſtinction, he embraced occaſional opportunities of ſuggeſting his opinion of the prevailing ſyſtem of politics, and the effects moſt likely to reſult from the proſecution of it: but although his advice was not adopted, I do not hence infer that the governing powers were cenſurable; my intention in introducing theſe obſervations, is to elucidate Dr. FOTHER-

GILL's political conduct reſpecting the conteſt between Great Britain and America, and clear it from the miſrepreſentations of perſons leſs intimately acquainted with him; and this affords a ſufficient apology for communicating to the public the following narrative of facts, ſtated from authentic papers that are now in my hands; leaving to the deciſion of the public, whether Dr. FOTHERGILL did not act the part of a true patriot, and a real friend of the conſtitution.

In the latter end of the year 1774, previous to the departure of Dr. Franklin out of this kingdom, an intimate friend of Dr. FOTHERGILL being in company with a nobleman of great political experience, between whom the converſation turning on the critical ſituation of the American colonies, he preſſed this gentleman to attempt a compromiſe with Dr. Franklin, before his intended departure; and he accordingly undertook it, from a cordial wiſh to promote a permanent reconciliation between the two countries: on this account he immediately applied to Dr. FOTHERGILL, who heartily united in this undertaking; and they mutually invited Dr. Franklin to a conference the ſame evening, and Dr. Franklin as readily accepted the invitation. This triumvirate, zealous for the welfare of both nations, devoted many hours to the important ſubjects of deliberation; and, after much diſcuſſion, it was mutually agreed, that they ſhould meet again on the ſucceeding evening, when Dr. Franklin ſhould commit to paper ſuch a conciliatory plan as he conceived America had a right to expect, and that the other two, as Engliſhmen, ſhould then object to ſuch claims as they might judge Great Britain ought not to grant.

On the appointed evening, Dr. Franklin produced the following propoſitions (ſee A.); and thoſe lines which appear in italics were objected to by Dr. FOTHERGILL and his colleague, and which Dr. Franklin gave up, and ſuffered to be expunged.

In this ſtate a copy was taken, and imparted for negociation; and the anſwer was, that the propoſitions were ſuch as appeared to demand too much; and in conſequence ſeveral attempts were made to reconcile the ſubjects of contention: but as the 12th article of the propoſitions was inſiſted on by Dr. Franklin, though many of the others were acceded

ceded to, the negociation was broken off, and in a ſhort time afterwards Dr. Franklin embarked for America.

The man of urbanity, who reflects upon the fatal carnage of 100,000 victims of war, drawn from the loom, and from rural tillage; and with it the fruitleſs expenditure of 100 millions of money, muſt unavoidably regret, that the laudable exertions of the phyſician and the patriot were thus unhappily fruſtrated. Seeing, however, though diſtantly, the impending danger, he perſevered in the ſame line of conduct, and renewed his endeavours to ſtop the effuſion of blood, and to reconcile the contending parties, as will appear by the following letter, marked (B), which he wrote in 1775 to a noble Lord.

In 1780, Dr. Franklin wrote to Dr. FOTHERGILL's colleague the ſubſequent letter, marked (C), which I introduce to corroborate the above narrative.

In the preceding year Dr. FOTHERGILL publiſhed a pamphlet, intitled, "An Engliſh Freeholder's Addreſs," which I have preſerved in his Works: it contains ſentiments further explanatory of his political character; ſentiments that will ever be revered.

(A.)

HINTS *for Converſation, upon the Subject of Terms that may probably produce a* durable *Union between Great Britain and her Colonies**.

1ſt. THE tea deſtroyed, to be paid for.

2d. The tea duty act to be repealed, *and all the duties that have been received upon it to be repaid into the treaſuries of the ſeveral provinces from which it has been collected.*

3d. The acts of navigation to be all re-enacted in the ſeveral Colonies.

4th. A naval officer, appointed by the crown, to reſide in each colony, to ſee that theſe acts are obſerved.

* The Editor conceives the following propoſitions to contain all the grievances comprized in the petition of Congreſs to the King, brought over by Governor Penn in 1775.

5th. All

5th. All the acts reſtraining manufactures in the Colonies, to be reconſidered.

6th. All duties ariſing on the acts for regulating trade with the Colonies, to be for the public uſe of the reſpective Colonies, and paid into their treaſuries.

7th. The collectors and cuſtom-houſe officers to be appointed by each governor, and not ſent from England; the preſent officers to be continued only during each governor's pleaſure.

8th. In conſideration of the Americans maintaining their own peace eſtabliſhment, and of the monopoly Britain is to have of their commerce, no requiſition to be made from them in time of peace.

9th. In time of war, on requiſition made by the king, with conſent of parliament, every colony ſhall raiſe money by ſome ſuch rule or proportion as the following: viz. If Britain, on account of the war, pays as high as 3*s*. in the pound to its land-tax, then the Colonies to add to their laſt general provincial tax a ſum equal to (ſuppoſe $\frac{1}{4}$) thereof; and if Britain, on the ſame account, pays 4*s*. in the pound, then the Colonies to add to their ſaid tax a ſum equal to (ſuppoſe $\frac{1}{2}$) thereof; which additional tax is to be granted to the king, and to be employed in raiſing and paying men for land or ſea ſervice, furniſhing proviſions, tranſports, or for ſuch other purpoſes as the king ſhall require and direct: and though no colony may contribute leſs, each may add as much by voluntary grant as they ſhall think proper.

10th. No troops to enter, and quarter in any colony, but with the conſent of its legiſlature.

11th. Caſtle William to be reſtored to the province of the Maſſachuſets Bay.

12th. The late Maſſachuſets and Quebec acts to be repealed, and a free government granted to Canada *.

13th. The extenſion of the act of Henry VIII. concerning treaſon, to the colonies, to be formally diſclaimed by parliament.

14th. The American Admiralty courts reduced to the ſame powers

* Theſe acts include the Boſton port bill; the alteration of the charters of the Maſſachuſets Bay; and, the extenſion of the limits of Canada.

they have in England, and the acts relative to them to be re-enacted in America.

15th. All Judges in the king's colony governments to be appointed during good behaviour, the Colonies fixing ample and equally durable salaries: or, if it is thought best that the king should still continue to appoint during pleasure, then the colony assemblies to grant salaries during their pleasure, as has always heretofore been the practice.

16th. The Governors also to be supported by voluntary grants of the assemblies, as heretofore.

17th. All power of internal legislation in the Colonies, to be disclaimed by parliament.

The following letter, which covered that above referred to, marked (B), evinces the pains Dr. FOTHERGILL took to prevent that disunion of the empire he had predicted and feared; and upon this account, short as it is, I insert it here: it was addressed, under cover, to his colleague in the transaction with Dr. Franklin.

"DEAR FRIEND,

"I CAME home last night at ten o'clock extremely fatigued. I could not forbear giving, perhaps, a very strong proof of it. If the enclosed remarks are worthy of the least notice, or any part of them, I wish we could see one another this morning, any time before nine o'clock.

J. FOTHERGILL."

8th of the 10th mo. 1775.

(B.)

"THE following sketch will shew rather my wishes than my hopes, of seeing the most certain, speedy, and honourable means of effecting the proposed measures.

"To send as speedily as possible some person or persons, on whom Government may rely, and who are not unknown to some of the leaders

of

of the Congreſs, and on whoſe character and probity they may have ſome dependence, to propoſe to them,

"That an act ſhall be paſſed this ſeſſions, virtually repealing all the blameable acts, by declaring that the Colonies ſhall be conſidered as being governed by the ſame laws, or placed in the ſame ſituation as they were in in the year 1762.

"That in conſequence of this declaration, if accepted by the Congreſs, the ſame perſons ſhall have inſtructions to the commander in chief to ceaſe all hoſtilities.

"That a general amneſty ſhall be declared, all priſoners releaſed, the provincial forces be diſbanded, and the ports reciprocally opened for both countries.

"That theſe preliminaries being fixed, inſtructions ſhall be ſent to the ſeveral governors, to convene the aſſemblies, and require them to chuſe two or more delegates, to meet a proper number of commiſſioners from England, at New York, and there to ſettle the due limits of authority on this ſide, and ſubmiſſion on theirs. The ſword will never ſettle it as it ought to be. Submiſſion to force, will endure no longer than ſuperior force commands ſubmiſſion;—intereſt only can make it perpetual: and it is the intereſt of Britain that the union ſhould be perpetual, be the preſent ſacrifice what it may.

"The mode of proceeding in the union between England and Scotland may be adopted, ſo far as circumſtances require; that is, the different conditions of the contenders conſidered. The objects are in moſt reſpects very different. From Scotland this country had chiefly in view negative advantages—that the Scots ſhould not be any longer the tools of other powers, to work with to our undoing. From America we have every poſſible advantage to hope for; not only the benefits of commerce, but their power to protect us *. No power in Europe, who

* "Let it be conſidered, that Scotland is reputed to contain but about one million and a half of people—America almoſt three millions: that Scotland is not ſuppoſed to encreaſe in population—America, by population, and emigrants from other countries, becomes double every twenty-five years:—therefore, that the preſent ſtate of America claims ſomething more than Scotland could claim at the Union, both in reſpect to numbers and future benefit."

knows

knows its intereſt, and has any poſſeſſions in the weſtern world, will chuſe to offend us, whilſt we and America are united; becauſe thoſe poſſeſſions are immediately ſubject to the powers of America, directed by us:—what thoſe powers are we now know full well by experience. Every diſtant poſſeſſion of every power in Europe, is a pledge for the good behaviour of its owner to Great Britain.—Is any object we are now contending for, an equivalent to ſuch an extenſive and moſt certain influence?

"It is therefore much to be wiſhed, that ſome ſuch perſons might be pitched upon, and ſent out, rather in a private character, as friends to both countries, than with a public authoritative commiſſion: for if thoſe who are now inveſted in America with power, ſhould *diſtruſt* them, the buſineſs is at an end; and this country and that are left expoſed to all the diſtreſſes, which are only beginning to be felt by both.

"Adminiſtration may think it an eaſy matter to avert any ſtorm which may ariſe from a diſcovery that they have been miſled, miſinformed, and groſsly abuſed, by thoſe on whoſe opinion they had too confidently relied.—This, however, may admit of ſome doubts; and I have too much regard for many of thoſe who compoſe it, to wiſh the experiment may ever be made.

"Let it be conſidered, that every provocation we give widens the breach; that the Americans have fully ſhewn they are the deſcendants of Engliſhmen; and if they are warm and impetuous like us, like us alſo they are placable; and inſtead of endeavouring to ſubdue them by force to a condition unworthy of our fellow-ſubjects, our countrymen, and our relations, let us open the ſhorteſt road to a ſpeedy, honourable, and effectual reconciliation.

JOHN FOTHERGILL."

(C.)

Copy of a LETTER *from Dr.* FRANKLIN *to* **, *dated Paſſy, Feb.* 12, 1781.

"DEAR SIR,

"I CONDOLE with you moſt ſincerely on the loſs of our dear friend Dr. FOTHERGILL. I hope that ſome one that knew him well,

will do juſtice to his memory, by an account of his life and character. He was a great doer of good. How much might have been done, and how much miſchief prevented, if his, your, and my *joint endeavours*, in a CERTAIN MELANCHOLY AFFAIR, had been a little more attended to!

With great reſpect and eſteem,

I am, &c.

B. FRANKLIN."

A mutual friendſhip had early commenced between Dr. FOTHERGILL and Dr. Franklin, and continued to the death of the former. Dr. Franklin, to whom I am under obligations for many civilities formerly, has ſince augmented them by his late very obliging communications; and the following extract of a letter is ſo applicable to the ſubject of my narrative, that I ſhall inſert his own words, as the moſt honourable and expreſſive teſtimony of his regard for his deceaſed FOTHERGILL.

" Our late excellent friend was always propoſing ſomething for the " good of mankind. You will find inſtances of this kind in one of his " letters, which I encloſe *, the only one I can at preſent lay my hand " on. I have ſome very valuable ones in America, if they are not " loſt in the late confuſions. Juſt before I left England, he, in con- " junction with Mr. ** and myſelf, laboured hard to prevent the " coming war, but our endeavours were fruitleſs. This tranſaction " is alluded to in the firſt page. If we may eſtimate the goodneſs " of a man by his diſpoſition to do good, and his conſtant endeavours " and ſucceſs in doing it, I can hardly conceive that a better man has " ever exiſted †."

* In this letter Dr. FOTHERGILL introduces the ſubject of this negociation; and, among other pertinent reflections, he ſuggeſts the importance of an uniformity of weights and meaſures throughout the continent of America; taking it for granted, as he long foreſaw, that ſhe would become independent. To make theſe more familiar, he recommends that they ſhould be framed of numbers eaſily diviſible, as 4, 8, 16, 32, &c.

† Letter to the Editor, dated Paſſy, March 17, 1783.

Whilſt

Whilſt he thus early diſapproved thoſe political meaſures which have ſince been generally reprobated as eventually ruinous to the empire, and long afterwards expreſſed his ſentiments to a friend of his in Yorkſhire, previous to the general aſſembly of the county, held on the 30th of December 1779, he uniformly mentioned his ſovereign in the moſt reſpectful language; it was not on men, but on meaſures, that he animadverted. Henry Zouch, of Sandal, in Yorkſhire, a clergyman, and a juſtice of the peace, of diſtinguiſhed reputation, was this intimate friend (and he was worthy of his confidence) to whom he addreſſed the following letter, which I am informed was read in a committee of the above meeting, and met with the moſt pointed approbation; which induces me to think that its inſertion here will be acceptable to the reader.

" THOUGH I am very apprehenſive that the ſubject of this letter will be of very little conſequence, yet I could not eaſily forego an opportunity of mentioning to thyſelf ſome ſentiments that have occurred to me in reſpect to the very important meeting about to be held at York.

" I know my voice is feeble and inſignificant; but being a native of the county, and having a great regard for it, on this and many other accounts, I think I ought not to be totally ſilent on ſo important an occaſion, though I know there are ſo many perſons will be preſent, who, in every reſpect but one, I acknowledge to be greatly indeed my ſuperiors;—that one is, a diſintereſted and impartial regard for the good of my native county, and the influence it will hold in the great national buſineſs that will come before you.

" If the motions made for retrenchments in expence are to be the baſis of your deliberations and petitions, I think them altogether unworthy;—all that could be obtained in theſe retrenchments, either by ſavings to the public treaſury, or abridging the power of the crown, are beneath the notice of ſuch an aſſembly, even were you ſure of obtaining all you have in contemplation.—I am morally certain you will obtain nothing; and every unſucceſsful conteſt diſheartens the vanquiſhed, and in proportion adds vigour to the conqueror.

" Have we not ſeen this to be the caſe, in all the petitions and remonſtrances that have been preſented? and is it not moſt certain that the majority will be doubly firm againſt you, as their intereſt is ſo much at ſtake?

" I conſider theſe motions as well intended, and they may be followed by others equally œconomical and wiſe; but they will all be rejected, and thoſe who have ſtood forth in their ſupport be diſcouraged.

" There is one neceſſary point, which I think you ought in the firſt place to ſtate moſt clearly—the general decay of the county—and keep cloſe to your own; manufactures declining, commerce languiſhing, value of land decaying, all public improvements at a ſtand, bankruptcies numerous, taxes encreaſing, multitudes diſtreſſed; and, was it not for the late favourable ſeaſons, univerſal poverty and wretchedneſs muſt have taken place. Pray, therefore, that peace may be reſtored between us and America, as the only means of ſaving your county from every ſpecies of calamity;—the war with that country, and its conſequences, having been the general cauſes of theſe diſtreſſes.—I do not mean that theſe expreſſions ſhould be uſed; you will find much better: but if you do not lay the axe to the root, in vain do you attempt the branches.

" Let not a ſingle reflection on the King or the miniſtry eſcape you—I mean not to appear in your petition. The acrimony that loaded the American petitions, and diſgraced many of our own, have done unſpeakable miſchief; I beg therefore, and earneſtly entreat, that every degree of invective may be ſhunned. Produce your facts, and ſtate them in the cleareſt light; but if you mean well to your country, and wiſh to ſee an example followed in other counties, ſhun every thing offenſive. As there is no great room for flattery, ſo neither give way to the reverſe temper;—if you do, poſterity may load your memories with deſerved reproach.

" Forgive me for thus offering my ſentiments to men much better informed than myſelf; but it is my firm opinion, from the knowledge I have of the temper of thoſe who muſt be the judges of your petitions, that ſo ſure as you deviate from a line of language, temperate yet firm, ſo ſure will you ſhut a door more cloſely againſt all that

you

you can urge;—and what muſt be the conſequence? A perſeverance in the ſame meaſures, to do deſpite to thoſe who condemned them. Once more, therefore, let me entreat that every thing manifeſtly offenſive in language may be ſtudiouſly avoided; that no bagatelles may be aſked for, but the removal of the great cauſe of expence—the war with America: the leſſer arrangements of œconomy may then be ſolicited, and theſe only take place at the deceaſe of the preſent occupants.

" Once more excuſe me, if I am taking a liberty unbecoming me;—the honour of our county, the good of the country in general, are at ſtake. If you aſk for what is evidently great and right, your example will be followed by all; if you aſk for things which you know beforehand will be refuſed, let your numbers be ever ſo great, you may poſſibly meet with many counter-petitions, and an attempt for general reformation be ſtifled in its infancy.

" J. FOTHERGILL."

London, 8th of the 10th mo. 1779.

With a natural attachment to his native country, ſtrengthened by every tie of intereſt and connection, and confirmed by his writings and patriotic exertions, yet, in the philanthropy of his breaſt, his affections expanded beyond the confines of empire. The Chriſtian Patriot, whilſt he directs his views to one univerſal Parent, and contemplates his unlimited goodneſs, feels his regard extended to all his creatures; and in the individual enjoyment of bleſſings, he delights in their univerſality and reciprocity.—Man was formed to be happy; and would be ſo, were the policy of nations directed to the communication of mutual benefits. In a ſmall community it is ever found, that the happineſs of individuals will be in proportion to the ſum of happineſs of the whole; and national felicity will be proportioned by a ſimilar ſcale. No man has the power of encreaſing his own happineſs, beyond the neceſſary and common enjoyments of life, by any other medium, than by that of benefiting his fellow creatures; and the true policy of an individual might become the true policy of nations, were national policy ſubſervient to reaſon and religion.

In this view, no language can be more impolitic and irrational, than

that

that which inculcates the exiſtence of the *natural* enmity of nations. We know that the wolf, impelled by hunger, becomes the *natural* enemy of weaker animals; but man, whoſe paſſions ought to be humanized in the ſchool of Him who invariably recommended *Peace on earth*, can never become the *natural* foe of man. The different habits of nations, and the variety in their productions, naturally point him out as the friend of his own ſpecies; and were religion of no avail, intereſt, one might imagine, would urge him to the communication of mutual benefits.

If we ſelect an example, where habit has rendered the language of *natural enemy* familiar to national prejudice, even France might be united to us by intereſt and friendſhip, were we to encourage a mutual intercourſe in trade, inſtead of interdicting it by the ſevereſt reſtraints. Whilſt ſhe takes off our Woollens, our Hard-ware, and other heavy articles of manufacture, we might receive in exchange her Laces, her Wines, and other articles, which the gaiety of the people, or the conſtitution of the ſoil, ſeem better adapted to produce. Mutual intereſt being thus created by nature, and eſtabliſhed by the communication of mutual advantages, we ſhould become *natural friends*; at leaſt, that enmity, to which ſo many thouſands have been ſacrificed, would no longer exiſt.—Thus I have heard Dr. FOTHERGILL reaſon; and may his ſpirit deſcend upon the rulers of the earth!

The manufacture of our fine Laces, which is carried on with ſuch ſedulous induſtry in ſome parts of England, and particularly in Buckinghamſhire, ſupports indeed many poor families; but the employment, inſtead of being ultimately beneficial, may really prove injurious, neither ſuiting the conſtitution of this country, nor the genius of the people: thoſe engaged in it, as well as in the manufactory of gauzes, &c. as I am informed, already appear like another race of people; that vigour and ſtrength which diſtinguiſh'd the labouring poor of this kingdom from thoſe of every other, is ſunk down into pallid debility. It is true, that women and children are chiefly occupied in theſe ſedentary employments; but it is from theſe enervated females that the next generation is to ſpring!

Even in the contracted ſpirit of national policy, if we have any rivals

or *natural enemies*, it cannot be true policy in us to rob them of thoſe employments that debilitate the labourer, and conſequently his offspring; but rather to encourage among them ſuch ſedentary manufactories, whilſt in return they exchange our wrought iron, and other products of athletic induſtry, which at the ſame time conduce to preſerve that health and vigour, upon which perſonal happineſs and national ſtrength ſo much depend.

When a man hath diſtinguiſhed himſelf by extraordinary efforts of genius, and gained the ſummit of popular fame, we naturally wiſh to be acquainted, not only with the moſt intereſting circumſtances of his life and character, but even thoſe which may be trifling in themſelves, and which by no means would bear to be recorded, did they refer to perſons of little fame; yet, when connected with a character that hath excited our admiration, or with works that we have contemplated with delight, they derive a kind of adventitious conſequence from their relation, and are ſought after with more avidity than greater matters of leſſer men*. This ſentiment, doubtleſs, induced the writer† of "An Af-"fectionate Tribute" to give the ſubſequent relation of Dr. FOTHERGILL's dreſs, addreſs, and manner of living; which I ſhall literally tranſcribe, for the information of ſuch as never enjoyed his acquaintance.

"The perſon of Dr. FOTHERGILL was of a delicate, rather of an extenuated make; his features were all character; his eye had a peculiar brilliancy of expreſſion, yet it was not eaſy ſo to mark the leading trait, as to diſengage it from the united whole. He was remarkably active and alert, and, with a few exceptions, enjoyed a general good ſtate of health. —He had a peculiarity of addreſs and manner, reſulting from perſon, education, and principle; but it was ſo perfectly accompanied by the moſt engaging attentions, that he was the genuine polite man, above all forms of breeding.—I knew him well, and never knew a man who left ſuch pleaſing impreſſions on the minds of his patients.

"His dreſs was remarkably neat, plain, and decent, peculiarly becoming himſelf; a perfect tranſcript of the order, and I may add, the

* Monthly Review, vol. lxv. p. 443. † The late Dr. William Hird.

neatneſs

neatneſs of his mind.—He thought it unworthy a man of ſenſe, and inconſiſtent with his character, to ſuffer himſelf to be led by the whim of faſhion, and become the ſlave of its caprices.—But this impreſſion upon his underſtanding was much ſtrengthened by his firm attachment to his principles as a Quaker, which lead to that decent plainneſs and modeſty in dreſs, which may be preſumed to be one, at leaſt, amongſt the external evidences of a ſpirit elevated in its views above all tranſient and ſublunary things.

" At his meals he was remarkably temperate; in the opinion of ſome, rather too abſtemious, eating ſparingly, but with a good reliſh, and rarely exceeding two glaſſes of wine at dinner or ſupper: yet, by this uniform and ſteady temperance, he preſerved his mind vigorous and active, and his conſtitution equal to all his engagements*."

Religion, when it works upon the heart, and ſubjects the paſſions to the exerciſe of beneficence, generates all thoſe attractive graces, which can be acquired by no other medium. Rules of exterior imitation may be delineated with the elegant pencil of a Cheſterfield; but the purity of the heart is the genuine ſource of true politeneſs: for that religion, which breathes *good-will unto man*, whilſt it refines the underſtanding, and ſoftens the affections, begets that complacency from which neceſſarily reſult thoſe amities, and that unaffected politeneſs, which alone ſhould form the gentleman; ſuch as the Scholar ſhould cultivate, and the Chriſtian recommend; and theſe rendered a FOTHERGILL beloved, reſpected, and illuſtrious.

But the time was approaching, when neither temperance nor virtue could exempt our valuable aſſociate from the final lot of humanity. For a ſeries of years, indeed for the moſt part of his life, he had enjoyed good health, and time ſeemed ſlowly to diminiſh the vigour of his body, or weaken the exertion of his mind; but it was perceptible to thoſe who were much with him, and what he often remarked himſelf, that fatigue became leſs ſupportable, and recruit of ſtrength, in his annual retreats into Cheſhire, was of late years more ſlowly acquired. There are many cauſes, beſides thoſe reſulting from advancing age,

* Page 27, 28.

which

which diminiſh the conſtitutional vigour and vivacity of a feeling mind; his was ſenſibly awake to all the endearments of brotherly affinity: he had loſt his youngeſt brother Joſeph, and afterwards his brother Samuel, both of Warrington; the latter my paternal Guardian, by whom I was early introduced to the protection of the phyſician: it was theſe relatives, and others in the vicinity, that firſt induced him to retreat to Lea-hall in Cheſhire, which is but a few miles diſtant from Warrington. Theſe ſucceſſive loſſes ſenſibly affected his mind, and interrupted that conſtitutional benefit, which he had formerly experienced. From this time many of his letters from the country teſtify the depth of his grief, and the irreparable chaſm of enjoyment which he had thereby ſuſtained:

Quis deſiderio ſit pudor, aut modus
Tam chari capitis!—— HOR.

In 1772, ſome months after the deceaſe of his brother Samuel, "I "have been obliged," he remarks from Lea-hall, "to write many "letters, which I am at preſent very unfit for, or any thing elſe: but "I will not ſpend all in unavailing complaints. I meet with many "things to put me in mind how much I have loſt; and I feel ſuch a "void in my enjoyments of this life, as reduces my wiſhes to a great "mediocrity indeed *."

In a ſucceeding year he acquaints me, "that he came down to "Lea-hall much oppreſſed: and now I am here," he adds, "I have "enough to do to command myſelf, when I recollect my brother, "whoſe countenance, counſel, and ſympathy, relieved every anxiety, "gave taſte to every enjoyment; but I will try to baniſh every thing, "but a wiſh to follow him through the remains of this life, with "ſubmiſſion to every difficulty, and gratitude for many many bleſ-"ſings †."

I have the rather indulged theſe digreſſions, as they recal to mind the virtues of my deceaſed guardian, the want of whoſe counſel, if Dr. Fo-

* Letter to the Editor, anno 1772.

† Ibid. anno 1774.

THERGILL, with a comprehenſive underſtanding rarely to be equalled, could ſo deeply lament, what muſt the public have ſuſtained when this god-like man was no more? for, if this ſacred appellation may be applied to him who devotes his life to render mankind wiſer and happier, I have ample ſanction for adopting it on the preſent occaſion; and more particularly as he was ſo nearly connected with the immediate ſubject of my narration *: but the progreſs of ſolicitude upon the mind, which is not the reſult of remorſe, is always ſlow, and rarely fatal; and the diſeaſe under which Dr. FOTHERGILL finally ſuffered, was certainly independent of this ſource. It was about the middle of November 1778, that, on waking out of a ſhort ſleep, a forcible inclination to make

* This pious man, a little before his death, addreſſed the following expreſſions to ſome of his relations, when they took leave of him, previous to their ſetting out for the Yearly Meeting in London, anno 1772.

"Our health is no more at our command, than length of days;—mine ſeems drawing "faſt towards a concluſion, I think: but I am content with every allotment of Provi- "dence, for they are all in wiſdom—unerring wiſdom. There is *One Thing* which, "as an arm underneath, bears up and ſupports; and though the rolling tempeſtuous "billows ſurround, yet my head is kept above them, and my feet are firmly eſtabliſhed.— "Oh! ſeek it—preſs after it—lay faſt hold of it.

"Though painful my nights and weariſome my days, yet I am preſerved in patience "and reſignation.—Death has no terrors, nor will the grave have any victory.—My ſoul "triumphs over death, hell, and the grave.

"Huſbands and wives, parents and children, health and riches, muſt all go;—diſap- "pointment is another name for them.

"I ſhould have been thankful, had I been able to have got to the enſuing Yearly "Meeting in London, which you are now going to attend, where I have been ſo often "refreſhed with my brethren; but it is otherwiſe allotted.—The Lord knows beſt what "is beſt for us;—I am content, and reſigned to his will.

"I feel a foretaſte of the joy which is to come; and who would wiſh to change ſuch a "ſtate of mind?——I ſhould be glad if an eaſy channel could be found, to inform the "Yearly Meeting, that as I have lived, ſo I ſhall cloſe, with the moſt unſhaken aſſu- "rance, that we have not followed cunningly-deviſed fables, but the pure, living, eternal "ſubſtance.

"Let the aged be ſtrong, let the middle-aged be animated, and the youth encouraged; "for the Lord is with Sion, the Lord will bleſs Sion!

"If I be now removed out of his church militant, where I have endeavoured in ſome "meaſure to fill up my duty, I have an *evidence* that I ſhall gain an admittance into his "glorious church triumphant, far above the heavens.

"My dear love to all them that love the Lord Jeſus."

water

water enſued, but without the power. For a day or two preceding, ſome heat, and an unuſual difficulty had attended: at length a total ſuppreſſion came on, that required manual aſſiſtance for upwards of two weeks, which was ſometimes accompanied with excruciating pain, though no leſs than two hundred drops of Thebaic tincture had been given in the ſpace of a few hours, without much relief. In the height of his diſtreſs I viſited him, and found him calm and recollected: he deſcribed, with wonderful ſerenity of mind, his acute miſery, expreſſing a pious and Chriſtian reſignation; and adding, "that if he had left any thing un-"done which he wiſhed to have done, it was perfecting the plan of "Ackworth School; and likewiſe, the complete arrangement of the "rules of our religious Society." The firſt, I have already intimated, was an undertaking worthy of a great and illuſtrious ſage; and the latter was equally arduous, though the difficulty could be known only to the Society intereſted in it: and he lived to accompliſh his ardent wiſhes.

In the commencement of December of the ſame year, he was able to ſee his friends; and ſoon afterwards the importunities of the ſick forced him again into his former arduous and active life, and for the ſpace of two years he enjoyed his uſual degree of health, at leaſt he rarely complained, and he certainly was equally occupied in the duties of his profeſſion, and in numerous exertions for the benefit of individuals, and of the community; for he never ſeemed ſo happy, as when he was rendering others ſo.

It was after this illneſs that he viſited Ackworth School, and endeavoured to perfect his plan, and perpetuate its advantages to poſterity. He retired as uſual, the latter end of the year, to Lea-hall, and once returned by Buxton, where he projected thoſe improvements in that celebrated reſort of invalids, already hinted at, and which, as I am informed, are now carrying into execution.

He likewiſe viſited Knareſborough, in Yorkſhire, after many years abſence, "to pay," as he, with filial piety, relates, "the grateful tribute "of a tear at the ſide of an honoured parent's grave.—To ſee that "his ſepulchre was not laid waſte to the beaſts of the field, but ſecured

" from the ravages of neglect, was to us (himself and ſiſter) a pleaſing " duty. Firmly perſuaded that we had not the leaſt cauſe to mourn on " his account, and nothing left more becoming us, than to call to " mind his precepts, and his example, we left the ſolitary ſpot, with " hearts full of reverent thankfulneſs, that ſuch was our father, and " that we were ſo far favoured, as to be able to remember him with gra- " titude and affection *."

But the firmeſt conſtitution, like the moſt perfect elaſtic, may be extended beyond the power of reſtoration. It was on the 12th day of December 1780 that he was again ſeized with a ſuppreſſion of urine, which no art could remove. I ſaw him in a ſtate of acute pain, which ſeemed almoſt inſupportable; he had ſtrength enough to raiſe himſelf up in bed, but with ſuch extreme thirſt, that while he leaned on his right arm, he held in the left hand a glaſs of wine and water, to moderate the inſatiable thirſt, of which fluid he was obliged to ſip after every ſentence, in order to enable him to ſpeak: he was then as ſerene as in perfect health; he endeavoured, indeed, to aſſume a degree of chearfulneſs, which was natural to him when well, and deſcribed his complaints, and their probable fatal termination, with a pious hope, " that " he had not lived in vain, but in a degree to anſwer the end of his " creation, by ſacrificing intereſted conſiderations, and his own eaſe, " to the good of his fellow creatures." Some individuals might have envied the univerſal eſteem he acquired by his virtues, his manners, and his ſkill in healing; and all may admire that comfort of mind which ſuſtained him to his final diſſolution, which was on the 26th day of December 1780.

A man ſo long, and ſo reſpectfully known, dying in the ſummit of celebrity, and ſurrounded with the careſſes of a numerous acquaintance, muſt be deeply and univerſally regretted.

Acts of friendſhip to the deceaſed are animated, becauſe they are diſintereſted, and virtuous minds are the moſt ardently diſpoſed to fulfil them: but to prevent the inconveniencies that were feared, and might reſult, from the crowd that purpoſed to aſſemble, to pay the laſt offices

* Letter to the Editor.

of

of eſteem to his memory, had he been interred in London, it was judged adviſeable to carry his remains into the country; which, on the 5th of January 1781, were depoſited in the burial-ground of Winch-more-hill, about twelve miles from town: nevertheleſs, upwards of ſeventy coaches and chaiſes, filled with friends, attended upon this melancholy occaſion. "The tender remembrance of friendſhip yet lives in every breaſt; we mourn without form; we ſee and feel the void his fall has left, and which only time can mitigate, and a reſignation to the diſpenſations of that Power, which orders all things with unerring wiſdom and goodneſs, beyond our comprehenſion *."

———*Quis talia fando,*
Temperet à lachrymis?—— VIRG.

* Dr. FOTHERGILL's Life of Dr. Ruſſell.

THE

THE following letter, though addreſſed to the ſiſter of Dr. FOTHERGILL, has ſuch an immediate reference to the preſent ſubject of biography, that I have preſumed to inſert it here.—This affectionate tribute of the living phyſician, after an intimacy commencing in youth, and continued with unabated friendſhip to the lateſt period of Dr. FOTHERGILL's life, affords the moſt honourable teſtimony of the amiable character of the one, and of the tender and ſympathetic feelings of the other; and muſt convey ſingular pleaſure to every reader, who hath enjoyed that genuine friendſhip, which we truſt doth not terminate with the grave.

" Dear Mrs. FOTHERGILL,

" I DO not fear to encreaſe your grief by this early addreſs, nor to recall to your memory the very afflicting diſpenſation which you have lately experienced, as I am well convinced it has never once been abſent from your mind ſince it happened; but I can no longer defer to mingle my tears with yours, and moſt ſincerely to condole with you on the ſignal loſs which you have ſuſtained. Your loſs, it muſt be confeſſed, is incomparably the greateſt; but you are by no means the only ſufferer—all his friends, his acquaintances, the publick—all partake of it, and ſhare it with you.

" As to myſelf, I feel it deeply. Forty-ſeven years have now run their courſe ſince I had firſt the happineſs of his acquaintance; during which long tract of time we have maintained an uninterrupted warm mutual and diſintereſted friendſhip. Often have I been benefited by his counſel and advice; always happy and improved by his converſation and correſpondence. The regard and kindneſs with which he diſtinguiſhed me,

me, has been ever my pleaſure and my boaſt. May the Almighty ſanctify this ſevere affliction to you! and may we all profit by ſo eminent an example! Great as your grief muſt be, you have every conſolation that can alleviate a misfortune of this kind. No one lived a more innocent and a more uſeful life. No one was ever more beloved and reſpected while living; none have died more univerſally regretted. I loved and eſteemed him highly alive; I ſhall ever reſpect his memory. Submiſſion to the will of Heaven, we all know, is ever our duty under every afflicting diſpenſation. The reaſon is very plain; of this our judgment is eaſily convinced: but the practice is not quite ſo eaſy. We cannot forget the pleaſure we enjoyed in the poſſeſſion of ſuch bleſſings; we look back with regret, and are deeply ſenſible of the preſent void. Natural affection will have its courſe, and it requires time to ſoothe the paſſions. Of all the taxes on humanity, this is the greateſt.—Both on your own account, and from the near relation in which you ſtand to the reſpected deceaſed, I muſt ever intereſt myſelf cordially in your welfare. I am far from expecting, nay, I do not even wiſh, you to take any notice of this letter ſoon. The preſent ſtate of your mind cannot admit of it: but hereafter, when time has mellowed your grief, and blunted the edge of your preſent poignant affliction, I will hope to hear, either from yourſelf, or by the hands of ſome of your friends, of your ſtate of health and ſituation. I hope I need not ſay, that if in any reſpect I can be made uſeful to you, it will afford me a ſenſible pleaſure. I commit you to the conſolation and guidance of the Almighty; and remain, with ſincere regard and eſteem,

"Dear Mrs. FOTHERGILL's

"Faithful and reſpectful friend,

"W. CUMING."

"*Dorcheſter, Jan.* 10, 1781."

Dissertatio Medica

INAUGURALIS,

De Emeticorum Usu in variis Morbis tractandis:

QUAM,

FAVENTE SUMMO NUMINE,

Ex Auctoritate amplissimi SENATUS ACADEMICI, *et nobilissimæ* FACULTATIS MEDICÆ *Decreto;*

PRO GRADU DOCTORATUS,

SUMMISQUE IN MEDICINA HONORIBUS ET PRIVILEGIIS, RITE AC LEGITIME CONSEQUENDIS,

Eruditorum examini subjicit,

JOANNES FOTHERGILL,

ANGLO-BRITANNUS,

Ad Diem 13 Augusti, *horâ locoque solitis.*

EDINBURGI,

M,DCC,XXXVI.

THE following Inaugural Theſis was written when the Author was little more than twenty-one years of age, and before Baron de Haller's immenſe work of Phyſiology made its appearance, and diffuſed new light upon the Nervous Syſtem.

Publications, under the character of Juvenile Attempts, do not always afford concluſive evidence of a riſing and ſuperior genius; they are too frequently the productions of indigent individuals, who are always to be found in colleges, and who ſubſiſt by the indolence or ignorance of wealthier ſtudents, furniſhing them with performances to which they have no better claim than what the mere exhibition of their names on a title page gives them. But whatever merit may be found in this Eſſay, I have authority to ſay, that it was the genuine production of the author, under whoſe name it was publiſhed, without any aſſiſtance either in the matter or the compoſition.

The ſubject is an important one, and too generally intereſting for the Public not to wiſh for a tranſlation of it into Engliſh, eſpecially as moſt of the Doctor's ſubſequent pieces were originally written in that language.

E.

Viris

Viris præclaris,

Præceptoribus ſuis plurimùm colendis,

JOANNI RUTHERFORD, Med. Doct. atque in Academia Edinburgenſi Medicinæ theoreticæ et practicæ Profeſſori :

ANDREÆ ST. CLAIR, Med. Regio, Medicinæ theoreticæ et practicæ in eadem Academia Profeſſori :

ANDREÆ PLUMMER, Med. Doct. atque ibidem Medicinæ et Chemiæ Profeſſori :

ALEXANDRO MONRO, R.S.S. et in eodem Lyceo Anatomiæ et Chirurgiæ Profeſſori :

NEC NON

CAROLO ALSTON, Med. Doct. et Reg. Botanices Profeſſori :

Ob plurima in ſe collata beneficia, hoc ſpecimen inaugurale, quod exegit mos laudandus Academiæ,

Omni quo par eſt obſequio et exiſtimatione offert

JOANNES FOTHERGILL, *A. & R.*

Dissertatio Medica
INAUGURALIS,

De Emeticorum Usu in variis Morbis tractandis.

PROŒMIUM.

QUUM corporis vigor, mentis acumen, salus perfecta præsens, futuræ stabilimen, vitæ constantis et integræ dulcedo, magnâ ex parte ventriculi, viscеris prænobilis, fata sequantur; nihil arduum aut molestum ducebant tum veteres tum recentiores medici, quo minus in vado esset tantæ utilitatis negotium. Experientia gnari facti fuerunt, si sospes esset ventriculus, minus metuendum esse reliquis; eo autem malè se gerente, incolumem diu hærere totius corporis fabricam non posse. Indies quoque compertum est, quòd arthritis, hydrops, scorbutus, tabes, insania, febresque pessimæ (et si quæ graviora mala supersint, et hominibus insensa magis,) rariùs attollunt capita, illæso interim ventriculo: et si forte nascantur aliunde, sæviunt eò magis, quo magis à sanitate recedit princeps hæc animalis officina. Hinc itaque liquet, quantum naturæ ministris incumbit, ejus incolumitati enixè prospicere. Ipsius autem ventriculi, ejusque contentorum vitia, tum et morbi exinde nati, quorum fibræ altiùs hærent, opem sæpe poscunt, quæ depletione tentatur; neque ad culpam horum delendam, prognatasque labes eradicandas, feliciùs adhibetur sæpissime remedium, quàm evacuatio per vomitum facta. Hac unicâ intentione adeo celebrata fuit Emesis apud veteres medicinæ patronos; ut etiam sanis, si sani perstare voluissent, hoc medicinæ genus præscripserit *(a)* Hippocrates, quod sæpius repetendum suasit, licet aspera et intractabilia admodum essent medicamenta vomitoria, veteribus familiaria; nec certe sine decumbentium fastidio, vel medicorum sollicitudine, porrigenda.

PARS PRIMA.

1. EST autem vomitus ea ventriculi, diaphragmatis, et musculorum abdominalium actio, quâ illius contenta, quasi inter præla compressa, vi magnâ sursum per os rejiciuntur. Horum siquidem viscerum contractione

(a) Hippocrates de diæta, lib. 3. & alibi passim.

sursum

sursum urgentur omnia in abdomine contenta viscera, constringitur inde pylorus, dum quæ in ventriculo hæret materies, illius *(a)* et ambientium vi musculari in orificium ejus superiùs impressa, illud dilatat, et per contractas œsophagi fibras longitudinales facilem sibi parat exitum.

2. Stimulus quicunque validus, ventriculo inditus, ejusque nervis applicatus, actionem hanc incitare post est, ob commercium quod obtinent ventriculi nervi cum eis, qui musculis abdominalibus et diaphragmati inserviunt.

3. Copia etiam ingestorum nimia atque moles, licet haud alio, saltem parum ingrato potiantur aculeo, nauseam, deinde vomitum excitare queunt; cujusmodi sunt, aqua egelida, aromatibus imbuta, suaviaque, nec non dapes illæ quæ gustui summopere blandiuntur, avidè et sine norma deglutitæ; quicquid porro nervos ventriculi irritat, aliâve aliquâ ratione æquabilem horum liquidi fluxum perturbat admodum, vomitionem ciet; qualia sunt capitis contusio vel concussio vehemens, jactatio in nave vel rheda inassuetis, valida imaginatio, sive rei cujusdam injucundæ memoria; hæc enim aliaque similia delicatulos summo urgent quandoque fastidio vomituque.

4. Attamen compertum est, objecta omnia, stimulo licet prædita, haud æquè certò vires suas in ventriculum vicinaque exerere, sed nunc per unum ex emunctoriis, nunc per alterum, promovere secessum: quædam itaque quæ ferè perpetuò vomitum producere constabat, quæque præ cæteris huic muneri obeundo maximè accommodata esse docebat experientia, in unicum hunc usum sepposuit vetustas. Ἐμετικὰ hæc appellabant Græci, VOMITORIA Latinis audiunt.

5. Mancus verò fuit horum apud veteres catalogus, licet amplus; pauca enim vomitoria cognita habuerunt, quæ non acerba admodum et inclementia, vel lenia prorsus et invalida, comperiuntur; si modo simplicia eadem, eisdem insignita titulis, apud nos hodie prostant, ac apud istos olim: uti cuique patebit, antiquorum scripta evolventi. Veratrum aliquando lethale fuit, infida quoque aliorum actio. Non mirum itaque, si morbo graviore torqueri, vel ad aliud quodcunque subsidii genus confugere maluerint ægroti, quàm durum et immite, vel lenius, at incertum, sæpe infructuosum, experiri medicamen: quo contigit ut absterritus quandoque æger, medicum abhorreret; medicus pariter medelam, quæ tanta pollicita est, propinare dubitaret: unde uterque incommodum haud leve sæpius tulit. Atque licet Hippocrates rationem intellexerit temperandi emetica; alii tamen multi, minus solertes, spe suâ sæpe exciderunt. Neque chemia, quæ tot præclara medicamenta detexit, ulla fere suppeditat emetica, quæ tenellis et delicatioribus tutò dare licet: quin et dolebat suo tempore Sydenhamus, desiderari adhucdum emeticum *tutum, et satis interim efficax*, quale in celebri radice Ipecacuanha passim hodie experiuntur practici. Hujus instituti non est, singula, quæ vi emeticâ pollent, recensere, horum saltem classes ratione virium indicâsse sufficiat.

(a) Wepfer de cicuta aquatica, cap. 15. Hist. 1.

6. In *lenia, vehementiora*, et *fortiſſima* vomitoria, diſtinguendi hunc evacuantium ordinem, mos quibuſdam obtinuit: nec quidem ineptè; diverſa enim iſta ſimplicia, quæ ad vomitum ciendum hodie uſurpantur, commodè ſatis ſub triplici hac ſerie diſpertiri poſſunt. Nulla tamen fides efficaciæ, ſenſibus patefactæ, odori ſaporive videlicet, habenda eſt: ſed experientiæ ſoli horum credenda diſtributio.

7. Emetica quæ *lenia* appellantur, gemini ſunt ordinis; 1*mo*, Recenſentur ea quæ mole ſuâ, vel irritamine levi, moli unito, ſtomachum laceſſunt; qualia ſunt, aqua tepida, viſcoſa, ſaccharata, mellita, oleoſa, ſalita, jura pinguia, infuſa theæ viridis, cardui benedicti, florum chamæmeli, aliaque ejuſmodi plura, ex diverſis plantis aromaticis elicita. 2*do*, Huc pertinet emetici cujuſdam fortioris doſis refracta, quæ ſtimulo gaudet tam valido, ut nauſeam, vomendique conatum unum alterumve provocare poſſit, nec ampliùs urgeat. Ex ſalium numero hæc plerumque petuntur, quæ humoribus gaſtricis ſtatim ſolvuntur, et celeriter undiquaque diſperſa, applicantur nervis, mox ſurſum rejiciuntur, penituſque epotis liquidis eluuntur ſoluta, ut brevi quieſcant omnia. Filum per œſophagum trajectum, irritatio gulæ, per pennam oleo madefactam; idea faſtidiens, inaſſueta navis agitatio, currûs per loca aſpera ducti conquaſſatio, animi denique pathemata leviora huic ordini conſentiunt. Noviſſimè tamen memoratas cauſas quibuſdam vomitiones inducere perquam violentas haud diffiteor; pleriſque verò non item, neque eos diu et fortiter ſimul moleſtare ſolent.

8. *Fortiorum* claſſis fit ex prioribus § 7. *n*. 2*do*, auctâ ſaltem doſi, vel cauſâ; aut ex iis quorum firmior compages, et hinc tardior effectus, ſed vehementior: namque emiſſæ particulæ vellicantes, paulatim in cryptas plicaſque ventris rugoſi ſeſe inſinuant, nervulis adhæreſcunt, moleſtiam creant, augentque, nec ingeminato vomendi niſu, velatis ſedibus excutiuntur, uſque donec eorum vires repetito opere decoquantur; hinc emeſis protractior, nec non vehementior. Medicamenta pleraque ſurſum purgantia, hodiernâ praxi maximè uſitata, huic claſſi addenda ſunt, uti v. g. aſarum, ipecacuanha, radix raphani ruſticani, ſemen ſinapis, ſcilla, horumque variæ præparationes, combinationes, ex vegetabilibus. Ex metallicis ſales quidam Chemiæ progenies, ut vitriolum Martis, et ſalia vitriolica: ſed palmam præ aliis meruiſſe videntur, quæ ex Venere acquiruntur, ſal ſc. cupri ejuſque tinctura. His addendi ſunt tartarus emeticus, et quorundam ex ſerie ſequenti imminuta doſis.

9. *Fortiſſima* nuncupare licet ea, quæ ars dogmatica et maximè rationalis, ob ſævos et atroces effectus ſæpius expertos evitat, quæque non ſine imminente machinæ periculo exhiberi poſſe perennis docuit obſervatio, quæ rariùs, niſi ab audaci medicaſtro, vel in morbo quodam acerrimum poſcente auxilium, à methodico præſcribuntur; licet inter hanc et prægreſſam claſſem, exquiſitas metas apponere, difficile quidem ſit. Plurima hujuſmodi ſuppeditat vegetabile regnum: eminent imprimis καθ᾽ purgantia, quorum amplificata doſis, præſertim

tim si ex resinosis desumatur, crudeles vomitus frequenter excitat. Resinosa etenim humoribus nostris parum miscibilia sunt, indissoluta cavo ventriculi accrescunt, summos concitant dolores, spasmos, et immanes per superiora depletiones: evincunt hoc cruciatus isti, qui ægrotis superveniunt post ingestam jalapi resinam, aut ejusmodi quodpiam, non rite per attritum solutum, vel miscibile aliâ quavis ratione factum; dum forte nativo suo sapone fraudantur humores inquilini, et aquosâ pituitâ plena sunt omnia. His annumerari possunt, helleborus albus, tithymali species nonnullæ, nicotiana, et plantæ aliæ permultæ. *deleteriæ* dictæ: classem augent, stibiata acriora, et illa quoque emitica quæ dat Mercurius, unà cum plerisque metallicis venenatis.

10. Ex tradita hactenus descriptione liquet, 1*mo*, Vomitum excitari non posse, sine quodam aculeo (intelligi velim omne id, quod liquidi vitalis fluxum sive nervorum actionem mutare queat) systematis nervosi regioni cuidam applicato. 2*do*, Quòd ex illius in nervos, horumque in musculos, § 1. actione, necessariò fit contentorum gastricorum evacuatio, denique 3*tio*, Quòd hæc neutiquam evenire possint, sine partium quarundam compressione forti, aliarum ingenti concussione, et insigni corporis universi motu. Lenissimæ etiam vomitioni hæc semper adsunt: crescunt ut extenditur emetici potentia, et adaucto stimulo, usque in fabricæ ruinam evehi possunt.

11. Quum itaque præfatæ conditiones nunquam non Ἐμέσει conjunguntur, quum ab hisce omnino pendeant pleræque ex iis mutationibus quæ ab emeticis sperantur, producuntur; effectus horum ex triplici illa causa nascentes, quinam sint, rimaturus, his quæsitis responsa expediam; scil. Quid valeat emeticum, quatenus est stimulus? Quatenus evacuet? Quatenus denique vi suâ mechanicâ totum corpus afficere queat?

PARS SECUNDA.

De Emeticorum Usu, à stimulo suo derivato.

12. NULLA adhuc instrumenta in corpore animali invenit anatome, quæ stimulorum objecta propriè existimari possunt, præter ipsos nervos; qui effectus horum, quales quales sint, primariò patiuntur, aliasque ad partes propagant, uti multiplicibus constat experimentis: hæc enim docent, quòd non modo in ipso puncto cui irritans applicatur, mutatio accidit; quin et ad nervi fontem, terminum, ramorum pullulantium fines derivatur effectus, nec non ad surculos, oppositam corporis plagam lustrantes, à causa licet diversa.

13. Effectus imprimis sunt, energiæ vitalis ad partem ita affectam accessio major, in aliis ejusdem diminutio; et perdita demum æquabilis leniscque ejus divisio, cursu magis accelerato, turbatoque simul. Hæc verò omnia, gradûs respectu, diversa futura sunt, et plus minusve conspicua, prout causæ lacessentis

vehementia

vehementia et copia, nervorum indoles, numerus atque moles, tegminis denique quo involuti ſunt craſities, eſt diverſa.

14. Cauſam hanc, ſive energiam, § 13. eſſe liquidum ſubtiliſſimum, mobiliſſimum, omnibuſque fluidi dotibus communibus præditum, è cerebro, jugi, leni, pacato motu derivatum in ſingulas corporis partes, agnoſcunt plerique Doctores. Nec inficias ibit, qui attentè perlegerit quæ de hac re ſcripſit *(a)* Boerhaavius; vel quæ ordine adhuc lucidiore expoſuit inclytus noſter Anatomiæ *(b)* profeſſor, perpenderit.

15. Neque admodum veroſimile videtur, effræno vel præcipiti quovis impetu ſpiritus animales unquam ita rapi, ut enormium tot effectuum cauſa ſint, vel tot morborum eſſentiam conſtituant; hancve in motum proclivitatem ab ingenti quadam et præternaturali mobilitate oriri poſſe: Quippe quòd ſpirituum impetus à fortibus vitæ viribus ſolummodo pendeat; cum tamen in nullis frequentiùs occurrant morbi à ſyſtemate nervoſo malè affecto nati, quàm in eis qui oppoſitâ potiuntur indole, laxis ſcil. debilibus, et quibus vitæ vires parum firmæ ſunt. Legibus certe œconomiæ perquam videtur conſentiens, liquidum hoc, nunc paulo celeriùs, nunc lentiùs moveri: ſed tantum intereſſe diſcrimen inter ſummam velocitatem, pigritiamque ſummam, ut ſola ſit hæc morborum origo, haud facile conceditur. Spirituum inæqualis diſtributio tumultuum plurimorum, qui nervis vitio dantur, parens eſſe poteſt, omniaque iſta phænomena, quæ morbos, nervoſos dictos, comitari ſolent, longè facilius hoc filo duce panduntur: nec alia ſuadet muſculorum actio.

16. Pungens quodcunque ſatis acre, nervo, ejuſve propagini appoſitum, inæquabilem hanc diſperſionem efficit, ut ſpaſmi et convulſiones ad necem uſque ſævientes oſtendunt. Peragit idem quoque compreſſio, in nervi cujuſcunque inſignioris ortum facta; aut obſtructus, alia quavis de cauſa, ſpirituum per ſuos canales egreſſus, unde propinqui pleniori horum rivo luſtrari debent. Hanc augent diatheſin, vel minuunt ſummopere diverſa fluidorum et ſolidorum ratio, quæ unicuique ætati convenit; tum et propria cuique temperies: quo etenim tenerior ætas, quo mollior habitus, eò, cæteris paribus, promptius irritantur nervi, vel comprimuntur. Sententiam confirmat experientia. Rarò enim opiparè paſcentes pueros, quorum ſanguis ſpiritibus dives, et inſigni prædita mollitie cutis, inquinat contagium varioloſum, ſi modo venenum haud fuerit mitiſſimum, quin excitantur contractiones horrendæ: neque rarò ſuperveniunt inſultus, epilepſiæ veræ prorſus æmuli. Nec ſemper ob egeſtatem liquidi vitalis, invadunt inſultus hyſterici, cum otioſas, et luxu ſolutas feminas adoriantur magis, quàm quibus ſors anguſtior obvenit.

17. His idciro ita poſitis, generalem hanc regulam licet ſtatuere; nempe ſi morbus à ſtimulo particulari cuivis parti applicato naſcatur, huic ſuccurrendum

(a) Boerhavii Inſtitutiones, § 275 ad 292. *(b)* Monro's Anatomical Treatiſe of the Nerves.

est, vel destructione causæ stimulantis, vel alterius applicatione parti adversæ; sic etenim restituto æquilibrio solvitur morbus spasmodicus.

18. Effectus memorati § 13. nervis præcipuè et musculis contingunt. Alii tamen et diversi vicinas sæpe partes corripiunt, uti dolor, cutis rubedo, calor; humorum affluxus, tumor; vasorum compressio, obstructio; horumque destructio, suppuratio, gangræna. Hæc internis juxta et externis corporis partibus eveniunt.

19. Generales aculeorum virtutes hactenus enarratas possidet remedium de quo nunc agitur. Hoc tamen sibi ferè proprium obtinet, quod emeticorum actioni certiores plerumque limites præscribere liceat, quàm interno cuivis stimulanti remedio. Hæc enim quandoque frangunt repagula, sæviuntque ferociùs quàm expedit, vel segniùs agunt; dum emetici vis ad votum ferè evehi vel reprimi potest, si atrociſſima tantummodo excipias venena.

20. Ex dictis [§ 13. ad 20.] patet quid valeat emeticum quatenus est stimulus. Insignes equidem præstat effectus, è quibus eminent sequentes. Lenior apoplexiæ species, quæ ab inerti frigidâque pituitâ nascitur, si modo à causa recente, nec corpore valde senili accidat, emetico prudenter exhibito sæpe solvitur: inde siquidem crassa subiguntur, excutiuntur; aperiuntur nervorum oscula, horum tramites expediuntur, incitato simul torpescentis sanguinis motu. Similes in simili paralysi præstat effectus.

Pueris frequens est morbus epilepsia, ab acri quovis rodente nervos, eosque vellicante. Adultis sæpe contingit ab eâdem causâ, tum et affectionibus animi gravioribus, à dolore sævo membra cruciante, à turbato spirituum fluxu, qualis hypochondriacis et hystericis familiaris est. In his casibus, si mobilis sit mali fomes, iterato vomitorio excutitur.

Membrana ista musculosa, quæ tracheæ segmenta cartilaginea sibi invicem adnectit, ex fibris conflatur musculosis contractilibus spasmo obnoxiis, in his præcipuè quibus genus nerveum est mobile nimis. Nictu oculi sæpe constringuntur fibræ, adducuntur sibi mutuò cartilagines, pertinaciter elongationi solitæ repugnant, crebros trahit spiritus æger, avidè captat auras, profundè gemit, tandem labore fatigatus, et mox angori succubiturus, præ defectu spirituum solutum sentit spasmum, explicatur pectus, et vivere de novo miser exorditur. Quid prohibet quin subitò propinata dosis salis vitrioli, cupri, hujusve tincturæ, quæ irritando ventriculum, ciendo vomitum, spirituum iter tramitemque mutando, tumultus hosce sedet? omni certe vacat periculo.

Ubi sanguis eam nanciſci indolem incipit, quæ apud veteres *atra bilis* dicta est, ubi functiones naturales labascunt propter spirituum absentiam; quando quosdam tantummodo nervos iniquè petunt, hi certos duntaxat mentis corporisve actiones exercent; vix præstantius exhibetur remedium, quam emeticum certis cautelis moderatum, ut postea dicendi erit occasio.

In morbis spasmodicis, aliisque plurimis nervosi ordinis, qui proventum ab inertiâ et languore chylopoieticῶn, ducere videntur, plurimum prodesse visa

sunt

ſunt emetica. Chorea Viti, malum certè paucis hujuſmodi pertinaciâ ſecundum, vires tamen hujus remedii *(a)* quandoque fatetur. Atque licet ſolâ vi ſtimulante in his morbis non juvent, eâ tamen plurimum proſunt, ſpirituum auctiorem fluxum verſus organa ſollicitando, quæ penuriam patiuntur, quæque exinde deveniunt morbis opportuna.

In malis denique pleriſque chronicis, quum pituita craſſa deſeſque habitum obtundit, ignaviùs hâc obſita vibrant ſolida, fluida jam viſcida difficiliùs propelluntur, perditæ vel depravatæ facultates univerſæ liquidi vitalis inopiam ſegnitiemve demonſtrant, uti in glutine vel acore ſpontaneo; emetica, licet curationem haud abſolvant quà ſtimuli, aliis tamen remediis palmam præripiunt; præſertim ſi ad reliquos vomitorii effectus reſpiciamus.

21. Actionis iſtius § 18. alter effectus eſt, fluidorum tenuiorum feſtinata ſecretio; quæ duplici ratione comparat Ἐρέθισμα; primò, motum ſanguinis intendit in vaſis majoribus, horum crebriorem et fortiorem in fluida reactionem excitando, attenuationem conciliando, et hinc ſeceſſui aptitudinem; dein ipſis ſecretionis organis præparationem expedit, et tranſitum humorum accelerat. Hinc ab eodem ſtimulo diverſæ augentur ſecretiones, prout diverſimodè in hoc vel illud organum ſecretorium determinatur.

PARS TERTIA.

De Emeticorum Uſu, evacuando producto.

22. EMETI effectus, quatenus evacuat, in duplicem ordinem partiri abſonum haud videtur, 1 *mus* eſt, Depletio ventriculi, contentis ſurſum rejectis. 2 *dus*, Aliarum partium excretio aucta per conatus vomendi. Quum verò hæc pro cauſa proxima haud agnoſcat vomitorium, inter effectus quos mechanicè præſtat emeſis commodè magis recitari poteſt, atque evacuatio univerſalis appellari meretur: altera particularis, ſive eorum expulſio, quæ jam in ventre ſtabulantur, vel eouſque per aculei vim pelliciuntur; vel denique per ἀναδρομὴν à viciniis in eum advehuntur; de quâ proximè ſermonem inſtituere jubet bona methodus.

23. Nocentia per os ingeſta, aut in ventriculum aliunde delata, promptam emetici medelam exigunt, neque ullum novit medicina potentius adjumentum, ad prolem horum morboſam radicitùs exſtirpandam, vel ad ſymptomata quædam atrocia, ſata hinc, lenienda.

24. Ex priorum numero, § 23. ex ingeſtis ſcilicet, cibi potuſque in cenſum meritò vocantur. Sors enim vitæ ineluctabilis, quamdiu vitales auras carpimus, hos effecit neceſſarios; rationes ſupprimo. Et materiei diverſiſſima

(a) Cheyne's Eſſay on the Gout, p. 113. Edit. 4.

indoles, ex quâ comparantur alimenta, et à noſtrâ ſæpiſſime aliena, quorundam incuria, improba aliorum ventris ingluvies, denique vetiti aut nocivi appetitus, error in eſcarum potuumque delectu, et menſuræ juſto moderamine, vitia induxerunt ventriculo multiplicia. Hinc ferax malorum progenies, ſtomacho ipſi crudeles minitans dolores, ultimiſque vaſorum anfractibus nocitura. Quæ ſane ſingulatim explicare jubet inceptum, denegant autem temporis anguſti limites. Et quidem eis excutiendis operam fruſtra navarem; quum penſum iſtud omni numero abſolutum, veſtris ſub auſpiciis, non ita pridem, in lucem prodiit, in diſſertatione *(a)* eleganti, *de noxis ex cibi potûſque uſu & abuſu oriundis.*

25. Copia ingeſtorum major juſto mala parit ibi deſcripta: his levamen afferre ſolet depletio; quæ, ſi æger ſit ἐυεμὴς, vomitoriis facienda; hâc enim ratione citiſſimè aufertur materies ventriculum gravans, et præcavetur ne incocti alimenti reliquiarum pars quævis in corporis interiora ducatur.

Vitiata qualitas idem petit auxilium, dum adhuc in cavo ventriculi remanet materia nociva, aut non longè ab eo propagatur. Sic, quæ nativâ gaudent tenacitate, majore quàm quæ domabilis ſit per corporis vires, ſuum ſecuta genium corrumpuntur, abeuntque in ductile phlegma. Eadem res eſt, ſi expultrix ventriculi facultas præpedita ſit, ut in debilibus ſæpe fieri teſtantur practici: tunc enim, licet nec copiâ nec qualitate inſigniter vitiabili gaudeant, ſponte tamen labem contrahunt ingeſta, natam ab ipſâ morâ auctamque. Hinc prodeunt acrimoniæ diverſæ ſpecies; hinc muci et pituitæ tenacis ſcaturigo: quæ prout ſingulatim dominantur, vel conjunctim permiſcentur, adjuvante hominis temperie huic illive proclivi, producunt diverſa et nonnunquam planè atrocia ſymptomata. Sic multiplices appetitûs depravationes, deletio integra, imminuta vel ſublata coctio vel incocti corruptio, hæc ſæpe pro ſuis cauſis proximis agnoſcunt.

Ex ægroto ipſo facilè diſcendum erit quid prægreſſum fuerit prædiſponens; atque hinc patet indoles materiæ, et quibus utendum remediis. Vomitoria fomitem exhauriunt, cauſam proximam funditùs eradicant: hiſce tamen ſolis non fidendum, ſed exhibitis roborantibus (inter hæc repetito, poſt debita intervalla, vomitu) imâ de ſtirpe tandem morbus reciditur.

26. Subſtantiæ quæcunque acres, caſu vel induſtriâ in ventrem acceptæ, vel medicamenti, vel veneni titulo, ſi moleſtia denunciet fabricæ noxam inſidiari, citiſſimè ſunt expellendæ, et per ea loca præcipuè, quæ portam dant maximè periculis immunem, quâ emigret hoſtis, intactâ aliarum partium ſalute. Si nullâ aut parvâ copiâ tubum inteſtinalem ingreſſæ ſunt, emeticum cæteris remediis longè præſtantius, et curationem ſæpe abſolvit; neque erit ommittendum,

(a) Autore Henrico Tong.

etiamſi

etiamſi portiuncula tantummodo hæreat adhuc in ventriculo. Claſſis prima § 7. amplam præbet pharmaciam, quâ plurimæ venenorum ſpecies debellantur et expelluntur; atque ſi antidoton univerſale ſit, aqua tepefacta copioſè ingeſta, id forte ſuppeditat. In delectu tamen horum prudentiâ opus eſt; expulſio quandoque haud implet vota, quin teneræ partes quibus applicantur, ab iſtorum injuriis tuendæ, mitigandi dolores, et veneni ſævities compeſcenda, etiam dum citam molimur ejectionem. Hîc iterum aſſumpti natura cognita medenti auxilia indigitat, ad infelicis ægri levamen tempeſtivum procurandum. Sic ſalia alcalica diluta toxicis opponuntur acidis; ſaponacea miſturam conciliant oleoſis; aquoſa ſales quoſcunque dividunt, ſternuntque vires; acria retundunt ea, quæ oleo vel glutine viſcoſo gaudent; et ſic de cæteris exiſtimandum. Conſulat lector quæ de hâc re egregiè ſcripſit *(a)* Boerhaavius in capitulo *de antidotis*.

27. Neque tantum per emetica fit ingeſtorum evacuatio, ſed et humorum omnium qui in ventriculum deferuntur. Proveniunt illi, vel à vaſis ipſius ventriculi, vel vicinorum: atque equidem nullibi clariùs conſpiciendus pungentium effectus, § 21 expoſitus, quàm in hoc viſcere. Id patebit, ſi attendamus ad nervorum per tunicas ampli ventriculi diſperſorum frequentiam, ad glandularum numerum, earumque munus, ad capacitatem denique vaſorum quibus hoc viſcus inſtruitur, molis reſpectu. Mollities tunicarum facilem dat nervulis introitum, cavitas ſpatioſa latam exhibet ſuperficiem. Hinc naſcitur inſignior actio, ſive gaſtrici liquoris uberior ſecretio; quæ, quum ſemper larga ſit, ſi augeatur, neceſſariò totum corpus quodammodo mutat, humores ſcroſos diſpellendo, exſiccando: et hinc alii emeticorum effectus pulchri, in morbis à ſerosâ vapidâque colluvie natis; ut in catarrho, leucophlegmatiâ, diabete, et fœdo iſto morbo virginibus exſecrato, qui ab excretorum colore pallente nomen accipit; aliiſque hujuſmodi, de quibus in ſequentibus fuſiùs dicendum.

28. Finitima ventriculo ſunt hepar atque pancreas. Utraque ſua ſecreta fluida in ejus cavum quandoque immittunt; quæ vel copiâ, vel acrimoniâ, vel utrâque chylopoieſin temerare poſſunt: bilis ſæpius, rarius ſuccus pancreaticus, morbos excitandi reus incuſatur. Bilem culpabant veteres, ac ſi morborum ſæviſſimorum parens eſſet: hanc ſententiam multi inter hodiernos improbant, neque bilem eſſe malorum cauſam adeò frequentem contendunt. Si verò probè patuiſſet his quid per bilem antiqui voluerint, ſaltem ex iis ſagaciores haud temere abjicienda fuiſſe eorum dogmata forſan judicaſſent. Non enim ſolus ille liquor ab hepate, ejuſque veſicâ ſuppeditatus, *Bilis* titulo inſignitus fuit; ſed totius ſanguinis molis pars haud aſpernabilis, et ipſiſſima illa quæ recentiores *oleum* vulgò appellant; quod, ut ex chemiâ diſcimus, æquè fertilis

(a) Inſtitutiones medicæ, § 1119.

morborum

morborum stirps hodie existit, ac fuit olim sub nomine celebri *Bilis flavæ*. Verùm hîc agitur de bile vesiculariâ et hepaticâ, in ventriculum sursum propulsâ, vel de liquore alio quovis, ibi advenâ, qui similia parit incommoda ac ipsa bilis; et talis est humor oleosus, interdum vomitu rejectus, flavescens, horrendâ dotatus amaritie, nec unquam penè obliviscendo sapore, bilem ferè referens, si solùm excipias quòd bilis in igne ardeat nunquam, hic autem instar olei sinceri flammam concipiat, si in ignitos carbones evomatur. Nascitur ab oleosis ingestis, loci calore mutatis in illuviem hanc ingratissimam, accedente gulâ nimis insatiabili, ut monet Horatius,

Nempe inamarescunt epulæ sine fine petitæ;
Illusique pedes vitiosum ferre recusant
Corpus.---------

Et vera bilis, atque flavescens illuvies ejus æmula, similiter hâc dote gaudent, quòd sc. stagnatio, in loco calido, acriores et magis horrendas utrasque facit: eâdem penè ratione ac oleum quodcunque tepore leni et diuturno fotum, à sapore, blandissimo, odore non insigni, colore subflavescente, transit per diversos corruptelæ gradus ad summum usque putredinis fastigium, tandemque maximam gustui acredinem induit, exhalat mephitim olidissimam, et nigredine deformi ferit oculos. Similia planè patitur utraque mox supra descripta bilis, iisdem subjecta legibus, ubicunque in corpore congesta, donec suam promovet expulsionem irrequietus hospes. Aliter enim diris et acerbis doloribus, torminibus, nauseis atque vomitibus, pœnam non finientibus, sed ad mortem usque vexantibus, excruciatur miserandus æger; præsertim si temperies hominis calidior, solis ardor, victus denique rancescens, aut fermentescens, pabulum flammamque præbuerint. En cholera! morborum teterrimus: febris accenditur, inflammantur viscera, laboribus succumbunt prostratæ vires, et nisi assideat lecto Sydenhamus alter, obrepens in viscera gangræna duros cum vita terminat labores. Intra confinia, quæ emetici vim sustinent, materies sedem habet, quæ causa morbi est. Indicatur ablatio causæ; cur non emeticis, aut deorsum purgantibus, vel utrisque tentatur egestio, cum in primis viis adhuc stabuletur? Haud sanè immeritò, in tantâ morbi feritate, horum usum repudiant medici prudentes: nam utcunque fructûs perplurimum in aliis, vel in inferiore ejusdem morbi gradu, præstat hoc vel istud medicamen; in violentâ tamen cholerâ, loris quam stimulis magis utendum est, ut facilè attendenti patebit. Acer enim et inflammans iste liquor, abraso priùs omni muco gastrico, et, quousque pertigerat, intestinali, nudis applicatur nervis, sævos excitat dolores, spasmos fortes, pertinaces, febresque adurentes incendit; vomitu perpetuo evocatur mucus superstes, causa provehitur, et continuato emetici impetu, reduplicantur effectus horrendi. Licet etenim minimo polleat aculeo, hic tamen, qualis qualis est, hosti indigenæ addit vires,

ſtimulus ſtimulo committitur, et horum ſociato nixu perit æger. Si ad hoc ſtadium morbus non attigerit, neque ſpem occidunt mali ominis ſymptomata, ut curationem vomitoriis tentemus jubent omnia. Rei cardo eſt delectus medicamenti peritus. Nec bilis, nec oleoſa materies, ſive bilis altera, omni fluido promiſcuè unitur; hoc reſpuit, illud verò ſequitur petitque. Quòd itaque ad miſturam parandam maximè idoneum eſt, iſtud uſurpandum; indolis morbi cognitæ habitâ interim ratione, cui ſemper opponi debet auxilium. Hinc ſaccharata, mellita, ſaponacea aceſcentibus permiſta, ea omnia quoque § 7. *n.* 1. recenſita, quæ mole ſuâ pluſquam erethiſmate quovis agunt, præ cæteris conferre videntur.

" Quandocunque bilis vacuanda eſt, inquit " *(a)* Foreſtus, poſt juſcula " multa, vel poſt potationem liberalem, provocandus eſt vomitus; nam bilis " ut oleum his ſupernatat, et ob id faciliùs evacuatur: adde quod acrimonia " ejus temperetur mixtione harum potionum." Norma certè in vomitionibus bilioſis ſanandis nunquam non obſervanda; neglecta quippe peſſima quandoque profert incommoda. Catharticum temere ingeſtum corruptæ materiæ partem abripit ad inferiora, fortè et in ſanguinem defert: hinc iterum novæ miſeriæ.

29. Tanta liquoris pancreatici diluvies occurrit rarò, quæ ſolitaria morborum cauſa queat haberi, natos tamen augere poteſt: quum enim in ſanitate larga adeò ſit ejus ſecretio, ut Brunneri experimenta docent, in morbis ex lymphâ redundante ortis, deveniet adhuc copioſior, hujuſque per emeticum evacuatio feroſam colluviem imminuet.

30. Febrium acceſſiones nauſeâ et vomitu plerumque ſtipantur, aliiſque ſymptomatibus, quæ ventriculum malè affici ſignificant. Cautè tamen erit diſtinguendum, an ab ipſo viſcere, an ab ejus contentis, oriatur ægritudo: alia enim curatio ventriculo, cujus membranæ vexantur inflammatione, alia corruptis ſordibus gravato, inflammatione libero, ſubminiſtranda. Antiquioribus haud adeò perſpectum fuiſſe videtur, hoc viſcus morbis iſtiuſmodi æquè eſſe obnoxium, ac aliud quodcunque; donec Fredericus Hoffmannus *(b)*, in ſuis exercitationibus, hoc malum ſæpius obvenire docuit, quàm vulgò creditur. Signa poſuit diagnoſtica, quibus ſcopulos latentes vitaret medicus, in quos facillimè alioquin impingeret incautus. Hæc omnia pro ſuo more, cum largo fœnore in libello *de cognoſcendis et curandis morbis* expoſuit Boerhaavius, nitidamque medendi methodum illi attexuit. Ab iſtarum commotionum, quæ in febris initio toties ventriculo ſuperveniunt, veri fontis inſcitiâ, lites iſtæ ſollicitæ inter practicos agitatæ, de emeticorum fructu in hiſce tractandis enato, profluxerunt. Adverſus horum utilitatem hi ſtrenuè arguunt, effectuum exitialium adducunt teſtes, et fronte torvo vituperant uſus. Alii ſucceſſus ſa-

(a) Foreſti obſerv. lib. xviii. obſ. 3.

(b) F. Hoffman. Diſſertationum Decad. 1.

lutares

lutares ad sidera tollunt, nec minus indubitatam historiarum fidem appellant, ad suas partes firmandas. Et quidem facilè liquet neutros à veritate penitùs aberrâsse. Quantos etenim cruciatus induceret vomitorium ventriculo, cujus vasa sanguine crasso turgent, et infarciuntur; cujus distracti nervi, levissimo contra ingesta collisu, atroces patiuntur dolores; cujus denique tunicæ distensæ tumore, duritie, atque dolore, phlegmonem verum in corporis exteriori natum omnino referunt. Quantas itaque clades in hoc rerum situ editura est operatio cum tantâ violentiâ conjuncta? Sæpius autem vitia, ab inclusis contentisque producta, molestiarum autores existunt: tunc sanè laude dignos præstat effectus, et Hippocratem, Sydenhamum, et clarissimos quosque in arte viros, usum eorum sancientes habemus; nec non et ratio suffulta praxi idem effatur. *(a)* " Si vomitus, ait Sydenhamus, vel inanis aliqua vomendi pro-
" pensio, interturbaverit ægrum, medicamentum emeticum omnino præscriben-
" dum erit." " Namque, ut testatur *(b)* Hippocrates, si quis homini vomenti
" aquam multam bibendam dare velit, ἐκκλυσθήσεται δι᾽ ἃ ἐμέει σὺν τῷ ἐμέτῳ,
" ὡὐτῶ μὲν διὰ τὸ ἐμέειν ὁ ἔμετος παύεται." Nec solum hoc commodum fœneratur, quinetiam et medico et ægrotanti per totum morbi decursuum quæstui ingenti erit, uti ex Sydenhamo discimus. *(c)* " Sanè vomitorium propinare,
" ubi istiusmodi prægressa est vomendi proclivitas, adeò est necessarium, ut nisi
" humor ille expellatur, in sentinam complurium malorum difficilium sit abi-
" turus, quæ crucem figent medico toto durante medicationis tempore, ægrum-
" que in haud leve periculum conjicient. Ex horum præcipuis et maximè so-
" litis est *Diarrhœa*, quæ ut plurimum in defervescentia febris consequitur, quo-
" tiescunque emetica, quando ea suadebat indicatio, omissa fuere.---Porro
" etiam compertum habebis, etiamsi proclivitas illa ad vomendum jam pridem
" præterierit, diarrhœam tamen, quamprimum vomitorium exhibueris, ple-
" rumque cessaturam, dummodo emetico ferendo pares fuerint ægri vires."
Nec sane teterrimum rerum conspectum vir egregius delineavit; namque putrida hæc materies in ventriculo stagnando magis putrida evadit, perque bibula vasorum orificia, vacua jam per calorem et liquidi jacturam reddita, in sanguinem ducitur, sordibus malignis cruorem polluit, et febrem omni numero sæviorem reddit; quæ cuncta feliciter anticipata fuissent, si vomitorium, quamprimùm se patefecit hæcce propensio, fuisset exhibitum. De emeticorum delectu monitum hîc quoque repetendum erit, scil. quod ea eligamus, quæ sordibus abluendis aptissima, quæ harum indoli adversentur, eamque mutent vel corrigant; quæ denique diluentis vicem gerant, si forte (quòd pote est)

(a) Sydenham. de morbis acutis § 1. cap. 4.
(b) Hippocrates de locis in homine, Clas. 2dæ, p. 16. Edit. Mer.
(c) Sydenhamus ubi supra.

portio

portio aliqua in ſanguinem hauriatur. His intentionibus arridentclaſſe 1*ma*, § 7. memorata, cum nonnullis ex § 8. decerptis efficaciora reddita; oxymel ſcilliticum v. g. cum radice ipecacuanha; hauſto dein largâ manu oxymelite ſimplice, aliove liquore tenui, prout res nata ſit.

31. Dum de febribus agitur, cautelam fas eſt in memoriam revocare, quæ apud practicos pleroſque proſtat, nec præteriri debet; ſcil. quòd in omnibus morbis, ubi plethoram adeſſe, vel ad eam eſſe vergentem habitum, ſua ſigna demonſtrant, et ſimul ægri conditio vomitorium poſtulaverit, ſanguinis miſſio ſemper præmittenda eſt; ne fortaſſe illud ingens conamen, et tetanus momentaneus, vaſa diſtenſa rumpat; vel major ſaltem quam par eſt ſanguinis impetus ad ea loca feratur, in quibus reſiſtentia minus firma vi cedat illatæ; diſrupta vaſa ſua liquida fundant, et immediatè pereat ægrotus per apoplexiam, vel hæmoptoe, vel inſanabili inde phthiſi, pulmone labefactato, tandem trucidetur; aliiſve viſceribus pariter infractis è medio tollatur. Illa vomitio videtur optima quæ brevi poſt ſectam venam cietur; certiùs enim incommoda evitantur à plenitudine cæterùm oritura; certiùs ſimul inſequuntur emetici effectus ſalubres, præſertim ſi ex febrium genere ſit morbus, qui utrumque expetit auxilium. Depleta ſiquidem per v. ſ. vaſa, citò quandoque de novo turgent; vel ob ſanguinis rarefactionem, vel ejus auctam molem per largos potus, in quos ardor et ſitis ægrum impellunt, eadem naſcuntur ac priùs incommoda: nec ante repetitam v. ſ. exhibere licet emeticum, quòd paucis poſt primam evacuationem horis tutò fuiſſet propinatum.

32. In febribus intermittentibus mirum quid exſequi videtur Παιδευσις εμέτε, quæ effectus quandoque exhibet æquè difficiles explicatu, ac ferè ipſius morbi natura. Licet enim illius ſedes præcipua ſit in extremis vaſis ſanguiferis, aut aliquando forte in nervis; humorum tamen evacuatio, qui in alvo colliguntur, haud minimi eſt momenti. Proſtant ſiquidem exempla hominum, qui vomitu ſolo curati fuere; hocque vel ſpontaneo, à benignis naturæ auſpiciis excitato, vel arte famulante inducto: dum interim ſanguinis evacuatio, niſi in plethoricis, plerumque obſit, et grave medenti tædium pariat. At repetita prudenter emetica, corruptum in primis viis morbi fomitem ſenſim conſumunt, ſubigunt, ſanguinis fluxum accelerant; morbum denique vel tollunt, vel tutam expediunt febrifugo viam, quod cæteròquin vel morbi fomitem figeret magis, vel evacuatione, ſurſùm aut deorſùm excitatâ, proprias ſuas perderet vires.

33. Multiplices affectat natura vias, per quas domitam febrium materiem, aptatamque ut per portas arte caſuve recludendas eliminet, iterumque ſanum corpus reddat. Nunc per emunctoria certis excretionibus aſſueta, per ſalivam, vomitum, ſeceſſum, ſudores aut urinas eam ejicit: nunc autem ad alia minus idonea loca deſpumationes emittit. Tumores ad exteriora nati, aliaque ſimilia

hujusmodi sunt. *(a)* " *Quæ educere oportet, quo maximè vergunt, eò ducito per* " *loca convenientia,*" omnibus est regula bene nota. Si per salivam febrem judicatam fore constet, manus auxiliatrices eo sunt movendæ. In vomitu idem erit præstandum, si criticum eum esse novimus, vel à materiâ excitatum naturæ inimicâ; sedandum verò, si à ventriculo inflammato, et vomitus vomitu demulceri nequit. Eadem res est, si per alia quævis excretoria egredi tentet. Quò diutiùs enim in corpore sistitur cocta fluensque sanies, eò pejora creat incommoda. Triste, sed verum hujus rei præbet exemplum febris purulenta, quæ à resorpto tabo variolis sæpiùs supervenit, secundaria plerisque nuncupata. Nec maligna minus est aliûs cujuscunque febris acutæ materies critica putrescens, quæ instantem exigit evacuationem. Præstò adsunt remedia, singulis evacuationibus promovendis destinata: hæc usurpanda prout viam monstraverit natura. Advertendum tantùm est, quòd uti materies morbi cocta per cutis spiracula difflatur, corruptâ labe usque adeo inquinata ut sanos sæpè polluat; similis tamen ad interiora ventriculi et intestini, per horum exhalantia vasa deponitur, cathartico nunc, nunc emetico feliciter auferenda; ne forsan, *(b)* " *Quæ per morbos post judicationem intus relinquuntur, morborum reversiones* " *faciant.* Atque suadet ea propter Celsus *(c)*; *Vomitum post febrem eliciendum* " *esse.*"

34. His numerosum morborum agmen liceat adjicere, qui bona et eximia multa ab hoc subsidio mutuantur. Pauci enim ex chronicis existunt, qui emeticorum ope non indigeant; sed eorum recensio particularis ultra metas protraheret orationem. Morbi enim plerique, puerilis ætatis affeclæ, diathesis rachitica, strumosa, saburra vermium fomes niduque, victûs errores, atque similia, sæpe emeticis feliciter emendantur. Arthritis, hydrops, scorbuti stadium clementius, adultis infesta, quandoque lenimen ab evacuatione per superiora facta sentiunt; chlorosis et fluor albus molliori sexu, eadem sæpè poscunt auxilia. Catarrhus, diarrhœa, dysenteria, cœliaca affectio, morbusque omnis à serosa colluvie natus, vomitorii commodum agnoscunt. Vix opus est memorare, quantum ad grandævos annos comparandos conducant, idoneis intervallis exhibita. Hodie non desunt homines, qui veterum consilii memores, licet gulæ placendæ parum dediti, nec scopis indigentes ad reliquias crapularum auferendas, tanti æstimant vomitionem, ut bis terve per mensem contractas in stomacho sordes per superiora propellant. Illi, qui accuratam maximè vivendi normam servare studet, sæpius in potu victuque errare necesse est. Hinc seriùs ocyùsve culpa ingruit ventriculo, ibique formatur primò morbi futuri stamen: ægritudo sive nausea molesta interdum sentitur, minuitur cibandi desiderium, aliaque imminent symptomata, varia pro genio causæ

(a) Hippocratis Aphor. § i. Aph. 21.
(b) Idem. § ii. Aph. 12.
(c) Celsi medicina, lib. iii. cap. 7.

vitiique

vitiique diverſo. Plerique ſtatim ad tincturas celebres plantis amaris aromaticis, ſpiritûs ardentis ope elicitas, confugiunt, iſtis confidunt, indulgent; donec horum ſub jugum miſſi torrefactis et effœtis viſceribus moriantur. Nullum quidem remedium novimus, quod tot tantaque eis polliceri videtur, qui ad cruditates generandas à vitæ genere ſedentario proclives ſunt; natum enim morbum aufert, cauſam proximam delet, eradicat, acorem eluendo quæ hanc plerumque conſtituit. Iis, itaque qui vitam ſtudioſam degunt, vel quorum corporis affectus exercitationes motuſque prohibent, qui denique artibus utuntur ſellulariis, vel qui ob aliam quamcunque cauſam eiſdem malis obnoxii vivunt, iis, inquam, crebrum emeticorum uſum commendarem.

PARS ULTIMA.

De Emeticorum Uſu, à mochlicâ ſuâ Virtute petendo.

35. TERTIUM adhuc ſupereſt quæſitum enodandum, quid ſc. emetica proſint, quatenus vim exercent mechanicam, et virtute mochlicâ expugnant morbos? Quæ itaque partes afficiuntur, quid patiuntur, quæ in reliquis exinde mutationes producuntur, et in toto corpore contingunt, proximè ſcrutandum.

36. Contractis itaque [§ 1.] muſculis abdominalibus et rigefactis, ferè inſtar columnæ iſtius oſſeæ, quæ poſteriora tuetur, vi hujuſmodi nullâ movendæ; compulſo ſimul validè diaphragmate, cui inferiùs oſſa pelvim conſtituentia immobilia opponuntur; omnimodo ventris infimi capacitas anguſtatur, dum hinc atque hinc, ſuper ſubterque, contenta ejus arctiſſimè conſtringuntur; nec punctum ferè in tota regione abdominali ingentis preſſuræ expers reperitur; cujus vim admodum inſignem eſſe teſtatur vehementia, quâ ſurſùm exploduntur ventris contenta: certa enim ſuadent experimenta, nullam ineſſe ventriculo potentiam contractilem, quæ iſta poſſunt exhaurire; donec conſpirans ſimul partium modò memoratarum compreſſio fortis evacuationem integram abſolvat. Tantæ ergo violentiæ viſcera ſubjecta mollia participes fiunt, unde inſignes utileſque effectus exſpectandi.

37. Antequam verò harum diſquiſitio inſtituatur, incolarum abdominalium actiones, methodo ſequenti, generatim diſponere haud alienum eſt; ut perſpectis horum muneribus, faciliùs cernantur mutationes morboſæ, clariùſque pateſcat quòt quibuſque modis in ſubſidium venire poſſit compreſſio vehemens, mechanica, alterna, in hæc viſcera.

38. Horum munera præcipua ſunt, 1*mo*, Ingeſtorum præparatio, ut naturæ egeſtatibus ſuccurrendis nata ſit materies. 2*do*, Hujus ſeparatio, ut quæ refectioni apta ſit ab ineptis amoveatur. 3*tio*, Ejuſdem in ſanguinem, per inſtru-

menta extra abdomen posita jam conversæ, ulterior elaboratio. 4*to*, Secretio liquorum vitæ usibus egregiè famulantium. 5*to*, Denique partium solidarum et fluidarum resídui, effœti nunc facti, à nutritiis separatio et ejectio. 1*mo*, Officinam præparantem ventriculus et intestina tenuia præbent. 2*do*, Fluidiora à crassis segregant vasa lactea et absorbentia. 3*tio*, Sanguis ad arterias amplas meseraicas, cæterasque per ventrem dispersas, perpetuam patitur concussionem, compressionem reciprocam, propulsionem : quæ omnia, in splene præsertim, conspicua. 4*to*, Cruor ita subactus, per appropriatas portas, v. g. per hepar, pancreas, totamque glandularem catervam, ubique per infimum ventrem dispositam, perpetim emanat, indole et formâ mutatis, juxta determinatas organi cujusque naturæ leges. 5*to*, Ramenta crassiora, corrupta, et per tubum protrusa tempestivè excernuntur : sanguinis pars tenuis et aquosa, detritis onusta salibus, oleisque nutritioni ineptis, per renes abit, constituitque urinam. Cuncta hæc officia, tempore eodem, et eodem auxilio promoventur ; alternatâ scil. et constanti agitatione ; quæ respirationis est comes assidua et necessaria. Patet enim, quòd si sisteretur motus abdominis, et lenis ista succussio cessaret, nulla vis adesset, quæ per tot tamque angustos tortuososque canales, ingenti interdum oneri subjectos (ut ii sunt, qui per inferiora repunt) contenta in eis fluida propellere valeret : impetus quo vibrat cor, labori esset impar ; et insignis illa potestas, absorptio dicta, quâ fluida ex cavis intra venas hauriuntur, licet tanta ut nullis præscriptis finibus coërcenda sit, citò deficeret. Nam sponte nata visciditas, cessante motu externo, canales paulatim obturaret, atque in exilibus tubulis tot impedimenta deponeret, ut sensim in omnibus progressus brevi tolleretur, in quibusdam viscéribus, vel in omnibus, prout malum proserpsisset latiùs, aut arctiora castra metâsset. Et quidem morborum Ætiologia demonstrat, plurimos ex eis, qui abdomini infensi sunt, ex hâc vel istâ, vel utrisque simul causis nasci. Remedium igitur attenuans, motumque properans, præ cæteris indicatur.

39. Nisu itaque vomitûs, viscerum superficies contra se mutuò validè comprimuntur, eorum moles imminuitur, compinguntur tranantia fluida, atteruntur, propelluntur ; adversus canalium latera urgentur, et quà datur exitus confestim exprimuntur. Hinc secretio fit expeditior, celerior expulsio ; crassi resolutio, ejusque subactio et ejectio ; denique actionum omnium [§ 37.] maturatio, organis ipsis vigor, et, omnibus superatis obstaculis, agendi facilitas ; ex quibus primariò pendent et quantitas et qualitas istarum secretionum, quæ sanitatis præsidia haberi possunt.

40. Interior ventriculi cavus conferto glandularum agmine vasisque exhalantibus obsidetur, ex quarum osculis, villosis, flexilibus, assiduò fluit humor, quo lubricus madidusque servatur ipse, defenduntur ab assumptorum injuriis nervi, promovetur chylopoiesis. Humorum verò crassities, sive indoles mu-

 cosa,

coſa, qui hæc loca ſalutant, accedente motu languidiore (prioris plerumque comite) neceſſariò ſecretionem minuit tardatque; glandulas infarcit viſcidis, ſenſimque munus earum evertit. Hinc gaſtrici fluoris penuria, cruditas inde et indigeſtio, appetitus deletus, aut nimius, ſtomachi ardor, aliquando nauſea ſitiſque. Eadem quandoque occurrunt mala, ab arefactâ ſordium cruſtâ cavitati ventris obductâ; ſicuti poſt febrem acutam diuturnam, ubi vulgus adſtans, aut medicus fortè crudelior, injuſtè naturæ poſcenti ipſam lymphan denegabant. Diluentia in hiſce caſibus haud ſufficiunt; hæc enim ulteriùs laxant vaſa; hinc tardiùs propulſa fluida cunctando brevi craſſeſcunt, haud parvo labore iterum ſolvenda. His infortuniis iſtud remedium haud infimi uſûs eſt, quod præſtat effectus ſupra enarratos [§ 29.] Inſtar enim pulmonis alterius totum abdomen cenſendum eſt. Munera quidem ſibi propria ſingula viſcera nanciſcuntur, ſed motus ſupervenit aliunde, quo perpetua fluidorum in unoquoque mutatio inducitur, provehitur; perinde ac in pectore res agitur, miſtio ſcil. compreſſio, attritio, ſolutio, atque ſimilia: ejuſdem cauſæ effectus idem, licet organis diverſis abſolvatur. Vomitu itaque citò perficitur, quod lentis vicibus conſequi nitebatur, ſed incaſſum, natura.

41. Alvus conſtricta, ſegnis, et ſolitariæ vitæ aſſueta comes, haud naſcitur ſæpius quàm à deficiente muco inteſtinali, et liquoris gaſtrici, glandularum et vaſorum [§ 40.] ſobolis abſentiâ. Hic enim molles fluidaſque fæces reddere debet; ille verò lapſum facilem iis conciliare. Cauſa defectûs eadem, ac ſupra [§ 40.] memorata, et levamen eâdem medelâ, adſcito motûs et exercitationis auxilio, tentandum. Ab hoc ſolo fonte ſemper enaſci malum non afferitur; at verò ſi ab alio quocunque ſemel fuerit inceptum, augmentum exinde capit, et alvus ſegnis tandem aſtricta devenit. Fæces quidem educunt κάτω purgantia blanda, præſens auferunt incommodum, moleſtias iſtiuſmodi ſtatûs plerumque conſortes leniunt. Si verò remediis, quæ tam pulchra præ ſe ferunt, nimis indulgeat æger, quoties alvus obſtipata reducit ærumnas, ſecutura nocumenta vix evitabit. Talia ſunt, alvus adhuc aſtrictior, humiditate omni cum fæcibus eductâ, et viſcerum oppilationes, infarctiones à craſſo relicto. Duplici itaque de cauſa [§ 34, 40.] ſeſe commendat emeſis, hominibus iſtis, qui vitâ fruuntur inerti; quatenus ſcilicet et expellit cruda, et viſcidos attenuat liquores, accelerando motum, et proinde humectantis optimi vice fungendo.

42. Ventriculum et inteſtina gravat nonnunquam vitium priori oppoſitum; ſcilicet aquoſi laticis diluvium, quo ſubmerſa ilia fatiſcunt, calorem amittunt, et inſtrumenta muneri vitali dicata huic obeundo imparia fiunt. Gravitas et languor circa præcordia; ſputatio frequens; edendi cupido perexigua; aquoſæ colluviei ejectio per os, mane præſertim infeſta; nauſea gravis brevi deſinens; ſedes

sedes liquidæ, crebræ, doloris expertes; unà cum corporis universi debilitate, inertiâ, atque pallore hanc indicant illuviem, simulque serosam solutamque sanguinis indolem. Memorata symptomata correctionem haud obscurè innuunt. Expressio liquidi redundantis, et robur additum canaliculis primò necessaria sunt, tum secutura inde compacta sanguinis crasis, et mutata diathesis pituitosa: his imprimis conferunt emetica. Hinc itaque patet cur ventrem solutum vomitus comprimat, compressum solvat, juxta Hippocratis placitum *(a)*, Celso repetitum, ratumque.

43. Pancreatis structura et munus, salivalium glandularum æmula, illud objiciunt similibus malis, secretioni nempe impeditæ, vel nimiæ. Utrique prodest emeticum; obstructionem quippe, si non nimis pertinax sit, referat, exuberantem laticem potenter emungendo exsiccat.

44. Inferiùs paulò, ab oculis lacteorum exsuguntur liquefacta ingesta, quæ statim ad glandulas meseraicas feruntur. Tardus istorum motus, et vascula tam exilia et tortuosa tenuiorum à crassis separationem promovent, dum difficile reddunt chyli ad sanguinem iter; illis præcipuè qui debili stamine potiuntur, praviſque simul vescuntur escis; vel quibus harum partium structura mala contingit. Imprudens ætas, temperies sequax, et victûs crudioris malesuada fames, pueritiam, præ aliis vitæ stadiis, morbis ex infarctis et tumefactis glandulis meseraicis opportunam reddunt. Causæ similes in adultis similes edunt morbos, sed rariores; nam reipsâ constat puerulis hujusmodi infarctiones, glandulas abdominales occupantes, frequentiores devenire. Istis enim annis vix nobis occurrunt epulæ gratiores, quàm fructus crudi, immaturi, legumina et farinacea viscida, et, si magis indissolubiles pariat natura cibos, istis utimur imprimis, eos importunè petimus, eventûs luxuriosæ gulæ nullâ factâ ratione. Inde massa tenax in alvo formatur, quæ in fluorem acidum, vix nisi formâ mutatum, tandem resolvitur, dilabitur è stomacho, occurrit bili inerti, eâ diluitur, vix tamen solvitur: tenuior pars abit in lactea, brevi præ tenacitate hæsura; quotidie renovatur causa, crescit augeturque obstructio, durior evadit tumor, vicina comprimit, aditum in venas claudit, atrophia nascitur, et homunculus indies marcescit. Vel, si ad tantam sævitiem morbus non attigerit, nec penitus obturentur glandulæ, imperfectus chylus sanguini affunditur, eumque labe contaminat; secreta, cruoris proles, vitiantur, affectis ubique ferè glandulis; eisque præcipuè tumefactis, quæ collum faciemque obsident: unde vultus fit prætumidus, torvus, et veram strumam, aut diathesin eò vergentem, adesse designat. Tetrica certe rerum facies hæc, et medenti nodus intortus; suum enim robur perdidere solida, justo viscidiùs fluida coguntur:

(a) Celsi medicina, lib. i. cap. 3.

hinc

hinc depravantur, et quæ aſſumptorum mutationem in corporis naturam ut plurimum debebant perficere, eam imperfectam relinquunt. Præterea, glandulis obturatis, præcluditur ipſe meatus, per quem novas vires ad ſanguinem mitti oportebat. Huc adde quòd ſemel oppilatæ glandularum cryptæ difficiliùs purgentur, et muneri ſuo minus aptæ reddantur: unde facile conſtat, ad morbum adeò pervicacem debellandum omni ſubſidii genere utendum eſſe. Tumorum reſolutio imprimis tentanda, ut vitæ pabulum, depravatis medela, robur debilibus, quantum victu et remediis fieri poſſit, ſubminiſtrentur. Deinde partium, in quibus mali ſedes, ita firmanda craſis, ut gravantia liquida ſubigant, expellant; curatâ interim vivendi normâ. Qui ſitum meſenterii callet, intelligit facile, quantâ cum violentiâ, niſu vomitûs, illud undequaque prematur; et quinam inde futuri ſint effectus in glandulas recens infarctas: in vicina fœdâ ſpurcitie cumulata [§ 39.] in pancreas eâdem ſcatens [§ 43.] in ventriculum denique, ſurſum evocando liquores acres [§ 34.] hunc infeſtantes, et novas ſubinde vires morbo ſuppeditantes. Sedulò autem perquirendum erit, ſi integra ſint viſcera, ſi nullo ulcere corrupta, ſi à labe putreſcente penitus immunia; ſin minus, imprudens emeſis hominem lædet. Idem quoque verum eſt, ſi ex ſola laxitate continui ſolutio metuatur: tunc enim virtus mechanica parciùs adhibenda eſt. Nil ferè aliud prohibet, nec magni fructûs ſpes erit inanis, dummodo mobilis ſit obſtipans materies, et repetita vomitoria commodè ferant ægri vires.

45. Inter cætera abdominalia ſplen viſcus eſt tenerrimâ compage donatum, cujus columnæ carneæ, muſculoſæ, ad fluxilem firmandam fabricam, plus quàm ad inſignem cruoris quam accipit copiam propellendam, aptatæ videntur; nec labori par eſt arteriæ robur, aut cordis impetus, per vaſorum numerum, et anfractus tortuoſus, retuſus. His verò ſuccurrit aſſidua et lenis agitatio, quam connexio ſplenis cum diaphragmate, muſculorum abdominalium propinquitas, poſitio pendula, iſti conciliant. Atque per has cauſas præcipuè ſanguinis progreſſum per vaſa lienalia conſervari cenſendum eſt. Ideoque ſi motus aſſuetus ſiſtatur, vel diu minuatur, (ut in eis fit, qui vitâ utuntur deſide, et domi peractâ) cunctatur in cellulis cryptiſque ſanguis, evadit craſſior, et maximo cum obſtructionis periculo res agitur; quum debita mobilitas, et impetus aſſuetus, facilis liberique transfluxûs autores, ceſſant. Diverſa morbi ætas, cauſa diverſa varium poſtulant lenimen; nec una medendi ratio lienoſis omnibus convenit. Si recens infarctio, nec ingens durities; ſi ab exercitationibus omiſſis, et ex acriore abhibitâ rei cuicunque curâ naſcatur; ſi gravedo diſtenſione dolens, nec copioſa materies, atque temperies εὔφορος quoad cætera, compreſſio mochlica cum fructu poteſt adhiberi. Si verò durities ſchirrum indicet tactu, aut ſi prægreſſa febris inflammatum lienem in puris facculum converterit,

converterit, ad alia fugiendum remedia, ne schirrus irritatus in cancrum abeat; vel perruptis claustris, quibus pus coercetur, purulento diluvio submergatur abdomen, aut sordidâ tabe obruatur hepar.

46. Inter morbos, qui jecori infensi sunt, fœda ista, et luteo colore cutim inficiens aurigo, sæpissime sensibus se prodit. Causas hujus mali proximas in scriptis medicis plurimas invenimus; singulas autem enarrandi vel discutiendi laborem mihi minuit elegantis illius exercitationis autor, qui de ictero tractatulum *Tentaminum Med. vol.* 1*mo* *(a)* inseruit. Cæterùm cum egregio viro, qui nomen suum latere voluit, censere licet, longè frequentissimas icteri causas calculos esse, in vesicâ felleâ satos, per meatum tortilem ex eâ derivatos, et limine nimis angusto hærentes. Nam præter historias, quas ipse auctor adducit, ratiocinia ejus plurimum stabilire videtur alia, *(b)* quæ volumine sequente traditur. Si itaque hæc sit vera rerum facies, (ut maxime verosimile videtur) cæteris remediis mechanica sunt anteferenda: ambulatio, equitatio, aliique motus quibus fortiter jactatur corpus, in hunc censum vocantur, ut eorum ope lapillus ab angustiis extrudatur, et bilis repressa effundatur. Descensum sanè egregiè promovent auxilia recensita; sed deficiunt nonnunquam, et duriori cuneo morbus indiget. Si unquam prosit emeticum virtute quâvis mechanicâ; unquamve sperandi effectus hujus salubres; et morbi sedes, et causæ genius, hîc mentem fructûs spe lactant, nec sæpe inani. Hausto enim copiosè liquore, turgidulus fotu tepefacto saccus, ipsi ferè ductui constricto apponitur, eumque laxat; dum urget à tergo bilis, ingenti contractione [§ 36.] protrusa. Aut si causas alibi ponamus, v. g. in poro biliario, in primo ejus exortu à portarum extremis, aut ubivis præterea, easque materiem crassam, purulentam, vel hærentes lapillulos agnoscimus; haud minimæ efficaciæ erit emeticum, si artis adjumento malum debellari possit.

47. Per sympathiam, ob commune nervorum consortium inter ventriculum atque renes, perque motus turbasque in illo concitatos, quotiescunque hi dolore afficiuntur, viam indigitâsse videtur dux natura, quâ sedibus excutiatur quicquid inimicum foret renibus diuturniore morâ. 1*mo*, Gypsea, mucosa, purulenta materies hîc nata, vel per metastasin aliunde huc provecta, crassior quàm quæ per exiles canalium fines exire possit, vel egressa diutius quàm fas est in sinu renali stabulans, augmentum quotidie capit, mole crescit, vicina premit, vel atterit, et cruciatûs atrocissimi existi auctor. Sæpe formatus jam calculus casu in ureterem, hospiti tanto recipiendo nimis angustum, protruditur; cujus tunicæ musculosæ, sensiles, scabrâ lapilli superficie rasæ, arctiùs

(a) Medical Essays, &c. Vol. i. Article 33. *(b)* Idem, Vol. ii. Article 28.

hunc

hunc complectuntur, et ulteriori progreſſui fortiùs obſtant, ſævientibus interim doloribus omnem fere tolerantiam ſuperantibus. V. S. imprimis celebratâ, univerſalibus et topicis ſtrictura tollenda eſt; deinde vis mochlica præſtat quod arte præſtandum. Nec unica hæc eſt vomitorii virtus in hoc morbo, ſed fomenti vicem gerit epotus liquor, qui cum injecto clyſmate balneum internum faciunt, quod aquoſo ſuo halitu relaxat contracturas, et, ventris infimi contenta adaugendo, in renes aut ureteres vim magis intendit.

2*do*, Morboſa renum flacciditas, infracto vaſorum robore, tale nonnunquam emitti patitur aquoſi laticis profluvium, ut ſpeciem iſtius morbi ſimulet, qui Διαβήτης Græcis appellatur. Exit crebrò urinæ aquoſæ, tenuis, decoloratæ, odoris ſaporiſque pene expertis, copia ſpectabilis; ſitis adeſt moleſta, virium proſtratio, fluidorum ingens diſpendium, et ſolidorum detritio. Pejor morbi ſpecies ea eſt, in qua fit effluxus liquoris albicantis, chyloſi, ſubdulcis, reliquiſque ſtipata ſignis, quæ propria huic morbo dedit praxis vetuſtior, et comprobat hodierna. Licet enim morbus rariſſimus, cernitur tamen aliquando. Sive jam natus ſit à relaxatis renum vaſis, ſive à fluidorum diſſoluta craſi, ſive ex alia quacunque προφάσει, uti loquitur *(a)* Sydenhamus, " Curativæ indi-" cationes, ad ſanguinem corroborandum, invigorandum, ac pariter ad fluxum " urinæ præternaturalem reſtringendum omnino dirigendæ ſunt;" cui addere licet, ad morboſam renum laxitatem auferendam.

Quæ de virtute emetici exſiccante ſupra [§ 42.] dicta ſunt ſatis evincunt, quantum prioribus indicationibus hæc reſpondeant. Renum ſitus, oſſibuſque duris vicinitas, quid mochlicè ii patiantur oſtendunt, et quam fortiter impetus humidum redundans ex ipſa renum ſubſtantiâ emungat. Sanè excutit quodammodo macerantem lympham, et amiſſum tonum fibris elatere ſuo privatis reſtituit.

48. Vix opus eſt monuiſſe, quàm immaniter uterum farcinâ tumentem comprimant muſculi [§ 36.] ſpaſmo validiſſimo contracti. Propiùs igitur inſtante partûs excluſione, ſedulò fugienda ſunt quæcunque iſtis calcar addunt. Sed eandem ob cauſam videre eſt, quanta ſpes ab eodem fonte profluat, ſi parturienti deficiant vires et repetito conamine eouſque robur proſternatur, ut quamvis ſitu legitimo potiatur infans, nec juſtam molem multò exſuperet, nec adeò arctetur exitus, quin par operi potentia partum produceret; emeticum, quod promptè, quod potentèr agat, quod citò coercendum, fauſtè ſæpe rem peragit; nec tumultus, calores, aut incendia febrilia parit, quæ comites atque ſequaces ſibi adſciſcunt aromata, et præſertim ardentes ſpiritus iſtis acuminati, et ejuſmodi plura, quæ ab aniculis, ſuo more, in magnum plerumque ægræ incommodum affatim porriguntur.

Alii ſunt uteri affectus, qui levamen ab eodem remedio capiunt: quum verò, licet ultimas ſedes in hoc viſcere poſuerint, vitia tamen per totum cor-

(a) Sydenhami Epiſt. Reſp. oper. p. 272.

pus dispergunt, hæ tanquam effectûs generalis causæ spectandæ. Fomes itaque in universo habitu delendus, priusquam utero redierit pristina salus. Quantum huic intentioni arrideat emeticum, postea dicendum.

Perspectis hoc pacto singulatim præcipuorum viscerum culpis, saltem quæ à remediis mochlicis commoda accipiunt, effectus qui totum corpus respiciunt perpendendi, et mutationes indagandæ, operationis tantæ progenies.

49. Præter insignes vasorum truncos, qui ventrem pervadunt, qui ad organa diversa sanguinem deportant, qui ab extremis referunt, quique in unum collecti portarum stirpem constituunt; milleni istorum surculi viscera perreptant, et variis ambagibus iter tentantes, plures formososque vasorum plexus constituunt; per quos assiduò propelluntur humores inquilini. Per vomitum vasorum situs, magnitudo et figura omni momento variantur, ita ut actio nata sit pulmonum actioni simillima. Si verò numerum vasorum abdominalium, et vim quæ eis eorumque contentis nisu vomitorio applicatur, in censum revoces, pulmonum vires, et actiones maxime potentes longè superari videas. Adde quòd hoc ipso temporis puncto, strenuius multo ab iis res geratur quàm solito more fit. Inferre itaque nil vetat uniuscujusque munus sanguificandi summoperè exinde provehi; id est, compactio, densatio, attritio, solutio, miscela cruori eximiè conciliantur. His quoque famulatur aucta sanguinis velocitas; comprimuntur enim arteriæ, et quæ per ventrem vadunt, quæque etiam per artus dispertiuntur. Musculi enim plerique leviori tetano, dum nisus instat, horrescunt, ut cuivis patebit hominem evomentem spectanti. Musculi, qui pectus humerosque ambiunt, sustentant costas figuntque; exporrecta brachia suffulciunt corpus, quibus opitulantur illi musculi qui dorsum vestiunt, antrorsum curvatam spinam in situ commodissimo detinendo; crura rigescunt, et instar immobilis statuæ æger ore hiante vomitûs insultum exspectat. Vasa itaque sanguifera musculorum comites, æquè ac abdominalia, pressuræ subjiciuntur, et eadem pati debent: minuuntur arteriarum diametri; ruit ergo compressum fluidum quo patet exitus; recessum prohibet urgens ejusdem à tergo columna; progredi necesse est, ocyùs itaque venas appetit: harum tunicæ minus rigidæ faciliùs vi cedunt externæ; idem itaque his accidit, comprimitur nempe pelliturque sanguis; valvulæ frequentes pedem revocare vetant, pergit ergo celeriùs et pleniori fluvio ad cor accedit; inde crebrò repetitis ictibus perculsus, properè cursus iterat eosdem. Prædicta docent, nec obscurè; 1*mo*, Hæmatopoiesin emendari. 2*do*, Secretiones augeri. 3*tio*, Solida novis viribus instaurari. 4*to*, Denique sanguinis momentum intendi, et sepositis impedimentis circulo liberiori frui. Atque ex hisce principiis facilè patebit, quinam sint morbi τῆς μοχλείας δεόμενοι, et quare tot tantaque, tum in fluida, tum in solida, efficiat vomitorium: in paucis tamen ejusmodi morbis horum usus perstringere haud à proposito alienum erit.

50. Præteritâ jam hyeme, solida, acri gelu priùs rigescentia, laxantur iterum,

rum, atque fluida, ab enervatis vaſis minore impetu propulſa, verno tepore ſpiſſeſcunt, et levi de cauſâ in extremis vaſculis ſiſtuntur, deficiente quoque conſueto ſolidorum robore; aëris humiditas ſordes accumulat, et corpus debile, fæcibus gravatum, multis malis opportunum reddit. Inducit fortaſſe natura febrem benignam intermittentem, quæ moleſtum onus brevi excuteret, ſanum vegetumque corpus daret, ſi ſibi commiſſa ab opere non deturbaretur. Urget tamen querulus æger, dictis amaris medicum laceſſit, et ſpreto conſilio, fortè ab aniculis intempeſtivum morbi levamen, millenis ſæpiùs malis ſtipatum, ſibi comparat. Emeticum ſecundat naturæ auſus; et, ſi radicitùs haud exſtirpet, tutam tamen expedit in ſanitatem viam [§ 32.] etiam ſæpiùs repetitum prodeſt. Febris intermittens autumnalis emetici ſubſidium haud minùs efflagitare videtur, tum ad amurcas ex primis viis exhauriendas, tum ad vitia, quorum radices altiùs hærent, corrigenda.

51. Febris lenta, continua, morbo priori affinis, gradu major, ab eiſdem fortè cauſis, idem circa tempus, quandoque graſſatur; immobilior videtur materies, quæque diuturno naturæ labore nullo modo ſubigi vel expelli poſſit: hinc nulla remiſſio; parum tamen mordax eſt, ergo haud impetu magno exardet. V. S. cum ſanguine emittit vires, quæ in hâc febris ſpecie fatiſcunt nimis; alvi ſubductio, ſi lenis, parum confert, ſi fortiùs res agatur, debilitat. Naturæ inceptis favere medici eſt; febri ergo flammæ ſubjiciendæ, ut irritos conatus abſolvat, craſſa ſubigat, et expellat ſubacta quò nocitura non ſunt. " At ſi frigus eſt et torpor, inquit Celſus *(a)*, et jactatio corporis; non alie-
" num eſt, in ipſâ febre, dare mulſi tres aut quatuor cyathos, vel cum cibo
" vinum benè dilutum. Intenditur enim ſæpè ex eo febris, et major ortus
" calor ſimul et priora mala tollit, et ſpem remiſſionis, inque eâ curationis,
" oſtendit." Nec quidem minora ab emeticis efficiuntur. Adeſt nempe vis inſignis ſpirituum motum accelerans [§ 18, 19.] evacuantur ſordes in ventre latentes [§ 30.] viſcida ſubiguntur, ſi quæ abdominis incolas obſideant [§ 39.] denique ſanguinis intenditur curſus, et augentur ſecretiones [§ 49, *n.* 2, 3, 4.] tenues, per exteriora præſertim.

Neque ulla fortaſſe eſt methodus efficacior vel utilior, quâ ſudor elici poteſt, quàm poſt exhibitum vomitorium; non modò enim in ipſâ operatione copioſus plerumque exprimitur, ſed exteriora verſus tam validè truduntur liquida attenuata [§ 49.] ut dimotis obſtaculis, quæ orificia cutanea claudunt, effluant pleno rivo humores iſtuc determinati. Atque huc egregiè confert opiatum, quod poſt emeticum dari optimo conſilio ſuadent practici. Vomitorium præterea evocat ſquallorem primas vias fœdantem, et præcavet ne exhibito hydrotico, eoque diſperſo per corpus fomite, manus hoſtiles in viſcera convertantur.

(a) Celſi Medicina, lib. 3. cap. 5.

52. Eadem doctrina innuit quanti sit usûs emeticum in tenui acrique catarrho, in asthmate humorali, aliisque ejusmodi morbis à frigore correpto natis; quum sciz. retenta materies perspiranda, vasa eousque inerti fluido replet, ut functiones omnes pœnas luant; quum gravitate pigrâ sensus hebescant, et ad stateram ferè corporis pondus auctum esse diceres; distensa denique vasa doleant, parteque sensiles ægrè lacessantur. Cum hæc et alia ejusmodi symptomata se produnt, remedium exhibendum est, quod portas reserare, liquores superfluos expellere, atque solitam agendi facilitatem corpori restituere possit. Haud parùm his confert emesis; et quâcunque corporis parte ægritudo suas sedes posuerit his causis orta, multùm valere possit. Ponamus glandulas, cæteraque vasa circa fauces et collum, tantâ scatere aquarum copiâ, ut defluxionem brevi adfore indicent signa, vis mochlica sæpe salutaris est. Rubens etenim tumensque facies, oculi scintillantes lachrymis suffusi, liquore suo madefacti nares, et salivæ mucique rivulum fundentes oris fauciumque lacunæ glanduloſæ, conatûs emetici nunquam non comites, liquidò demonstrant quantâ cum vi appetat has oras sanguis, et quantus in vascula obstipata impetus sit: dum canales ossei cedere nescii, et insignes vertebralium et carotidum internarum arcus et ascensûs obliquitas cruoris ad cerebri appulsum valdè retundunt: fluxilis ergo hujus compages minus periclitatur, impetu ut plurimùm extrorsum determinato; parùm tamen introrsum vis aucta devenit. Et partim fortè hinc, partim à virtute stimulante et evacuante, ratio patebit cur in vertigine, hemicraniâ aliisque similibus, vomitus tanti sit usûs; cur in epilepsiâ quandoque in senibus adeò profuerit, ut fatentur observatorum scripta; "Inveteratam epilepsiam, quæ etiam per xx annos ægrum traxit, "curatam novi, inquit Hoffmannus *(a)*, ab emeticorum usu et specificis "antiepilepticis ex animali regno petitis." Nec mihi desunt historiæ similes, at referre prohibent limites præscripti.

53. Impedit eadem ratio, quò minùs horum usus in variolis distinctè enarretur; non modò quatenus evacuant, et avertunt alioqui futura mala [§ 30.] sed ob alios etiam quibus potiuntur effectus [§ 49.] et eximias inde manantes mutationes. Pustulis refertam esse cutim ponamus, vascula perspiratoria ita compressa ut coactam materiem vis solita nequeat protrudere: hoc in casu contentorum moles augetur; calor febrilis ita ad interiora exæstuat, ut organa intus exhalantia adeò arefacta, vel alioquin obstipata evadant, ut suum munus exsequi non possint. Ex utrâque parte cohibetur idcirco fluidum, quod diuturnum nimis circuitum jam patitur, quodque longiore morâ pessima mala pariturum est. Calor enim nimius acrimoniam gignit, unde stimulus partibus nervosis: hinc iterum febrilis æstus sitisque, fortasse

(a) Hoffmanni dissertat. Decad. 1. p. 204.

delirium,

delirium, huic ſupervenit; ab auctâ fluidorum mole anxietas præcordia infeſtat: quum interim calore craſſiora deveniunt fluida, coagulantur, et inepta magis redduntur ad exitum ſibi aperiendum per ea loca quæ ſæpè indigitat natura, ſciz. per fauces vel inteſtina. Exigunt hæc mala coagulati in vaſis exhalantibus utriuſque loci reſolutionem, evacuationem, reliquiſque conciliatam fluiditatem, nec auctâ interim febre pluſquam per lene opiatum tutò coerceri queat. Qui prædicta [§ 13, 18, 39, 49.] de emeticorum effectibus, tum in fluida, tum in ſolida, in mentem revocaverit, hæc non inepta eſſe auxilia, imò aptiſſima forſan prædicabit. De febribus acutis agens Sydenhamus hæc profert. *(a)* " Sæpe miratus ſum, inquit, dum fortè materiem vomitu re-
" jectam aliquando curioſè contemplabar, eamque neque mole valdè ſpec-
" tabilem, nec pravis qualitatibus inſignem, quî factum fuerit, ut ægri tan-
" tum levaminis exinde ſenſerint; nempe vomitu peracto ſæva illa ſympto-
" mata (nauſea v. g. anxietas, jactationes, ſuſpiria luctuoſa, linguæ nigredo,
" &c.) quæ et ipſos excruciarant, et adſtantes perterrefacerent, mitigari ſo-
" lent ac ſolvi, quodque morbi reliquum eſt ἐυθύμως tolerari." Quum verò ex antea dictis pateat, fluida craſſa ſolvi, canales obturatos reddi tranabiles, totum corpus arefactum humectari, ſimulque nociva expelli, mirandum non eſt levamen tam ſubitum inde evenire.

54. Beneficiis ſic curſim enarratis, quæ ab emeticis lucrantur morbi acutiores, via ſternitur ad alios, in quibus occaſio minùs præceps, nec adeò fallax experientia, licet judicium ſatis difficile. Vomitoria certè iſti morborum cohorti præcipuè adverſari videntur, qui vel in ipſo ventriculo, vel in viſceribus propè ſitis ortum ſedemque obtinent, et hujuſmodi omnes ferè morbi chronici ſunt. Vitia enim hinc nata longè latèque brevi diſpertiuntur, iterumque effectus temeratæ ſalutis ad hæc loca revertuntur. Hoc nullibi clariùs conſpicitur, quàm in eis morbis, qui cum mentis alienatione junguntur, quique à pravo victu, vel in eo aſſumendo errore, ut à cauſâ proximâ eveniunt. Licet enim ab animi pathematibus, ab evacuationibus, aliiſve cauſis remotioribus enaſcantur, victûs tamen inepta ratio ſæpè conſtituit propiorem. Innumeri nervorum ſurculi ad ventriculum emiſſi, neque ad ipſius nutritionem, neque ad motum quemlibet provehendum tantummodò comparati ſunt, ſed potiùs ad chylificandi operam adjuvandam. Diſperſis itaque nimiâ copiâ ſpiritibus, perditur ex cauſis ſanitatis una; aſſuetæ ſcil. ciborum menſuræ, in noſtri naturam mutandæ, imparia deveniunt inſtrumenta: aſſueta tamen menſura aſſumitur, et dum cætera æqualia non ſunt, neceſſariò enaſcitur indigeſtio, et inde alia mala. Hæc origo ſæpiſſimè eſt affectionis hypochondriacæ, et reliquorum quandoque graduum mentis læſæ, à vacillatione le-

(a) Sydenhami Op. ſect. 1. cap. 4.

viſſimâ

viſſimâ ad ſummam uſque inſaniam. Docent phænomena hujus morbi in fluidis præ primis hærere culpam, hancque eſſe nimiam craſſitiem, ſive partium mobiliſſimarum difflationem: hæ ſunt ſpiritus animales, halitus cruoris vaporoſi, et aquea dein ejus elementa, quorum minus majuſve diſpendium morbum efficit leniorem vel graviorem, dum ſanguis per varios ſpiſſitudinis gradus tranſit, donec in veram bilem, à veteribus atram dictam, degeneret. Quodcunque de hujus morbi naturâ cognitum habemus, præceptis chemicis ut plurimùm acceptum referendum eſt, quorum ope hîc, uti etiam in aliis benè multis, plurima phænomena, alioquin abdita prorſus, deteguntur. Ex chemicâ ſanguinis ànalyſi conſtat, difflatis aquoſis ſupereſſe ſalina, oleoſa, terreſtria, diverſimodè conjuncta, ſanitatis muneribus parùm apta, utpote quæ craſſiora et leviora ſanguine ſano. Eadem etiam chemia fidis experimentis demonſtrat, oleum, ſalem, terramque unita, plus aëris in ſe continere, quàm aquam reliquis conjunctam. Hujus teſtis ſit calculus humanus. Ergo ſolida præpollent fluidis, ocyus hæc circumaguntur, et augetur tenuioris diſpendium, dum craſſeſcens reſiduum intimam cum diluentibus admiſtionem reſpuit. Ingeſta haud ſatis ſubacta morbo addunt, viſcera molliora obſtipant, actionem minuunt tolluntve: hincque ſplenis, hepatis, hypochondriorum oppilationes, tumores, dolores. Sanatio requirit viſcido reſtitutionem fluoris et miſcibilitatis. Hæc fiunt per diluentia, ſaponacea et attritum. Diluentia ſola parùm valere oſtendit expoſita morbi natura: ſola ſaponacea, efficaciora licet, rarò ſufficiunt; adjuvantibus verò attritu et calore omnem quam poſſident vim exerunt, docente chemiâ. Denique attritus in hoc morbo rarò per ſtimulantia vulgaria intenditur, quin hæc ſæpè nociva comperta ſint. Inde quidem augetur ſanguinis celeritas, ſed ſimul augetur ejuſdem rarefactio. Compertum autem eſt attritum eſſe in ratione celeritatis, ſoliditatis, et compreſſionis. Si itaque auctæ rarefactionis ratio ſuperet rationem auctæ celeritatis, inde non modò non augebitur attritus, ſed, è contrario, minuetur. Poſtulatur itaque remedium quod ſanguinis celeritatem intendat, rareſcentiam cohibeat. Tale, in niſu vomitûs, reperiri, facilè ex prægreſſis liquet. Hinc obiter patet utilitas ſubmerſionis in aquâ frigidâ.

55. Huic morbo ex diametro opponi videtur hydrops, in quo lympha ſeroſa viſcera ſubmergit, et palleſcens ſanguis corpus deturpat ingrato colore, docetque aquam exuberare, et vitio diverſo, oleum, terram, ſalemque deficere.

Diſpoſitione pituitoſâ in fluidis ſubortâ (quæ à multiplici cauſâ fit, quarum aliquas haud inconcinnè memorat Poeta *(a)*,

(a) Sammonicus.

Corruptî

Corrupti jecoris vitio vel ſplenis, acerbus
Creſcit hydrops : aut cum ſiccatæ febre medullæ
Atque avidæ fauces gelidum traxêre liquorem :
Tum lympha intercus vitio gliſcente tumeſcit,
Secernens miſeram proprio de viſcere pellem.)

ſtatim ita debilitantur ſolida, ut torpidos liquores vix propellere poſſint. Hinc ſtagnatio in lateralibus vaſis, et functionum languor. Indies accumulatur ſerum, turget, propinqua lædit, et perpetuò renovantur morbi cauſæ. Si contingat hæc in unico vaſe, hydatis formatur; ſi κατα φλέβας, ſeu per tunicam cellularem per omne corpus diſperſam, fit leucophlegmatia; ſi ruptum vas effundat contenta in cavum quodcunque, localis hydrops ſuboritur: ſi denique (quod ſæpiſſimè in cauſâ eſt) actio venarum abſorbentium debilitetur, ſive ab obſtructione in eis natâ, ſive à mero languore et inertiâ ſolidorum; dum ſuo munere funguntur arterioſæ inhiantes, et ſquallentem laticem ſine fine in cavitatem eructant: hîc continuò accumulatus ſpiſſeſcit, vaſa omnigena brevi effœta reddit, et hydropem topicum producit. In hoc morbo curando primaria morbi cauſa minuenda vel adimenda eſt; attenuantia, evacuantia, exſiccantia, roborantia uniuſcujuſque ordinis uſurpanda; ut tandem amoveatur onus humidum, minuatur latex, et vaſa eòuſque viribus inſtaurentur, ut officio debito fungantur, et fluidorum nativa bonitas redintegretur. Hiſce omnibus abſolvendis dicata plurima apud practicos remedia invenimus. Neſcio quot ſpecifica celebria ab iis recenſeantur, quæ uno ferè ictu morbum profligent, ſi fides eorum promiſſis ſit habenda. Diſplicet aliis hæc curta ſupellex, et in vitium incidunt contrarium; pompoſam memorant farraginem, et remediorum cumulo obruunt ægrum. Utraque praxis evitanda, neque ſolis emeticis curatio committenda, nec ſine his tentanda; cùm longiores adimant labores, et compendio quaſi rem gerant, quæ pluribus adminiculis cæteroquin indiget. Remedia antihydropica, priùs memorata, ſuum opus abſolvere videntur, motum et attritum fluidorum ciendo, pellendo, diffiando exuberantem lympham. His omnibus ſimul conducit niſus emeticus fortis, ſæpiùs repetitus: craſſa quippe comminuit, obſtructa referat, propellit ſtagnantia, humida exſiccat, ſecretiones aquoſas auget, ſolutum ſanguinem compingit, reſolvit viſcidum, celeriorem ad extrema facit appulſum, movetque ſudores. Adde quòd ingentem in tumefactum abdomen vim exerit, et quum in hoc tantummodò ſedem habet morbus, nec quopiam viſcere peſſundato, nec in corpore valdè ſenili, et recens ſit, repetitis emeticis, benè inſtitutâ diætâ, et exercitatione modicâ, res tutò expeditur, niſi in iis ſit, *(a)* " quibus inutilis libertas eſt, nec tam facilè " coguntur ac ii, qui ſervitutis beneficio convaleſcunt." In hydropis etiam

(a) Celſi medicina, lib. iii. cap. 21.

provectiori gradu haud parùm conferre visa est emesis. Idem comprobat historia apud Forestum *(a)* recitata de quodam hydropico, qui " inflatus ventre, " manibus, pedibusque et facie, à medicis destitutus, et tanquam desperatus, " adiit littus marinum, et naviculam per aliquot miliaria ascendit in altum " maris, et provocato vomitu, post vomitum exercitio utens, sanitati restitutus " est." Huc afferre licuerat Sydenhami suffragium, quod in tractatu suo eleganti de hydrope crebrò fert, et sententiam de horum commodo plurimis exemplis iteratâ observatione ratis, suffulcit; at diserta ejus verba in arte seniores probè callent, ad ipsum libellum juniores lubenter amandantur, cujus evolutio,

------ *si propiùs stes*
Te capiet magis; ------ et
------ *decies repetita placebit.*

Hoc tamen in morbo haud mochlicis pugna committenda est, nisi viscera aliaque ita se habeant, ut antea [§ 44.] observatum.

56. Ex enarratis hactenus liquidò patebit, in morbis plerisque à colluvie serosâ natis, quænam ab emeticis exspectanda sint. Patebit quoque horum usus in morbo qui puerulis utriusque sexûs infensus, gravis nec infrequens, rachitide scilicet; qui à vitiis in abdomine natis, ad medullam usque dispersis sæpiùs productus, ipsa corporis fulcimenta pedetentim suffodit, et durissima ossa, inflexibilia ferè, nimis facilè flectenda reddit. Mali ortus et progressus, curatoria indicata, nec non ratio, quâ huic morbo vomitoriis iteratis occurri possit, ex sequentibus clariùs cernuntur *(b)*.

1*mo*, Ossa, quæ in toto corpore jam solidissima sunt, olim gelatinæ fluxiles, membranæ, cartilagines fuere, quæ paulatim durescentes, per diversos soliditatis gradus, ossa tandem fiunt rigida.

2*do*, Hujus indurationis causa duplex existit, materiæ scil. ossificæ à sanguine secretio, et secretæ appositio firma, sive compressio particularum ad se invicem fortis. Hæc effecta sunt virium vitæ integrarum, et musculorum vicinorum incumbentium. Ideoque

3*tio*, Si sanguis particulis ossium structuræ idoneis minus dives sit, secretio minor erit, et muneri suo ineptior. Porrò, si absit actio musculosa, et vires langueant, altera causa ossificationis abest. Hinc itaque

4*to*, Liquet istas conditiones, quæ rachitidem parere possint, omnes ejusmodi esse quæ chylopoiesin et hæmatopoiesin depravare solent. His ergo imprimis erit prospiciendum, et medicina id genus eligenda, quæ et vitium in ipsis officinis diversimodè corrigat [§ 18, 27, 39.] auferat, nocivos ejus effectus, in aliis locis pullulantes, emendet, atque impetûs motûsque formantis defectui optimè subvenire possit [§ 49.] Viscerum quidem saburram feliciter educunt

(a) Observ. lib. xix. obs. 33. *(b)* Vid. Alex. Monro's Anatomy of human Bones, p. 34, &c.

purgantia: ſed ſi fortiora fuerint, aut nimis ſæpè repetita, vires proſternunt admodum, craſſiora relinquunt, ſed vapida, et obſtructionibus creandis magis opportuna; et debilia jam facta ſolida adhuc debilitant. Emetica validè expurgant viſcera, nec vitæ viribus adeò funeſta, ſolida corroborant; imprimis ſi victus accuratus inſtituatur, ſi corpus in frigidam ſæpè immergatur, ſi denique ſpecificis leniantur ſubinde nata ſymptomata.

57. An in arthritidis inſultibus utilis ſit vomitus necne, quibus, quando et quoties exhibendus, definire haud leve eſt. Illi, quorum auctoritas mecum præ plurium valet, in paroxyſmis omninò ejus uſum dehortantur, niſi urgeant nauſea, vomitus, aliaque ventriculi ſorde ſcatentis ſigna; et tunc lenia tantummodo admittunt. Alii *(a)* verò haud infimi ſubſellii medici ſtant contra; urgetque unus *(b)* ſe obſervâſſe " inſultus arthriticos conſuetos, perpetuò " ferè mitiores, quando ſtatim inter initia leni emetico, vel ſolo, vel cum " laxante mixto, prima regio à ſordibus evacuata fuerit." Qui valet, has lites dirimat: ego, iis miſſis factis, emeticorum uſum in alio ejuſdem morbi ſtadio demonſtrare paucis conabor; id eſt, inter paroxyſmos, ad futuros avertendos. Acris illa materies, in anguſtiis hærens, et dolores cruciantes excitans, poſt exacerbationem podagricam (ſi rectè res geratur, nec intempeſtivo medicaminum externè vel internè applicatorum uſu ſuffocentur incepta naturæ) expellitur, ſudor lenis locum affectum perfundens, vel, ſi deterius adhuc malum, et ſedes habeat profundiores, erumpens tophus, inſequens inde levamen, ſymptomatum omnium remiſſio, hanc evacuationem criticam fuiſſe deſignat; ideoque morbi fomitis in ſanguinem, parteſque nobilioribus vitæ functionibus dicatas, nequaquam metuendus erit regreſſus, ſed quod morbi jam ſupereſt inſtar alîus cujuſque chronici ſævioris abigendum. Fluida, ſi prava ſint, mendis purganda, infirma ſolida roboranda, vires totius corporis inſtaurandæ, ſtirps denique atrocis mali quantum valet ars ſuccidenda. His plurimum confert medicina gymnaſtica, quæ præ cæteris aliis ſuppetiis infracta membra novâ virtute reficit. Equitatio, vectio in rhedâ, curru, &c. ſunt optima ſubſidia. At quoties hæc prohibet parum amica tempeſtas anni? Hyeme aut vere ſæpiſſimè contingit podagræ deceſſus, pejus tamen adhuc ſi autumno intermittat. Aër enim humore gravis frigiduſque foràs egredi omninò prohibet; atque intra porticus, vel domûs penetralia, pedibus inſiſtere, aut motu quovis corpus torqueri, ægrè admittunt artus diſtorti, et nuperis cruciatibus claudicantes. Frictio ſanè leviter tantummodo mundat exteriora, neque evacuat è viſceribus pituitam, quæ ob omiſſum tamdiu motum ea neceſſariò gravare incipit. Præterea rarò deſunt ægro gratulabundi ſodales, qui pignus amicitiæ charius dare neſciunt, quam propriam ſalutem poculis evertere, hominiſque ex morbo recreati exitium moliri, dum ſanitatem priſtinam verbis

(a) See Dr. Cheyne's Eſſay upon the Gout, p. 77, &c. *(b)* Hoffmanni Diſſert. Decad. 1. p. 411.

exoptant, reverà autem insidias sanitati struunt. Ex his atque similibus causis, emeticum sæpè sæpiùs perquam necessarium est convalescentibus, neque ex prædictis colligere arduum erit quâ ratione exercitationis etiam fortioris vice fungatur. Patet etiam quibus modis actionibus animalibus opitulentur vomitoria, crassa quomodo subigant, denique plus minusve singulis indicatis respondeant: neque verentur ex practicis sagaces, bis in mense, sæpiùs quandoque, istiusmodi hominibus vomitum præcipere. Perspectis itaque horum commodis in chronicis plerisque, eos morbos levi pede percurrere animus est, qui sexui sequiori tantummodo infesti sunt.

58. Non modò vitæ ratio, sed ipsum ferè vitale stamen fœminis molliorem ac laxiorem temperiem dedisse videtur, nisi fors durior alienam impertita sit, atque mens sana, in corpore sano laboribus improbis indurato, eis firmitudinem donaverit masculæ vi omninò æmulam. Est tamen vitæ stadium, quo etiam hæc mulierum conditio ex errore levi pessimis obnoxia malis evadit; eo scilicet quo sexûs discrimina jam adfutura sint, id est, ad vel circiter annum ætatis 15: huc usque enim, sensu medico, genus unum idemque est. In quibus autem discrepant, quare, quæ causæ physicæ discriminis, referre non opus est; fusiùs ea ab aliis tractantur. Sed brevis morborum recitatio, quum lucidiori argumentorum explicationi inservire possit, proposito haud incongruum videtur.

1*mo*, Adveniente molis augmenti termino, eadem organa, quæ corpori virgineo pabulum ministrârunt et incrementum, plus pergunt conficere quàm sola corporis nutritio jam exigit; quod supersit sanguinis per vasa uterina jam periodicè emittitur. Si diutiùs retineatur ob deficientes vasorum vires, vel impeditum exitum, plethora plethoræ superadditur, et morbi virginei indicia citò sese produnt.

2*do*, Si verò aquosus, solutus vel acris sanguis uterum pervadat, et momentum absit quo dilatentur vasorum oscula, eòusque ut rubrum sanguinem deponant; is lateralia permeat, in glandulas, quæ cavum uteri ubique obsident, infunditur, crassescit; exit tandem liquor viscosus, colore diversus, nunc albus [à quo *fluor albus* appellatur] vel albicans, vix lintea tingens, flavescens, virideſcens, nigricans, et omnibus affectus coloribus qui inter hos existunt; nunc sine fœtore transit, nunc graveolet; nunc mitis, ut in initio plerumque, et diutiùs vigente morbo acrior, coloratior, fœtidior evadit. Patentes glandulæ tenuiores quoscunque separant humores, et eliminant; inter quos nutritivos, qui solidis vigorem, momentum fluidis suppeditâsse debebant. Hinc indies à viribus aliquid subtrahitur, perit membrorum virtus, labitur digestio, vitio magis indelebili fluida corrumpuntur, et per totum corporis œconomiam serpit labes, quâ nullâ (expertos afferentes audivi) ex toto chronicorum agmine, sexui crudelior, curatu difficilior, aut effectibus exitiosior. Nam fatiscunt imprimis instrumenta ipsa, quorum ope cætera reparari debuerant, et morbi

sedes

ſedes in viſcere ponitur, cui omnium difficillimè ſit medicina. Id quidem haud citò labefactatur, ſed ſi ſemel infectum fuerit, vitium diu ſervat; " Quia " pars eſt, inquit Foreſtus *(a)*, quæ promptè recipit aliarum partium excre- " menta, tum ob ſitum inferiorem, tum ob multitudinem venarum eò per- " tingentium, tum etiam propter conſuetam illam naturalem purgationem." His adde compagem ſolidam et vaſculoſam, remediis, quorum vires longo circuitu decoquuntur, antequam huc deferantur, haud facilè cedentem. Etiam poſt emendatam cruoris indolem, laxa glandularum fabrica pertinaciter obſtat medelæ, atque ea medicamina, quæ harum mollitiei adverſantur, conſtringunt quoque arteriolarum orificia, et moleſtiorem reddunt menſtruationem. Laxitas nativa, victûs prava ratio, vita deſes et luxurioſa hunc morbum plerumque inducunt, *Rariùs enim*, ut ab eodem Foreſto obſervatum, *id pati viſæ ſunt agreſtes mulieres*. Eadem quoque *(b)* fluxum uterinum ſuppreſſum ſæpè præcedunt. Remedia ergo hiſce morbis adhibenda ſunt, quæ noxis, ex iſtiuſmodi cauſis ſubortis, obviàm eant; neque vomitoria repetita omittenda ſunt: præter enim effectus, qui hactenus indicantur, ſtomachum expurgandi, ſolida ſtimulandi, et ſanguinem mirè atterendi, hunc tanto impetu verſus uterum propellunt, ut exempla proſtent *(c)* in quibus ſola vis ejuſmodi mechanica tardatum fluxum repentè profuderit: atque, niſi δυσεμὴς ſit ægra, vel incommodè ferat emetici actionem, haud minora in fluore albo quàm in pleriſque chronicis exſpectanda ſunt. Sæpiùs autem in hoc morbo motu leviſſimo fatiſcunt vires, unde incommodi plus quam fructûs accipiunt. Hoc ergo in primis indagandum, priùſquam porrigantur emetica ægris hujuſmodi.

59. Nihil etenim ex omni parte perfectum atque beatum: ſua ſecum trahunt commoda, et etiam incommoda vomitoria; nec minus verenda hæc, quàm appetenda iſta, ſi fortè infelici auſpice porrigantur. Infauſti autem eventus remedii utilitatem haud minus prædicant quàm effectus optabiliores; inſitam ejus vim demonſtrant, efficaciam probant, dum porrigentis imperitiam vel temeritatem redarguunt, nec hominis excidii reum habendum eſt medicamen, ſed manus quæ ineptè vel intempeſtivè miniſtrant. Quamvis autem, ex traditâ de emeticis doctrinâ, facilè perito patere poſſit, in quibus caſibus utilia, in quibus nociva ſint; haud tamen alienum eſt, ut brevi horum morborum enarratione claudatur diſſertatio, in quibus vomitus imprimis vitandus.

1 *mo*, Nativa corporis ſtructura apud nonnullos *(d)* ſcriptores cauſa exſtat, quo minus quibuſdam propinentur emetica; quibus habitus macer et gracilis, collum extenſius, pectus anguſtum, atque ad vomendum difficultas; quibus denique ſanguinis ſputum, animi deliquium, tuſſis moleſta, familiaria fuere, ab emeticis liberati ſunt: qui verò contrariâ temperie præditi ſunt, horum

(a) Foreſti obſerv. lib. 28. Obſ. 21. *(b)* Opera Doctoris Freind, p. 67, 80. *(c)* Plateri obſ. med. p. 191. Hildan. obſ. cent. 3. obſ. 58. *(d)* Vide Fallopium de Purgant. p. 81.

usum salutarem ex consulto medicorum sæpè sunt experti. In vehementiorum usu hæc sanè perpendenda sunt, ne forsan temeritatis vel incuriæ pœnas luamus; nec in leniori vomitu præcipiendo penitùs omittenda. Idiosyncrasia quædâm, experientiâ ægroto cognita, at à medico, nisi ab ipso didicerit, nunquam detegenda, hujus vel illius medicaminis usum vetaret, quod aliter ab ignaro porrectum multa mala est pariturum.

2*do*, In morbis inflammatoriis, ubi sanguis adusto lentore inquinatur, immeabilis in arteriarum finibus sistitur, neque vi propellendus; ut in febribus acutis, inflammationibus topicis, pleuritide, phrenitide, hepatitide, aliisque ejusmodi; vires vitæ minuendæ potiùs quàm provehendæ: ergo peractâ accessione, urgente sævissimo dolore, tutum non erit emeticum.

3*tio*, Neque, si multum lædatur visceris, sive partis alicujus actio, quæ tonica dicitur, sive æquilibrata potentia, quâ solida fluidis reniti deberet, minuatur, emetici fortioris vim mochlicam experiri licet, antequam ratio partis habita sit, an tantæ vehementiæ impetum commodè ferat, vel incommodi majoris fiat particeps. Sic v. g. in hydrope abdominali exsiccat emeticum, sed tumorem pro aliquo saltem tempore extendit.

4*to*, In pulmones emeticorum vis sanè ingens est, quia nisu vomitorio tam subitò per eos dimittitur sanguinis inassueta moles, quâ distenduntur vasa, comprimuntur vesiculæ, quibus fortiter reagens intra detentus aër, pressuram validam longè validiorem reddit; et, si dehiscentia priùs vasa sanguinem effuderint, vulnuscula certò certiùs ampliata hœmoptoen augebunt. Quin et in incipiente hœmoptoe, ab externâ causâ producta, dum sanguis adhuc blandus, nec sordidâ tabe contaminatus, vix ferè ad emeticum licet confugere, quo è vesiculis pulmonicis excutiatur latens cruor, qui, stagnando corruptus, morbum, alioqui haud periculosissimum, intenderet. Pulmonicis igitur vix porrigenda sunt, nisi puris inundatio pulmones obruat, et lethum à suffocante materiâ, aliàs inevitabile, adfuturum sit.

5*to*, Denique cavendum est ab horum usu in eis morbis, qui pro causis agnoscunt sanguinem multum crassum, pituitam valdè tenacem, copiosam, penè immobilem, aliamve quamcunque hujusmodi materiem, cerebrum et nervorum fontem gravantem, ut gravior apoplexiæ, paraplegiæ, hemiplegiæ species, veternus, carus et ejusmodi. Altiùs enim morbum plerumque figunt, vel in ipsâ forte operatione hominem interimunt. Vix ad eorum usu dehortatione opus est, licet aliqua symptomata ea necessaria esse alioquin innuerent, quando imminet adhuc hæmorrhagiæ metus, post vulnerata aut detruncata membra; vel denique quando per ampliores abscessus, aut aliud quodcunque ostium, apertus paratur exitus, per quem facto ingenti impetu emanet cum vitâ cruor.

A MEDICAL

A

MEDICAL INAUGURAL DISSERTATION:

ON THE

USE OF EMETICS,

IN VARIOUS DISEASES.

By JOHN FOTHERGILL.

EDINBURGH,

M,DCC,XXXVI.

To the following celebrated Profeſſors, his Preceptors; viz.

JOHN RUTHERFORD, Doctor of Medicine, and Profeſſor of the Theory and Practice of Phyſic in the Univerſity of Edinburgh:

ANDREW ST. CLAIR, Phyſician to the King, Profeſſor of the Theory and Practice of Phyſic in the ſame Univerſity:

ANDREW PLUMMER, Med. Doct. Profeſſor of Medicine and Chemiſtry at the ſame Place:

ALEXANDER MONRO, R.S.S. Profeſſor of Anatomy and Surgery in the ſame School of Phyſic:

AND ALSO

CHARLES ALSTON, Doctor of Medicine, Phyſician to the King, and Profeſſor of Botany:

On Account of the many Favours conferred upon him,

THIS INAUGURAL SPECIMEN,

Which the laudable Cuſtom of the Univerſity requires,

Is offered, with all due Submiſſion and Eſteem, by

JOHN FOTHERGILL, A. & R.

A TRANSLATION

A

TRANSLATION

OF THE PRECEDING

MEDICAL INAUGURAL DISSERTATION,

ON THE

Uſe of EMETICS in treating various DISEASES.

PROŒMIUM.

AS vigour of body, *acumen* of mind, preſent health, and a foundation for future, with the ſweetneſs of a life unmoleſted by diſeaſe, depend in great meaſure on the ſtate of that noble viſcus the ſtomach; ſo phyſicians, both ancient and modern, have uſed every effort to preſerve a function of ſo much utility to the body in a ſound ſtate. They knew, by experience, that if the ſtomach was healthy, leſs was to be feared from other parts; but this being diſeaſed, other parts could not long remain ſound. We daily obſerve that the gout, dropſy, ſcurvy, conſumption, inſania, the worſt kinds of fevers (and other ſtill worſe diſeaſes, if worſe can be) ſeldom happen but the ſtomach is firſt affected; and if by chance they ſhould ariſe from ſome other part, yet they become more ſevere in proportion as this great animal laboratory recedes from a healthy ſtate. Hence therefore it appears, how much thoſe who miniſter to the aid of nature in curing diſeaſes, ought earneſtly to attend to its ſafety. But the faults of the ſtomach itſelf, and of the matters it contains, as alſo the diſeaſes which ariſe from hence, often require the aid of depletion; and moſt commonly there is no remedy more happily exhibited, either to take off the faults of the one, or eradicate the effects of the other, than evacuation by vomit. Hence emetics were ſo much celebrated among the antients, that Hippocrates *(a)* even recommended them to the healthy, if they wiſhed to remain ſo, and often adviſed to repeat them; although medicines of this claſs, common among the antients, were extremely rough and unmanageable, and could not be given without diſguſt to the patient, and anxiety to the phyſician.

PART THE FIRST.

1. VOMITING is that action of the ſtomach, diaphragm, and abdominal muſcles, by which the contents of the ſtomach, being ſqueezed as in a

(a) Hippocrat. de diæta, lib. 3. et alibi paſſim.

preſs, are thrown up by the mouth with great force; for by the contraction of theſe viſcera, all the other viſcera of the abdomen are preſſed upwards; hence the pylorus is conſtringed, and the matters contained in the ſtomach being preſſed by the muſcular force of it *(a)*, and the ſurrounding parts, into the upper orifice, they dilate it, and eaſily force their way through the contracted longitudinal fibres of the œſophagus.

2. Any powerful ſtimulus thrown into the ſtomach, and applied to its nerves, may excite this action, on account of the connection between the nerves of the ſtomach and thoſe of the abdominal muſcles and diaphragm.

3. Too great a quantity and bulk of things taken into the ſtomach, though they ſhould have no other diſagreeable ſtimulus, or at leaſt but very little, may excite nauſea, and then vomiting; ſuch are cold water mixed with ſome aromatic ſubſtance, ſweetmeats, and thoſe dainties which, pleaſing the palate, are greedily ſwallowed beyond the bounds of moderation.---Whatever irritates the nerves of the ſtomach, or any way greatly diſturbs the equable motion of the nervous fluid, will excite vomiting; ſuch as, a contuſion, or vehement ſhaking of the head; the motion of a ſhip or carriage, to thoſe not uſed to it; a ſtrong imagination or recollection of ſome unpleaſant nauſeous thing: theſe, and the like, will ſometimes affect the delicate with great diſguſt and vomiting.

4. But it is found that all ſubſtances, though endowed with a ſtimulus, do not with equal certainty produce their effects on the ſtomach and neighbouring parts, but ſometimes promote an excretion by one, ſometimes by another of the emunctories: antiquity therefore ſet apart certain ſubſtances for this purpoſe only, which they found almoſt conſtantly excited vomiting, and which experience had taught were peculiarly adapted above others to perform this office. Theſe the Greeks called Ἐμετικα, EMETICA; the Latins VOMITORIA.

5. But the catalogue of theſe was defective among the antients, though large; for they were acquainted with few emetics, which are not found to be either extremely rough and unfavourable, or altogether gentle and weak; at leaſt if our catalogue of ſimples, marked with this title, be the ſame as theirs, as will appear to any one who examines their writings. The Veratrum, or *White Hellebore*, was ſometimes fatal, and the action of others doubtful. What wonder then if patients afflicted with ſome dangerous diſeaſe, preferred any other kind of remedy to a violent and cruel, or elſe too gentle, uncertain, and often an ineffectual emetic? Hence the patient, alarmed, deteſted the phyſician, and the phyſician heſitated to give the remedy which promiſed ſo much relief; from which both the one and the other ſuffered

(a) Wepfer de Cicuta Aquatica, cap. 15. hiſt. 1.

conſiderable

conſiderable inconvenience. And although Hippocrates underſtood the method of moderating the force of emetics, yet many others leſs ſkillful were often diſappointed in their expectation. And chemiſtry, which has diſcovered ſo many famous remedies, hardly ſupplies us with any emetic which we can give with ſafety to the young and delicate. Sydenham alſo in his time lamented, that even then there was wanting an emetic, which was both ſafe, and at the ſame time *ſufficiently efficacious*, ſuch as practitioners now find in the celebrated Ipecacoanha root. But it is not my purpoſe to deſcend to particular emetics; it will be ſufficient only to point out their claſſes according to their various powers.

6. It has been the cuſtom of ſome to divide this order of evacuants into *gentle*, more *powerful*, and the *ſtrongeſt* emetics; and not improperly; for thoſe different ſimples uſed at preſent to excite vomiting may be conveniently ranged under this threefold order. No regard however muſt be had to their efficacy as diſcovered by the ſenſes, that is of ſmelling and taſte, but the diſtribution muſt be founded wholly on experience.

7. Emetics called *lenient* or gentle are of two kinds; 1. Such as by their bulk, or by a very ſlight irritation united to their bulk, offend the ſtomach: ſuch are, water that is warm, viſcid, ſugared, mixed with honey, oil, or ſalt; fat broths, infuſions of green tea, carduus benedictus, chamomile-flowers, and others of the like kind, drawn from different aromatic plants. 2. Of this order are, the ſmall doſe of a more powerful emetic, which poſſeſſes a ſtimulus ſo ſtrong, that in a diminiſhed doſe it can provoke either a nauſea, or an attempt to vomit, without urging its effects any farther. Theſe are chiefly taken from the claſs of ſalts, which, being immediately diſſolved in the gaſtric juices, and quickly diſperſed every way, are applied to the nerves, and ſhortly thrown up, and being wholly diſſolved, are waſhed off by the liquors drank, and their effects preſently ceaſe.----A thread paſſed down the œſophagus, an irritation of the gullet by a feather wet with oil, a nauſeating idea, an unuſual agitation of a ſhip, the ſhaking of a carriage drawn over a rough road, and laſtly, the ſlighter paſſions of the mind, belong to this claſs. I do not deny but the cauſes juſt mentioned excite violent vomitings in ſome perſons, but in the generality they do not, nor do their effects continue long and powerful.

8. The claſs of *ſtronger emetics* is formed out of thoſe mentioned § 7, number 2d, the doſe only or cauſe being increaſed; or it may be formed of thoſe ſubſtances which have a more firm texture, and hence produce a more ſlow but more vehement effect: for, ſhooting out their vellicating particles, they inſinuate themſelves by degrees into the cells and foldings of the inner coat of the ſtomach, adhere to the nervous fibrillæ, and create and in-

creaſe uneaſineſs; and, the ſeat where they fix being covered, they cannot be thrown off by the redoubled efforts of vomiting, until their ſtrength by repeated operation be weakened; hence ariſes a longer and more vehement vomiting. --- Many medicines which operate by vomiting, in frequent uſe in the preſent practice, are to be added to this claſs: of vegetables, for example, aſarum, ipecacoanha, wild horſe-radiſh, muſtard-ſeed, ſquills with their various preparations and combinations: of metals, ſome ſalts, the products of chemiſtry, as the vitriol of ſteel and vitriolic ſalts; but thoſe prepared from copper ſeem to merit a preference to all others, that is, the ſal cupri and its tincture. To theſe muſt be added emetic tartar, and a diminiſhed doſe of ſome out of the claſs following.

9. We call thoſe the *moſt powerful* emetics which the dogmatic and eſpecially rational art avoids, on account of the cruel and vehement effects often experienced from them, and which conſtant obſervation has taught cannot be exhibited without imminent danger to the whole machine, and which are very ſeldom preſcribed except by a bold medicaſter, or by a regular phyſician in ſome certain diſeaſe which requires the moſt powerful remedy; although indeed it is difficult to fix the exact limits between this and the preceding claſs. The vegetable kingdom affords many medicines of this kind, eſpecially under the claſs of purgatives, the doſe of which being increaſed, often produces cruel vomitings, and particularly if taken from the reſins. Reſinous ſubſtances are but little miſcible with the animal fluids, and remaining undiſſolved, they accrete to the cavity of the ſtomach, and occaſion the moſt violent pains, ſpaſms, and exceſſive vomitings: this is evident from thoſe tortures which the ſick experience after taking the reſin of jalap, or any other of the ſame kind, not rightly diſſolved by triture, or made miſcible with our fluids by ſome other method; whilſt perhaps the natural humours are deprived of their native ſoap, and all is full of a watery phlegm. To theſe may be added the white hellebore, ſome ſpecies of the tithymali, tobacco, and many other plants called deleterious: the claſs may be increaſed alſo by the more acrid preparations of antimony, and thoſe emetics prepared from mercury, together with many poiſonous metals.

10. From the deſcription hitherto given it is evident, 1. That vomiting cannot be excited without ſome ſtimulus (I mean any thing which can alter the motion of the vital fluid, or the action of the nerves) applied to ſome region of the nervous ſyſtem. 2. That from the action of that upon the nerves, and of theſe upon the muſcles, (§ 1) there neceſſarily happens an evacuation of the contents of the gaſtric region. 3. Laſtly, That theſe can by no means happen without a ſtrong compreſſion of certain parts, a powerful concuſſion of others, and a great motion of the whole body. Theſe always attend the moſt

moſt gentle vomiting; they increaſe, as the power of the emetic is extended; and, the ſtimulus being increaſed, they may be carried even to the ruin of the ſtructure of the parts.

11. The fore-mentioned conditions are always connected with vomiting, and moſt of thoſe changes produced or expected from emetics, are entirely dependent upon them: being about, therefore, to enquire, what are the effects of theſe, ariſing from that threefold cauſe, I ſhall reply to theſe queſtions; viz. What is the uſe of an emetic, merely as a ſtimulant? or, merely as an evacuant? and laſtly, How far can it affect the whole body by its mechanical force?

PART THE SECOND.

Of the Uſe of Emetics, derived from their Stimulus.

12. ANATOMY has not yet diſcovered any parts of the body which may properly be eſteemed the objects of ſtimuli, except the nerves, which primarily ſuffer the effects of them, whatever they be, and propagate them to other parts, as appears by many experiments. For by experiments we learn, that not only the part to which the irritating ſubſtance is applied ſuffers a change, but alſo the effect is propagated to the origin, termination, and extremities of the ſpreading branches of the nerves, and alſo to the branches ſhooting off to the oppoſite region of the body, though from a different cauſe.

13. The principal effects are, a greater acceſſion of the vital energy to the part affected, and a diminution of it in others; and, the equable moderate diſtribution of it being loſt, the motion is both accelerated and confuſed. But theſe will all be different in degree, and more or leſs conſpicuous, according as the vehemence and force of the exciting cauſe is different, and according to the diſpoſition, number, and bigneſs of the nerves, and the thickneſs of the coats with which they are covered.

14. Moſt of the learned acknowledge, that this cauſe or energy, (§ 13) is a moſt ſubtile moveable liquid, endowed with all the common properties of a fluid, and derived from the brain, by a conſtant, gentle, placid motion, to every ſeparate part of the body. Nor will any one deny this, who has attentively read over what Boerhaave *(a)* has written on this ſubject; or well conſidered what our celebrated profeſſor of anatomy *(b)* has ſaid upon it, in an order and method ſtill more clear and beautiful.

15. Nor does it ſeem probable that the animal ſpirits are ever hurried along with ſuch unbridled precipitate impetuoſity, as to become the cauſe of ſo many

(a) Boerhaave's Inſt. § 275, ad 292. *(b)* Monro's Anatomical Treatiſe of the Nerves.

prodigious effects, or to form the eſſence of ſuch a number of diſeaſes: or that this diſpoſition to motion, can ariſe from any exceſſive preternatural mobility; for the impetus of the ſpirits depends only on ſtrong vital powers, whereas diſeaſes of the nervous ſyſtem moſt frequently occur in perſons of an oppoſite habit and diſpoſition of body, that is, in the relaxed and feeble, in whom the vital powers are weak. It is certainly extremely conſonant to the laws of the animal œconomy, that this liquid ſhould be moved ſometimes quicker and ſometimes ſlower: but there is ſo great a difference between the greateſt velocity, and the greateſt degree of inactivity, that we cannot eaſily allow this to be the only origin of diſeaſes. The unequal diſtribution of the ſpirits may produce many tumultuous motions in the body, commonly attributed to a vitiated ſtate of the nerves; and thoſe phænomena which uſually accompany diſeaſes called nervous, are much more eaſily explained on this ſuppoſition; nor does the action of the muſcles oppoſe our theory.

16. Any pungent acrid ſubſtance, applied to a nerve or its branches, produces this unequal diſtribution, ſo that ſpaſms and convulſions ariſe; which may increaſe even to the extinction of life. Compreſſion alſo made on the origin of any more remarkable nerve, produces the ſame effect; or even an obſtructed egreſs of the ſpirits through their canals, from any cauſe whatever; by which the neighbouring tubes receive them in a fuller ſtream. The different proportion of ſolids and fluids peculiar to every age, as alſo the temperament peculiar to every perſon, very much increaſe or diminiſh this diſpoſition; for the younger the perſon, and the ſofter and more relaxed his habit of body, the more readily, other circumſtances equal, are the nerves irritated or compreſſed. Experience confirms this opinion: for the variolous contagion, even of the mildeſt kind, ſeldom attacks children richly fed, whoſe blood is full of ſpirits, and whoſe ſkin is endowed with remarkable ſoftneſs, but dreadful contractions and ſpaſms enſue: fits alſo not unfrequently ſupervene, altogether ſimilar to a true epilepſy. Nor do hyſteric fits always happen from a poverty or want of the vital fluid, ſince they attack women of leiſure, and diſſolved in luxury, more than others to whom a harder fate is allotted.

17. Theſe things thus premiſed, we may eſtabliſh this general rule; that if a diſeaſe ariſe from a ſtimulus applied to ſome particular part, it is to be relieved by deſtroying the ſtimulating cauſe, or by applying another ſtimulus to the oppoſite part; for the equilibrium being thus reſtored, the diſeaſe will terminate.

18. The effects mentioned § 13, chiefly take place in the nerves and muſcles. Other, however, and different effects ariſe in the neighbouring parts, ſuch as pain, redneſs of the ſkin, and heat; an afflux of humours with tumor or ſwelling; a compreſſion and obſtruction of the veſſels; a deſtruction of them,

 ſuppuration,

ſuppuration, and gangrene. Theſe happen to the internal as well as external parts of the body.

19. The remedy of which we now treat, poſſeſſes all the general virtues of ſtimuli hitherto mentioned. It has this, however, peculiar to itſelf, that we may commonly preſcribe more certain limits to the action of emetics, than to any other internal ſtimulant whatever; for other internal ſtimuli ſometimes exceed the bounds intended, and rage more fiercely than is proper, or elſe are too ſluggiſh and inactive; whereas the force of an emetic may be increaſed or repreſſed almoſt at pleaſure, if we only except the more vehement poiſons.

20. From what has been ſaid § 13 to 20, it appears what uſe an emetic is of, conſidered as a ſtimulus. It produces remarkable effects, among which the following are the moſt conſiderable. The ſlighter ſpecies of apoplexy, which ariſes from a cold, ſluggiſh, pituitous matter, the cauſe being recent, and the body not very old, is often terminated by an emetic prudently exhibited; for hence the thick humours are concocted and thrown off, the ſmall mouths of the nerves are opened, their paſſage is rendered free, the motion of the torpid blood being at the ſame time accelerated. It produces the like effects in a ſimilar kind of palſy.

The epilepſy is a diſeaſe common in children, ariſing from ſome acrid matter corroding and vellicating the nerves. It often happens in adults from the ſame cauſe, and alſo from the ſtronger paſſions of the mind; from ſevere pain affecting the limbs; from a diſordered motion of the ſpirits, ſuch as is common to hypochondriac and hyſterical perſons. In theſe caſes, if the fomes of the diſeaſe be moveable, it is thrown off by repeated vomiting.

The muſcular membrane, which connects the cartilaginous ſegments of the trachea together, is formed of muſcular contractile fibres, and obnoxious to ſpaſm, eſpecially in thoſe in whom the nervous ſyſtem is too irritable and moveable. Theſe fibres are often inſtantly conſtringed, the cartilages are drawn together, and obſtinately reſiſt their uſual elongation; the patient draws his breath quick, eagerly catches at the air, groans deeply; when at length fatigued with labour, and ready to ſink under his anguiſh, he feels the ſpaſm relieved, the breaſt is expanded, and he begins to live as it were anew.--- What hinders, but that a doſe of vitriolic ſalt, the ſalt of copper, or its tincture, ſpeedily given, might calm theſe tumults, by irritating the ſtomach, exciting vomiting, and changing the courſe and track of the ſpirits? The experiment is certainly free from all danger.

When the blood begins to acquire that diſpoſition which among the antients was called *atra bilis*; when the natural functions fail through a want of ſpirits; when the ſpirits improperly paſs only to ſome nerves, and theſe only exerciſe certain functions of body and mind; in this caſe a better remedy can ſcarcely

be

be exhibited than an emetic, moderated by certain cautions, as afterwards we shall have occasion to mention.

In spasmodic diseases, and many others of the nervous kind, which seem to arise from inactivity and languor in the chylopoietic system, emetics seem to be of real service. The *Chorea Viti*, a disease which certainly for obstinacy is second to few of this kind, even sometimes acknowledges the power of this remedy *(a)*. And though emetics are not of use in these diseases merely by their stimulant power, yet they do much good by soliciting a greater afflux of spirits towards the organs, which suffer through a penury or want of them, and are hence obnoxious to disease.

Lastly, in most chronic diseases, when a thick pituitous matter spoils the comely habit, the solids, loaded with it, vibrate too slowly, and the fluids, now become viscid, are propelled through the vessels with greater difficulty, and, the general powers of the body being either lost or depraved, demonstrate either a want or too great a sluggishness of the vital fluid, as in a spontaneous gluten or acrimony; emetics, although they do not perform a cure merely as stimulants, yet they are to be preferred to all other remedies, especially if we take into the account the other effects of vomiting.

21. The other effect of the action mentioned § 18, is a quicker secretion of the thinner fluids: this the irritation or stimulus performs in two ways; first, it increases the motion of the blood in the larger vessels, by exciting them to a more frequent and stronger re-action on the fluids, and procuring an attenuation of them; and hence an aptness to secretion: secondly, it facilitates the preparation, and accelerates the passage of the humours in the organs of secretion themselves. Hence, from the same stimulus different secretions are increased, according as it is differently determined to this or that secretory organ.

PART THE THIRD.

Of the Use of Emetics as Evacuants.

22. IT seems not improper to divide the effects of an emetic, considered as an evacuant, into two kinds: the first is a depletion of the stomach, its contents being thrown up; the second, an increased excretion in other parts by the exertions of vomiting. But as this does not acknowledge vomiting as its proximate cause, it may more properly be placed among the mechanical effects of an emetic, and merits the appellation of an universal evacuation. The other particular is an expulsion of the matters lodged in the intestines,

(a) Cheyne's Essay on the Gout, p. 113, edit. 4.

or

or driven thither by the force of ſtimuli, or laſtly, which have flowed back from the neighbouring parts into them; concerning which, a good method requires that we now ſpeak.

23. Subſtances hurtful to the body, taken in by the mouth, or carried into the ſtomach from ſome other part, require the inſtant relief of an emetic; nor does the art of medicine know any more powerful aid effectually to extirpate the morbid effects of them, or to ſoften and meliorate ſome alarming ſymptoms produced by them, *than a vomit.*

24. Food and drink are juſtly reckoned among the *ingeſta* mentioned paragraph 23; for the inevitable lot of life makes theſe neceſſary as long as we breath the vital air: but the reaſons I paſs over. And the very different quality of the ſubſtances from which our food is prepared, often foreign to the nature of our body; the incautious uſe of ſome things, and exceſſive gluttony in others; laſtly, an appetite for ſomething forbidden or hurtful, a fault in the choice of meat and drink, and in the moderate quantity of them; have introduced innumerable complaints into the ſtomach. Hence the fruitful progeny of diſeaſes, threatening cruel pains to the ſtomach itſelf, and hurtful to the extreme windings of the veſſels; all of which the nature of my undertaking requires me to explain ſeparately, but the narrow limits of time forbid it: and indeed my labour would be loſt, ſince the taſk, compleatly finiſhed, was not long ago publiſhed under your auſpices, in an elegant diſſertation *(a) de noxis ex cibi potuſque uſu et abuſu oriundis.*

25. Too great a quantity of things taken into the ſtomach produces the diſeaſes there deſcribed; theſe are uſually relieved by depletion, which, if the patient have a diſpoſition towards it, is to be made by vomiting; for by this method the offending matter is quickeſt carried off, and any part of the crude unconcocted aliment prevented from paſſing into the interior parts of the body.

The vitiated quality of food requires the ſame remedy, whilſt it remains in the ſtomach, or is not carried far beyond it. Subſtances which have a greater native tenacity than what the powers of the body can overcome, retaining their own nature, corrupt, and paſs into a kind of ropy phlegm. The caſe is the ſame if the expulſive faculty of the ſtomach be weakened or hindered, which, as practitioners teſtify, often happens in debilitated habits; for then, though the *ingeſta* be not remarkably faulty either in quantity or quality, yet they ſpontaneouſly contract a vitiated quality, which ariſes from, and is increaſed by their delay in the ſtomach. Hence ariſe different ſpecies of acrimony; hence the ſpring of mucus, and a tough pituitous matter; which as they ſeparately prevail, or are mixed together, aided by the temperament of the perſon in-

(a) Autore Henrico Tong.

clined

clined to this or that, they produce different, and ſometimes truly alarming ſymptoms. So many kinds of depraved appetite; a total loſs of it; a diminution or exceſſive increaſe of it; a vitiated, leſſened, or total want of digeſtion; or a corruption of the undigeſted matter; often ariſe from theſe as their proximate cauſes.

It may eaſily be learned from the patient himſelf, what had been the prediſponant cauſe; and hence the quality of the matter will appear, and what remedies are to be uſed. Emetics evacuate the fomes of the complaint, and utterly eradicate the proximate cauſe. Yet we muſt not truſt wholly to theſe; but by exhibiting ſtrengthening remedies (a vomit being repeated at proper intervals) we deſtroy the diſeaſe from its loweſt root.

26. If any acrid ſubſtance taken into the body either by chance or deſign, whether under the name of a medicine or a poiſon, threatens an injury to the ſtructure of the parts, it is to be expelled as ſoon as poſſible, and eſpecially by thoſe paſſages where it may paſs out of the body ſafely, without hurting the other parts. If only a ſmall quantity has entered the inteſtinal tube, an emetic is to be greatly preferred to any other remedy, and often finiſhes the cure; nor muſt it be omitted, if a very ſmall portion only continues to adhere to the ſtomach. The firſt claſs, mentioned ſection 7, affords an ample ſupply of remedies, by which many ſpecies of poiſons are vanquiſhed and expelled; and if there be ſuch a thing as an univerſal antidote, it is perhaps warm water copiouſly drank. In the choice of theſe remedies, however, there is need of prudence; expulſion does not always compleat our wiſhes, but the tender parts to which the poiſon or acrid matter is applied, are to be preſerved from its injuries, the pains to be mitigated, and the raging cruelty of the poiſon appeaſed, even while we attempt a ſpeedy ejection of it. And here alſo, the nature of the matter taken into the body being known, points out to the phyſician the means of procuring a timely relief to the unhappy ſufferer. So alkaline ſalts diluted, are oppoſed to the acid poiſons; ſaponaceous ſubſtances prepare the oily for mixture; water and watery bodies divide ſalts of all kinds, and deſtroy their powers; acrids take off the effects of thoſe which have an oily glutinous viſcoſity; and ſo of the reſt. The reader may conſult what Boerhaave *(a)* has ſo excellently written on this ſubject, in his chapter on *antidotes*.

27. Nor does there only happen by emetics an evacuation of the ingeſta, but alſo of all the humours carried into the ſtomach from other parts. Theſe come either from the veſſels of the ſtomach itſelf, or from thoſe of the neighbouring viſcera. And indeed the effects of pungent ſubſtances, mentioned § 21, are no where more clearly ſeen than in this viſcus. This will appear, if we conſider

(a) Inſtitutiones Medicæ, § 1119.

the

the abundance of nerves diſperſed through the coats of it, the number of glands and their office, and laſtly the capacity of the veſſels with which this viſcus is furniſhed in proportion to its bulk. The ſoftneſs of the coats gives an eaſy entrance to the nerves, and a ſpacious cavity exhibits a large ſuperficies. Hence ariſes a more remarkable action, or a more plentiful excretion of the gaſtric liquor; which, as it is always large, if it be increaſed, muſt neceſſarily in ſome meaſure alter the whole body, by diſpelling and drying up the ſerous humours. Hence ariſe thoſe excellent effects of emetics in diſeaſes originating from a ſerous vapid *colluvies*; as in catarrhs, the leucophlegmatia, diabetes, *fluor albus*, and others of this kind, of which we ſhall ſpeak more fully in the following ſections.

28. The liver and pancreas are ſituated near the ſtomach; and both of them ſometimes diſcharge their ſecreted fluids into its cavity; which by their quantity or acrimony or both, may diſorder chylification. The bile is frequently accuſed as guilty of producing diſeaſes, the pancreatic juice more ſeldom. The antients blamed the bile as the parent of the moſt cruel diſorders; but many of the moderns deny this, and contend that the bile is not ſo frequently the cauſe of complaints as the antients imagined: but if theſe had well underſtood what the antients meant by bile, the wiſer amongſt them at leaſt, would perhaps have thought their *dogmata* ought not to have been ſo raſhly rejected; for not only the liquor ſupplied by the liver and gall-bladder came under the title of bile, but alſo a conſiderable part of the whole maſs of blood, which the moderns commonly call *oil*; which, as we learn from chemiſtry, is as fruitful a ſource of diſeaſes at preſent, as it was formerly under the celebrated name of *bilis flava*. But here we treat of the veſicular and hepatic bile, propelled upwards into the ſtomach, or of any other liquor brought thither, which is productive of like miſchiefs as the bile itſelf; and ſuch is the oily humour ſometimes thrown up by vomiting; yellow, of an horrible bitterneſs, and taſte ſcarce ever to be forgotten, reſembling the bile, except only that the bile never blazes in the fire, but this, like pure oil, catches flame if it be thrown from the mouth on burning coals. It ariſes from oily meats, changed by the heat of the place into this moſt filthy diſagreeable matter; aided alſo by too inſatiable an appetite, as *Horace* intimates:

> *Nempe inamareſcunt epulæ ſine fine petitæ;*
> *Illuſique pedes vitioſum ferre recuſant*
> *Corpus.* ----------

The bile, and this yellow filth approaching to the nature of it, have alike this quality, that ſtagnation in a hot place renders them both more acrid and horrible; much in the manner of oil, which, expoſed to a gentle continued heat, paſſes from a taſte extremely bland, a ſmell not remarkable, and a yellowiſh colour, through various degrees of corruption, to the higheſt pitch of putridity, and

at length puts on the moſt violent acrimony to the taſte, exhales the moſt rank mephitic ſmell, and preſents to the eyes an ugly blackneſs. Both kinds of bile juſt mentioned, evidently undergo ſimilar changes, are ſubject to the ſame laws, wherever collected in the body, until the uneaſy gueſts promote their own expulſion. For otherwiſe the pitiable ſufferer is tortured with dreadful cruel pains, gripes, nauſea, and vomiting, which do not however terminate the pain, but continue to harraſs the patient even till death, eſpecially if a hot temperament of the perſon, the heat of the ſun, a rancid or fermenting food, have added fuel and flame to the diſeaſe. Here then is the cholera, the moſt direful of diſeaſes: a fever is kindled, the viſcera are inflamed, the ſtrength fallen ſinks under the load, and unleſs another Sydenham ſits by the bed, and watches over the patient, a gangrene creeping on the viſcera terminates the cruel torture and life together. But the matter which cauſes the diſeaſe is ſeated within the confines that ſuſtain the force of an emetic; and the removal of the cauſe is indicated; why not then try an evacuation by emetics, or downward by purgatives, or by both, ſeeing it is yet lodged in the *primæ viæ?* It is not without cauſe that prudent phyſicians have rejected the uſe of theſe in ſo great a violence of the diſeaſe; for, whatever good effect the one or other may perform in other diſeaſes, or in a milder degree of this, yet in ſo violent a *cholera* we muſt rather uſe reſtraints than ſtimuli, as will eaſily appear to any one who conſiders the caſe: for the mucus of the ſtomach and inteſtinal tube, as far as this acrid inflaming liquor has extended, being abraded, it is now applied to the naked nerves, and excites cruel pains, violent obſtinate ſpaſms, kindles burning fevers; and, the remaining mucus being conſtantly thrown up by the emetic, the cauſe of the diſeaſe is increaſed, and, by the continued efforts of vomiting, the dreadful effects are redoubled; for although the emetic have but the ſmalleſt degree of ſtimulus, yet this, whatever it be, adds ſtrength to the enemy lodged within; ſtimulus is added to ſtimulus, and by the united efforts of theſe the patient periſhes. But if the diſeaſe have not attained this degree of violence, if hope be not quite cut off, and if every thing perſuades us to attempt the cure by emetics, then the point will turn on a ſkilful choice of the remedy: for neither bile, nor the oily matter, will unite with every kind of liquid; it refuſes one, but follows and unites with another. That, therefore, which is moſt proper to promote a mixture muſt be uſed, regard being had to the known diſpoſition of the diſeaſe, to which the remedy muſt always be oppoſed. Hence *ſaccharata*, *mellita*, *ſaponacea*, mixed with aceſcents, and all thoſe mentioned ſection 7, number 1, which act rather by their bulk than ſtimulus, ſeem to promiſe ſucceſs above others.

" Whenever bile is to be evacuated," ſays Foreſtus *(a)*, " after much

(a) Foreſt. Obſerv. lib. 18. obſ. 3.

 broth,

broth, or after a free "drinking of ſome liquid, vomiting is to be excited; "for bile, like oil, ſwims on the top of theſe, and on that account is more "eaſily evacuated; its acrimony alſo is moderated by a mixture with them." A rule is certainly always to be obſerved in curing bilious vomiting; which being neglected, the worſt miſchiefs ſometimes enſue. A cathartic, inconſiderately given, carries a part of the corrupted matter lower, and perhaps into the blood; hence again new miſeries ariſe.

29. So great an overflow of pancreatic juice ſeldom occurs, as alone to be eſteemed the cauſe of diſeaſe; but in the courſe of diſeaſes, it may increaſe them: for as in health ſo large a ſecretion of it is made, as Brunnerus' experiments ſhew, in diſeaſes ariſing from a redundant lymph it may yet become more copious, and an evacuation of this by an emetic will diminiſh the ſerous colluvies.

30. The acceſſions of fevers are commonly accompanied with nauſea, vomiting, and other ſymptoms, which ſhew the ſtomach to be in a bad ſtate: it ought, however, to be carefully diſtinguiſhed, whether this ſickneſs ariſes from the viſcus itſelf, or from its contents; for an inflammation of the membranes of the ſtomach requires one kind of treatment, and the ſtomach loaded with corrupted ſordes, and free from inflammation, another. It ſeems not to have been well underſtood by the more antient writers, that this viſcus is equally obnoxious to inflammation as any other part whatever, until Frederick Hoffmann *(a)*, in his Diſſertations, obſerved that it happens more frequently than is commonly ſuppoſed. He lays down the diagnoſtic ſigns by which the phyſician may avoid the latent rocks on which the incautious eaſily ſtrike. All theſe Boerhaave has explained in his uſual manner, with large improvement, in his book *De cognoſcendis et curandis morbis*, to which he has annexed a neat method of cure. From an ignorance of the true ſource of the commotions which ſo often happen in the ſtomach in the beginning of fevers, have ariſen thoſe contentions, ſo anxiouſly agitated among practitioners, concerning the uſe of emetics in treating theſe diſorders. Some argue ſtrenuouſly againſt their utility, adduce inſtances of their pernicious effects, and with a grave countenance forbid their uſe: others extol their ſalutary effects to the ſkies, and call in to their aid hiſtories of ſucceſsful caſes not leſs credible than the former. Indeed it is eaſy to ſee that neither of them are much miſtaken; for what excruciating tortures does a vomit excite in the ſtomach, when the veſſels are turgid with thick blood; when the diſtended nerves ſuffer the moſt violent pains on the ſlighteſt colliſion againſt the *ingeſta*; and when the coats of the ſtomach are affected with tumour, hardneſs, and pain, reſembling a true phlegmon on the external ſurface of the body? What miſchiefs then

(a) F. Hoff. Diſſertat. decad. 1.

muſt an operation, joined with ſuch violence, produce in ſuch a ſituation of things? But the cauſe of pain and uneaſineſs oftener proceeds from the contents of the ſtomach, and then certainly an emetic produces commendable effects; and Hippocrates, Sydenham, and the moſt famous practitioners in the healing art, warrant their uſe. Reaſon alſo, ſupported by practice, ſpeaks the ſame thing: "*(a)* If vomiting," ſays *Sydenham*, "or an ineffectual pro-"penſity to it, has diſturbed the patient, an emetic muſt by all means be pre-"ſcribed." For, as Hippocrates teſtifies, if any one chuſes to exhibit much water to a perſon vomiting, ἐκκλυσθήσεται δι ἃ ἐμέει σὺν τῷ ἐμέτῳ, οὑτῶ μὲν διὰ τὸ ἐμέειν ὁ ἔμεος παύεται; *the cauſe of the ſickneſs will be waſhed off with the emetic, and thus by a vomit the vomiting will ceaſe.* Nor is this the only advantage gained, but it will alſo be of great uſe both to the phyſician and patient, through the courſe of the diſeaſe, as we learn from *Sydenham*. "To exhibit a "vomit, when there precedes a propenſity to it, is ſo neceſſary, that, unleſs "the humour be expelled, it will become the ſource of many diſeaſes, a tor-"ment to the phyſician through the whole courſe of the cure, and throw "the patient into great danger. Of theſe effects the chief and moſt com-"mon is a diarrhœa, which generally follows in the decline of a fever, as "often as an emetic, when indicated, has been omitted. And although the "propenſity to vomit may have been over ſome time, yet the diarrhœa will "ceaſe as ſoon as an emetic is exhibited, provided the patient have ſtrength "to bear it." Nor has this famous writer delineated the blackeſt ſtate of things; for this putrid matter, by ſtagnating in the ſtomach, becomes more putrid, and, paſſing into the blood by the abſorbents, rendered empty by heat and loſs of fluids, it pollutes the vital fluid with malignant ſordes, and renders the fever in all reſpects more ſevere; all which might have been prevented, if an emetic had been exhibited as ſoon as this propenſity to vomit appeared. Concerning the choice of emetics, a caution muſt alſo here be repeated; viz. that we chooſe thoſe which are moſt fitted to waſh off the ſordes, are moſt oppoſed to their nature, and change and correct them; and laſtly, which may perform the office of diluents, if by chance (which may happen) any part of them ſhould be abſorbed into the blood. For theſe purpoſes, thoſe mentioned ſection 7, claſs 1, are ſuitable, being rendered more efficacious by ſome out of § 8; for example, oxymel of ſquills with ipecacoanha root, or with a large draught of ſimple oxymel, or any other thin liquor, as the occaſion may require.

31. In treating fevers, we ought not to forget a caution mentioned by moſt practical writers, that in all diſeaſes where a plethora is preſent, or where the habit tends to one, and where the condition of the patient requires at the

(a) Sydenh. de morbis acutis, § 1. cap. 4.

ſame

ſame time an emetic, bleeding ought always to precede it, leſt the ſtrong effort of vomiting, and a ſort of momentary tetanus, ſhould rupture the diſtended veſſels, or too great an impetus of the blood be determined to thoſe parts where there is leaſt reſiſtance. For, the veſſels being ruptured, pour out their fluids, and the patient immediately dies, either of an apoplexy or an hæmoptoe; or he periſhes at length of an incurable phthiſis, or from an affection of the lungs; or is cut off by the morbid affections of ſome other viſcera. That vomiting ſeems to be of moſt uſe, which is excited immediately after bleeding; for the inconveniences of a plethora are then more certainly avoided, and the ſalutary effects of the emetic are more certainly obtained, eſpecially if the diſeaſe be a fever, which requires the help of both; for the veſſels being emptied of part of their contents by bleeding, ſometimes ſuddenly become turgid again, either by the rarefaction of the blood, or its bulk being increaſed by the quantity of liquids drank on account of the great thirſt; hence the ſame inconveniences ariſe as before: nor can we exhibit an emetic before bleeding has been repeated, though it might have been given with ſafety a few hours after the firſt evacuation.

32. The operation of emetics in intermittent fevers ſeems ſomething wonderful, as they ſometimes exhibit effects not leſs difficult of explanation than the nature of the diſeaſe itſelf; for although the extremities of the ſanguiferous veſſels, or perhaps ſometimes the nerves, are principally affected, yet an evacuation of the matters collected in the inteſtines is of great moment. There are inſtances of perſons cured by a vomit only, whether ſpontaneous or excited by art; whilſt bleeding, except in plethoric habits, generally does harm, and renders the diſeaſe more difficult of cure. But emetics, prudently repeated, carry off by degrees the corrupted fomes of the diſeaſe from the *primæ viæ*, accelerate the motion of the blood, and laſtly either take off the diſorder, or make way for the ſafe exhibition of a febrifuge; which otherwiſe would fix the fomes of the diſeaſe more obſtinately, and, an evacuation being excited upwards or downwards, it would loſe its effects.

33. Nature anxiouſly attempts, by the paſſages opened by chance or art, to throw off the prepared febrile matter, and again reſtore the body to health. Sometimes ſhe attempts it by the emunctories appropriated to certain excretions, as by ſpitting, vomiting, alvine fæces, ſweat, or urine: at other times by paſſages leſs proper, as when tumours ariſe on the external ſurface, and the like. It is a rule well known to all, that *(a) Quæ educere oportet, quo maximè vergunt, eò ducito per loca convenientia:* "*Whatever is to be evacuated, ought to be expelled by thoſe natural emunctories to which it principally tends.*" If it appears that the criſis of a fever will happen by ſpitting, the

(a) Hipp. Aphor. § 1. Aphor. 21.

aiding

aiding hand of art ought to promote that ſecretion. The like rule muſt be obſerved in vomiting, if we know it is critical, or excited by ſome matter offenſive to nature; but if it ariſe from inflammation of the ſtomach, and cannot be relieved by a vomit, it ought to be ſtopped. The caſe is the ſame if the matter attempts an egreſs by any other emunctory; for the longer any concocted matter, fit for expulſion, is retained in the body, the greater inconveniences it produces. The purulent fever affords us a melancholy but juſt example of this; when, in thoſe affected with the ſmall-pox, the ſecondary fever, ſo called, ſupervenes from an abſorption of purulent matter: nor is the critical putreſcent matter of any other fever leſs malignant, but requires inſtant evacuation. There are remedies at hand proper to promote this or that evacuation, according as nature points out the way; only we muſt obſerve, that as the concocted matter of the diſeaſe, which paſſes off through the pores of the ſkin, is ſo loaded with contaminating particles, that it often affects the healthy; ſo a ſimilar matter is depoſited in the cavities of the ſtomach and inteſtines, which is happily to be carried off ſometimes by a cathartic, ſometimes by an emetic; leſt, perhaps, *being left after the criſis of a diſeaſe, it ſhould occaſion a return of it (a)*. Celſus alſo adviſes, that it ſhould be carried off by vomit after a fever *(b)*.

34. We may add a great number of diſeaſes to thoſe already mentioned, which receive ſingular help from this remedy. There are few chronic diſorders which do not require the help of emetics; but a particular enumeration of them would lead me too far. Moſt diſeaſes common to children, a ricketty or ſtrumous diſpoſition, the ſaburra, fomes and neſt of worms, and the like, are often ſucceſsfully cured by emetics. The gout, dropſy, a milder degree of ſcurvy, common to adults, ſometimes are relieved by vomiting: the chloroſis, and fluor albus, in the weaker ſex, often require this help. A catarrh, diarrhœa, dyſentery, cæliac paſſion, and every diſeaſe ariſing from a ſerous colluvies, are relieved by a vomit. It is ſcarce neceſſary to mention how much emetics, exhibited at proper intervals, contribute to promote long life. There are ſome perſons at preſent, who, though not given to gluttony, nor wanting the means of carrying off the dregs of a full meal, yet, mindful of the advice of the antients, eſteem vomiting of ſo much conſequence, that two or three times a month they empty the ſtomach of its ſordes by a vomit. He who ſtudies the moſt exact rule of living, often neceſſarily commits ſome error in diet. Hence ſooner or later the fault affects the ſtomach, and there firſt lays the foundation of future diſeaſe. Sickneſs, or a troubleſome nauſea, is ſometimes felt, a loſs of appetite, and various other ſymptoms appear, according to the different nature of the cauſe, and the manner in

(a) Aphor. Hipp. § 2. Aph. 12. *(b)* Celſi medicina, lib. 3. cap. 7.

which

which the ſtomach is affected. Many betake themſelves immediately to ſome celebrated tincture, drawn with ſpirits from bitter aromatic plants; in this they confide and indulge themſelves, till, habituated to them, they at length die with their ſtomach and bowels parched and worn out. We know no remedy which ſeems to promiſe ſo many and great advantages to ſedentary perſons, liable to crudities in the *primæ viæ* from a ſedentary life, as an emetic. It carries off the diſeaſe when produced; it deſtroys its proximate cauſe, by waſhing off the acrimony which moſt commonly conſtitutes it. To the ſtudious, therefore; to thoſe whoſe ſtate of body forbids much exerciſe; and laſtly, to perſons who ſit much in their buſineſs, or on any other account are expoſed to ſimilar diſeaſes, I would recommend the frequent uſe of emetics.

PART THE LAST.

Of the Uſe of Emetics, ariſing from their mechanical Force.

35. THE third queſtion remains yet to be explained; viz. What are the mechanical effects and uſes of emetics in removing diſeaſes? We ſhall therefore next enquire into the parts affected, what change they undergo, what is hence produced in other parts, and what happens in the whole body.

36. The abdominal muſcles being contracted, (§ 1) and made rigid, almoſt like the bony column which defends the poſterior parts, not moveable by any force of this kind; and the diaphragm being ſtrongly forced downward, to which are oppoſed the immoveable bones of the pelvis, the cavity of the lower belly is every way diminiſhed, and the whole contents of it powerfully ſqueezed together. Nor is there any part of the abdominal region free from this forcible preſſure, the great force of which is evident from the vehemence with which the contents are thrown upward; for certain experiments incline us to believe that there is no contractile power in the ſtomach ſufficient to throw up its contents, till aſſiſted by the ſtrong compreſſion of the parts mentioned, which compleats the evacuation; and the ſoft viſcera lying under theſe parts, are affected with the violence of their action, whence great and uſeful effects may be expected.

37. But before we enter into a diſquiſition of theſe effects, it will not be improper to take a view of the actions of the abdominal viſcera, according to the following general diviſion of them; that, their office being known, we may more eaſily know the morbid changes which take place in them, and that it may more clearly appear in how many ways this vehement mechanical alternate compreſſion of theſe viſcera may be of uſe.

38. Their principal offices are, 1. To prepare from the ingeſta a matter fit for nouriſhing the body: 2. To ſeparate what is proper for nouriſhment from

from that which is improper: 3. A farther preparation of the ſame matter, when changed into blood, by powers ſituated beyond the abdomen: 4. To ſecrete liquids extremely uſeful to the purpoſes of life: 5 and laſtly, To ſeparate and throw off from the nouriſhed parts, the reſidue of ſolids and fluids now become uſeleſs. Thus; 1. The ſtomach and ſmall inteſtines prepare the chyle. 2. The lacteals and abſorbents ſeparate the more fluid from the groſſer parts. 3. The blood in the large meſeraic arteries, and others diſperſed through the abdominal viſcera, ſuffers a continual concuſſion, reciprocal compreſſion and propulſion; all which are more eſpecially obſervable in the ſpleen. 4. The blood, thus prepared, flows conſtantly through paſſages appointed for it; viz. through the liver, pancreas, and the numerous glands every where diſperſed through the lower belly; in this courſe the quality and form of it are changed, according to the laws appropriated to the nature of each particular organ. 5. The groſſer filaments being corrupted, are preſſed forward and timely excreted: the thin and watery part of the blood, loaded with ſalts and oil, unfit for nutrition, paſſes off by the kidnies, and forms the urine. All theſe offices are promoted at the ſame time, and by the ſame means; that is, an alternate conſtant agitation, the neceſſary conſequence of reſpiration; for if this motion and gentle concuſſion of the abdomen ſhould ceaſe, there would be no force ſufficient to propel the fluids through ſuch narrow winding canals, eſpecially in the lower part of the belly, where they ſometimes lie under a conſiderable preſſure: the force of the heart alſo would be unequal to the labour impoſed upon it; the great power of abſorption would ceaſe, though too great to be limited by any preſcribed bounds; for the viſcera, not being agitated by the motion of other parts, a ſpontaneous viſcidity would ariſe in the fluids, and gradually obſtruct the canals, or form ſo many impediments in the ſmall tubes, that their progreſs would preſently ceaſe, either in ſome or all the viſcera, according as theſe miſchiefs had more or leſs extended themſelves. And, indeed, the ætiology of diſeaſes ſhews, that many complaints of the abdomen ariſe from one or other of theſe cauſes, or from both concurring together. An attenuating remedy, therefore, which accelerates the motion of the parts, is more eſpecially indicated.

39. By the effort of vomiting, the ſuperficies of the viſcera are ſtrongly preſſed together, their bulk is diminiſhed, and the fluids circulating through them are preſſed together, rubbed one againſt another, and againſt the ſides of the veſſels: they are alſo propelled forward, and driven out where a paſſage opens for them. Hence ſecretion and expulſion is quicker; the thick matter is reſolved and prepared for ejection; all the actions (§ 37) riſe to maturity, vigour appears in the organs, and, all obſtacles being removed, they act with eaſe; on which both the quantity and quality of thoſe ſecretions, which may be eſteemed the preſervatives of health, immediately depend.

40. The

40. The inner cavity of the ſtomach is extremely full of glands and exhalant veſſels, from the villous flexible mouths of which a liquor is ſecreted, by which it is lubricated and preſerved moiſt, the nerves are defended from the injuries of the food, and chylification is promoted. But the mucous nature of this liquor neceſſarily diminiſhes and retards its ſecretion, loads the glands with a viſcid matter, and gradually ſubverts their office, eſpecially if its motion be ſlow, which is commonly the caſe with a mucous fluid. Hence ariſes a deficiency of the gaſtric fluor, crudity, and indigeſtion, an appetite diminiſhed or too much increaſed, heat in the ſtomach, ſometimes nauſea, and thirſt. The ſame miſchiefs ſometimes occur from dried cruſted ſordes lining the cavity of the belly, as after an acute continued fever, when the attendants, or perhaps the too cruel phyſician, have unjuſtly thwarted nature, craving a ſupply of her diminiſhed lymph. Diluents are not ſufficient in theſe caſes, they even relax the veſſels more; hence the languid fluids, by their delay, preſently thicken, not eaſily again to be reſolved. An emetic, which produces the effects mentioned § 29, is of great ſervice in theſe complaints; for the whole abdomen ſhould be conſidered in this reſpect as ſomewhat ſimilar to the lungs. Indeed, every viſcus has ſome office peculiar to itſelf; but the motion by which a conſtant change of fluids is promoted and takes place in every one, ariſes from ſome other part; ſo that a mixture, compreſſion, attrition, ſolution, and the like, take place in the fluids here, juſt as happens in the thoracic viſcera. The ſame cauſe produces the ſame effect, though in different organs: a vomit, therefore, performs ſpeedily what nature by ſlow ſteps attempts in vain to obtain.

41. Coſtiveneſs, the uſual companion of a ſedentary inactive life, generally ariſes from a deficiency of the mucus of the inteſtines, and from a want of the gaſtric juice, ſupplied from the glands and veſſels, (§ 40). The gaſtric juice ought to render the fæces ſoft and moveable, and the mucus procure them an eaſy deſcent. The cauſe of this defect is the ſame as mentioned above, (§ 40) and the cure muſt be attempted by the ſame means, only with the additional help of exerciſe and motion. I do not ſuppoſe that this complaint always ariſes from this cauſe; but if it has ariſen from any other, it is increaſed by this, and the perſon, not regular before, becomes at length coſtive. Gentle purgatives, indeed, carry off the fæces, remove the preſent inconveniences, and moderate the uneaſineſs of this ſituation: but if the patient indulge himſelf too much, as often as coſtive, in remedies which ſeem to give ſo much relief, he will ſcarcely avoid other inconveniences from this quarter; for, all the humidity being drawn off with the fæces, the belly will become ſtill more coſtive, the viſcera will be obſtructed and ſtuffed with the remaining thick matter. On two accounts, therefore, (§ 34, 40) an emetic recommends itſelf

to perſons of a ſedentary inactive life; that is, as it expels the crude matters, and by accelerating motion attenuates the viſcid, and thus performs the office of an excellent diluent.

42. A complaint of an oppoſite nature ſometimes afflicts the ſtomach and inteſtines; that is, a kind of deluge of a watery liquid, in which the *ilia* being immerſed, become tired, loſe their heat, and the parts deſtined to perform the vital function become unequal to the taſk. A weight and langour about the precordia, frequent ſpitting, loſs of appetite, belching up a watery matter, more eſpecially troubleſome in the morning, great nauſea, but ſuddenly going off, frequent liquid ſtools without pain, with univerſal debility, inactivity, and paleneſs, are the ſigns of this watery inundation, and at the ſame time point out the ſerous diſſolved ſtate of the blood. The ſymptoms now mentioned pretty clearly indicate the method of cure. An evacuation of the redundant fluid, and ſtrength added to the ſmall veſſels, are firſt neceſſary; hence will follow a firmer craſis of the blood, and a change of its pituitous diatheſis; and for theſe purpoſes emetics are eſpecially uſeful. Hence we ſee why a vomit checks a diarrhœa, and alſo removes coſtiveneſs, according to the maxim *(a)* of Hippocrates, repeated and approved by Celſus.

43. The ſtructure and office of the pancreas, being ſimilar to that of the ſalival glands, render it liable to ſimilar complaints; namely, to have the ſecretion of its fluid either diminiſhed or too much increaſed. In both caſes an emetic is uſeful; it removes the obſtruction, if not too obſtinate, and, by compreſſing the viſcus, carries off the ſuperabundant fluid.

44. A little below the pancreas, the aliments, now rendered liquid, are abſorbed by the mouths of the lacteals, and immediately carried to the meſeraic glands. The ſlow motion of theſe, and the ſmallneſs and winding ſtructure of the veſſels, promote a ſeparation of the thin from the thicker parts, but render the paſſage of the chyle to the blood difficult, eſpecially in delicate habits, and thoſe who feed on bad food, or have the ſtructure of theſe parts badly formed. Children, from inexperience, weakneſs of their conſtitution, and ſtrong inclination to groſs improper food, are more ſubject, than perſons of more advanced age, to infarctions and ſwellings of the meſeraic glands. Similar cauſes will produce ſimilar diſeaſes in adults, but they are not ſo common, for we ſee in reality that children are moſt ſubject to theſe kinds of obſtructions. At this age there is ſcarcely any thing more pleaſing to the palate than raw unripe fruit; leguminous, farinaceous, viſcid ſubſtances, and other kinds of eatables the moſt viſcid, are then eſpecially ſought after and uſed, without any attention to the effects this ſpecies of luxurious

(a) Celſi medicina, lib. i. cap. 3.

appetite

appetite may produce. Hence a tough matter is formed in the ſtomach, and at length paſſes into a viſcid liquor, though hardly changed except in appearance: paſſing from the ſtomach, it meets with an inactive bile, is diluted with it, but not diſſolved. The more fluid part enters the lacteals, but on account of its tenacity ſtops there: the cauſe is every day renewed, the obſtruction grows and increaſes, the tumor becomes harder, preſſes on the neighbouring parts, and blocks up the paſſage to the veins; hence an atrophia is produced, and the miſerable ſufferer daily pines away: or, if the diſeaſe does not proceed ſo far, nor wholly obſtruct the glands, yet an imperfect chyle is mixed with the blood, contaminates it, and, the glands being every where affected, eſpecially thoſe about the face and neck, the ſecretions made from it are vitiated; the face becomes ſwelled and diſtorted, and ſhews either a true ſtruma or a diſpoſition verging towards it. This is, doubtleſs, a dark face of things, and difficult for the phyſician: the ſolids have loſt their ſtrength, the fluids are too viſcid, and the parts which ought to change the aliments into the nature of the body, being depraved, leave concoction imperfect. The glands alſo being obſtructed, the blood is precluded all means of acquiring new vigour; and the glands, once clogged with viſcid matter, with difficulty perform their office and evacuate their contents. It appears, therefore, that every kind of help muſt be uſed to remove ſo obſtinate a diſeaſe. A reſolution of the tumours is firſt to be attempted, that, as far as can be done by food and medicine, we may nouriſh the body, cure the depraved, and ſtrengthen the weak parts. Then the texture of the parts in which the diſeaſe is ſeated muſt be ſo ſtrengthened as to concoct and expel the offending fluids, regard being ſtill had to the manner of living. They who know the ſituation of the meſentery, will eaſily conceive with what violence it will be preſſed on every ſide, by the efforts of vomiting; and what effects will follow on glands newly obſtructed, on the neighbouring parts loaded with a foul matter, (§ 39) on the pancreas abounding with the like, (§ 43) and laſtly, on the ſtomach, by throwing up the acrid humours (§ 34) hurtful to it, and occaſionally ſupplying new ſtrength to the diſeaſe. But we ought carefully to examine if the viſcera are ſound, corrupted by no ulcer, and wholly free from any putreſcent waſte; for otherwiſe an imprudent emetic would be very hurtful. The ſame alſo is true, if from laxity alone a rupture be feared; for in this caſe mechanical force muſt be ſparingly applied. Nothing elſe forbids the uſe of an emetic; nor will our expectations of great good from it be diſappointed, provided the obſtructing matter be moveable, and the ſtrength of the patient ſufficient to bear repeated operations.

45. Of all the abdominal viſcera, the ſpleen is of the ſofteſt moſt delicate ſtructure, and the fleſhy muſcular columns ſeem rather adapted to

ſupport its flexible fabric, than to propel the large quantity of blood it receives: nor is the impetus of the heart, being diminiſhed in this viſcus by the winding ſtructure of the veſſels, nor the ſtrength of the artery, ſufficient for this purpoſe; but they are aſſiſted by a conſtant gentle agitation, which the ſpleen receives from its connection with the diaphragm, its nearneſs to the abdominal muſcles, and its pendulous ſituation: and from theſe cauſes chiefly the progreſs of the blood through the veſſels of the ſpleen is thought to be preſerved. If therefore the uſual motion ſtop, or be for ſome time diminiſhed, as happens to thoſe of an inactive life, the blood is retarded in the ſmall cells and cavities, becomes thicker, and is in the greateſt danger of producing an obſtruction, from a want of the neceſſary mobility and uſual impetus, the cauſes of a free eaſy paſſage to the blood. The mode of giving relief muſt be varied, according to the ſtage of the diſeaſe and the different cauſes that may have produced it; for one method of cure is not proper for every perſon affected with complaints of the ſpleen. If the infarction be recent, and the hardneſs great; if it has ariſen from omiſſion of exerciſe, or too great an application of mind to ſome object; if there be a ſenſe of painful diſtenſion without much matter collected, and the habit of body in other reſpects good; mechanical compreſſion may be applied to advantage: but if the hardneſs ſeems to indicate a ſchirrus, or if the ſpleen has been inflamed by a preceding fever, and converted into a bag of pus, then we muſt have recourſe to other remedies, leſt by irritating the ſchirrus we change it into a cancer; or, the membranes confining the pus being ruptured, the abdomen ſhould be overflowed with a purulent matter, or the liver affected with a putrid waſte.

46. Among the diſeaſes which affect the liver, the unſightly jaundice moſt frequently diſcovers itſelf to view. Medical writers have aſſigned many proximate cauſes of this complaint. But the author of an elegant little tract on the jaundice, inſerted in the Medical Eſſays † has ſaved me the trouble of reciting them ſeparately, or diſcuſſing them. We may allow with this author, who choſe to conceal his name, that the moſt frequent cauſes are, ſtones generated in the veſicula fellea, and lodged in the duct, too narrow to give them paſſage: for, beſides the hiſtories adduced by this author, his other reaſonings in the following volume ‡ abundantly confirm it. Now ſuppoſing this to be the caſe, which ſeems highly probable, medicines which act by mechanical force, are to be preferred to all others. Walking, riding, and other motions which conſiderably agitate the body, are of this claſs; by the help of which the gall-ſtone is puſhed forward, and the obſtructed bile iſſues forth. Theſe, doubtleſs, greatly promote the deſcent of the bile; but ſometimes they fail, the diſeaſe requiring a ſtronger propelling cauſe; and if an

† Vol. i. art. 33. ‡ Vol. ii. art. 28.

emetic

emetic ever be uſeful from its mechanic force, and if the ſeat of diſeaſe, and the nature of its cauſe, ever favour its ſalutary effects, it is certainly here: nor are we often diſappointed in our expectations; for, a large quantity of liquor being drank, the ſtomach, like a bag turgid with a warm fluid, is applied almoſt upon the conſtricted duct, and relaxes it; whilſt the bile lodged behind is urged forward by the action of vomiting, (§ 36.) Or if we ſuppoſe the cauſe ſeated in ſome other part, for example, in the firſt origin of the biliary ducts, where they ariſe from the extremities of the *vena portarum*, or elſewhere, and that the obſtructing cauſe be a thick purulent matter, or ſmall ſtones lodging faſt; in theſe caſes an emetic will be of conſiderable ſervice, if the diſeaſe can be remedied by the help of art.

47. Whenever the kidnies are affected with pain, nature, by drawing the ſtomach into conſent, and exciting motions or uneaſineſs in it, from a common conſent of nerves between theſe two viſcera, ſeems to point out the way by which any thing that would be hurtful to the kidnies, by a longer delay, may be diſlodged from them. 1. A gypſeous, mucous, purulent matter, either produced here or brought by metaſtaſis, being too thick to paſs the fine veſſels of the kidnies, or having paſſed, lodges too long in the renal ſinus, daily increaſes in bulk, preſſes on the neighbouring parts, or rubs againſt them, and cauſes the moſt excruciating torments. A ſtone being in this caſe often formed, is forced into the ureter, too narrow to receive ſo large a ſubſtance, the muſcular ſenſible coats of which being injured by the rough ſuperficies of the ſtone, contract themſelves cloſer, and ſtrongly oppoſe its farther progreſs, the pains at the ſame time becoming almoſt too great to be endured. Veneſection being firſt performed, the ſtricture is to be removed by topics and univerſal remedies; after which, mechanical force performs what art can do. Nor is this the only effect of a vomit in this diſeaſe; but the liquor drank performs the office of a fomentation, and, together with a clyſter, makes a kind of internal bath, which, by its watery halitus, relaxes the ſtrictures, and, by increaſing the volume of the contents of the lower belly, it acts with greater force on the kidnies and ureters.

2. A morbid flaccidity of the kidnies from weakneſs of the veſſels, ſometimes permits ſuch a flux of watery liquor to paſs off, as reſembles a ſpecies of the diſeaſe called by the Greeks a diabetes. There frequently is paſſed a conſiderable quantity of thin watery urine, almoſt without colour, taſte, or ſmell, attended with a troubleſome thirſt, proſtration of ſtrength, great loſs of fluids, and a waſte of the ſolids. But a worſe ſpecies of the diſeaſe happens, when there is an efflux of a whitiſh, chylous, ſweetiſh liquor, which antient practice ſuppoſed peculiar to this diſeaſe, and which modern practice has confirmed; for though the diſeaſe be very uncommon, yet it is met with ſometimes;

times; and whether it may have ariſen from relaxed veſſels of the kidnies, or a diſſolved ſtate of the fluids, or from any other cauſe, the curative indications, as Sydenham obſerves *(a)*, muſt be wholly directed to ſtrengthen and invigorate the blood, and to reſtrain the preternatural flux of urine; and we may add, to take away the morbid laxity of the veſſels of the kidnies.

What has been ſaid above, (§ 42) concerning the power of emetics in evacuating fluids, ſufficiently evinces how much it anſwers to the two firſt indications. The ſituation of the kidnies, and their nearneſs to the bones, ſhew what mechanical effects may take place in them, and how ſtrongly the efforts of vomiting may evacuate the redundant humour from their ſubſtance. It certainly expels the lymph, which in ſome meaſure macerates the kidnies, and thus reſtores the loſt tone to the fibres.

48. It is hardly neceſſary to obſerve how exceedingly the muſcles, affected with a ſtrong ſpaſm, compreſs the uterus, tumid with its burden, (§ 36.) The time of delivery therefore approaching, every thing which adds a ſtimulus to them muſt be carefully avoided: but for the ſame reaſon we ſee how much may be expected from this ſource, if the natural ſtrength ſhould be deficient, or by repeated efforts and ſtraining ſhould be ſo far reduced as to be unable to expel the infant, though it be well ſituated, of a proper ſize, and the parts alſo of a natural ſtructure; in this caſe an emetic, which acts quickly and powerfully and may ſoon be reſtrained, often happily finiſhes the buſineſs, without raiſing any diſturbance, heat, or fever in the ſyſtem; which uſually follow the uſe of aromatics, eſpecially when joined with ardent ſpirits and other things of the like kind, which old women, according to cuſtom, exhibit with a liberal hand, and generally to the great detriment of the patient.

There are other affections of the uterus which may be relieved by this remedy; but although they have fixed their ultimate ſeat in this viſcus, yet they ſpread diſorder through the whole body, and are to be conſidered as cauſes of a general effect: the fomes therefore, are to be removed from the general habit, before the uterus can return to its former healthy ſtate. How far an emetic may be ſuited to this intention of cure, will be ſhewn hereafter.

Having thus conſidered the faults of the principal viſcera ſeparately, at leaſt thoſe which admit of relief from mechanical remedies, we muſt now conſider the effects which reſpect the whole body, and enquire into the general changes produced by ſo great an operation.

49. Beſides the large trunks of veſſels which paſs through the belly, and, bringing the blood from the extremities, carry it to various viſcera, and, being formed into one, conſtitute the origin of the *vena portatarum*; there are

(a) Sydenh. Epiſt. Reſp. oper. p. 272.

ſtill thouſands of their branches, which creep through the viſcera, and, making their way by various turnings, form many beautiful plexus of veſſels, through which the natural fluids are conſtantly propelled. By vomiting, the ſituation, magnitude, and figure of the veſſels, are every moment changed, ſo that an action ariſes altogether ſimilar to the action of the lungs. But if we advert to the number of the abdominal veſſels, and to the force applied to them and their contents by the efforts of vomiting, we ſhall ſee that this action far exceeds the powers and action of the lungs, and at this very time alſo, they act much more ſtrongly than uſual. We may juſtly conclude, therefore, that every part of ſanguification is exceedingly promoted by it; that is, a union, denſation, attrition, ſolution, and mixture of the fluids with the blood, is excellently promoted. Theſe effects are alſo aſſiſted by the increaſed velocity of the blood; for the arteries are compreſſed, as well thoſe which go to the belly, as thoſe diſperſed to the limbs. Moſt of the muſcles grow rigid with a ſlighter kind of tetanus in the very act of vomiting, as will eaſily appear to any one looking on a perſon in this ſituation. The muſcles of the breaſt and ſhoulders ſupport and fix the ribs; the arms ſtretched out, ſupport the body, by which the muſcles of the back are aſſiſted in keeping the body bent forward in a convenient poſture; the legs become ſtiff, and the patient, like an immoveable ſtatue, waits with open mouth the attack of ſickneſs and retching. The blood-veſſels, therefore, which accompany the muſcles, are equally ſubject to this preſſure as thoſe of the abdomen, and are affected with it in like manner: the diameter of the arteries is diminiſhed, and the compreſſed fluid ruſhes out where a paſſage opens for it; the column urging on behind, prohibits a reflux, it muſt neceſſarily therefore proceed forward, and ſooner reaches the veins. The coats of theſe are leſs rigid and more eaſily yield to external force; the ſame effect therefore takes place here, namely, the blood is compreſſed and puſhed forward: the frequent valves forbid its return; it urges on its way therefore with greater velocity, and reaches the heart in a fuller ſtream; but, driven from hence with frequent repeated ſtrokes, it haſtens on to perform the uſual rounds. From theſe things we clearly learn, 1. That ſanguification is made better: 2. That the ſecretions are increaſed: 3. That the ſolids acquire new ſtrength: 4. Laſtly, That the momentum of the blood is increaſed, and, impediments being removed, the circulation becomes more free. But from theſe principles it will eaſily appear, what diſeaſes τῆς μοχλείας δεόμενοι, *require mechanical motion* as a remedy, and why ſo many and ſuch great effects are produced by vomiting, both on the fluids and ſolids. It will not, however, be foreign to our purpoſe, to ſhew their uſe in a few of theſe kinds of diſeaſes.

50. The winter being paſt, the ſolids, before ſtiffened by the piercing froſt, are again relaxed; but the fluids, propelled with leſs force by the enervated veſſels,

veſſels, grow thick by the vernal heat, and on any ſlight occaſion ſtagnate in the extreme veſſels, the ſolids failing of their uſual ſtrength: the humidity of the air accumulates the ſordes, and the weak body, loaded with fæces, becomes liable to many diſorders. Nature, perhaps, brings on a benign intermittent, which might ſoon ſhake off the troubleſome load, and reſtore the body to health and vigour, if left to itſelf, and not diſturbed in its courſe. But the complaining patient is urgent; he abuſes the phyſician with hard ſpeeches, and deſpiſing his advice, perhaps procures from ſome old woman an untimely relief, often accompanied with a thouſand miſchiefs. An emetic ſeconds the attempts of nature; and, if it does not radically extirpate the complaint, yet it expedites a ſafe way to health, (§ 32) and if repeated is uſeful. An autumnal intermittent ſeems no leſs to require the help of an emetic, as well to evacuate the foulneſs of the *primæ viæ*, as to correct the diſorders which have a deeper root in the ſyſtem.

§ 51. Nearly allied to this, is a ſlow continued fever, greater in degree, ariſing perhaps from the ſame cauſes, and ſometimes raging about the ſame time: the morbid matter ſeems more immoveable, and which can by no means be ſubdued or expelled by the ſlow work of nature. Hence there is no remiſſion; yet the diſeaſe is not ſo violent, nor the heat extreme. Veneſection evacuates, with the blood, the ſtrength alſo, which in this ſpecies of fever is already too low. A gentle laxative is of little uſe and a ſtronger purgative debilitates. 'Tis the buſineſs of the phyſician to favour and promote what nature has begun. We muſt therefore ſupport the fever, that it may finiſh its attempts (otherwiſe too weak and uſeleſs) and concoct the crude, and expel the concocted matter, that it may not be hurtful to the body. "If there "be coldneſs and torpor," ſays Celſus *(a)*, "and reſtleſsneſs, it will not "be improper to give in the fever three or four cups of the *mulſum (b)*, or di- "luted wine mixed with the food; for by this means the fever is increaſed, a "greater heat ariſes, and removes the forementioned ſymptoms, gives hope "of a remiſſion, and in that remiſſion of a cure." But emetics perform all this. There is a ſtrong force accelerating the motion of the ſpirits, (§ 18, 19); the ſordes lodged in the bowels are evacuated, (§ 30); if the abdominal viſcera are clogged with viſcid matter, it is corrected and ſubdued, (§ 39); and laſtly, the motion of the blood is quickened, and the thin ſecretions, (§ 49, n. 2, 3, 4,) are increaſed, eſpecially thoſe by the ſkin and ſurface of the body. Perhaps there is no method of promoting ſweat, more efficacious or uſeful, than after an emetic has been exhibited; for not only a copious ſweat is excited during the operation, but the attenuated fluids

(a) Celſ. med. lib. 3. cap. 9. *(b)* Water and honey boiled together.

are

are propelled ſo forcibly to the ſurface of the body, (§ 49), that, the obſtructions being removed which block the cutaneous orifices, the humours determined hither ruſh out in a full ſtream. And here opiates are of uſe, which practitioners moſt judiciouſly adviſe after an emetic. Vomiting likewiſe cleanſes the ſquallid foulneſs of the *primæ viæ*, and prevents the viſcera from being injured when an hydrogogue is adminiſtered, and the fomes diſperſed through the body.

52. The ſame doctrine points out the great uſe of an emetic in a thin acrid catarrh, in the humoral aſthma, and other diſorders of the like kind, ariſing from catching cold; when the matter of perſpiration is retained, and ſo far loads the veſſels with an inactive fluid, that all the functions ſuffer by it; when the ſenſes grow dull with a ſtupid heavineſs, and one would almoſt ſay that the body is literally heavier than uſual; and laſtly, when the diſtended veſſels become painful, and the ſenſible parts are hurt; when theſe, and other like ſymptoms appear, a remedy muſt be exhibited, which may open the pores, expel the ſuperfluous humours, and reſtore the body to its uſual activity. An emetic is of great uſe for theſe purpoſes, in whatever part of the body the complaint, ariſing from theſe cauſes, may be ſituated. If we ſuppoſe that the glands, and other veſſels about the fauces and neck, ſo much abound with a watery humour, that there are ſigns of an approaching defluxion, mechanical force will be of uſe; for the face growing red and ſwelling, the eyes ſparkling and filled with tears, the noſtrils moiſtened with their uſual fluid, and the glands of the mouth and fauces pouring out a rivulet of ſaliva and mucus; all which conſtantly accompany the efforts of vomiting; clearly demonſtrate with what force the blood makes towards theſe paſſages, and the greatneſs of the attack on the obſtructed veſſels. For as the bony canals do not yield, and as the great arch and obliquity of aſcent of the vertebral and carotid canals greatly break the force of the blood in its approach to the brain; ſo the tender flexible texture of it is in leſs danger from an emetic, the impetus being moſtly determined outward, the increaſed force inwardly being but ſmall. Hence partly, and from its ſtimulant and evacuating virtue, the reaſon will appear why a vomit is of ſo much uſe in a vertigo, hemicrania, and other like diſeaſes; why it has ſometimes been ſo uſeful in the epilepſy of old people, as writers of obſervation acknowledge: "I have known," ſays Hoffmann *(a)* "an inveterate epilepſy, which had afflicted "the patient twenty years, cured by the uſe of emetics and ſpecific anti-"epileptics, taken from the animal kingdom." Nor am I unacquainted with ſimilar hiſtories; but the preſcribed limits of my work forbid the relation of them.

(a) Hoff. Diſſert. decad. 1. p. 204.

53. The ſame reaſon renders it leſs neceſſary diſtinctly to relate their uſe in the ſmall-pox; not only as they evacuate and turn the future miſchief to ſome other part, (§ 30) but alſo on account of other effects which they poſſeſs, (§ 49) and the excellent changes which ariſe from them. Let us ſuppoſe the ſkin covered with puſtules; and the ſmall perſpiratory veſſels ſo compreſſed, that the uſual ſtrength cannot puſh forward the hard compacted matter: in this caſe the bulk of the contents of the veſſels is increaſed; a febrile heat is ſo kindled in the interior parts, that the internal exhalent organs become dried, or otherwiſe ſo obſtructed that they cannot perform their functions. On both accounts a fluid is retained, which has already undergone too long a circulation, and which by a longer delay would be productive of the worſt effects; for too much heat produces acrimony, whence a ſtimulus is applied to the nervous parts; hence alſo ariſe febrile heat and thirſt, perhaps delirium may ſupervene: from the increaſed bulk of the fluids, anxiety infeſts the præcordia; the thick matter made fluid by heat is coagulated, and rendered more unfit for excretion through the organs which nature often points out for it, that is the fauces or inteſtines. Theſe diſorders require, in the exhalent veſſels of both places, a reſolution and evacuation of the coagulated matter, and fluidity to be produced in the reſt, but ſo that the fever be no more increaſed than can be ſafely reſtrained by an opiate. Whoever recollects what has been ſaid (§ 13, 18, 39, 49) concerning the effects of emetics both on the fluids and ſolids, will foreſee that they are not improper remedies in this caſe, nay, perhaps the moſt proper. Sydenham, treating of acute fevers, ſays *(a)*, "When I have ſometimes happened carefully to examine the "matter thrown up by a vomit, and have found it neither remarkable in "quantity, nor of very bad quality, I have admired that the patients have "received ſo much relief from it; for, the vomiting being over, the ſevere "ſymptoms, (viz. the naufea, anxiety, reſtleſsneſs, deep ſighs, blackneſs of "the tongue, &c.) which tormented the patient, and terrified the by-ſtanders, "were uſually mitigated and went off, leaving the reſt of the diſeaſe to-"lerable." But from what has been ſaid, it appears that the thick fluids are diſſolved, the obſtructed canals made free and open, the whole body, dried and parched up, becomes moiſt, and the hurtful matters are expelled; it is no wonder therefore, that ſuch ſudden relief ſhould happen from it.

54. The advantages received from emetics in acute diſeaſes being thus curſorily related, the way is paved to chronic complaints; in which the opportunity of giving relief is not ſo fleeting, nor experience ſo fallacious, though judgment and diſcrimination are ſufficiently difficult. Vomits ſeem more eſpecially oppoſed to thoſe claſſes of diſeaſes which have their origin and ſeat

(a) Sydenh. oper. § 1. cap. 4.

in

in the ſtomach, or viſcera ſituated near it, which is the caſe with almoſt all chronic complaints; for the diſorders ariſing from theſe parts are quickly diſperſed through the ſyſtem, and the effects of loſt or broken health are returned on theſe viſcera. This is no where more evident than in thoſe diſeaſes which are accompanied with loſs of reaſon, and which happen from bad food, or ſome error in diet, as their proximate cauſe; for though they ariſe from paſſions of the mind, evacuations, or other remote cauſes, yet an improper method of living often conſtitutes the proximate cauſe. The innumerable branches of nerves ſent off to the ſtomach, do not ſerve either for nutrition or motion only, but rather to promote chylification. The animal ſpirits, therefore, being diſperſed in too great a quantity, one of the cauſes of health is loſt; that is, the inſtruments deſtined to convert the uſual quantity of food into the nature of our body, become unequal to the taſk; but the uſual quantity being taken into the ſtomach, there neceſſarily ariſes indigeſtion, the ſource of other diſeaſes. This is moſt frequently the origin of the hypochondriac affection, and ſometimes of other degrees of defective reaſon, from the ſlighteſt to the higheſt pitch of madneſs. The phænomena of this diſeaſe ſhew that the fault is principally lodged in the fluids, and conſiſts in too great a thickneſs of them, or a diſſipation of the moſt volatile moveable parts---Theſe are the animal ſpirits, the vaporoſe halitus of the blood, and laſtly the watery elements of it; the greater or leſs waſte of which makes the diſeaſe milder or more ſevere; whilſt the blood paſſes through various degrees of ſpiſſitude, till at length it degenerates into a true bile, called by the antients *atra bilis*. What is known of the nature of this diſeaſe, is chiefly owing to chemiſtry; by the help of which, in this, as in many other diſorders, many phænomena otherwiſe unintelligible, become evident. From the chemical analyſis of the blood it appears, that the watery parts being evaporated, there remain a ſaline, an oily, and an earthy matter, variouſly combined together, but little fit for the functions of health, as being thicker and lighter than healthy blood. Chemiſtry likewiſe demonſtrates, by experiments to be depended upon, that oil, ſalt, and earth, united together, contain more air than water mixed with the reſt. The human calculus is an example of this; therefore the ſolids are too powerful for the fluids, circulate them too quickly, and the waſte of the thinner part is increaſed, whilſt the reſiduum growing thick, refuſes an intimate mixture with diluents. The *ingeſta*, not ſufficiently concocted, add to the diſeaſe, obſtruct the ſoft viſcera, and weaken or deſtroy their action. Hence ariſe obſtructions, tumours, and pains of the ſpleen, liver, and hypochondria. Health requires a reſtoration of fluidity and miſcibility to the viſcid part: this is obtained by diluents, ſaponaceous ſubſtances, and attrition. But the nature of the diſeaſe, as above explained,

ſhews that diluents alone are of little uſe; ſaponaceous ſubſtances alone, though very efficacious, are ſeldom ſufficient; but theſe aided by attrition and heat exert their whole force, as appears from chemiſtry. Laſtly, attrition in this diſeaſe is ſeldom increaſed by the common ſtimulants, which are often found hurtful. It is true, they increaſe the celerity of the blood, but they increaſe at the ſame time its rarefaction. But it is found that attrition is in proportion to the celerity, ſolidity, and compreſſion: if therefore the ratio of increaſed rarefaction, exceed the ratio of increaſed celerity, not only the attrition will not be increaſed, but on the contrary it will be diminiſhed. A remedy therefore is wanted which may increaſe the celerity of the blood, and at the ſame time reſtrain its rarefaction. It eaſily appears, from what has been ſaid, that ſuch a remedy is found in the effort of vomiting.---Hence appears, by the bye, the utility of immerſion in cold water.

55. A dropſy ſeems diametrically oppoſite to this diſeaſe; in which a ſerous lymph drowns the viſcera, and the pallid blood deforms the body with a diſagreeable colour, and ſhews that water abounds, and that, by a contrary fault, the oily, earthy, and ſaline parts are deficient.

A pituitous diſpoſition having ariſen in the fluids (which may happen from various cauſes, ſome of which the poet *(a)* has not unaptly deſcribed,

Corrupti jecoris vitio vel ſplenis, acerbus
Creſcit hydrops: aut cum ſiccatæ febre medullæ
Atque avidæ fauces gelidum traxêre liquorem:
Tum lympha intercus vitio gliſcente tumeſcit,
Secernens miſeram proprio de viſcere pellem.)

immediately the ſolids are ſo debilitated that they are ſcarce able to propel the torpid fluids. Hence ſtagnation in the lateral veſſels, and languor of the functions. The ſerum is daily accumulated, ſwells, injures the neighbouring parts, and the cauſes of the diſeaſe are continually renewed. If this happens in one veſſel only, an hydatis is formed: if κατα φλεβας, *along the veins*, or in the tunica cellularis diſperſed through the body, a leucophlegmatia takes place: if a ruptured veſſel pour its contents into ſome cavity, a local dropſy is produced: if, laſtly, (which is often one cauſe of the diſeaſe) the action of the abſorbent veins be debilitated, either from obſtruction produced in them, or from mere languor and inertia of the ſolids, whilſt the ſmall arteries with open mouths perform their office, and pour their fluid from the drained body without end into a cavity; in this caſe the fluid being continually accumulated grows thick, and in a ſhort time renders the veſſels of all kinds unfit for their office, and produces a topical dropſy. In the cure of this diſeaſe the

(a) Sammonicus.

primary

primary cauſe muſt be diminiſhed or removed; attenuants, evacuants, exſiccants, and roborants of every order, muſt be uſed, that the humid load may be removed, the water leſſened, and the veſſels ſo far reſtored to their ſtrength, that they may perform their proper office, and the native healthy ſtate of the fluids be renewed. To do all this, we find many remedies among practical writers. I know not how many celebrated ſpecifics are mentioned by them which will carry off the diſeaſe almoſt at one ſtroke, if we are to give credit to their promiſes. Others are diſpleaſed with this ſhort way of doing things, and relate a pompous farrago of remedies, and almoſt bury the patient under a heap of medicines. The practice of both is to be avoided; nor is the cure wholly to be left to emetics, nor yet attempted without them; ſeeing they ſhorten the labour, and perform in a compendious manner what would otherwiſe require many helps. Anti-hydropic remedies before mentioned, ſeem to produce their effect by exciting motion and attrition of the fluids, and by carrying off the exuberant lymph. A ſtrong effort of vomiting often repeated, promotes all theſe at once. It opens the obſtructed veſſels, breaks down and propels the thick and ſtagnant fluids, dries up the humid parts, increaſes the watery ſecretions, renders compact the diſſolved blood, and diſſolves the viſcid, carries the blood with greater velocity to the extremities, and promotes ſweat. It alſo exerts a ſtrong action on the tumefied abdomen; and, when the diſeaſe is wholly ſeated here and recent, the viſcera ſound, and the body not very old, the cure is ſafely finiſhed by repeated vomits with proper regimen and moderate exerciſe; except in perſons, "who being their "own maſters, cannot ſo eaſily be governed, as thoſe who recover by the "benefit of being controuled *(a)*." In the advanced ſtage of the dropſy, an emetic ſeems to be of no ſmall uſe. This is proved by a caſe mentioned by Foreſtus *(b)*, of a dropſical perſon, "ſwelled in his belly, hands, feet and "face; left by the phyſicians, and at length deſpairing of a cure, he went to "the ſea ſhore, and in a ſmall veſſel went ſome diſtance on the ſea; by "which a vomiting being promoted, and afterwards uſing exerciſe, he was "reſtored to health." I might here adduce the ſuffrage of Sydenham, who, in his elegant tract on the dropſy, ſupports his opinion of their uſefulneſs by many examples confirmed by repeated obſervation: but the more advanced in the art know well the elegant words of the author, and the leſs advanced are chearfully recommended to the book itſelf, in the reading of which,

------ *ſi propiùs ſtes*
Te capiet magis; ------ et
------ *decies repetita placebit.*

(a) Celſ. Medicin. lib. iii. cap. 21. *(b)* Obſerv. lib. xix. obſ. 33.

------ *if*

------ if cloſer thou attend
It will ſtrike thee the more; ------ and
------ a thouſand times repeated will pleaſe thee.

But in this diſeaſe the cure is not to be committed to mechanical action, unleſs the viſcera, and other circumſtances, are as mentioned in paragraph forty-fourth.

56. From what has hitherto been ſaid, it will clearly appear what effects may be expected from the action of emetics in diſeaſes ariſing from a ſerous colluvies. Their uſe alſo will appear in the rickets, a diſeaſe troubleſome to children of both ſexes, difficult to remove, and frequent. It is commonly produced by ſome fault ariſing in the abdomen, and propagated as far as the medulla; by ſlow degrees it digs into the very pillars of the body, and renders the hardeſt and almoſt inflexible bones too eaſy to be bent. The origin and progreſs of the diſeaſe, the curatory indications, and alſo the manner by which it may be relieved by repeated vomits, will clearly appear from the following obſervations *(a)*.

1. The hardeſt bones in the body were once a moveable jelly, membranes or cartilages; which by degrees, growing hard through various degrees of ſolidity, at length become rigid bones.

2. There are two cauſes of this induration; viz. a ſecretion of a bony matter from the blood, and a firm appoſition of the matter ſecreted, or a ſtrong compreſſion of the particles one to another. Theſe are the effects of a compleat vigour of the living powers, and the action of the neighbouring incumbent muſcles. Therefore,

3. If the blood be not ſufficiently ſtored with proper particles for the ſtructure of the bones, a leſs ſecretion will be made, and leſs fit for the purpoſe of oſſification. Moreover, if muſcular action be deficient, and the ſtrength languid, another cauſe of oſſification is wanting. Hence, therefore,

4. It appears, that thoſe conditions which can produce the rachitis, are all of that kind which uſually deprave chylification and ſanguification. Particular regard, therefore, muſt be had to theſe, and that kind of medicine be choſen, which may correct and remove the fault in its very formation, (§ 18. 27. 39); may mend the hurtful effects of it, beginning to appear in other places; and in the beſt manner relieve the defect of impetus and motion in the muſcles, (§ 49.) Purgatives indeed happily carry off the ſaburra of the viſcera; but if they are too ſtrong, they debilitate much, and leave a thick but vapid matter behind, more apt to produce obſtructions; and the ſolids, already too weak, they weaken farther. Emetics powerfully purge the viſcera, are not ſo hurtful to the vital powers, and ſtrengthen the ſolids; eſpecially if an

(a) Vide Alex. Monr. Anatomy of the Bones, p. 34.

accurate regimen be obſerved, if the body be often immerſed in cold water, and laſtly, if the ſymptoms ariſing be ſometimes moderated by ſpecifics.

57. Whether a vomit be uſeful in attacks of the gout, to whom, when, and how often it ought to be exhibited, is not eaſy to determine. Thoſe, whoſe authority I very much regard above moſt others, altogether diſſuade from their uſe in the paroxyſms, except nauſea, vomiting, and other ſigns of the ſtomach being loaded with ſordes, be urgent, and then they only admit the lenient emetics. But other phyſicians, *(a)* of no ſmall note, are of an oppoſite opinion; and one *(b)* aſſerts, that "he has ſeen the uſual attacks of the gout "always rendered more mild, when the *prima regio* has been cleared of "ſordes, immediately at the commencement of the paroxyſm, by a gentle "emetic, either alone, or joined with a laxative." Who is ſufficient to decide theſe differences? As for me, diſmiſſing theſe facts, I ſhall endeavour to demonſtrate, in few words, the uſe of emetics in a different ſtage of the ſame diſeaſe; that is, between the paroxyſms, in order to prevent the future. The acrid matter ſtagnating in the very fine paſſages, and exciting excruciating pains, is expelled after a gouty paroxyſm (if the cure be rightly conducted, nor the efforts of nature checked by the untimely uſe of ſome external or internal medicine) a gentle ſweat moiſtens the part affected; or, if the diſeaſe be of a ſtill worſe kind, having a deeper ſeat in the body, and producing tophi, an alleviation and remiſſion of all the ſymptoms ſucceeding, ſhew the evacuation to have been critical: therefore a return of the fomes of the diſeaſe into the blood, and upon the parts appointed for the more noble functions of life, is by no means to be feared; but the reſt of the diſeaſe is to be removed in the manner of any other more ſevere chronic complaint. If the fluids are depraved, they muſt be purged by alterants; the weak ſolids muſt be ſtrengthened, the powers of the whole body be renewed, and the root of the cruel diſeaſe, as far as art can effect it, be cut up. For theſe purpoſes the medicina gymnaſtica, *or exerciſe*, is extremely uſeful; which, above many other helps, revives the weakened limbs with freſh vigour. Riding on horſeback, or in a carriage, running, &c. are excellent helps. But how often does the unfriendly ſeaſon of the year prevent theſe exerciſes? In the winter or ſpring the gout commonly abates, but is yet worſe if it intermits in the autumn. For the air heavy and cold, wholly prevents going abroad; and the diſtorted joints, yet lame with the late pains, do but ill admit of ſtanding long on the feet, or that the body be tortured with any kind of motion indoors, or in ſome covered walk. Friction, in reality, does nothing more than ſlightly clean the external parts; it evacuates no pituitous matter from the

(a) Vide Dr. Cheyne's Eſſay on the Gout, p. 77, &c. *(b)* Hoffm. Diſſ. Decad. i. p. 411.

viſcera,

viſcera, which, for want of motion, neceſſarily begins to be troubleſome. Nor are there wanting to patients flattering companions, who know not how to give a dearer pledge of friendſhip, than by ruining their own health by drinking, and attempting the ruin of a man recovering from diſeaſe, whilſt in words they wiſh him his uſual health, but in reality take the means to deſtroy it. For theſe and the like reaſons, an emetic is almoſt always very neceſſary to theſe convaleſcents; nor will it be difficult to collect from what has been ſaid, in what manner it ſupplies the place of vigorous exerciſe. It appears alſo in what manner vomits aſſiſt the animal functions, how they concoct the thick humours, and laſtly, more or leſs anſwer to every ſingle indication. Nor are diſcerning practitioners afraid, twice a month, or ſometimes oftener, to order a vomit to perſons in this ſituation.---Having therefore, taken a view of their uſe in moſt chronic diſeaſes, we intend ſlightly to run over the complaints which are troubleſome only to the tender ſex.

58. Not only the manner of living, but almoſt the very vital ſtamina, ſeem to have given a more ſoft lax temperament to women than to men; unleſs a harder lot in life may have imparted to them an unnatural one, and an healthy mind in a healthy body, hardened with ſevere labour, ſhould have given them a firmneſs altogether imitating muſcular force. There is however a ſtage of life in which the condition of women, from the leaſt error, becomes liable to the worſt miſchiefs; that is, at the time the difference of the ſexes begins to appear, which is at or about the fifteenth year of their age: for till this time, in a medical ſenſe, they are but one and the ſame genus or kind. But in what they differ, why, and what are the phyſical cauſes of this difference, is not neceſſary at preſent to explain, having been largely treated of by others. But a brief recital of theſe diſeaſes, as it may ſerve for a more clear explication of this argument, ſeems not improper to our purpoſe.

1. The terminus of increaſing bulk approaching, the ſame organs which have hitherto prepared nouriſhment for the body, ſtill continue to prepare more than nutrition alone requires. The ſuperabundant blood therefore now paſſes off periodically by the uterine veſſels. If it be detained too long in the body, through weakneſs of the veſſels, or by an obſtructed paſſage, plethora is added to plethora, and the diſeaſes of the ſex preſently appear.

2. If a watery diſſolved or acrid blood pervade the uterus, and momentum or force be wanting to open the mouths of the veſſels ſo far that they may depoſit the red blood, it then paſſes into the lateral veſſels, is poured into the glands every where placed in the cavity of the uterus, and becomes thick: at length there paſſes off a viſcid fluid, different in colour, ſometimes white (from which it has been called *fluor albus*) or whitiſh, ſcarce tinging a cloth; ſometimes yellowiſh, greeniſh, blackiſh, and affected with every colour between

between theſe; ſometimes it paſſes off without fetor, ſometimes it ſmells; ſometimes it is mild, generally at firſt, but the diſeaſe continuing long it becomes more acrid, deeper coloured, and more fetid. The opening glands ſeparate and throw off the thin humours of all kinds; amongſt which are the nutritious, which ought to have given vigour to the ſolids, and momentum to the fluids. Hence ſtrength declines daily, the limbs loſe their power, digeſtion fails, a more indelible faulty ſtate corrupts the fluids, and a diſeaſe creeps into the whole œconomy, than which (I have heard the ſkilful aſſert it) there is none among the whole troop of chronic complaints more cruel to the ſex, more difficult to be cured, or more fatal in its effects; for the very inſtruments fail, by the help of which the other parts ought to be repaired, and the ſeat of the diſeaſe is in a viſcus, to which, of all others, it is moſt difficult to apply a remedy. —'Tis true, it does not ſoon fail, but when once affected, it preſerves its vitiated ſtate long; becauſe it is a part, ſays Foreſtus *(a)*, " which readily receives the excrementitious particles of other " parts, both on account of its inferior ſituation, and the multitude of veins " running to it, and alſo on account of the uſual natural purgation." Add to this, that its ſolid vaſcular ſtructure does not eaſily yield to medicines, the powers of which are weakened by a long circuit before they reach it. And after the diſpoſition of the blood has been made better, the lax texture of the glands obſtinately oppoſes a cure, and thoſe medicines which are oppoſed to this ſoftneſs, conſtringe the orifices of the arteries, and render menſtruation more difficult. Native laxity, a bad diet, an inactive and luxurious life, generally produce this diſeaſe: for, as the ſame Foreſtus has obſerved, *country-women ſeem ſeldom affected with it.* Theſe circumſtances alſo often precede a ſuppreſſion of the uterine flux *(b)*. Such remedies, therefore, muſt be applied in theſe caſes, as are oppoſed to diſeaſes ariſing from cauſes of this kind; not omitting repeated vomits: for, beſides the effects hitherto mentioned, of cleanſing the ſtomach, ſtimulating the ſolids, and producing a wonderful attrition in the blood, they alſo propel it with ſuch force to the uterus, that we find examples *(c)* where this mechanical force alone, in retarded menſes, has produced an inſtant flow. And, unleſs the patient be *hard to vomit*, or can ill bear the action of an emetic, no leſs advantages are to be expected from it in the *fluor albus*, than in moſt other chronic diſeaſes. But it often happens that patients in this diſeaſe are fatigued with the leaſt motion; whence they receive more harm than good from a vomit. This, therefore, is firſt to be conſidered, before emetics be given to patients of this kind.

(a) Foreſt. Obſ. lib. 28. obſ. 21. *(b)* Oper. Friend. page 67. 80.
(c) Plater. Obſ. Med. p. 191.—Hildan. Obſ. cent. 3. obſ. 58.

59. **But** there is nothing perfect and happy in every reſpect: emetics have their advantages, and alſo their diſadvantages; nor are theſe leſs to be feared than thoſe to be deſired, if by chance the medicine be given improperly. But the unſucceſsful events of a remedy no leſs ſhew the utility of it, than if the moſt deſirable effects had taken place from it; they demonſtrate its power, and prove its efficacy, whilſt they convict the artiſt of unſkilfulneſs and temerity; nor is the medicine to be accuſed of the death of a man, but the hand which improperly or untimely adminiſters it. And though, from the doctrine of emetics already delivered, it may appear clear to the ſkilful, in what caſes they may be uſeful, and in what hurtful, yet it will not be improper to cloſe the preſent diſſertation with a ſhort account of the diſeaſes in which a vomit is eſpecially to be avoided.

1. The natural ſtructure of the body is a reaſon with ſome writers *(a)* why emetics ſhould not be given to ſome perſons; thoſe of a ſpare thin habit, long neck, narrow breaſt, and hard to vomit; and thoſe ſubject to ſpitting of blood, fainting, or a troubleſome cough; have been excuſed from emetics: but perſons of a contrary temperament have often, by the advice of phyſicians, experienced their ſalutary effects. In the uſe of the ſtronger emetics theſe circumſtances certainly ought to be conſidered, leſt perhaps we ſhould fall under the cenſure of temerity or incaution; nor ought they wholly to be omitted in ordering a gentle vomit. Idioſyncraſia, or a peculiar diſlike to ſome things, known to the patient from experience, but not diſcoverable by the phyſician, unleſs he has learned it from him, may forbid the uſe of this or that medicine, which otherwiſe, given by one not knowing it, would produce many miſchiefs.

2. In inflammatory diſeaſes, when the blood is polluted with a parched lentor, and, unfit to paſs through the extremities of the arteries, ſtagnates, and muſt not be urged by force; as in acute fevers, topical inflammations, the pleuriſy, frenzy, inflammation of the liver, and the like; the vital powers muſt rather be diminiſhed than increaſed; therefore, the acceſſion over, and violent pain urgent, an emetic will not be ſafe.

3. Nor, if the action called tonic, of any viſcus or part be much injured, or if the juſt force by which the ſolids ought to re-act on the fluids be much leſſened, ought we to try the mechanical force of a ſtrong emetic, before regard be had to the part, whether it can bear to advantage an attack of ſuch great violence, or whether it will not ſuffer a greater inconvenience from it. For example; in a dropſy of the belly an emetic carries off the water, but for a time at leaſt it increaſes the ſwelling.

(a) Vid. Fallop. de purgant. p. 81.

4. The action of emetics is certainly great on the lungs, becauſe in the effort of vomiting, an unuſual quantity of blood is paſſed ſuddenly through them, by which the veſſels are diſtended, the veſicles compreſſed, on which the air retained within re-acting ſtrongly, renders the preſſure much more ſtrong and powerful; and if the gaping veſſels have before let out the blood, the ſmall wounds being almoſt certainly enlarged, will increaſe the hæmoptoë. In an incipient hæmoptoë alſo, produced by ſome external cauſe, while the blood is yet bland, nor contaminated with any ſordid corruption, we can ſcarce have recourſe to an emetic; by which the latent cruor, corrupted by ſtagnation, is expelled the veſicles of the lungs, and may increaſe the diſeaſe otherwiſe not very dangerous. Emetics, therefore, can ſcarcely be given to perſons affected with pulmonary complaints, unleſs where an inundation of pus has overflowed the lungs, and death otherwiſe inevitable, be threatened from ſuffocation.

5. Laſtly, we muſt carefully abſtain from their uſe in thoſe diſeaſes which are cauſed by much thick blood, a copious very tough pituitous matter almoſt immoveable, or any other matter of the like kind, afflicting the brain and origin of the nerves, as in the more ſevere kind of apoplexy, paraplegy, hemiplegy, in the lethargy, carus, and the like; for commonly they fix the diſeaſe deeper, and in a very ſtrong operation they deſtroy life. It is ſcarce neceſſary to diſſuade from the uſe of emetics when there is yet danger of an hæmorrhage after a limb has been wounded or cut off, though ſome ſymptoms might ſeem to point them out as neceſſary; or laſtly, when by large abſceſſes, or by any other opening, a great ſhock being given to the ſyſtem, the patient would bleed to death.

THE following Eſſays on the Weather and Diſeaſes of London in 1751, *and the three ſubſequent years, were originally inſerted in the Gentleman's Magazine, commencing with the* 21*ſt volume. They were deemed worthy of ſelection here, not merely as bloſſoms preſaging fruit, but as ripened fruit itſelf, fit for immediate ſervice. It is, indeed, to be regretted, that ſuch periodical communications were not longer continued, in a city, which affords, undoubtedly, the moſt multifarious obſervation.*

Editor.

ON WEATHER AND DISEASES.

Mr. URBAN,

IF the incloſed account of the weather ſhould appear to be not unworthy of a place in the *Magazine*, nor be diſapproved of by the ingenious part of the faculty, it will induce me to proceed in furniſhing ſome ſhort remarks of the like nature once a month, whilſt health and leiſure permit. I ſhall ſay nothing at preſent of my motives to this eſſay, or inſiſt upon its utility. I ſhall only obſerve, that the barometer I uſe is a good one; and the thermometer is graduated by Fahrenheit's ſcale, and made by a workman of eſtabliſhed character: it is ſuſpended at about two inches diſtance from the wainſcot, in a room where no fire is ever kept, nor does the ſun ſhine into any part of it above two hours in a day, nor then within ſome yards of the thermometer; above it is a wide ſtaircaſe, and a door opens out of the room where it is placed into an airy court almoſt every half hour in the day.

The direction of the wind is not always ſo exactly put down as I could wiſh, from the reſtiffneſs of the neighbouring vanes; nor is its force, or the meaſure of rain, determined any other way than by conjectural eſtimation.

I am, &c.

Of the Weather in April 1751.

The temperature of the air in reſpect to heat and cold, during the whole of this month, hath been ſurprizingly equal, notwithſtanding the wind has blown from almoſt every point of the compaſs. The loweſt degree to which the mercury in the thermometer fell was 43, the 2d inſt. with a clear cold wind from the N.E; the higheſt it aroſe to was 57, the 24th, the weather fair, warm, ſerene, and the wind ſouth: ſo that during that period the weather varied only 14 degrees, from one extreme to the other, and this in ſo ſlow a manner, that the mercury did not riſe or fall quite 4 degrees in any day of the time.

The motion of the quickſilver in the barometer, has been ſtill more confined. It ſtood the 26th of laſt month at 29 inches one tenth, the wind weſterly,

terly, and much rain; and roſe by degrees to 30, the 8th inſt. the weather moderate, fair, clear, wind N. E. this was its higheſt aſcent; the extreme variation 9 tenths. Its greateſt riſe on one day was the 26th, when it roſe from 29.1, to 29.4, the wind weſterly and high. Its greateſt fall was 3 tenths, on the 13th, the wind changing from north to ſouth; an equality which would ſcarce have been expected.

Great quantities of rain have fallen during this month, ſometimes in heavy ſudden ſhowers, ſometimes in long-continuing rains; and ſuch has been the tendency to wet, that we have had ſhowers frequently with a north-eaſt wind. The 15th, 16th, 17th, and 18th were fair and moſtly clear: beſides this ſhort ſeaſon of fine weather, it has ſcarcely been fair 48 hours together, the whole month. The wind was ſome days pretty high and ſtormy; there was one ſudden ſtorm of hail the 21ſt, and ſome froſty mornings about the ſame time.

The whole of the month may be ſaid to have been wet, though moderate; and rather cold for the ſeaſon, than remarkable for any thing elſe.

With reſpect to diſeaſes, the only one that I have ſeen that has looked like an epidemic, is an inſidious ſpecies of peripneumony. The ſick complain firſt of chillneſs, ſhivering, and general pains, frequently of the limbs, then of ſome part about the thorax, but this laſt never acute, not often with a cough, and ſometimes without much difficulty of breathing. They frequently complain of pain upon ſneezing, coughing, or even ſwallowing, on one ſide of the neck, juſt above the place where the middle of the maſtoid muſcle takes its riſe from the clavicle. This is often acute, and where it is ſo, from an inſtance or two I have ſeen, ſeems to afford a bad prognoſtic. The patients can lie eaſy in one poſture, which is commonly upon the back, but not on either ſide. They have, or affect to ſhew, great compoſure and eaſe, which impoſes on thoſe about them, till they are ſuddenly alarmed with ſome unexpected alteration, which carries the patient off in a ſhort time.

The blood is commonly ſizy; the urine crude or turbid, without a fair ſediment; the pulſe quick, ſmall, at length weak, and with a remarkable jerk; the tongue moiſt, and drinking is rather fatiguing than pleaſant. Early bleeding, gentle antiphlogiſtic purges of ſal cathart. and manna in the pectoral decoction; cupping on the ſide, with bliſters, mild diaphoretics, and pectorals intermixed, have in ſome caſes been ſucceſsful.

As to conſumptions, they are rather endemic than epidemic here, though this month moſt commonly is fatal to many who are expoſed to them.

Should this imperfect eſſay be favourably received, the author will endeavour to continue it with care and aſſiduity.

Obſervations

Obſervations on the Weather, &c. in May 1751.

The weather continued cold, dark, and rainy, as in the preceding month, till the 18th of the preſent, in which time it was ſeldom fair above 24 hours together; very often it rained, without intermiſſion, great part of the day and night, with the wind varying from S. E. to S. W. or N. W. About the 18th the weather became fair and clear, yet cool, the wind moſtly N. or N. E. with a few very ſlight ſhowers.

The mercury in the barometer kept about 29 6 tenths at a medium: during the firſt part of the month it ſunk to 29.2, the 3d inſt. with much rain, wind S. W. and roſe by ſlow advances by the 18th to 30.4. where it continued ſeveral days, wind N. and N. E.

The variations in reſpect to heat and cold, have been more conſiderable. The mercury in the thermometer continued almoſt ſtationary between 49 and 58, till the 9th, when it ſunk from 52 to 47, viz. 5 deg. (its greateſt variation in 24 hours, any time this month) the wind N. W. with a pretty ſharp froſt, which was felt in many diſtant places in the country. The north-weſt parts of Yorkſhire had much ſnow, the earth was frozen hard, and thick ice was on the water. From this time the weather became ſomewhat warmer, the mercury ſometimes riſing to 58, and on the 21ſt and 22d at noon to 64, the air ſerene and vernal.

The ſame diſeaſes continued during the rainy ſeaſon; intermittents, both tertians and quartans, likewiſe appeared, and ſome obſtinate rheumatiſms, but none of them attended with any unuſual ſymptoms, or requiring any method of cure different from what is commonly put in practice.

Though it is out of courſe, it may not, however, be altogether improper to obſerve in this place, that the winter in general has been remarkably wet and cold; that diſeaſes of the breaſt have been more frequent than any others, and theſe chiefly ſuch as manifeſtly aroſe from a *ſeroſa colluvies*.

The ſmall-pox was uncommonly mild in general, few dying of it, in compariſon of what happens in moſt other years. Great numbers of children had the hooping-cough, both in London and ſeveral adjacent villages, in a violent degree. Strong, ſanguine, healthy children ſeemed to ſuffer moſt by it; and to ſome of theſe it proved fatal, where it was neglected, or improperly managed in the beginning.

For though nothing ſeemed to avail much in carrying off the diſeaſe, but change of air, with aſſes milk and proper diet; yet in conſtitutions like thoſe above deſcribed, if a vein was not opened, ſometimes oftener than once, with bliſters, manna, oxymel ſcilliticum in ſmall cinnamon-water, given frequently in ſmall doſes, the inceſſant cough brought on inflammations in the lungs,

ſometimes of greater, ſometimes of leſs extent, in proportion to the fulneſs of the veſſels, and the diſpoſition to inflammatory diſorders.

A ſtrong healthy child, betwixt two and three years old, was ſeized with this diſorder in a violent degree: he was ſent into the country, the ſeaſon cold and wet, where his diſorder continued without abatement, having no medical aſſiſtance. In about a month the cough became leſs ſevere, but a continual feveriſh heat ſucceeded, with difficulty of breathing, a ſhort, troubleſome, but not convulſive cough, a quick, feeble pulſe, and looſe greeniſh ſtools, or elſe a tendency to coſtiveneſs. After three weeks illneſs, various methods were put in practice to aſſiſt him, but in vain; his fever increaſed, with ſome irregular remiſſions, and his breathing became more difficult till he expired, after about ſix or ſeven weeks indiſpoſition.

Upon opening the body, the lungs on both ſides were found full of matter, not collected in abſceſſes, but diſperſed and hardened throughout the whole ſubſtance of the lobes, in the lower edges of which it was ſo cloſely impacted, and in a manner indurated, as to reſiſt as much in cutting as the firmeſt glandular ſubſtance in the body.

On viewing the condition of the viſcera in the lower belly more attentively, ſome of the contents of the ſtomach were found floating in the left hypochondrium, being part of an oily draught unaltered: it was judged that ſome ſlight wound had been made in the ſtomach, though the knife was conducted with the utmoſt circumſpection; but the opening was ſoon diſcovered to have been made by another cauſe; that part of the bottom of the ſtomach which lies next the ſpleen, about the breadth of a crown-piece, was in ſo putrid a condition, as ſcarcely to bear the ſlighteſt touch, yet without having its colour much altered. The inteſtines were almoſt tranſparent and exanguious, and the colon larger than the ſtomach; the gall-bladder full of a yellowiſh ſerum; the ſpleen ſmall and harder than common; every thing elſe was ſound. It muſt ſeem a little remarkable that the child had no vomitings, no *ſingultus*, or any ſymptom from whence it could be diſcovered that the ſtomach was particularly affected, unleſs we attribute to this cauſe a great unwillingneſs in the child to be moved, and at one period of the diſeaſe a total refuſal of liquids or other ſuſtenance; but this went off a few days before he died, during which time he took every thing with a kind of greedineſs. This caſe has been more prolixly related than perhaps is ſuitable; but 'tis done for the ſake of preciſion, which is always neceſſary in regard to facts with which it is of uſe to practitioners to be acquainted.

Obſervations

Obſervations on the Weather, &c. in June 1751.

The motions of the quickſilver in the barometer have, in this month, been confined within narrow limits: twice it ſubſided from 30. and 30.1, (the point where it was generally ſtationary during the laſt month) to 29.6, viz. on the 28th ult. and the 16th inſt. the wind being weſterly, with rain. It roſe about the 3d to 30.3, and continued there a day or two, the wind E. and N. E. which was its greateſt aſcent. The variations in the thermometer have been more conſiderable. The mercury ſtood at 53, the 26th ult. its loweſt point, and where it had remained almoſt ſtationary during the preceding month; from whence it roſe by ſlow advances to 60, about the beginning of this preſent. And on the 5th, 6th, and 7th, the mercury ſtood at 68, at ſeven in the morning, the uſual hour of obſervation; though by noon it aroſe to 73. But as theſe notes are intended to point out the general temperature of the air, the effects of the mid-day ſun are not always mentioned. For though the ſudden changes of the air, without doubt, affect the animal œconomy, as certainly, and as dangerouſly, as the more equal procedure of a malignant ſeaſon, yet it is not every gleam of heat, or ſudden chill, that can produce ſuch effects.

An account of this kind would however be imperfect, were no notice taken of the ſudden alterations; and this, perhaps, may have induced ſome writers to give their journals entire to the public: but it ſeems quite ſufficient for every medical purpoſe, to mention only the greateſt variations that have happened in the ſpace of 24 hours, on either of the inſtruments above mentioned; which variations have in this month been very moderate, 4 degrees in the barometer, 5 in the thermometer, having been the greateſt in one natural day.

As the preceding months were cold and wet, this hath been, for the moſt part, warm and dry; there having been fewer rainy days in this month than fair ones in the former, though the wind, excepting about 10 days, was generally S. or N. W.

The diſeaſes that have chiefly appeared in this month, were the ſore-throat, which was, ſome years ago, epidemic; and a ſlow remittent fever, of which ſome caſes have occurred ſince the warm weather came in.

The former was treated in the method which was generally found beneficial when it raged before, and with ſucceſs; the latter, when neglected at the beginning, which, from the mildneſs of its ſymptoms, moſt frequently happens, too often proves fatal. The ſick find a wearineſs, head-ach, and ſtupor, with pains in the limbs, ſometimes in the ſide, but not acute: they have ſlight ſhiverings, ſucceeded by heats, but not often vehement: the complaints

increaſe as night approaches, but are eaſier the next morning after a ſweat, which in ſome is profuſe: thus they continue ſeveral days, often without the leaſt apprehenſion, till on a ſudden thoſe about them are ſurprized with the appearance of imminent danger.

Moderate bleeding, gentle diaphoretics, and, in ſome caſes, ſmall doſes of the bark, would probably have prevented thoſe difficulties, from whence too often no art can extricate them afterwards.

It may not be improper to obſerve, that the town in general has been and continues very healthy, as appears both from the accounts of ſuch as cannot be unacquainted with this circumſtance, as well as from the weekly bills, if their teſtimony may be in the leaſt relied upon. According to theſe the burials have been decreaſing ſeveral weeks, and by the laſt, amount to no more than 298, than which, it is apprehended, few can remember to have ſeen them lower at this time of the year. That theſe bills are not correct, is not entirely the fault of the company of pariſh-clerks, who, it ſeems, want power to compel thoſe who ought to be under their direction to do their duty. But wherever the omiſſion is, 'tis pity but it was rectified, ſince nothing would contribute ſo effectually to demonſtrate the influence of the ſeaſons on human bodies, as a juſt and regular account of thoſe particulars, which properly make a part of the bill of mortality.

Obſervations on the Weather, &c. in July 1751.

The weather in this month may be ſaid to have been warm and wet, it having rained more or leſs on 24 days out of 30; on ſome of them very heavily, and during a conſiderable part of 24 hours.

The wind was for the moſt part S. W. and the ſky frequently cloudy when it did not rain; the air temperate.

The mercury in the barometer ſometimes ſunk to 29.4. and one day roſe to 30.1. *viz.* on the 9th, the wind E. But it generally kept between 29.7. and 9, not varying above ſix tenths of an inch in the whole month, nor ſhifting above two of theſe in one day.

In the thermometer the motions of the quickſilver were as limited as in the barometer. Twice it ſunk to 59, viz. on the 26th ult. and the 19th inſt. On the 10th, 11th, and 12th, it ſtood about 64 and 5, its higheſt aſcent, at the uſual hour of obſervation; for at noon it roſe to 72, on the 10th, the warmeſt day this month; wind E.

As the variations in reſpect to heat did not exceed 6 degrees in the whole month, ſo no two ſucceeding days differed from each other above 3 degrees, a greater equality than is common to be obſerved at this ſeaſon; to which cauſe,

cauſe, very probably, and to the moiſt temperature of the air, may be aſcribed the uncommon healthineſs of the town, and, as far as I can learn, of many parts of the country alſo.

Obſervations on the Weather, &c. in Auguſt 1751.

Barometer.

Higheſt 30 $\frac{3}{10}$, the 24th inſt. Wind N. E.
Loweſt 29 $\frac{4}{10}$ 27th ult. S. E.
Common ſtation about 29 $\frac{7}{10}$.
Greateſt variation in one day $\frac{3}{10}$.

Thermometer.

Higheſt 64 degr. 5th inſt. Wind S. S. W.
Loweſt 57. 25th. N. E.
Greateſt var. in one day 3 22d from 61 to 58 N. W.
Common ſtation 61 degrees.

It is ſcarcely poſſible to meet with a more equal temperature of the air in any climate, than has here been obſerved, during this laſt month; the wind has, for the moſt part, kept betwixt the South and Weſt points, till within theſe few days. The firſt and laſt weeks of this period were moderately warm, with ſeveral fair days. The middle part of the month was likewiſe moderately warm, but wet; and, excepting a very few days, the whole month rather cloudy and overcaſt.

As it ſeldom happens that there is any remarkable increaſe of mortality, without ſome very ſenſible change in the temperature of the air preceding it; and as the alteration in the weight of the atmoſphere did not exceed nine tenths, nor the heat of it vary above ſeven degrees, in the whole month; it is the more difficult to account for thoſe fluctuations in the weekly bills in this period; the numbers having fallen from 306 in one week, to 224 the next, and again roſe to 304, without any manifeſt reaſon. And though it would not be candid to attribute any part of this to want of care in the compilers of the bills, without good evidence, yet one cannot but wiſh that all poſſible care might be taken to bring in their accounts as regularly as poſſible; otherwiſe the main end of an inſtitution, capable of being highly beneficial to ſociety, muſt not only be defeated, but miſtakes and prejudice be thereby occaſioned.

Obſervations

Obſervations on the Weather, &c. in September 1751.

Barometer.

Higheſt $30\frac{3}{10}$, 25th ult. Wind, N. E.
Loweſt $29\frac{3}{10}$, 19th, at night, with thunder, lightning, and heavy rain. S. E.
Greateſt variation in one day $\frac{6}{10}$, from $30\frac{2}{10}$ to $29\frac{6}{10}$, the 30th ult. N. W. to S. W.
Common ſtation about $29\frac{8}{10}$.

Thermometer.

Higheſt 62, with much rain, the 20th, Wind S. E.
Loweſt 50, fair and froſty, 9th, N. W.
Common ſtation about 57.
Greateſt variation in one day 6 deg. *viz.* 59 to 53, S. W. to N. W.

During the firſt part of this month, the weather was moderately warm, clear, and fair; from thence it changed to cool, windy, and wet; and continued ſo till towards the concluſion, when it became more temperate, and inclined to fair, though with ſome guſts of wind, and heavy rain. This variable ſtate of the weather, however, ſeems to have had no remarkably injurious effects on the health of the people, the weekly bills continuing moderately low, and no epidemic diſorders appearing, ſo as to engage the attention of the public, or of the faculty. Some intermittents occurred about the beginning of the month, but theſe were neither ſo frequent, nor their ſymptoms ſo vehement, as often happens about this ſeaſon.

Obſervations on the Weather, &c. in October 1751.

Barometer.

Higheſt $30\frac{4}{10}$. Loweſt $29\frac{4}{10}$.
Greateſt variation in one day $\frac{3}{10}$, 30th ult. from $29\frac{7}{10}$ to 30. S. W. to N. W.
Common ſtation about $30\frac{1}{10}$.

Thermometer.

Higheſt 56. Loweſt 46.
Greateſt variation in one day 5 deg. 17th, 52 to 47. N. E. cloudy.
Common ſtation 52.

The weather in this month has been generally fair, clear, cool, and froſty, there having been more dry days in this month than in many of the preceding. There were ſome wet days about the beginning, and it now ſeems diſpoſed to rain, the wind having ſkipped from N. E. E. where it kept moſt part of two weeks, to S. E.

The variations in reſpect to heat and cold, as well as the weight of the atmoſphere, have been very inconſiderable; much leſs than in the preceding months: to this perhaps may be aſcribed the ſhare of health which the town enjoys; the weekly bills in the firſt week being 317, in the ſecond 373, the third 292, and the laſt 358.

A ſlow continual fever, beginning with acute pains in the forehead, extending to the eyes, with ſcarce any perceptible rigors preceding; a quick, ſoft pulſe, not much heat, a moiſt tongue, crude urine, moderate ſweats, but eaſily rendered profuſe, made its appearance about the beginning of the month, though many were not affected with it, and few mortally: bleeding eaſed, but did not remove the pains in the head; bliſters were of uſe; mild diaphoretics and cardiacs, in ſmall doſes, kept up the pulſe, and afforded great relief; large doſes, eſpecially of the volatile kind, occaſioned reſtleſsneſs, thirſt, a dry tongue, copious ſweats, and high-coloured water, however plentifully the ſick took diluters. Thoſe who recovered appeared to grow better about the 14th or 15th, the water depoſiting a copious ſediment of a yellowiſh colour.

The malignant ſore-throat affected ſeveral, both children and adults, ſome of whom had large hard tumours on each ſide of the neck externally; where theſe appeared early, and were very large, the ſick were in great danger, and if they recovered, the amendment was ſlow and tedious.

Obſervations on the Weather, &c. in November 1751.

The weather in this month has been unuſually tempeſtuous, and more variable than in the preceding. The laſt concluded wet and cold, the preſent began cold and froſty, and continued ſo till the 12th; the wind ſhifting then from N. E. to the Southward, brought rain and a warmer air; and from that time to near the concluſion of the month, we have had frequently very high winds, and heavy rains with ſome ſnow; with reſpect to cold, variable but not immoderate *.

Barometer.

Higheſt 30 $\frac{5}{10}$, 5th inſt. froſt. Wind N.
Loweſt 29. 0, 19th, heavy rain and ſnow.
Greateſt variation in one day $\frac{4}{10}$, 19th inſt.
Common ſtation about 29 $\frac{8}{10}$.

* On the 21ſt was ſnow, hail, much lightning and thunder.

Thermometer.

Thermometer.

Higheſt 54, 26th ult. Wind S. E.
Loweſt 42, 3d inſt. clear, very cold. N. W.
Greateſt variation in one day } 8 deg. { 28th, 54 to 46. N. W. high.
Common ſtation 47.

The concluſion of the laſt and the beginning of the preſent month were moderate, and the weekly bills very little affected. After the cold froſty weather ſet in, the burials increaſed from 319 to 395, and kept up nearly to the ſame number the week following. A more temperate moiſt ſeaſon ſucceeding, reduced them to 338. It has been frequently obſerved, and as far as the bills may be depended on, is demonſtrable, that an exceſs of wet, with moderate warmth, is not ſo injurious to our conſtitutions, as a ſevere cold ſeaſon.

Obſervations on the Weather, &c. in December 1751.

The weather in this month was variable: the greateſt part of it was fair, froſty, dark, foggy, and cold; the wind northerly: the latter part of it was wet, and, with reſpect to cold, moderate; the wind generally W. or S. W. The weekly bills, which were very low in the laſt month, increaſed with the cold weather, and ſunk again as it became more temperate.

Barometer.

Higheſt 30. 4, 30th ult. Wind North.
Loweſt 29. 5, 20th inſt. Wind S. E.
Greateſt variation in one day $\frac{3}{10}$.
Common ſtation, 30.

Thermometer.

Higheſt 51, 21ſt inſt. Wind S. E.
Loweſt 37, 4th inſt. thick fog. N.
Greateſt variation in one day 6 deg.
Common ſtation 44.

In the preceding month the ſmall-pox began to make their appearance more frequently than they had done of late, and became epidemic in this. They were in general of a benign kind, tolerably diſtinct, though often very numerous. Many had them ſo favourably as to require very little medical aſſiſtance, and perhaps a greater number of people have got through them ſafely than has of late years been known; for the truth of which remark, the writer refers to the experience of practitioners. And as the ſmall-pox, of all the diſeaſes mentioned in the weekly bills, is, perhaps, the only one of which we have

have any tolerable exact account, it being a diſeaſe which the moſt ignorant cannot eaſily miſtake for another, it may not be improper here to ſubjoin the amount of the general bills, and the numbers of thoſe who died of the ſmall-pox during the four laſt years.

	Total Amount.	Small-pox.
In 1748,	23,869.	1789.
1749,	25,516.	2625.
1750,	23,727.	1229.
1751,	21,028.	998.

And here one cannot but regret the preſent defective method of compiling theſe bills; the liſt of diſeaſes is itſelf abſurd in ſeveral inſtances; and the perſons who are to aſſign a name to the diſeaſe of which any perſon died, are the leaſt qualified perhaps of all others to do it properly. It is needleſs in this place to point out to phyſicians the benefits that would moſt probably accrue to the ſcience they are converſant in, from faithful hiſtories of the air, and the moſt obvious mutations in reſpect to its qualities, together with correct accounts of the ſeveral diſeaſes of which thoſe died whoſe deaths are regiſtered.

It would likewiſe take up too much room in this place to deſcribe the uncertainty to which thoſe are expoſed, who would form any uſeful or preciſe ideas from the preſent bills; it may not, however, be improper to wipe off one unjuſt aſperſion, which from theſe very bills is caſt upon our country by foreigners, at leaſt, ſo far as any thing of this kind can contribute to it.

The three moſt capital articles in our general bills, are Conſumptions, Convulſions, and Fevers; under which laſt article are commonly ranked, not only common inflammatory fevers, but every other ſpecies that is uſually enumerated; yet the number of thoſe who are ſaid to die of fevers ſeldom equals, very ſeldom exceeds the number of thoſe who are ſaid to die of Conſumptions; nay, it is much the moſt common for theſe to be as four to three of Fevers. Hence foreigners, who are ignorant in what manner our bills are compiled, give it out, that a Conſumption is the grand endemic of England; and conclude, unjuſtly, that, as ſcarce any diſeaſe is known to be more affected, either for the better or the worſe, by the air than this is, the air of England muſt moſt certainly have ſomething in it extremely pernicious, as a diſeaſe, ſo much depending on the ſtate of the air, is ſo frequent among us: whereas, in fact, the truth of the caſe appears to be this: the ſearchers are commonly two as poor and ignorant perſons as the pariſh affords; theſe are to ſee all dead bodies, and to report to the company of pariſh-clerks of what diſeaſe they died: if the body is emaciated, which may happen even from an acute fever, 'tis enough for them to place it to the article of Conſumptions,

though the death of the party was perhaps owing to a diſeaſe ſpecifically different; and thus a monſtrous account is framed by the ignorance of the ſearchers, to the diſgrace of our country, and even ſo far as to diſcourage ſome foreigners from coming among us.

It may be alſo obſerved, that from the ſame cauſe ſprings another abſurd effect, which is the article of Convulſions. 'Tis not uncommon for perſons who die of very different diſtempers, to have ſome convulſive motions before they depart; in fevers of various kinds, nothing is more common: yet if any thing of this nature is hinted at before the ſearchers, or they make any inquiry and find this to be the caſe, the dead are immediately added to the article of Convulſions. Of theſe facts the writer has known a multitude of inſtances; curioſity at firſt, ſeconded by an inclination to contribute all in his power to rectify ſo flagrant an abuſe of an inſtitution deſigned for, and ſtill capable of, very beneficial purpoſes, having engaged him in ſome enquiries of this nature.

From comparing the accounts of the weather given in the preceding months, it will appear, that the ſeaſons, excepting a greater tendency to rain than has happened for ſeveral years paſt, have been uncommonly moderate; no extremes of heat or cold, nor any great or ſudden changes, in reſpect to either of theſe qualities. This may, perhaps, in a great meaſure have contributed much to the healthineſs of the year in this metropolis, it having been before obſerved, that no weather is in common ſo little productive of acute and fatal diſeaſes, as the warm and the moiſt, nor any ſo dangerous in theſe reſpects as the oppoſite; and may at the ſame time account for that remarkable addition to the article of coughs and hooping-coughs, which appears in the preſent year compared with the preceding; the account whereof is as follows:

Died of the cough and hooping-cough	In 1748,	150.
	1749,	82.
	1750,	55.
	1751,	275.

It may likewiſe be farther obſerved, that, according to the ſum of the laſt bill, the chronic diſeaſes are more numerous in proportion than the acute, theſe ſeeming to have diminiſhed in a ſomewhat greater ratio, and that probably for the reaſon before aſſigned; viz. that moiſt and moderately warm ſeaſons are the leaſt of all diſpoſed to produce acute diſeaſes. For as to the hooping-cough, it may rather be ranked among the chronics, it ſeldom proving fatal in a ſhort time, when ſo it terminates.

Obſervations

Obſervations on the Weather, &c. in January 1752.

Barometer.

Higheſt 30. 4. Loweſt 29. 0, 14th. High wind, S. Rain.
Greateſt variation in one day $\frac{2}{10}$.
Common ſtation 29. 5.

Thermometer.

Higheſt 51 deg. Loweſt 42 deg.
Greateſt variation in one day 4 deg.
Common ſtation 45.

The barometer in this month has afforded an unuſual phenomenon, which is worthy of notice, and eſpecially as the cauſe of it is ſince come to light. In the concluſion of the laſt and the fore part of this month, the quick-ſilver ſtood moſtly above 30 deg. with a northerly wind. It ſunk about the middle of the month very low, with the wind at S. E. and S. W. viz. to 29, and roſe but a degree or two during ten days, though the wind ſhifted to the north-eaſt, and kept northerly all the time, with dark, cold, moiſt weather, ſome rain, and now and then a ſlight appearance of ſnow.

What is moſt ſingular in this caſe is, that the quickſilver ſhould ſink ſo low, and continue there ſo ſteadily, with a wind that commonly raiſes it to 30 deg. at leaſt, that is, a full inch higher, unleſs great quantities of ſnow fall at the ſame time; but as very little of this appeared about London, the obſerver was at a loſs to account for it any other way than by ſuppoſing that in the north ſomething unuſual muſt have happened, of which, indeed, he was ſoon after informed *(a)*.

The variations, in reſpect to heat or cold, have been very inconſiderable; the mercury having traverſed only nine degrees during the whole month, and only four of theſe in any one day. But to the ſenſes the weather ſeemed much more variable, it having been in general a dark, moiſt, cold, and unpleaſant month.

A diſtinct benign kind of the ſmall-pox continued to be the epidemic of this month; a few confluent caſes occurred, but rarely, in compariſon of the

(a) Extract of a letter from Richmond in Yorkſhire, dated the 21ſt inſtant.

——The ſnow began to fall the 15th, and, ſave a little intermiſſion the next morning, hath continued falling ever ſince; and though we have a ſtrong north-eaſt wind, which drives the ſnow into hollow, ſheltered places, yet in the middle of a plain field, into which I got with ſome difficulty this evening, to meaſure the depth of the ſnow, I found it to be 27 inches deep, very heavy, and cloſe. If it had fallen light, and with little wind, it muſt have lain above a yard deep upon the plain ground, which is more by above one half than moſt people here have ever ſeen, and it ſtill continues ſnowing.

numbers of thoſe who had them in a favourable way. Bleeding moderately, and an emetic, at the firſt attack, commonly rendered the diſeaſe extremely favourable, and, except a gentle anodyne to abate the ſenſe of ſoreneſs, or an emollient clyſter, was almoſt the only medical aſſiſtance required.

A few had the malignant angina, together with the ſmall-pox. Theſe required a warm antiſeptic regimen, and commonly did well. The intercurrent diſeaſes were the *peripneumonia notha*, and ſlow remittent fevers, often attended with *apthæ*, and running out to a great length, eſpecially if either copious evacuations on one hand, or a too warm regimen on the other, had diſordered the uſual procedures of nature.

Moderate evacuations, blifters, gentle diaphoretics, keeping the body ſoluble at the ſame time, appear the moſt likely methods of removing the diſorders of the ſeaſon, being moſtly the produce of a *ſeroſa colluvies*.

Obſervations on the Weather, &c. in February 1752.

Barometer.

Higheſt 30. 2. Loweſt 29. 4.

Greateſt variation in one day 3. the 9th, from 29. 8. to 29. 5.

Common ſtation 30. 0.

Thermometer.

Higheſt 51, 24th inſt. Wind S. E.

Loweſt 38, 24th inſt. Snow, cold. N. W.

Greateſt variation in one day 5.

Common ſtation 45.

The wind during this month kept generally betwixt the S. E. and N. W. points, ſeldom continuing in any one, two days together. As in the preceding month the quickſilver ſunk unuſually with a northerly, ſo it has kept up with a ſoutherly wind in as remarkable a manner, though the cauſe has not hitherto appeared ſo evidently.

The weather has in general been inclined to fair, clear, and temperate, though interrupted with ſome ſmart froſts, heavy rains, ſnow, and hail; but theſe were of ſhort duration.

The ſmall-pox continued to be the principal epidemic of the ſeaſon, though in general of a benign kind. Children, and young perſons, unleſs the conſtitution is very unfavourable, get through it very well, and the height to which the weekly bills are ſwelled, ought to be conſidered in the preſent caſe as an argument of the frequency, not fatality of this diſtemper. For from what has occurred to the writer of theſe obſervations, as well as what he has been

been able to learn from ſome of the oldeſt practitioners, this diſeaſe has ſeldom, if ever, been known to be more general, or ſo mild and favourable as it is at preſent.

The practice of inoculation ſeems to gain ground conſiderably, and is generally performed in the manner deſcribed in vol. xxi. p. 123. Could thoſe who are employed in this affair be prevailed upon to communicate authentic accounts of their ſucceſs, they would do an eſſential ſervice to the public.

Obſervations on the Weather, &c. in March 1752.

Barometer.

Higheſt 30. 6½, the 27th and 28th ult. Wind N. W. clear and cold.
Loweſt 29. 3, the 15th, with ſtorms of wind S. W.
Greateſt variation in one day 4½.
Common ſtation about 30.

Thermometer.

Higheſt 55, 10th inſt. Wind S. E.
Loweſt 39, the 6th, froſt. Wind N. E.
Greateſt variation in one day 6, the 13th, from 50 to 44.
Common ſtation 47.

The weather in this period has been variable and inconſtant: the concluſion of the laſt month was fair, cold, and froſty; the fore part of this inclined to warm and fair; the middle wet and tempeſtuous; and the laſt inclined to cold, with ſtorms of wind, rain, and hail. The diſeaſes have been the ſmall-pox chiefly, rheumatiſm, and of late a few remittent fevers, affecting the head violently at the firſt attack, and very early occaſioning unfavourable appearances.

The ſmall-pox continue to be moſtly benign, often of the coherent kind, eſpecially in adults, and a few have the confluent. In theſe the ſpitting is commonly very copious, and ſo fatiguing as to prevent the patient from enjoying any reſt or quiet; occaſioning an early tendency to a delirium, and hindering the ſwelling of the face. Under theſe circumſtances, ſmall doſes of ſome warm anodyne, ſuch as *theriac. And. & conf. Damocrat.* from gr. 15 to ℈j or ℥ſs at a doſe, once in 6 hours, have afforded great relief, and rendered larger doſes of a paregoric at night leſs neceſſary for ſome days; the ſpitting becomes leſs troubleſome, the face ſwells, the pulſe grows full yet ſoft, and the oppreſſion, of which under this circumſtance they often complain, is relieved. In the preſent conſtitution at leaſt, it will perhaps be found true, from the moſt impartial and accurate obſervations, (and ſuch only ought to be admitted into medical records) that the danger will be in proportion to the ſpitting, and that it is expedient to reſtrain this diſcharge, and to divert the flow.

flow of it to the ſkin, by ſmall doſes of opiates. It ſhould be remembered, that this remark relates to the preſent conſtitution; and that it may not always hold good, that we ſhould endeavour by warm anodynes to ſuppreſs a diſcharge, which has heretofore been conſidered as a peculiar advantage. It ſhould only put us upon obſerving the *juvantia & lædentia*, with the utmoſt attention, and to act as reaſon and experience direct.

It ſeems likewiſe neceſſary to remark, that there is a poſſibility of occaſioning great detriment to the patient, by purging too early in this diſtemper. If the diſeaſe is benign, and the crop of puſtules not very large, no inconvenience ſeems likely to ariſe from waiting till they are in general dry, not only on the face and trunk, but even on the extremities. And it is not altogether improbable, but that ſome of thoſe diſorders proceed from this cauſe, which are intended to be ſhunned by early purging. 'Tis well known that the power of abſorption ſeems to be increaſed after purging. If this be the caſe, while the body is covered by a putrid cruſt, or by any quantity of putrid moiſture, a larger quantity muſt be received into the maſs of blood, muſt render it acrid, and occaſion hectic heats, or be depoſited in particular collections, and form abſceſſes, boils, and other inconveniencies or diſtempers. And, notwithſtanding the authority of ſome reſpectable names, it is not a matter out of doubt with ſome, how far purgatives may be beneficial in that ſtage of the diſtemper, wherein they have been ſo warmly recommended.

Obſervations on the Weather, &c. in April 1752.

Barometer.

Higheſt 30. 4. Loweſt 29. 2, the 25th inſt. Wind S. W. with rain and hail.
Greateſt variation in one day 2.
Common ſtation 30.

Thermometer.

Higheſt 56. 56. Loweſt 42.
Greateſt variation in one day 5.
Common ſtation 51.

The weather at the end of the laſt month was froſty, clear, and cold; at the beginning of this, it became more moderate, grew cold and wet towards the middle, and again cleared up towards the concluſion, with ſome ſudden guſts of wind, and rain, and hail. But in general the weather, during this month, may be ſaid to have been remarkably even, and from its ſenſible qualities not likely to give birth to any particular diſtemper.

The ſmall-pox continued to be the principal epidemic during this period,

as

as it had been in the preceding months; during which time it attacked moſt of thoſe who had not hitherto had the diſtemper, and is now ſpread into the ſuburbs, and the neighbouring villages, but ſtill in a favourable way in general. Some have the confluent, a few the bleeding kind; but theſe are not very common, conſidering the number of thoſe who are ſeized with it. After bleeding where it was indicated, and cleanſing the ſtomach with an emetic at the firſt attack, mild cardiacs, with ſmall doſes of anodynes, ſucceeded much better than the cooling antiphlogiſtic regimen, which commonly occaſioned languors, increaſed a troubleſome, unavailing ptyaliſm, and retarded the eruption, and progreſs of maturation.

Several were ſeized with a remittent fever, accompanied with acute headachs, reſtleſſneſs, and anxiety, a quick full pulſe, without much thirſt, which generally ſoon gave way to bleeding, emptying the firſt paſſages, and gentle diaphoretics.

THESE obſervations on the weather have now been carried on through all the ſeaſons, and the principal changes taken notice of. Though the advantages reſulting from them may yet be but ſmall, a longer ſeries may prove more fruitful. To the writer it appears, that not only a ſteady courſe of any kind of weather may produce particular diſeaſes, but likewiſe very quick tranſitions from one extreme to another may be equally injurious; with this view he has noted not only the greateſt aſcent and deſcent of the quickſilver in his inſtruments, but likewiſe the greateſt variations that have happened in the ſpace of 24 hours, in any part of the month; and theſe circumſtances he has placed as follows:

VIEW *of the* General State *of the* AIR *for* 1751.

	Barom.			Thermom.		
	Higheſt.	*Low.*	*Var.*	*H.*	*L.*	*Var.*
April -	30.	29.1	.3	57	43	4
May -	30.4	29.2	.3	58	47	5
June -	30.3	29.6	.4	68	53	5
July -	30.1	29.4	.6	65	59	3
Auguſt -	30.3	29.4	.3	64	57	3
September -	30.3	29.3	.6	62	50	6
October -	30.4	29.4	.3	56	46	5
November -	30.5	29.0	.4	54	42	8
December -	30.4	29.5	.3	51	37	6
January -	30.4	29.0	.2	51	42	4
February -	30.2	29.4	.3	51	38	5
March -	30.6½	29.3	.4⅓	55	39	6

And it may afford ſome ſatisfaction to the reader to obſerve, that, notwithſtanding the daily complaints we hear from thoſe about us, and the repetition of the ſame complaints that occur in the writings of ſome foreigners, our climate is more temperate, the extremes of heat and cold more confined, the tranſitions from one extremity to another more gradual, than could eaſily have been imagined; and more ſo, perhaps, than can be equalled in every reſpect by any country in Europe, of which we have any authentic memorials, as may perhaps on ſome future occaſion be demonſtrated.

From the preceding table it will appear, that during the laſt 12 months the mercury in the barometer never roſe higher than 30 inches, 6½ tenths; never ſubſided lower than 29°; conſequently, that its motion did not much exced 1½ inch in that time, nor more than 6 tenths of an inch in 24 hours.

The thermometer likewiſe diſcovers a more equal temperature, with reſpect to heat and cold, than might have been expected in a country where ſo many exclamations are daily vented againſt the inconſtancy of the weather, and the irregularity of the ſeaſons: the utmoſt aſcent of the quickſilver was 68 degrees, the loweſt deſcent 37 degrees; ſo that it only traverſed in the ſeveral changes from ſpring to ſummer, from both to autumn and winter, about 32 degrees, and not more than 8 of theſe in 24 hours at any one time.

If we, therefore, compare this account with the moſt accurate we have of the weather in any other country, we ſhall perhaps find abundant cauſe to be ſatisfied with our own, in this, as well as in moſt other reſpects.

Obſervations on the Weather, &c. in May 1752.

Barometer.

Higheſt 30 $\frac{3}{10}$, the 11th. Wind E. Loweſt 29 $\frac{4}{10}$.

Greateſt variation in one day $\frac{3}{10}$.

Common ſtation 29. 9.

Thermometer.

Higheſt 63. Loweſt 49, 30th ult. Wind N.

Greateſt variation in one day, from 55 to 61, the 13th. Wind N. E.

Common ſtation 55.

The concluſion of the laſt month was wet, cloudy, cold, with high winds; the beginning of this was more temperate, the weather moſtly fair and clear, with ſhowers ſometimes intervening, and continued ſo till towards the end of this month.

The mercury in both inſtruments has been remarkably ſteady, the ſeaſon of the year conſidered; the ſenſible changes more moderate than uſual; and if the article of ſmall-pox had not ſwelled the weekly accounts conſiderably,

it

it would have appeared to have been, as in reality it was, a healthy time, ſcarce any thing like an epidemical diſeaſe occurring in this period.

Obſervations on the Weather, &c. in June 1752.

Barometer.

Higheſt 30 $\frac{3}{10}$. Loweſt 29 $\frac{6}{10}$.

Greateſt variation in one day $\frac{4}{10}$, *viz.* the 4th. Wind high, S. W. yet it roſe from 29.8 to 30.2.

Common ſtation 29 $\frac{9}{10}$.

Thermometer.

Higheſt 66 deg. Loweſt 59.

Greateſt variation in one day 5, the 11th, from 60 to 65. Wind W. clear and calm.

Common ſtation 61.

The concluſion of the laſt month was cloſe, ſultry, and wet; the fore-part of this was fair, ſerene, and warm. About the middle, the weather became more variable, and at length ſet in cloudy, wet, and ſomewhat cool, and ſo continues. The wind for the moſt part was ſoutherly, and ſometimes very high, which, together with the moiſture of the air, made it cold to the ſenſe, though, by experiment, the heat was equal and moderate.

The ſmall-pox ſtill continues in the neighbourhood of this city, not many eſcaping who have not had it before. This article, in the weekly bills, hath been very high, but ſeems now to be upon the decline: the mortality, however, ought not to be eſtimated by this ſcale, without taking into conſideration the numbers who have it, and eſcape not only with life, but even favourably; witneſs the crouds of ſuch whom we daily ſee in the ſtreets, without any other veſtige than the remaining redneſs of a diſtinct pock.

There is a circumſtance of this diſeaſe which I have once ſeen, and which has fallen under the obſervation of ſeveral gentlemen, eminent in the profeſſion, who related it to me, though I do not remember to have found it in any writer on the ſubject. Several children, who had the diſtemper in a very favourable manner, loſt their ſpeech, and became unable to ſtir or help themſelves; and this without being reduced in fleſh, or labouring under any diſcharges that might be ſuppoſed to weaken them in any ſuch degree, ſo that it has much more the appearance of a palſy, than mere imbecillity, and affects the organs of ſpeech as well as other inſtruments of motion. This diſorder has likewiſe been obſerved to occur in ſuch caſes, chiefly, where the eruption has been attended with convulſions; and I do not remember to have heard of one inſtance in which this had not been the caſe.----This affection ſeems to be

more troubleſome and alarming to thoſe about the ſick, than dangerous; for though it goes off ſlowly, yet all I have heard of at length have recovered perfectly. A perpetual bliſter betwixt the ſhoulders, gentle rhubarb purges, a proper diet, and the air, ſeemed the moſt ſerviceable remedies.

Obſervations on the Weather, &c. in July 1752.

Barometer.

Higheſt 30. 2, the 18th. Wind S. W. and much rain.
Loweſt 29. 5, the 25th. Wind S. fair and clear.
Greateſt variation in one day $\frac{2}{10}$.
Common ſtation 29. 7.

Thermometer.

Higheſt 70 deg. the 13th. Fair, clear.
Loweſt 60, very warm. Wind S. E.
Greateſt variation in one day 7 deg. *viz.* from 63 to 70, the 13th.
Common ſtation 63.

The whole of the preceding month may be ſaid to have been wet, cloudy, and yet inclined to warm. The barometer ſtood moſt common at 29.7, or 8, which is what is meant by its common ſtation; it never ſunk or roſe above two degrees in one day, which ſhews an equality, hardly to be expected while the wind ſhifts to every part of the compaſs, with ſudden ſtorms of heavy rain. One phænomenon was remarkable: It rained hard while the quickſilver ſtood very high; it was fair when at the loweſt. This, however, proves no more, than that we are not yet acquainted with all the cauſes that affect this inſtrument. The thermometer, except on one particular day, was alike ſteady; it ſeldom varied above three degrees in 24 hours, and the quickſilver ſtood oftener at 62 or 3, than at any other point. The winds blew moſtly from the ſouthern or weſtern points, and ſeldom very freſh.

Few acute diſeaſes, except the ſmall-pox, appeared this month. The article of fevers in the weekly bills was perhaps ſeldom ever lower. The number of thoſe who died of the firſt-mentioned diſeaſe ſeems to be leſſening; but the malignity rather ſeems to increaſe with the warmth of the weather, ſome inſtances having lately occurred of a very malignant confluent ſort; conſiderable numbers however eſcape: and this year may be marked, in the annals of medicine, as one of the moſt remarkable conſtitutions that has happened in our memory, both for the frequency of this diſtemper, and its mildneſs; and it may alſo be taken notice of, that the weather has been at the ſame time unuſually temperate with regard to heat, though in general wet and cloudy.

Children from one to three years old have, I believe, ſuffered more from this

this diſtemper, during this conſtitution, than thoſe of any other age, at leaſt it has ſo fallen out under the writer's obſervation. Several inſtances he has known, of this age, when the load was not very large, the eruption kindly, the maturation at firſt very promiſing; but inſtead of ripening on the extremities, about the 10th or 11th, they continued crude and watery; the pulſe quick, with great heat, delirium, reſtleſsneſs, and difficulty of breathing; the tongue dry; the belly ſometimes looſe, with dark fœtid ſtools, at other times diſpoſed to coſtiveneſs. In this manner ſome have continued 17 or 18 days, inſenſibly waſting both in fleſh and ſtrength, in ſpite of every effort to aſſiſt them, and have then expired.

Obſervations on the Weather, &c. in Auguſt 1752.

Barometer.

Higheſt 30 $\frac{2}{10}$. Loweſt 29 $\frac{5}{10}$.

Greateſt variation in one day $\frac{2}{10}$.

Common ſtation about 30.

Thermometer.

Higheſt 68 deg. 10th at night. Wind N.

Loweſt 60, 16th. High wind at W.

Greateſt variation in one day 4 degrees.

Common ſtation 63.

The end of the laſt month was inclined to be wet, windy, and dark. This began fair, cloudy, and warm: about the middle it became fair, and clear, with ſome intervening ſhowers, and ſo continued to the 25th. The wind was variable, ſeldom continuing more than two days in the ſame quarter, but kept generally S. W. The quickſilver in the barometer was unuſually ſteady, and often kept high, with the wind at S. E. In the thermometer, except on one or two days, its motion was confined, the ſeaſon of the year conſidered, within very narrow limits; the air having ſeldom been hot, or otherwiſe than warm, and often moiſt.

The ſmall-pox, which was ſlowly decreaſing laſt month, has continued, through the courſe of this, to grow leſs frequent, and the bills were leſs by 40 laſt week, than at the concluſion of the laſt month.

Fewer fevers have ſeldom been known at this ſeaſon; which may be ſaid in general to be very healthy.---Hypochondriac complaints are frequent; hæmorrhages from various parts, the hemoptoe eſpecially are not uncommon; and ſuch other complaints as ariſe from great laxity of the ſolids, and conſequent increaſe of viſcidity in the fluids.

Obſervations on the Weather, &c. in September 1752.

Barometer.

Higheſt 30 $\frac{3}{10}$. Loweſt 29 $\frac{2}{10}$.

Greateſt variation in one day $\frac{6}{10}$, *viz.* the 26th ult. when it roſe from 29 $\frac{2}{10}$ to 29 $\frac{8}{10}$. High wind at N. W.

Common ſtation about 29 $\frac{9}{10}$.

Thermometer.

Higheſt 64 deg. the 19th. Wind South.

Loweſt 54, the 27th ult. W. N. W.

Greateſt variation in one day 6 deg. the ſame day.

Common ſtation 60 degrees.

The laſt month concluded ſtormy, wet, and cold; this began more moderately, though ſomewhat windy, dark, and cold: towards the middle the weather became fair, clear, and warm; and, except a few windy days about the 22d, has been moderate, and inclined to fair.

The ſmall-pox has almoſt totally diſappeared in the city; in the ſuburbs, and extreme parts of the town, it is much leſs frequent than it has been; in ſome of the neighbouring villages it yet ſubſiſts, though in none of them, as far as I can learn, with any remarkable frequency.

Many have been ſeized with pains about the region of the ſtomach, attended with ſickneſs, vomiting of green porraceous bile, and coſtiveneſs. Shiverings, laſſitude, and pains in the limbs, often accompanied the firſt attack; in ſome, the leaſt attempt to raiſe the head from the pillow, produced a tendency to vomiting. The heat in moſt was moderate; the pulſe ſmall, and ſeldom quick. Small doſes of the ſaline mixture, made quite neutral with abſorbents, and a few drops of *Tinct. Thebaic.* commonly took off the diſpoſition to vomiting in a ſhort time, and a doſe of rhubarb, or hiera picra, then was retained, and gave effectual relief.

Emetics, though of the mildeſt kind, ſeemed not to be of the uſe one might have expected. The pain often ſeemed to be increaſed afterwards; the tendency to vomiting became more continual; the laſſitude, reſtleſsneſs, and proneneſs to vomit, upon motion, more troubleſome; and the difficulty of procuring the neceſſary diſcharges downwards, increaſed.

Obſervations

Obſervations on the Weather, &c. in October 1752.

Barometer.

Higheſt 30 $\frac{4}{10}$ $\frac{1}{2}$. Loweſt 29 $\frac{6}{10}$.
Greateſt variation in one day $\frac{2}{10}$. *viz.*
Common ſtation about 29 $\frac{2}{10}$.

Thermometer.

Higheſt 62 deg. Loweſt 50 degrees.
Greateſt variation in one day 6 degrees.
Common ſtation 56 degrees.

During this month, the weather has been leſs variable, than for the ſame length of time it has been ſince the year commenced. Excepting two or three ſhowers, it has been altogether fair, moſtly ſunſhine, and little wind; and though in and about the city there have been very thick fogs, morning and evening, during the two laſt weeks, now and then continuing all day, yet moſt commonly they broke away before noon, and left us the cleareſt ſky, for the greateſt length of time together, we have had this ſummer.---The warmth and equal temperature of the air, have been not leſs remarkable than the dryneſs; and though the wind has been chiefly N. E. yet the air was neither ſo cold or piercing, as is commonly felt when it blows from this quarter. Should theſe remarks afford no other advantage, yet to have it in our power to compare, and with ſome degree of exactneſs, the paſt ſeaſons with the preſent, will afford ſatisfaction; and if the reader looks back to the yearly table (See April 1752, p. 95) he may there at one view ſee how much the laſt differed from the preſent, both in reſpect to coldneſs and wet. It may alſo be proper again to explain what is meant by the words *common ſtation*; which are not intended to ſignify the mean height betwixt the higheſt aſcent, or loweſt deſcent of the quickſilver, in either inſtrument, but to denote that it oftener ſtood about this point, than at any other.

The town in general has been healthy, as from ſo equal a ſeaſon might be expected; ſome inflammatory diſorders of the bowels have occurred, but oftener occaſioned by errors in diet (eſpecially the eating of vaſt quantities of walnuts, which are uncommonly plentiful) than by any other cauſe.

And here it may not be improper to obſerve, that this nut ſeems entirely indigeſtible in the ſtomach, unleſs it be firſt well chewed, and by the teeth ground down as fine as it ought to be, to become nutritious. Without this care, it breaks under the teeth into ſmall angular bits, often with ſharp edges, capable of hurting very tender bowels; and by this means, and not by any acrid irritating quality they are naturally poſſeſſed of, while recent, occaſioning

pains,

pains, ſometimes fluxes, or ſpaſmodic conſtrictions of the guts, and obſtinate coſtiveneſs.

And it has happened in many ſuch inſtances, that after the walnuts thus haſtily devoured, have laid in the body many days, they have been voided undigeſted and unaltered, to appearance at leaſt: ſo that there is great reaſon to ſuſpect, that as the nuts are ſwallowed, ſo they paſs the ſtomach and inteſtines, no power being therein lodged, capable of reducing them into the form of chyle. It may however ſo happen that they may become highly injurious, if long retained in the body, not only from their form, as hath been mentioned above, but likewiſe from a rancid, cauſtic acrimony, which the oil of this nut ſeems capable of acquiring, by digeſtion, as well as moſt other oils of the like nature and extraction; which from the mildeſt and leaſt irritating ſubſtances become, merely by being expoſed to proper degrees of heat, as acrid and as ſtimulant as moſt in nature; ſo that if a ſpaſm is once occaſioned in the guts by their figure, and coſtiveneſs enſues, they every moment acquire new properties, which render them capable of producing very miſchievous conſequences. To prevent theſe, it is therefore beſt to eat but few at a time, to grind them very well, and then they may be uſed with as much ſafety, by moſt people, as any other kind of fruit.

Obſervations on the Weather, &c. in November 1752.

Barometer.

Higheſt 30 $\frac{5}{10}$ $\frac{1}{2}$. Loweſt 29 $\frac{2}{10}$. *viz.* 9th ult. High wind S. S. W.

Greateſt variation in one day $\frac{6}{10}$, *viz.* 22d, from 30.2 to 29.6; thick fog, and wind from N. W. to S. S. W.

Common ſtation about 30 $\frac{2}{10}$ $\frac{1}{2}$.

Thermometer.

Higheſt 57 deg. Loweſt 46 degrees.

Greateſt variation in one day 6 degrees.

Common ſtation 52 degrees.

In this month the weather has been more variable than in ſome of the preceding; in the firſt part, the air was moſtly fair, clear, and froſty; with thick fogs morning and nights in the city. Towards the middle of the month, it became more dark and cloudy, with high winds at S. S. W. and a few ſhowers; concluding moiſt and foggy.

The mercury in the barometer often ſtood at an uncommon height, even with the winds at S. S. W. when it generally ſubſides very low. In the thermometer it was more variable, though not more ſo than is uſual at this ſeaſon.

So

So that upon the whole the weather may be ſaid to have been as temperate in this, the time of the year conſidered, as many of the preceding months.

The meaſles have made their appearance in ſome parts of the town, but are not hitherto accompanied with any uncommon or very dangerous ſymptom. The ſmall-pox have not ceaſed, nor the hooping-cough altogether, yet theſe are leſs frequent than they have been.

Rheumatiſms, and an inſidious kind of rheumatic fever, have appeared this month more frequently than in the preceding. This fever is at firſt perceived by ſlight ſhiverings, acute pains in the limbs, ſhifting with great quickneſs from part to part: the heat not immoderate; the pulſe, for many days, not much quicker than in time of health; the belly rather coſtive; and the urine uncommonly thick and clay-coloured. After ſeveral treacherous remiſſions, the head is at length attacked, a delirium, watchfulneſs, or *coma vigil*, and ſpaſms of every part ſucceed, which end unhappily.---Whatever evacuations ſeem neceſſary, muſt be directed early; whatever weakens, muſt in the progreſs of the diſeaſe be avoided; and ſtimulants applied with moderation. Sometimes *apthæ*, of a benign aſpect, happily terminate the diſeaſe. If a dark-coloured *ichor* diſcolours the lips or tongue, the event is too often fatal.

Obſervations on the Weather, &c. in January 1753.

Barometer.

Higheſt 30 $\frac{4}{10}$.
Loweſt 29, the 10th inſt. with rainy tempeſtuous weather, wind W.S.W.
Greateſt variation in one day $\frac{6}{10}$.
Common ſtation 30 $\frac{1}{10}$.

Thermometer.

Higheſt 49 degrees.
Loweſt 38 deg. 24th, hard froſt. Wind N.
Common ſtation 43 degrees.
Greateſt variation in one day 5 degrees.

Thermometer in the open air, in London.

Higheſt 43. Loweſt 32.
Greateſt variation between any two mornings, 7 degrees.

The weather in this month, though ſometimes variable, has been moſtly inclined to cold, fair, and froſty, and in the city, a few days excepted, very dark. The wind was often northerly, and when from the S. and S. W. points, generally bluſtering, with cold rain or ſleet.

The variations were not however ſo ſudden, or ſenſible, as to affect the general health in a very eminent degree; except in chronic diſorders of the breaſt,

breaſt, as aſthmas, peripneumonies, and *defluxions*, which were very frequent about the beginning of the month, and were fatal to many.

Some ſlow continual fevers have likewiſe appeared, and terminated variouſly, ſome with benign *apthæ*, which appeared critical, or elſe with miliary eruptions, not in the neck and breaſt only, but over the whole body.

This kind of fever ſeldom admits of any evacuation, after the diſeaſe is once confirmed, except by bliſters, and moderate ſweats: and theſe, if profuſe, are moſtly prejudicial, and the former almoſt always ſo, when applied very early, as is too much the general practice of thoſe, who, by a pernicious cuſtom, are commonly the firſt conſulted; and who ſeldom fail to adviſe bleeding and bliſtering almoſt in the ſame breath, and ſuch medicines, as they ſuppoſe will promote the moſt plentiful ſweats: ſo that in two or three days, it often happens that the ſick have undergone every ſpecies of pharmaceutical direction, and are then ſurrendered, unneceſſarily enfeebled, into the hands of the phyſician; who can only lament the loſs of thoſe forces, which he ſees himſelf deprived of, to combat the diſeaſe; and ſubmit to a tedious attendance, and a doubtful prognoſtic, than which ſcarce any thing is ſo diſagreeable to the rational and humane practitioner.

Obſervations on the Weather, &c. in February 1753.

Barometer.

Higheſt 30 $\frac{4}{10}$. Loweſt 29 $\frac{1}{10}$.

Greateſt variation in one day $\frac{4}{10}$.

Common ſtation 29 $\frac{8}{10}$.

Thermometer within doors.

Higheſt 52 degrees.

Loweſt 38 deg. 11th, hard froſt. Wind N. E. Thick fog.

Common ſtation 45 degrees.

Greateſt variation in one day 5 degrees.

Thermometer without doors, at 8 in the morning.

Higheſt 51. Loweſt 29, the 11th ult.

Greateſt variation in one day 10 deg. viz. the 13th, from 35 to 45.

Common ſtation 43.

The laſt month concluded froſty, dark, and very cold; this began with froſt, ſleet, or ſnow: towards the middle, the weather became wet and more temperate, and ſo continued, with ſome ſhort intervals of fair and clear weather, to the end of this account. The winds were variable, and ſometimes bluſtering, from the S. S. W.; as they were cold, with dark fogs, from the N. and N. E.

The fevers mentioned in the laſt month occurred often in this, and proved fatal to ſeveral. Rheumatiſms were alſo common, and eſpecially among children from 4 to 8 or 10 years old: theſe young ſubjects generally were ſeized with a pain about the neck, back of the head, or the ſhoulders; from hence it often ſhifted to the hands and feet, and knees, and plainly diſcovered its nature by the ſwellings it produced: the fever attending it had regular exacerbations in the evening, followed by moderate ſweats and freedom from pain in the morning; which interval continued with a calm quiet pulſe till 4 or 5 in the afternoon, when the ſymptoms again appeared. In ſome young ſubjects, where evacuations were uſed too freely, either by bleeding or purging, the diſorder proved ſuddenly and unexpectedly fatal; the pains of the head became violent, either a convulſion, or hemiplegia, or both, ſucceeded, and death ſoon followed. A decoction of the bark, with rhubarb ſufficient to keep the belly open, given in ſmall doſes, and often, eſpecially in the intervals, commonly removed the diſorder in a few days with great certainty; whilſt bleeding, purging, and diaphoretics, often rendered the diſtemper tedious, and ſometimes, as is obſerved above, fatal.---Some ancient people died ſuddenly, ſoon after the weather, from very cold and dry, became wet and temperate; and ſome inſtances occurred at this time, as they have done heretofore in the like caſes, that have repeatedly induced me to reflect on the promiſcuous uſe of bleeding in theſe ſudden emergencies, with ſome anxiety. For it ſeems very probable, that the caſes of perſons in years, who are ſeized with apoplexies, ſudden faintings, or other ſymptoms of ſpeedy diſſolution, in which bleeding can be of any uſe, are very few. And

That caſes of this nature, in which bleeding is certainly pernicious, and deprives the unhappy perſon of any chance for a recovery, are very numerous.

It would carry me beyond the limits I have any right to aſk for, and into a ſeries of reflections not ſuited to every reader's taſte, to endeavour to fix the proper indications for bleeding: but what is above ſuggeſted will, I hope, induce every practitioner to think twice, before he orders this operation to be performed; becauſe in many caſes, if the patient ſhould ſurvive it, either a univerſal palſy ſucceeds, and the patient dies in a ſhort time; or he is ſeized with a partial one, which perhaps attends him to his grave. Common uſage precipitates too many into this practice; and of the few who think at all, it is not every one who has reſolution enough not to be influenced by ſo current an opinion.

Obſervations on the Weather, &c. in March 1753.

Barometer.

Higheſt 30 $\frac{5}{10}$. Loweſt 29 $\frac{6}{10}$.

Greateſt variation in one day $\frac{4}{10}$.

Common ſtation 30.

Thermometer within doors.

Higheſt 54 deg. Loweſt 43 deg.

Common ſtation 48 degrees.

Greateſt variation in one day 6 degrees.

Thermometer without doors.

Higheſt 55 deg. Loweſt 32 deg.

Greateſt variation in one day 8 degrees, *viz.* the 14th, from 42 to 50. Wind S. W.

Common ſtation 40.

The mercury in the barometer, during this inconſtant month, has ranged within narrower bounds than uſual, and its tranſitions have been more confined. In the thermometer, the variations have not been very remarkable. The former part of this month, as well as the concluſion of the laſt, the weather was moſtly fair, clear, and cold, the wind generally at E. or N. E.; towards the middle it ſhifted to the S. W. blowing freſh with gentle ſhowers and temperate warmth, and ſo continued to the end of the month.

Diſorders of the breaſt were frequent; ſeveral young ſanguine perſons, eſpecially, had ſpittings of blood, without much pain in the breaſt, or difficulty of breathing: moderate evacuations, by bleeding and purging, with ſmall doſes of nitre and the mildeſt balſamics, ſoon relieved them. About the middle of the month divers complained of unuſual head-achs, attended with feveriſh ſymptoms, which were often very alarming at the firſt attack, but ſoon ſubſided. They complained firſt of pain or ſtiffneſs in the neck, with darting pains about the temples, and ſo acute as oftentimes to raiſe the pulſe and heat conſiderably. The external parts of the head grew ſore; and to ſuch a degree as it was painful to reſt it on the pillow. Now and then the pains remitted an hour or two, and again returned with their former violence; but the whole abated in three or four days, and gradually wore off, leaving, however, a ſort of uneaſineſs about the head, which the patients commonly compared to a cap of lead, or ſome heavy ſubſtance incloſing it. Moderate bleeding or cupping, bliſters, nitre joined with volatiles in ſmall doſes, and given often, were ordered to ſeveral under theſe complaints, with advantage.

Palſies alſo were not uncommon, and afforded ſome freſh inſtances of the diſadvantages

diſadvantages of indiſcriminate bleeding. The writer of theſe remarks is no enemy to this operation in general; but in diſeaſes, where every means that the phyſician employs are ſuch as invigorate, to begin the cure by deducting from that force which we want to increaſe, certainly requires ſome conſideration.--- There may be caſes, it is allowed, where bleeding in palſies may be of uſe; but that it is generally ſo, is denied; and cool, unprejudiced obſervation will, I doubt not, lead to the ſame opinion. And it is of the more conſequence to deliberate maturely on this operation in the caſe before us, in as much as the remedy in queſtion is not of the unimportant kind: if it is not proper, it is very improper, and coſts the patient much time to recover it, and the phyſician not a little uneaſineſs, to ſee his utmoſt efforts avail much leſs, than where bleeding has been omitted.

Obſervations on the Weather, &c. in April 1753.

Barometer.

Higheſt $30\frac{2}{10}$. Loweſt $29\frac{2}{10}$.

Greateſt variation in one day $\frac{4}{10}$.

Common ſtation $29\frac{7}{10}$.

Thermometer within doors.

Higheſt 59 deg. Loweſt 41 deg.

Common ſtation 52 degrees.

Greateſt variation in one day 6 degrees.

Thermometer without doors.

Higheſt 60 deg. Loweſt 39 deg.

Common ſtation 45.

Greateſt variation in one day 10 degrees.

The weather, at the end of the laſt month, and the beginning of this, was generally fair, clear, and temperate, though with intervening ſhowers, ſometimes accompanied with hail. Towards the middle it became more diſpoſed to be wet, dark, and cold, but grew uncommonly warm, ſerene, and pleaſant, for a few days, about the 20th; after which it again became cool, with ſhowers almoſt daily. The wind has generally been S. S. W. or weſt; a few days it ſtood N. E. and ſometimes N. W. Upon the whole, the weather has been ſeaſonable; the advances to warmth very ſlow and uniform: and, in this place, few remember to have obſerved a ſpring, wherein the progreſs from cold to warm, or rather temperate, which it has never yet exceeded long together, hath been more natural.

As the weather has been thus uncommonly ſeaſonable, the diſeaſes have been few, and the acute ones leſs violent.---Coughs with a remarkable hoarſe-

neſs, ſome ſtraitneſs of the breath, and, in ſome, attended with a copious expectoration, have been frequent during this month; likewiſe the ſore-throat, attended with ulcers, but generally mild, unleſs where copious bleeding, purgatives, and nitre, had made it otherwiſe. Fewer ſpring-fevers have occurred than I have ever known; and theſe, commonly, by moderate evacuations, ſoon became regular intermittents, and early gave way to the bark.

Obſervations on the Weather, &c. in May 1753.

Barometer.

Higheſt $30\frac{5}{10}$. Loweſt $29\frac{4}{10}$.

Greateſt variation in one day $\frac{2}{10}$.

Common ſtation $30\frac{1}{10}$.

Thermometer within doors.

Higheſt 61 deg. Loweſt 50 deg.

Greateſt variation in one day 3 degrees.

Common ſtation 44 degrees.

The weather in this month has been leſs variable than is uſual at this ſeaſon: the mercury in the barometer kept very high for the moſt part, even with the wind at S.W. In the thermometer, its motions have been confined to narrow limits, the time of year conſidered. During the whole ſpring, the progreſs from cold to temperate and warm, hath been the moſt gradual and regular that moſt people remember; and the tranſitions from one extreme to the other very inconſiderable. For which reaſons the year has been thus far healthy, the produce of the earth abundant, and the proſpect of ſtill greater abundance very promiſing.

Nothing like an epidemic has appeared; and conſumptions, the common ſpring diſeaſe, have not been ſo numerous as in ſome preceding years. Palſies and apoplexies were frequent about the beginning and middle of the month, and ſome hæmorrhages towards the concluſion.

A root, of which the Chineſe have long been extravagantly fond, has of late, I find, been recommended in this place; and merits the greater conſideration, as it is one of the products of our own colonies in North America. The name of this drug is *Ginſeng*; the manner of its diſcovery, and other circumſtances of its natural hiſtory, would take up too much room: but give me leave to ſay, that ſome conſiderable parcels of the root have been ſent to China, and diſpoſed of to great advantage; that this advantage would ſtill have been greater, had thoſe who gather the root, collected it at a proper ſeaſon, and cured it in the Chineſe manner; and that it has been tried in many caſes here, yet not ſo fully as to eſtabliſh its character in any particular diſeaſe. In tedious

dious chronic coughs incident to people in years, a decoction of it has been of ſervice; and in ſuch diſorders as attend advancing years, where the ſolids are too inactive, the fluids viſcid and acrimonious, it ſeems to promiſe conſiderable benefit, if uſed in moderate doſes, and long continued. Time will, perhaps, diſcover its proper effects; and, as it conſiſts of a mild, lubricating mucilage, joined with ſome degree of aromatic warmth, it may be tried in ſuch diſorders with great ſafety. One drachm and a half, boiled in four ounces of water, in a cloſe veſſel, and ſlow heat, about half an hour, will be a proper mean doſe; or it may be given in powder to half a drachm or two ſcruples. Upon the whole, though it does not ſeem entitled to even a moderate ſhare of thoſe virtues that are romanticly aſcribed to it by the Chineſe *(a)*, yet is it very well worthy the attention of the faculty, and promiſes fair to be a more uſeful and efficacious medicine, than many now kept in the ſhops, as the Sarſa China, and ſome others; and a medicine too, of which we may always depend on a conſtant ſupply from our own plantations.

Obſervations on the Weather, &c. in June 1753.

Barometer.

Higheſt $30\frac{3}{10}$. Loweſt $29\frac{7}{10}$.

Greateſt variation in one day $\frac{2}{10}$.

Common ſtation $30\frac{1}{10}$.

Thermometer.

Higheſt 71 deg. Loweſt 56 deg.

Greateſt variation in one day 11 degrees, the 9th ult. from 59 to 70.

Common ſtation 66 degrees.

The laſt month concluded dry, fair, and warm; this began in the ſame manner, and continued ſo till about the 20th, the heat daily increaſing. About this time the air was cooled by ſome moderate ſhowers; ſtorms of hail fell in ſome parts, and in the villages about London, and did conſiderable damage; very little fell in the city. The wind kept generally N. N. E. or N. W.

The motions of the quickſilver in the barometer, were confined within very narrow limits; in the thermometer, the contrary happened, the tranſitions in this inſtrument having been the moſt ſudden and expanſive, that have lately been obſerved. About the beginning of the month ſeveral were ſeized with remittent fevers, which, after moderate bleeding, an emetic, and emptying the firſt paſſages, either went off in a few days, or became intermittent, and ſoon yielded to the cortex.

(a) Du Halde's hiſt. fol. vol. i. 322. ii. 217.

Several

Several were likewiſe ſeized with a diſorder in the bowels in the nature of a nephritic cholic, with bilious vomitings, obſtinate coſtiveneſs, and pain about the region of the kidnies, and ſometimes a dyſury, though without any certain indication of gravel, or that the parts were affected any other way than by a ſpaſmodic conſtriction from conſent of parts.

Obſervations on the Weather, &c. in July 1753.

Barometer.

Higheſt $30\frac{3}{10}$. Loweſt $29\frac{5}{10}$.
Greateſt variation in one day $\frac{3}{10}$.
Common ſtation $29\frac{9}{10}$.

Thermometer.

Higheſt 72 deg. *viz.* the 7th inſtant; and without doors, in a cool ſhade, 80.
Loweſt 57 deg.
Greateſt variation in one day 5 degrees.
Common ſtation 64 degrees.

The laſt month concluded fair, cloudy, and temperate: this began with ſome hot days, which, towards the middle, were ſucceeded by ſome refreſhing ſhowers: after which the weather continued for the moſt part fair, ſometimes cloudy and cool, at others hot and ſultry. The 7th was a hotter day than any in the two laſt years, in this place.

Apoplexies have been more than commonly frequent and fatal: even perſons much below the meridian of life, have been ſuddenly ſnatched off by this diſtemper. Some fevers of the low depreſſed kind have appeared; many have been ſeized with inflammations of the bowels; and, in ſome of the neighbouring villages, the ſore-throat, attended with ulcers, has appeared in divers families.

The frequency of apoplexies has furniſhed ſome freſh opportunities of obſerving the effects of bleeding in this diſeaſe, and ſtrengthened the writer's opinion, that this evacuation is far from being always advantageous in this diſtemper: on the contrary, he has ſeen inſtances wherein he thinks it has been attended with the worſt conſequences.

Obſervations on the Weather, &c. in Auguſt 1753.

Barometer.

Higheſt $30\frac{3}{10}$. Loweſt $29\frac{3}{10}$.
Greateſt variation in one day $\frac{3}{10}$.
Common ſtation $29\frac{8}{10}$.

Thermometer.

Higheſt 66 deg. Loweſt 60 deg.

Greateſt variation in one day 5 degrees.

Common ſtation 63 degrees.

The concluſion of the laſt month, and beginning of the preſent, were fair and temperate; towards the middle, the weather became wet, cloudy, and cool, with high winds at S.W.; about the 20th it became fair, clear, and warm, and continued ſo. The wind was variable, often ſhifting to oppoſite points the ſame day: it kept northerly for ſeveral days, but for the moſt part S. W. or S. E. The quickſilver in neither of the inſtruments, had any remarkable motion; whether it roſe or fell, it was ſlowly, nor were the tranſitions from heat to cold, or the contrary, ſudden or very conſiderable.

Many, during this month, have complained of diſorders in the head, before the rains, about the middle of the month eſpecially. Some had a dizzineſs to ſuch a degree as to render it almoſt dangerous to walk abroad; others had acute pains affecting one part of the head only, as the forehead, or down one ſide, with great languors, ſickneſs, and a quick ſmall pulſe: in ſeveral of theſe, after a few days, the diſorder became intermittent, and was eaſily removed by the bark. And moſt of the acute diſeaſes that have occurred in this period, have diſcovered a tendency this way; the head being very much afflicted during the paroxyſm, not ſo much with violent pain, as with great confuſion and dizzineſs, ſo far as to be unable to raiſe it from the pillow without ſuffering greatly. Bleeding moderately at firſt, with an emetic as ſoon as convenient, the ſaline draughts during the paroxyſm, and the bark in ſubſtance given plentifully in the intervals, ſoon removed the complaints in many inſtances. Bliſters gave no relief, but moſt commonly brought on very violent ſtranguries, which ſeems to be their uſual effect in ſummer and in autumnal diſeaſes, more than in thoſe of the ſpring.

Obſervations on the Weather, &c. in September 1753.

Barometer.

Higheſt $30\frac{3}{10}$. Loweſt $29\frac{9}{10}$.

Greateſt variation in one day $\frac{3}{10}$.

Common ſtation $30\frac{1}{10}$.

Thermometer.

Higheſt 66 deg. Loweſt 56 deg.

Greateſt variation in one day 7 degrees, *viz.* the 25th, when it ſunk from 63 to 56, the only day in the whole month in which it either ſunk ſo low, or varied above half ſo much.

Common ſtation 63 degrees.

From

From the 26th of the laſt month, to the 25th of this incluſive, there have been but five or ſix days on which any rain has fallen, and on moſt of them very inconſiderable quantities; the heat has, at the ſame time, been unuſual in this climate, with the moſt ſettled drought that has of late years been obſerved. For though the wind has blown, in this period, almoſt from every point of the compaſs, yet the barometer has ſtood motionleſs at 30 inches, with the wind at S. E. for days together; a phænomenon very rarely obſerved, and an indication of the moſt uncommon propenſity to dryneſs.

From this ſtate of the weather, fruits of every kind this country affords, have been ripened to the greateſt perfection; and, if the wines of our own vineyards are at any time to be drank without prejudice, for this ſeems to be the moſt we can expect in this country, the wines of this year's growth ſtand the faireſt chance for it. But, at the ſame time that the dry hot weather has had this effect with regard to fruits, it has burnt up the herbage in the neighbourhood of London altogether, except in the marſhes, and very low meadows; on the higher grounds ſcarce the leaſt appearance of verdure remains; ſo that with the withered ſun-burnt aſpect of the country about us, and the clouds of duſt that are raiſed by the carriages, &c. in every avenue to this metropolis, we reſemble the ſcorched Campagnia, rather than the verdant environs of London.

Bilious cholics, inflammations of the bowels, remittent fevers, with violent head-achs, vomitings, reſtleſſneſs, faintings, high-coloured urine, and bilious ſtools, become more frequent, but not very fatal; the patients bear moderate bleeding well, gentle purgatives of the ſaline kind, and plentiful diluents: bliſters are ſeldom indicated; when applied, they are often injurious, and often bring on unconquerable ſtranguries, to which the ſick are many of them prone, this preſent ſeaſon, where no bliſters have been applied.---And the writer thinks he has oftener than in one ſeaſon found, that bliſters, after hot dry ſummers, are injurious in common, and perhaps for the very reaſons that render them beneficial, nay abſolutely neceſſary, in moſt kinds of vernal fevers.

In the preſent remittent fevers, the ſick are diſpoſed to copious ſweats, which weaken but afford no relief. Every plentiful evacuation ſinks them conſiderably, and eſpecially if the diſeaſe is advanced a few days; which is mentioned to guard againſt the imprudent, indiſcriminate uſe of a celebrated powder, long ſince diſcarded from rational practice, on account of its danger and uncertainty, and of the pernicious effects whereof the writer has lately been a witneſs, though adminiſtered in a much ſmaller doſe than is commonly given, and under circumſtances the moſt encouraging to hope for advantage from it.

Obſervations

Obſervations on the Weather, &c. in October 1753.

Barometer.

Higheſt $30\frac{3}{10}$. Loweſt $29\frac{5}{10}$.

Greateſt variation in one day $\frac{5}{10}$.

Common ſtation 29.

Thermometer.

Higheſt 64 deg. Loweſt 52 deg.

Greateſt variation in one day 5 degrees.

Common ſtation 59 degrees.

The weather in this month, though more variable than in the preceding, has for the moſt part been mild and temperate, even with the wind at N. E. about which point and the N. it has kept for ſome time. There have been a few ſhowery days, but in general the weather has been fair and cloudy, with ſome heavy miſts.

About the beginning of the month ſeveral were attacked with ſlow remitting and dangerous fevers; which ſtill continue to affect divers. The manner of the attack was various: ſome were attended with a thrilling coldneſs, with very little heat intervening, either night or day, during three or four days; and even, after they were confined to their beds, a ſlight, though almoſt conſtant rigor attended them moſt part of the day, till at length an uneaſy heat took its place, and continued without intermiſſion many days. But this was not the caſe in all: the beginning was more ſenſibly felt by ſeveral; the rigor more violent and of ſhorter continuance; the ſucceeding heat, though more intenſe, of a ſhorter duration; and the concomitant ſymptoms the more natural. Perſons of a freſh florid habit were generally ſeized in this manner, and moſtly recovered; the diſeaſe either ſpeedily terminating in an intermittent, or decreaſing about the 14th with a thick lateritious ſediment: but ſuch as were of a ſquallid, or pale ſwarthy complexion, and were ſeized with this fever, were attacked in the manner firſt deſcribed: the beginning was obſcure, the patient often went abroad, with chilling rigors, many days, and applied for help when the diſeaſe was advanced to ſuch a period, as to admit of very little either from art or nature. The freſh and ſanguine bore bleeding repeatedly, to advantage; the head-ach, reſtleſſneſs, and heat, often abating after it. But the others did not receive the like benefit: a moderately warm and cardiac regimen; keeping the ſick from profuſe ſweats, or any weakening evacuation; ſupplying thin diluting liquors often, and in ſmall quantities, ſeemed to afford the greateſt relief.---Rheumatiſms have been frequent in this month, as is common at this ſeaſon, and probably as much owing to a want of accommodating the cloathing to it, as to the variableneſs of the weather.

Obſervations on the Weather, &c. in November 1753.

Barometer.

Higheſt 30 $\frac{3}{10}$. Loweſt 29 $\frac{4}{10}$.

Greateſt variation in one day $\frac{5}{10}$.

Common ſtation 29 $\frac{8}{10}$.

Thermometer.

Higheſt 58 deg. Loweſt 45 deg.

Common ſtation 49 degrees.

Greateſt variation in one day 7 degrees.

The weather in this month for the moſt part has been cloudy, cold, and fair, with ſharp froſts, but of no long continuance, and interrupted with cold rain; the wind frequently at N. W.

The ſame kind of fever as mentioned in my former, has continued to ſhew itſelf during this month, and has terminated fatally in many inſtances, and chiefly, perhaps, from ſlower and imperceptible approaches. Often has it affected the ſick great part of a week before they have been induced to ſeek any relief, when the moments of affording it effectually were paſſed. Copious evacuations of any kind were obſerved to be injurious; the ſick were not often diſpoſed to any, except profuſe ſweats, which were never found, that I know of, relieving.

Diſorders of the bowels were frequent, in ſome with obſtinate coſtiveneſs, with a diarrhœa in others, and generally yielded to the known methods.

Obſervations on the Weather, &c. in December 1753.

Barometer.

Higheſt 30 inch. 4 deg. Loweſt 29 inch. 22 deg.

Greateſt variation in one day 7 deg.

Common ſtation 29 inch. 8 deg.

Thermometer within doors.

Higheſt 58 deg. Loweſt 40 deg.

Greateſt variation in one day 7 deg.

Common ſtation 47 deg.

Thermometer without doors.

Higheſt 55 deg. the 22d inſt. Loweſt 29 deg. the 8th.

Greateſt variation in one day 10 deg. *viz.* the 12th, from 40 to 50.

The laſt month concluded with hard froſt, the weather very cold, the wind

wind N. or N. W. The beginning of this month likewiſe was cold and froſty, but often dark, thick, hazy weather. About the 10th we had ſome ſnow, but this was ſoon carried off by warm rain, the wind ſhifting ſuddenly from N. E. to S. E. and S. W. where it continued to the 25th, the weather being uncommonly warm, though dark and ſhowery. Upon the whole, we have had greater viciſſitudes, and more ſudden tranſitions from cold and dry to warm and moiſt, in this month, than has happened in any one for a conſiderable time paſt.

About the beginning of the month, during the ſharp froſt, ſeveral were ſeized with the ſmall-pox, of a dangerous kind. The puſtules appeared in ſeveral on the ſecond day, and without much previous indiſpoſition. The fever of eruption was far from being violent, and the pulſe often continued as ſlow as in perfect health, and much ſmaller till the 4th or 5th day from the eruption, the ſick in the main delirious in the night, and no way abating as the ptyaliſm, which was in many caſes profuſe, and boded danger, came on. About the 7th the pulſe became more quick, but not more ſtrong; heat, reſtleſſneſs, and delirium increaſed, and if the patient ſurvived the 11th, it was often with great difficulty, and generally to undergo freſh dangers from the ſecondary fever; but a peripneumony proved fatal to ſeveral about the eleventh.

The puſtules, inſtead of filling with a kindly yellowiſh matter, or appearing of this colour externally, were, in all that I ſaw, of a pale cream-coloured aſpect, running into one another on the face, with here and there, both on the face and limbs, ſmall mortified cruſts, and the whole aſpect as if covered with a wetted parchment.

The cauſes that produced the ſlow, treacherous, remittent fever, mentioned in a preceding account, ſeem to have produced the like unfavourable diſpoſition of the habit in this. The attack in both was not alarming; the progreſs ſlow and fallacious; the approach of the criſis terrible, and too often fatal.---However, the diſeaſe is by no means general; many of thoſe who have it, 'tis true, have it in a pretty ſevere manner, yet many eſcape. A decoction of the Cortex, with ſmall doſes of Conf. Damocrat. *viz.* 10, 15, to 20 gr. given in the languid ſtate, has been of ſervice in ſome caſes; exchanging this regimen for a mild, demulcent, yet moderately cordial regimen, as the diſeaſe advanced.

A caſe of an unuſual nature, the ſubject conſidered, has probably occurred to many practitioners within this month or ſix weeks. It appears at leaſt unuſual to the writer, and he therefore mentions it. He has been called to ſeveral children, and to none much above ſeven years of age, and girls chiefly, who have had the jaundice. He has heard from others, that the like caſes had occurred to them. The writer found that a grain, or gr. *ſs* of Calomel, in a pill, with Tereb. *q. ſ.* every night, and a few ſpoonfuls of the ſaline mixture two

or three times a day, ſoon took off the yellowneſs, coſtiveneſs, and high-coloured urine; and a tea-ſpoonful of the Vin. Chalybeat. in chamomile-tea, reſtored their appetite and vivacity, which were always greatly affected, and ſeemingly more than even in adults.

Obſervations on the Weather, &c. in January 1754.

Barometer.
Higheſt $30\frac{5}{10}$. Loweſt 29.
Greateſt variation in one day $\frac{5}{10}$.
Common ſtation $29\frac{8}{10}$.

Thermometer within doors.
Higheſt 55 deg. Loweſt 40 deg.
Greateſt variation in one day 5 deg.
Common ſtation 45 deg.

Thermometer without doors.
Higheſt 48. Loweſt 25.
Greateſt variation in 24 hours 12 deg.
Common ſtation 40 deg.

The laſt month ended fair, froſty, cloudy, and very cold; wind N.E. This began in the ſame manner; but the wind ſuddenly ſhifting to the S.W. the weather became leſs cold, but ſtill inclined to froſty. About the middle we had ſome heavy rains, the cold moderate, and the weather continued variable till towards the end, without any remarkable exceſs in any reſpect.

Two ſingular phænomena appeared in the barometer in the courſe of this month, *viz.* about the 8th the quickſilver ſtood at 29.2, the wind northerly and fair. In common, when it ſtands ſo low we ſeldom fail of heavy rains, high winds, or ſnow; but none of theſe happened in the neighbourhood of this place; nor had we any accounts of deep ſnows or much rain in the north about this time; though I have never known the like circumſtance happen without one or other of them falling plentifully to the northward.---The other phænomenon was the reverſe to this. While the quickſilver ſtood ſeveral days together at 30.5, we had ſoutherly winds, with rain, and the weather temperate. It is difficult to account for this, unleſs we ſuppoſe a current of wind from the N. or N.E. to have paſſed above the ſouthern ſtream, and in a greater quantity.

The ſudden tranſitions in the former month, and the variable temperature of the preſent, ſeemed to render acute diſeaſes, for a time, more frequent and fatal. Fevers of the kind before mentioned continued; plentiful bleeding almoſt always brought on very alarming ſymptoms. It ſeemed, however, neceſſary

ceſſary to bleed moderately once, and ſometimes, by cupping, to mitigate the head-ach, of which all the patients complained, ſome more ſome leſs. Bliſters applied early increaſed the heat; and, if a ſweating regimen was purſued, about the ſeventh or eighth day ſmall red irregular *ſtigmata*, not round, as regular *petechiæ*, ſhewed themſelves about the neck, breaſt, and arms, in great numbers, appearing juſt as if an eruption was about to follow; but they never roſe above the ſurface of the ſkin.---Avoiding all immoderate evacuations; keeping the patient moderately covered; ſupporting his ſtrength with proper liquids, without loading him with too much of them; promoting the circulation gently with the milder diaphoretics; and applying bliſters, ſucceſſively, as the falling pulſe ſeemed to indicate their neceſſity, were the means of conducting ſome, who had this ſpecies of fever, through very imminent dangers: under which circumſtances the diſcharges from the bliſters ſeemed to be of ſingular advantage; for it happened, in divers inſtances, that with the common dreſſings only, bliſters on the arms, where they are rather more readily diſpoſed to heal in common than in ſome parts of the body, have kept open a week or ten days, nay, in one caſe, a fortnight, the matter being often at firſt thin and ſanious, but becoming gradually laudable and plentiful.

Rheumatiſms were alſo frequent about the breaking up of the froſt, and the muſcles of the thorax being in ſome caſes affected, made it difficult to diſtinguiſh in what degree the internal parts likewiſe ſuffered; which nevertheleſs is a circumſtance of great moment, as the method which would be the moſt likely to remove a genuine inflammation of the lungs or pleura, would often increaſe a rheumatic affection of the muſcles concerned in reſpiration, and bring on that very diſeaſe which it was intended to remove, *viz.* an inflammation of the lungs, for want of a juſt dilatation of the thorax. This, however, is not deſigned to prevent bleeding in the above-mentioned caſes, but as a caution to ſome, who may have been taught to think, that copious bleeding is indicated, whenever a patient complains of pain in any part of the region of the thorax.

Obſervations on the Weather, &c. in February 1754.

Barometer.

Higheſt 30 $\frac{6}{100}$. Loweſt 29 $\frac{5}{100}$.

Greateſt variation in one day $\frac{5}{100}$.

Common ſtation 30 $\frac{2}{100}$.

Thermometer without doors.

Higheſt 48, the 13th inſtant.

Loweſt 25, the 6th and 7th. Severe froſt.

Greateſt variation in one day 13 deg. between the 1ſt and 2d inſt. when the quickſilver roſe from 27 to 40 deg.

The

The froſt, which began about the 26th of the preceding month, became intenſe in a few days, and continued till the 9th, when it broke up with a ſudden, but a very cold thaw, with ſleet and heavy cold rains. After this the weather became more temperate, the mornings froſty and ſharp, but the air in the day commonly ſerene, ſeaſonable, and fair, and ſo continued to the 26th.

The quickſilver in the barometer has kept, during this changeable weather, within very confined limits, the ſeaſon conſidered. In the thermometer it has ſeldom varied more; nor could it be expected to happen otherwiſe. For the ſatisfaction of thoſe gentlemen who employ themſelves in the like obſervations, it is thought proper to acquaint them,

That the inſtrument by which theſe are made, is graduated according to Fahrenheit's ſcale, and was made by a workman of reputation.

That it is placed without doors, in a court, one ſtory from the ground, in a ſituation ſheltered from any current of wind, as well as ſecured, by the height and ſituation of the neighbouring houſes, from the direct or reflected influence of the ſun.

That the uſual hour of obſervation is about eight in the morning, in winter, ſeven in ſummer; and that the place is near the center, and one of the moſt populous parts of the city.

It may be likewiſe obſerved, that the inſtrument is diſtant about two inches from the wall, and has as little connection as poſſible, to be ſecure, with any ſolid body. The ſcale is wood, and touches the tube in very few points.---Though the writer imagined he had choſen a very proper place within doors, to diſcover the general temper of the air, yet, from a ſtrict attention, he finds that many cauſes concur to render this inſtrument uncertain within doors, in any ſituation, and he doubts it is ſtill liable to many exceptions without.

Thus far no diſeaſes have appeared in the city or ſuburbs, ſo far as the author knows, that have any thing peculiar to merit a farther deſcription at preſent.

Obſervations on the Weather, &c. in March 1754.

Barometer.

Higheſt $30\frac{6}{10}$. Loweſt $29\frac{2}{10}$.
Greateſt variation in one day $\frac{5}{10}$.
Common ſtation $30\frac{2}{10}$.

Thermometer within doors.

Higheſt 51.
Loweſt 38 deg. the 13th and 18th. Hard froſt and much ſnow.
Greateſt variation 6.
Common ſtation 44.

Thermometer without doors.

Higheſt 46. Loweſt 29, the 12th. Froſt.

Greateſt variation 6.

Common ſtation 37.

The unuſual ſeverity of the weather in this laſt month claims a particular notice, as the like, perhaps, hath not been obſerved in this country for many years. The laſt month ended rather temperate and fair, the thermometer without doors keeping always above 40, and within doors commonly near 50. About the 5th ult. the wind ſhifted from S.W. to N.E. and the weather from temperate and clear became gradually more cold and cloudy. On the 9th it began to ſnow, freezing hard at the ſame time, and continued ſnowing, more or leſs, almoſt every day to the 25th, the time when this monthly account concludes. During this time the weather was for the moſt part unuſually dark and cloudy, the wind often high, and from the N.W. N. or N.E. points.

Diſorders of the breaſt were, during this time, both frequent and fatal. Lax corpulent habits, ſubject to coughs and aſthmatic complaints, ſuffered extremely. A thin irritating defluxion, with little appearance of a fever, began, and produced violent and inceſſant coughing. Bleeding afforded ſome temporary relief; but, if copious, weakened. Diſcharges by ſtool, either ſpontaneous or artificial, gave little relief. Plentiful expectoration was the moſt beneficial; but the quantity to be diſcharged too often exceeded the force of nature; and, notwithſtanding the application of bliſters, the uſe of mild balſamics mixed with volatiles and the more ſtimulating expectorants, (as the caſe ſeemed to require all) too often proved unſucceſsful. Palſies were likewiſe not uncommon; and the writer thinks he has met with freſh cauſe to ſuſpect, that the too free and frequent uſe of the lancet, in ſuch complaints, ſometimes ſubjects both the patient and phyſician to inſuperable difficulties.

Obſervations on the Weather, &c. in April 1754.

Barometer.

Higheſt $30\frac{3}{10}$. Loweſt $29\frac{3}{10}$.

Greateſt variation in one day $\frac{4}{10}$.

Common ſtation 30.

Thermometer within doors.

Higheſt 56. Loweſt 41 deg. the 25th.

Greateſt variation in one day 9, the 18th, from 50 at night to 41 in the morning. Hard froſt and ſnow.

Common ſtation 50.

Thermometer

Thermometer without doors.

Higheſt 54. Loweſt 32.

Greateſt variation 7, the 6th, from 47 to 54.

Common ſtation 41.

Greateſt variation between morning and noon 10.

The unuſual ſeverity of the weather, both in this and other parts of Britain, during this month, will probably be long remembered. A few days before this account concludes, the cold indeed began to relax, and there was now and then a day, towards noon, when the air was temperate; but in general it has been cold and dry to an extreme degree; the froſts ſharp, and accompanied with ſnow and hail. From this ſtate of the weather, every appearance of ſpring has been exceſſively retarded, and the powers of vegetation in a manner locked up. Scarce an alder-leaf fully expanded, and the lilies but half opened; from theſe it will be eaſy to judge of the reſt.

Thus far, however, the general health has not ſuffered by it, nothing like an epidemic having ſhewn itſelf in the city, nor the ſporadics numerous. Spaſmodic or rheumatic pains of the breaſt have affected ſome, but have been ſoon removed by moderate bleeding, ſmall doſes of camphire and nitre mixed, with laxative only and volatile medicines, as occaſion required.

Obſervations on the Weather, &c. in May 1754.

Barometer.

Higheſt $30\frac{1}{10}$. Loweſt $29\frac{6}{10}$.

Greateſt variation in one day $\frac{3}{10}$.

Common ſtation $29\frac{2}{10}$.

Thermometer within doors.

Higheſt 61 deg. Loweſt 53.

Greateſt variation in one day 6 degrees.

Common ſtation 57 degrees.

The thermometer without doors has not been ſo carefully obſerved this month, as to furniſh a regular account of it.

The weather about the end of the laſt month was temperate and fair, the wind S. W. it veered ſoon to the N. E. and the air grew cool and cloudy, though dry. Towards the middle of this month it became more temperate, the wind ſoutherly, and at length ſucceeded ſome plentiful warm rains about the 22d, which continued with ſome interruptions a few days, when the weather again became cool and fair.

Perhaps there are but few who can remember ſo ſudden an alteration in the face

face of vegetative nature, as hath happened in this month: ſpring, inſtead of her uſual progreſs, which in this country has been interrupted and ſlow, came upon us at once, and the ſcene which had been ſo long dreary and deſolate, was ſuddenly covered with verdure; the trees bloſſomed into fragrance and beauty, and the pledges of plenty were every where ſcattered with the utmoſt profuſion. Thoſe who repined at the delay, and were ready to wiſh the power of rain and ſunſhine in their own hands, are once more detected in the folly of diſcontent, and it is to be hoped they will at laſt learn to acquieſce, not only with chearfulneſs, but gratitude, in the diſpenſations of that unerring goodneſs which preſides over univerſal nature, and has ſo long bleſſed this country with *health and fruitful ſeaſons*.

In reſpect to diſeaſes, none have appeared that deſerve the name of epidemic. Rheumatiſms, vernal intermittents, and conſumptive complaints, have been the moſt frequent, but not more ſo than in other ſprings.

The ſmall-pox, which was beginning to ſpread in ſome parts of the town, ſeems to be upon the decline; except by inoculation; for this practice daily gains ground, notwithſtanding ſome inſtances now and then occur, that are not attended with the happy ſucceſs one could wiſh for. In general, however, both the favourableneſs of the diſeaſe itſelf, and the abſence of various ill conſequences attending it in the natural way, are ſo much in favour of inoculation, that in time it ſeems likely to become the general practice, and may thereby ſecure to the ſtate a multitude of uſeful lives, to the parties themſelves tranquillity of mind, and to many of them agreeableneſs of perſon.

It may again be proper to remind thoſe who are engaged in this practice, that the ſlighteſt ſcratch with the point of a needle, or any other inſtrument that will juſt make the blood ſtart through the ſcarf ſkin, will be ſufficient; and that much leſs than the tenth part of an inch of fine thread, that has been drawn through a ripe puſtule, will be enough to produce the diſeaſe. And alſo, that the matter ſhould not be applied, by the perſon who has taken it from the variolous patient, ſoon after he has procured it, for the reaſons alledged in a former *Magazine*, (vol. xxiii. p. 218.)

Obſervations on the Weather, &c. in June 1754.

Barometer.

Higheſt $30\frac{1}{10}$. Loweſt $29\frac{7}{10}$.

Greateſt variation in one day $\frac{3}{10}$.

Common ſtation $29\frac{8}{10}$.

Thermometer within doors.

Higheſt 65 deg. Loweſt 57.

Common ſtation 61 degrees.

Greateſt variation in one day 4 degrees.

The weather at the end of the laſt month was cool, cloudy, and dry; at the beginning of this it became more warm and clear; a few days about the middle were ſtill warmer; but as the month advanced, the weather grew more cloudy and cool, except ſome ſudden gleams of heat from a few hours of a clear mid-day ſun now and then, which raiſed the thermometer without doors conſiderably, while within doors it remained unaltered, varying not more than about four degrees in any one day or night, as far as occurred to the obſerver, in all this period.

The wind has been chiefly S. W. or W. and moſtly pretty high, which both covered the ſky with clouds, and kept off the rains from theſe parts, except now and then ſome acceptable ſhowers, and a wet day or two near the end of the month.

The ſame kind of remittent fevers, mentioned in a preceding month, have appeared, though not in great numbers; irregular intermittents have likewiſe been frequent, eſpecially periodical hemicranias, which ſoon gave way to the Bark, with ſo much Rhubarb, or Tinct. Guaiac. Volat. added, as kept the belly rather lax than coſtive. Coughs, rheumatic pains affecting different parts of the thorax, and other diſeaſes of the breaſt, have been much more frequent in this month than uſual, cauſed perhaps rather by the too early change of dreſs, than the peculiar conſtitution of the air. Bleeding in moſt was beneficial; a repetition was ſometimes neceſſary. Mild diaphoretics, anodynes, pectorals, and warmth, were generally ſucceſsful. The ulcerated ſore-throat has juſt begun to ſhew itſelf, with its uſual ſymptoms; it yields to the common remedies, and is exaſperated, as it always has been in general, by bleeding and large evacuations. A cataplaſm of Ther. Androm. with a ſmall quantity of Sal. C. C. ſpread thick, and applied externally from ear to ear, ſeems to have afforded ſpeedy relief in ſome caſes, not however omitting cordials internally at the ſame time.

Obſervations on the Weather, &c. in July 1754.

Barometer.

Higheſt $30\frac{2}{10}$. Loweſt $29\frac{3}{10}$.

Greateſt variation in one day $\frac{5}{10}$.

Common ſtation 30.0.

Thermometer within doors.

Higheſt 68 degrees, the 22d. Wind S.E. Very warm.

Loweſt 60.

Greateſt variation in one day 5 degrees.

Common ſtation 62 degrees.

The

The laſt month ended cool, ſhowery, with briſk weſterly winds; the beginning of this was fair, clear, and temperate: towards the middle it became more wet and cloudy, and continued ſo, with the intervention of a very few warm days, to the end of the month. The wind during the whole was variable, but kept generally to W. or S.W. and ſometimes pretty briſk.

About the beginning of the month, ſeveral were attacked with the *eryſipelas*, affecting chiefly the head and face, though ſometimes appearing on other parts of the body. Mild diaphoretics, with anodynes to abate the painful ſoreneſs, not to ſtupify; emollient clyſters, to keep the belly open, not lax; diluting liquors moderately in regard to quantity, and rather cool than hot, in a few days reſtored the patients to their uſual health: nitre diſpirited them; and, without ſome anodyne at night, they were diſpoſed to watchfulneſs and delirium, as in the ſmall-pox. As the month advanced, apoplexies and paralytic complaints became very frequent, and we ſtill hear of one or other almoſt daily attacked. To what can this be owing? Sudden tranſitions from heat to cold, or from cold to heat, often produce theſe complaints: but, excepting a day or two, the weather has been uncommonly equal; and none of the ſenſible qualities have remarkably predominated. If nothing in the conſtitution of the air appears capable of producing ſuch complaints, to what other general cauſe can we have recourſe? In reſpect to diet, we change nothing in our common courſe, except a more plentiful uſe of vegetables; in which term muſt be underſtood to be included fruits of all ſorts, as well as roots and greens. But theſe have ſeldom been conſidered as productive of ſuch diſorders.---They may, however, by accident, contribute in ſome conſtitutions to bring on the above-mentioned diſorders, that is, by their quantity.---We ſeldom are called to apoplectic patients, but, upon enquiry, we learn that ſome unguarded meal has preceded, and that, within a very few hours before the attack, they have made a repaſt which, either in reſpect to quantity or quality, the by-ſtanders themſelves admit to have been improper.---It is therefore mentioned as a caution to all, who either from their make and time of life have reaſon to apprehend they are expoſed to the diſeaſe above-mentioned, or have already had ſome ſlight attack of it, that as they wiſh to prolong their lives, they would avoid full meals, but more eſpecially ſuppers. The conſtant and abundant uſe of tea, though for a very different reaſon, ſeems likewiſe capable of contributing its ſhare to the increaſe of theſe diſorders: and, indeed, the continued uſe of this exotic ſeems to demand the attention of the faculty, and their ſteady and unanimous oppoſition, if its effects ſhould appear to be as certainly, though inſenſibly, injurious to the body, as the conſumption of time, and its other ill conſequences, are undoubtedly to the ſtate.

Obſervations on the Weather, &c. in Auguſt 1754.

Barometer.

Higheſt 30 $\frac{2}{10}$. Loweſt 29 $\frac{7}{10}$.

Greateſt variation in one day $\frac{3}{10}$.

Common ſtation 30. 0.

Thermometer within doors.

Higheſt 69 degrees at night, the 20th. E.

Loweſt 60.

Greateſt variation in one day 4 degrees.

Common ſtation 64 degrees.

As the laſt month ended, ſo this began, cloudy, cool, and wet: the weather continued thus till about the middle, when the wind ſhifted to the E. and brought a fair, warm, and agreeable ſeaſon. After a ſtorm of thunder, lightning, and heavy rain, the 22d in the night, with a S. E. wind, the air continued ſultry, and the weather wet, till the period when this account concludes.

The motions of the quickſilver, both in the barometer and thermometer, have been very ſlow, and the riſe and fall in each by ſhort gradations. In the thermometer, ſuſpended in the ſhade without doors on the 11th in the morning, the mercury ſtood at 58; 2 degrees lower than within doors, any time this month; and roſe the 15th and 19th to 75 at noon, the higheſt it was obſerved to be.

A dangerous remittent fever, and the ſmall-pox, have been the moſt common acute diſeaſes that have occurred in this month. The former was fatal to many; and though it often continued to the 14th or 17th day, yet it was extremely difficult to diſcover the *juvantia* or *lædentia*, except in regard to bleeding, which was moſt commonly injurious, as thoſe who loſt the moſt blood, and at the greateſt diſtance from the firſt attack, ſuffered the moſt, were the ſooneſt delirious, convulſed, and carried off. The early application of bliſters ſeemed no leſs injurious. A gentle emetic, and mild calming diaphoretics, the bed-cloaths light, the room airy, but not cold, with thin diluting liquors to ſatiety, not to load, were circumſtances of moment to the patients eaſe, as well as recovery.

The ſmall-pox were frequent in many parts of the city and eaſtern ſuburbs eſpecially. In general the kind was mild, diſtinct, and favourable. Out of ſixteen, who had the diſeaſe in a certain diſtrict, of different ages, one only died; but in common a much larger proportion miſcarried. And it is to be remarked, particularly, that though in general the ſmall-pox was of

the ſort deſcribed, yet where it was otherwiſe, it was ſo in an extreme degree, with an uncommon proneneſs to malignancy. In two caſes that occurred, where the load of ſmall-pox was not remarkably great, the ſubjects young and healthy, and no obvious miſmanagement, large livid *petechiæ* appeared ſoon after the eruption, daily increaſing in extent and deepneſs of colour to the 3d or 6th, when, after days and nights of inceſſant anxiety and delirium, and the fruitleſs application of ſuch remedies as ſeemed the moſt ſuitable, the diſeaſe proved fatal. The author does not remember ever to have ſeen inſtances of ſo virulent a kind, appearing at a time when the general tendency was to the mildeſt and moſt favourable.

Obſervations on the Weather, &c. in September 1754.

Barometer.

Higheſt $30\frac{5}{10}$. Loweſt $29\frac{9}{10}$.

Greateſt variation in one day $\frac{2}{10}$.

Common ſtation $30\frac{2}{10}$.

Thermometer within doors.

Higheſt 67 deg. Loweſt 57.

Greateſt variation in one day 7 degrees.

Common ſtation 63 degrees.

The weather during this month has been uncommonly dry, the air, for the moſt part, temperate and ſerene; ſometimes approaching, in the middle of the day, to ſultry, whilſt the mornings and evenings were rather cold than temperate. On the 7th and 8th we had ſome gentle ſhowers, the wind S. W. and ſomewhat high; the reſt of the month was dry, and the wind northerly.

Choleras, inflammations of the bowels, rheumatiſms, and intermittents, have been the moſt common diſeaſes; but a dangerous remittent fever, though not very frequent, has been the moſt alarming; the acceſs is commonly vehement, the rigor like that of a regular tertian, the ſubſequent heat intenſe, which generally continues ſo long as to ſhew that it is not of this genus: partial ſweats ſucceed, which afford no relief, but leave the laſſitude and pains of the head and back as afflicting as at firſt. In this ſtate it is common for thoſe who are called in, to order bleeding. The blood is florid, not very denſe; the ſerum of a deep yellow; the urine at the ſame time is crude and high-coloured. Bleeding often mitigates the febrile ſymptoms conſiderably; but they return in twenty-four hours, and induce ſome to bleed a ſecond time. The reſpite from this ſecond bleeding is frequently more perceptible than the firſt, but a delirium often follows the next night, with a dry tongue, quick pulſe, high-coloured urine, looſe acrid ſtools, catchings, watchfulneſs, and

and the moſt alarming ſymptoms. Now and then they hold out to the 17th or 18th day, but more commonly drop off about the 14th or 15th.

Obſervations on the Weather, &c. in October 1754.

Barometer.

Higheſt $30\frac{4}{10}$. Loweſt $29\frac{2}{10}$.
Greateſt variation in one day $\frac{3}{10}$.
Common ſtation $30\frac{1}{10}$.

Thermometer within doors.

Higheſt 65 deg. Loweſt 52.
Greateſt variation in one day 7 degrees.
Common ſtation 56 degrees.

Thermometer without doors, in the morning.

Higheſt 64. Loweſt 43.
Greateſt difference betwixt morning and noon on the ſame day 15 degrees, *viz.* on the 15th inſtant, from 43, the loweſt, to 58.
Greateſt variation betwixt any two mornings 11 degrees, *viz.* from 44 to 55, between the 8th and 9th inſtant.
Common ſtation 54 degrees.

If the preceding account is more prolix, it is with a deſign to make it the more uſeful: the reader will be pleaſed to remember, that it is a record of facts, which though at preſent ſeem but little intereſting, yet, in future time, may be of very important uſe. What inſtruction would not ſomething of this kind have afforded, had it commenced a century ago, and been regularly continued to the preſent time?

The end of the laſt month was for the moſt part fair, clear, and temperate, and likewiſe the beginning of this. On the 6th we had the firſt ſhower that had fallen for ſome weeks, and on the 9th ſome heavy rain: except ſome intervening ſhowers, the reſt of the month was generally fair, and the weather favourable as to heat; now and then a few warm days, with very little wind, and at other times a briſk cool weſterly breeze, or northerly and cold.

The fever, mentioned in the laſt account, did not wholly diſappear till the weather became more moiſt and cool; the preceding aduſt temperature having manifeſtly contributed to increaſe it.

Rheumatic pains affecting various parts about the thorax, intermittents, and ſome inflammatory rheumatiſms, are now more common, which generally yield to the ordinary treatment.

But before we altogether diſmiſs the fever above-mentioned, it may not be

be improper to remark, that ſcarcely any thing in the practice of medicine requires greater judgment, than to determine, at the acceſs of fevers, whether bleeding is proper or not, and to what quantities. In the preſent inſtance, moderate bleeding once, ſeldom was beneficial, but to repeat it, was moſt commonly injurious. The writer does not ſay this with a view to inſinuate, that none but a few are judges, in order to promote their advantage; but merely with a deſign to prevail upon thoſe who are often firſt called, to conſider, that if the fever is of the low depreſſed kind, they are taking away that force which will ere long be wanted, and which no art can reſtore.

Next to bleeding, bliſters are commonly applied, and they often follow each other immediately; ſo that one often finds bleeding, bliſtering, ſweating, and perhaps a repetition of all, have been promiſcuouſly ordered in the ſpace of a very few days, while, from the general diſorder, it was ſcarcely poſſible to determine whether any, or which of theſe proceſſes was neceſſary. Theſe things are not ſaid with a view to accuſe or reproach, but to excite a juſt and neceſſary conſideration of what is proper, and not what is cuſtomarily done. Bleeding is, doubtleſs, often neceſſary in fevers; the pulſe, the conſtitution, or the ſeaſon, moſtly point out the time and the quantity; which, if it is at all proper, is moſt commonly ſo within the firſt four, five, or ſix days. This evacuation, with diluents and proper regimen, will often take off a fever without any other aſſiſtance. But in regard to bliſters, their early application muſt in moſt caſes be prejudicial. Where bleeding is proper, they are commonly improper; they cannot take off a fever, they have no tendency to it, any otherways than by keeping up the languent circulation, where the pulſe rather grows feeble, and the ſtrength declines; here they are a noble remedy: a prudent ſucceſſion of them often does wonders towards the acme of the fever, and not only promotes a ſalutary criſis, by the ſtimulant invigorating quality, but by opening a favourable drain for the critical diſcharge itſelf. We loſe theſe advantages if we bliſter early; we hurry on the already too precipitate courſe of the blood and juices, and deprive ourſelves of a reſource, than which medicine hardly affords any one more efficacious. Emptying the firſt paſſages prudently at the firſt is ſcarcely ever prejudicial in this or any other fever: bleeding in this is moſt commonly injurious; and bliſters early applied, I believe, are ſeldom uſeful in fevers, if not conſtantly detrimental.

Obſervations on the Weather, &c. in November 1754.

Barometer.

Higheſt $30\frac{3}{10}$. Loweſt $28\frac{8}{10}$.

Greateſt variation in one day $\frac{6}{10}$.

Common ſtation $29\frac{8}{10}$.

Total of mornings obſervations $920\frac{8}{10}$.

Thermometer

Thermometer within doors.

Higheſt 60. Loweſt 50.
Greateſt variation in one day 4.
Common ſtation 52.
Total of mornings obſervations 1716.

Thermometer without doors.

	Morning.	Noon.	
Higheſt - - -	56	64	27th ult.
Loweſt - - -	39	47	27th ult.
Common ſtation	48	52½	

Greateſt variation from morn to noon 10.

Total - - -	1461	1638.

The quickſilver in the barometer ſunk lower on the 9th and 10th inſtant, than it has been known to do during the courſe of theſe obſervations; ſo low as to 28 inches 8-tenths, the weather at the ſame time fair, and, the ſeaſon conſidered, clear and temperate; the wind S. E. and rather calm. Theſe circumſtances are mentioned, as they are uncommon with a S. E. wind. The quickſilver, indeed, almoſt always ſinks, but ſeldom low, without very high winds, or much rain, neither of which happened at that time, nor did any remarkable wet weather enſue about this place. It was conjectured that much rain might then be falling in diſtant parts, which from the daily papers, and other accounts, was ſoon after found to be the caſe. And it has more than once been obſerved, that if the quickſilver keeps very low, with a northerly wind, much ſnow is then falling to the northward, and perhaps at a very great diſtance; and alſo that if it is low with a S. E. and fair, heavy rains are then falling to the ſouthward, though, perhaps, neither ſnow or rain appear at the place of obſervation.

The weather during this month, till within a few days of its concluſion, has for the moſt part been fair and clear, though there have been ſome dark, cold, and rainy days, but generally clear, temperate, and the winds eaſterly. Rheumatiſms have been very frequent and obſtinate. Many have been ſeized with catarrhal coughs, and conſumptive habits have ſuffered greatly. The fever mentioned in the preceding accounts ſtill continues; the cautions hinted before are ſtill neceſſary: bleeding, almoſt in the ſmalleſt quantity, is injurious, and a repetition generally fatal.

REMARKS

* REMARKS

ON THE

NEUTRAL SALTS OF PLANTS,

AND ON

TERRA FOLIATA TARTARI.

CHEMISTS, who prepare the lixivial Salts of Vegetables, generally take care, by the means of hot water, and ſometimes repeated affuſions of it, to get every thing out of the aſhes that is ſoluble; and when they evaporate this ſolution, they employ the ſalt which is obtained from it as a pure alcali in other operations, either not knowing or neglecting the Neutral Salt, which Boerhaave ſays † is mixed with it, and is *ſui generis*. In an operation which I was lately employed in, the neceſſity of conſidering the effects of this Neutral Salt was evident, and I could determine the genus to which the greater part of it belonged.

An ingenious Chemiſt of my acquaintance, intending to make a large quantity of *Terra foliata Tartari*, uſed for that purpoſe the *lixivial Salt of Fern*, carefully made in the country by a perſon well ſkilled in practical chemiſtry, careful and exact. Some of this ſalt was fluxed, the reſt was a clean lixivial ſalt; each kind was ſaturated by itſelf with ſtrong diſtilled vinegar, eight or nine times the weight of the ſalt being ſufficient of the vinegar to fully ſaturate the alcali of both parcels; whereas uſually fourteen or fifteen times the weight of the ſalt is requiſite of the vinegar to make a perfect ſaturation.

The ſaturated liquors being filtrated, and carefully evaporated to a mellaginous conſiſtence, hiſſed and crackled where it hardened on the ſides of the veſſel, and did more ſo the nearer they came to dryneſs, ſhewing hardly any marks of a diſpoſition to flow, which commonly happens when the ſaline liquor is ſo far evaporated.

* Written in the year 1736, and inſerted in the 5th volume of "Medical Eſſays and Obſervations, publiſhed by a Society in Edinburgh," page 147.

† Chem. Proc. 14.

No methods which the operator, who is a very expert artiſt, could then fall upon, ſerved to make the proceſs ſucceed.

The Chemiſt having informed me of the caſe, we could diſcover no fault in the materials, veſſels, or operation; but, ſuſpecting the Neutral Salt to be the cauſe of the proceſs not ſucceeding, we diſſolved all the refractory maſs in warm water, ſet it to cool, and had a conſiderable qauntity of neutral cryſtals, ſeveral of them exactly reſembling thoſe cryſtals delineated in tab. I. of your vol. i. which were procured by Dr. Plummer from *Moffat* water; only ours were more perfect, which was owing probably to the large quantities of materials we had. Moſt of the cryſtals were cubical, which, joined differently, and mixed with other ſalts, made a ſurprizing variety of figures, which cannot well be deſcribed in words; but I have ſent ſome of them of different ſhapes in a box. It was plain from their figure and taſte, and by experiment, that common *Sal marinum* made up a great part of what we had; the reſt might not unjuſtly be called partly a *Sal Polychreſt*, partly the eſſential ſalt of the plant.

We were obliged to repeat this operation for obtaining thoſe cryſtals, before we could obtain a Salt which flowed and foliated; the cryſtals depoſited each time were more bitter and more pungent, though in form reſembling the firſt we got; the *Terra foliata* did not flow nor foliate ſo freely, nor were the foliations ſo large or ſo white as uſual.

It is with reaſon then that Boerhaave orders * a *Sal Alcali puriſſimum* to be uſed in the preparation of *Tartarus regeneratus*, or *Terra foliata Tartari*; and the diſpenſatories which order *Sal Tartari*, direct the chemiſts to a more certain proceſs than when they are left at liberty to employ what they will. The chemiſts in town here moſtly uſe the *cineres clavellati* in this proceſs, and ſucceed very well, or make the ſalt with large foliations and white; and perhaps this is the only one of all the neutral ſaponaceous ſalts, which is more efficacious, the whiter and purer it is.

The principal reaſon why chemiſts ſucceed better in making *Terra foliata Tartari* with *cineres clavellati*, than with any other of the lixivial ſalts, ſeems to be, becauſe thoſe who prepare the *Pot-aſh* content themſelves with letting cold water run through large tubes or vats filled with aſhes, till it has waſhed ſo much from them as to make a *lixivium* ſupport an egg; by which operation, little of the Neutral Salts are diſſolved to mix with the *lixivium*; and probably in drying the *lixivium*, what of the Neutral Salt is in it, is forced by the fire to the ſurface, to form that cruſt which it takes in burning the ſtraw that is wetted with it.

That the aſhes which remain after the *pot-aſhes* or ſalts are extracted, con-

* Chem. Proc. 67.

tain much of the Neutral Salt, is evident from their ſerving ſo well the purpoſes of agriculture, being preferable to ſea-ſalt for all ſuch purpoſes.

How ſuch a quantity of ſea-ſalt ſhould be contained in vegetables, is an enquiry foreign to your deſign, and therefore I ſhall not mention my opinion of this phænomenon: I believe it will not, however, be unneceſſary to remark, that Phyſicians ought to conſider, that the proportion of this Neutral Salt, mixed in alcaline ones, is often different; the more is thus mixed, the leſs acid is required to ſaturate a given quantity: hence it frequently happens, that the medicine we intend ſhould be perfectly neutral, is very acid, and entirely diſappoints our expectations *.

With reſpect to the proceſs for making the *regenerated Tartar*, it may not perhaps be without ſome uſe to obſerve, that the more vinegar is put to it, the *foliations* will appear larger and whiter, though it is the more expenſive, becauſe, whatever vinegar is beſtowed on it, the operator muſt expect very little more ſalt than the weight of the alcali made uſe of.

The addition of ſomewhat more than the ordinary proportion of vinegar not only contributes to render the ſalt finer, as by repeated trials we found it did, but alſo prevents it from becoming too alcaline; for was it to be brought to an exact *punctum ſaturationis* before it is committed to the fire, the heat neceſſary to evaporate the liquor and flux the maſs would render it more of an alcaline corroſive, than of a neutral ſaponaceous nature. This induced me to remark, that its whiteneſs may be eſteemed as a mark of its goodneſs, it arguing that a proper quantity of vinegar has been uſed; and it may be rendered whiter and more pure by repeating the diſſolution, evaporation, and fluxion.

The *Tartarus regeneratus*, taken from the quantity of half a drachm to two drachms, is an excellent alterative and diuretic; and from three to ſix drachms

* It is common here to preſcribe one ſcruple of Sal Abſinth. to half an ounce of Succ. Limon. To learn how far this proportion was juſt, I procured ſix parcels of Salt of Wormwood, and ſix of Salt of Tartar, from ſhops in different parts of the town: I procured likewiſe a quantity of lemon-juice, ſufficient for all the trials I intended. Half an ounce of this juice was ſaturated with 18 grains of one of theſe parcels, and required 32 of another to reduce it to the ſame degree of neutrality. This difference was owing to the Neutral Salt contained in the laſt, which was really procured from Wormwood aſhes, and carefully lixiviated with hot water.

The ſpecimens of Salt Tartar were more alike; they varied only from 18 or 19 grains to 23 or 24. The freſh Salt of Tartar is a pure alcaline ſalt; if it is expoſed to the air, it abſorbs the acid contained in it, and thus becomes neutral in proportion to the time it has been kept, or as it has been expoſed to the air.

Wherefore, in directing the common ſaline draughts, it would ſeem that 24 grains is a much more ſuitable proportion than one ſcruple; and if to this mixture we add a ſcruple of ſome abſorbent, as crab's eyes, &c. we ſhall probably have a mixture more perfectly neutral, than we ſhall be able in common to obtain by any other method of preſcribing.

is a very mild cathartic, that never ſinks the ſpirits, or raiſes any violent diſorder, and particularly is ſerviceable to ſeveral dropſical patients: of its ſervice this way allow me to mention one hiſtory.

A married gentlewoman, forty-eight years old, childleſs, a little corpulent, was repeatedly affected with an immoderate diſcharge of the *menſes*; ſoon after her belly began to ſwell, her legs grew œdematous, and all the ſymptoms of a dropſy appeared. She was treated with the ſtrong and gentler cathartics, diuretics, aperients, and corroborants; but this bad circumſtance always attended evacuants either by ſtool or urine, that they never failed to produce a diſcharge of blood from the *vagina*, which ſunk her prodigiouſly. Corroborants, eſpecially of the aſtringent kind, ſoon ſtopt the flux; but, at the ſame time, contributed to increaſe the ſwelling, by leſſening the diſcharge by urine and ſtool. She then began to take three drachms of the *Terra foliata Tartari* once or twice a week; it gave her two or three ſtools, with a large evacuation of urine, without exciting the menſtrual diſcharge, or affecting her ſtrength: ſhe continued the uſe of it for upwards of a year, without increaſing the doſe, or attempting any other relief than what that gave her, which was very great. Whether it would have made a complete cure, I cannot ſay; for, having taken a rough purgative, ſhe had her days ſhortened by it.

THE

THE following Eſſay on Amber was printed in the Philoſophical Tranſactions, when curioſity was much excited upon the origin of this valuable production: beſides the authorities quoted in this place, the reader may meet with many others in James's Medicinal Dictionary, under the word Ambra: *Philoſophical Tranſactions, N° 19, p. 349; N° 248, p. 5; N° 468, p. 322: Dictionnaire Raiſonnè-Univerſel de Matiere Medicale, tom.* vii. *p.* 209, *et ſuivant: Macquer Dictionnaire de Chimie, ſous le mot* Succin. *Edit.* 1778.

Though Amber was known to Antiquity, Frederic I. *King of Pruſſia, was the firſt who rendered it an important commercial object. Amber is very common in this kingdom, and in ſome places lies almoſt on a level with the ſurface of the ground, ſo that the labourers collect conſiderable quantities of it in tilling the land. There are ſome parts of Pruſſia, where neither tree nor herb vegetates, where the ground is covered with a ſubſtance reſembling the bark of a tree. Frederic cauſed this ſubſtance to be removed, under which was found a bed of black earth, and beneath this a bed of wood, in the veins of which Amber was diſcovered, greater in plenty in proportion to the quantity of this wood.*

Some years ago a conſiderable quantity of fine Amber was found in Saxony, which has furniſhed four diſſertations, printed in the Collection of the Curioſities of Nature; an extract of which may be ſeen in the French edition of Henkel's Pyritologia.

It is ſaid that the King of Pruſſia has a burning mirror of Amber, that is a foot broad, and free from blemiſh. There is in the cabinet of the Duke of Florence, a fine column of Amber, ſix feet high, and of the moſt perfect luſtre: there are alſo veſſels made of this ſubſtance with infinite labour. We are informed, that ſome years ago there was an artiſt in Pruſſia, called Samuel Som, who had not only the art of clarifying Amber, and rendering it tranſparent, but alſo of dying it of any colour, and even to ſoften it and incloſe inſects in it, to make a gain of ſelling it to perſons curious in theſe rarities.

Editor.

EXTRACT

EXTRACT OF AN ESSAY UPON THE ORIGIN OF AMBER*,

Read before the ROYAL SOCIETY, March 1, 1743-4, p. 21.

AFTER all that has been wrote upon the ſubject of Amber, its origin is yet, in a great meaſure, unknown. Several ingenious men have ſearched into this affair upon the ſpot where the Amber is principally gathered: they have related their obſervations with great candour; they have given us the concluſions they drew from the facts they diſcovered; yet without ſatisfying us entirely about many particulars.

But as a knowledge of the nature of things can only be acquired from the things themſelves, I have carefully collected every material fact I could meet with from thoſe who were beſt acquainted with the natural hiſtory of this ſubject, and whoſe induſtry and accurateneſs in obſerving, and good faith in relating their obſervations, have been generally eſteemed unexceptionable. Of theſe I ſhall only mention *Wigandus*, *Hartman*, and *Sendelius*, the laſt who has wrote, as far as I know, profeſſedly upon this ſubject.

The evidence which theſe gentlemen afford us I have endeavoured to throw together, in the moſt natural order I could, without reſpect to any hypotheſis: but as this enumeration of facts admits of no abridgement, my papers would take up too much room in your memoirs, therefore I can only refer to the eſſay itſelf. Upon this foundation of facts is built a diſcuſſion of the following problems:

1. Whether Amber is not ſtrictly a marine production; or is reduced by ſome quality of the ſea-water into the condition we find it in? Or,
2. Whether it is not to be conſidered only as a bituminous body, generated in the bowels of the earth? Or, laſtly,

* Philoſophical Tranſactions, N° 472.

3. Whether

3. Whether it is not, in its origin, a vegetable production, a reſin; but changed into its preſent form by a mineral acid?

It will only be neceſſary, in this place, to mention, that, after having ſhewn the difficulty of maintaining the two firſt, I have undertaken to ſupport the laſt of theſe opinions.

I endeavour to make it appear, that Amber was, in its origin, a vegetable reſin *; the product, perhaps, of the fir or pine kind †; by conſidering the appearance of the ſubſtance itſelf: and that though it has ſome diſtinguiſhing properties, yet it has many others, which are common to an indurated reſin. Its aſpect, its texture, its form, are arguments for this. The bodies which it is known to incloſe are urged as proofs, that this incluſion could not happen in the ſea, nor in the earth, but upon its ſurface; as the included objects are moſtly animals, moſtly volatiles too: very few reptiles, except ſuch as are often found aloft in trees, as ants, ſpiders, &c. and ſcarcely ever any aquatics, are found in Amber. And, I believe, I may challenge all the cabinets of the curious to produce one inſtance of a marine body having been found naturally incloſed in Amber. That there are ſeveral fictitious ones is granted.

That this reſin, with the trees which afforded it, were buried in the earth by the deluge, or by ſome ſuch violent renverſement, and there conſtitute the proper veins of Amber, I likewiſe endeavour to make appear, from the ſame evidence of facts. The ſubſtance of which theſe veins conſiſt hath ſeveral genuine characteriſtics of wood ſtill remaining. The texture of this ſubſtance is often an undoubted proof of what it hath been; being fibrous, and, when dried, ſwims in water, and burns like other wood. The Amber is not diſpoſed in theſe veins in one continued *ſtratum*; but lumps of it are irregularly diſſeminated through the whole of what I call the woody maſs.

A difficulty, which naturally offers itſelf in this place, is attempted to be removed: What proof have we that this, which is called wood, is not mere foſſil wood, the product of creating power, exerted in the place where it is now found? It is anſwered, that as there are undoubted proofs, that many ſubſtances now occur, where they were not originally framed, we are under no greater difficulty in accounting for the change of place in one than the other. It is known that the *exuviæ* of fiſhes are ſometimes found on the tops of the higheſt mountains. The bones of large animals are met with at prodigious depths, where nature never formed, nor art conveyed them. Whole woods are found under-ground. The cauſe that effected theſe was capable of the other.

Yet, allowing theſe allegations to be juſt, by what cauſes is this change pro-

* From the ſubſequent obſervations on mixing oils, reſinous and pinguous ſubſtances, it appears that the author retained the opinion he had thus early adopted. *Editor.*

† This was the ſuggeſtion of Agricola, and of ſome more recent writers. *Editor.*

duced

duced? It is urged, that time is one of the cauſes; and that the reſt is completed by the acid of the earth, a vitriolic mineral acid. It is proved, from the facts above-mentioned, that ſuch an acid is preſent wherever Amber occurs in its *proper matrix*; that it is ſometimes found in the Amber itſelf, in its genuine appearance; that the acid of the ſalt of Amber appears, from experiments, to be vitriolic; that common turpentine (a known vegetable reſin) affords, by proper management with a vitriolic acid, a conſiderable portion of the ſame chemical principles that Amber does; that thoſe pieces of Amber, which have been found ſoft and imperfect, are nearly related to a vegetable reſin: in ſhort, it is endeavoured to be proved, that we have the ingredients of Amber in our power, and that nothing is wanting but a ſucceſsful application of them to each other, at leaſt to procure the medicinal preparations of Amber at an eaſy expence. Time and repeated trials may, perhaps, ripen this beginning, in ſomebody's hands, into an happy uſeful imitation of this valuable ſubſtance.

This account is concluded with an enquiry into the medical virtues of Amber, and ſome of its principal preparations. It is obſerved, that a ſubſtance of ſo firm a texture, as ſcarce to yield to any common *menſtruum*, is not likely to produce any conſiderable effects upon the human body; and that, indeed, there are very few genuine inſtances recorded of any: that buſy imagination might, probably, at firſt, introduce it, prejudice ſupport it, and engage men of parts and authority to recommend it to their inattentive ſucceſſors.

I ſhall finiſh this abſtract with remarking, that were ſome of the leiſure moments of men of great abilities and experience devoted to inform the world of the inefficacy of ſuch methods and medicines as they have proved to be ſo, Phyſic would be reduced into narrower bounds; they would merit the thanks of every one in the profeſſion; and poſterity, at leaſt, would commend their endeavours.

OBSERVATIONS ON THE MANNA PERSICUM *,

Read before the Royal Society, April 26, 1744.

IT does not appear very plain, from any thing that has occurred to me in the writings of the elder Greek phyſicians, that they were much, if at all, acquainted with any ſubſtance that now goes under the name of *Manna*. They had the term, but applied it to a ſubject very different from what we do at preſent. The Ὑποσεισμα τῦ Λιβανωτῦ, or the *Micæ thuris concuſſu eliſæ*, the bits broke off from the *olibanum* in carriage, was the ſubſtance they knew by that name.

If the *Arabians* did not firſt of all introduce ſome kind of purging *Manna* into practice, they at leaſt rendered the uſe of this drug more common and extenſive. Their country afforded ſeveral ſpecies of it; which being familiarly known, is, perhaps, the reaſon why no deſcriptions have been left ſufficiently clear, whereby to diſtinguiſh them from each other. Whoever has conſulted the Arabian writers, or the beſt of their commentators, will allow that their accounts are defective.

That they had three ſorts of this drug, diſtinguiſhed by the names of *Manna*, *Tereniabin*, and *Siracoſt*, is certain; but whether theſe are now known, or by what appellations, has been very much diſputed.

Rauwolf, in his Itinerary publiſhed by Ray, and Tournefort, in his voyage to the Levant, have given the cleareſt intimations of any writers that I know of: if to theſe we add Cluſius, we have all that we are to expect of certainty, amongſt thoſe who have mentioned it; they being eye-witneſſes of what they wrote. Yet the deſcriptions of theſe are either ſo imperfect or unknown, that a very late writer upon the *Materia Medica* †, either not hav-

* Philoſophical Tranſactions, N° 472, p. 86.

† Geoffroy Tractat. de Mat. Med. vol. ii. p. 586, &c.

ing ſeen or underſtood them, has fallen into a miſtake about the *Manna Arabum*, and his authority may perhaps miſlead others.

My worthy friend Peter Collinſon, having procured a ſort of *Manna* from a gentleman at Peterſburgh, under the title of *Manna Perſicum ex planta* Al-Hagi *Maurorum*, was pleaſed to favour me with a ſpecimen of it. I conſulted the principal writers on the *Materia Medica*; and finding their opinions to be frequently oppoſite, and their accounts in general perplexed, I imagined it would not be unacceptable to the curious to have ſuch a deſcription of this ſpecies as would probably make it clear, that we have one kind of the *Manna Arabum* ſtill extant, viz. the *Tereniabin*, and prevent any future miſtakes about it.

The ſpecimen of *Manna* that now lies before me appears, at firſt ſight, to be a dirty reddiſh brown-coloured mixed maſs; which, upon a nearer view, is found to conſiſt of,

1. A great number of globular, cryſtalline, almoſt pellucid bodies, of a yellowiſh white colour, and different ſizes; the biggeſt not much exceeding a large coriander-ſeed, or a very ſmall pea. They differ from grains of Maſtich, in being more upon the reddiſh caſt; but in figure and tranſparency vary not much.
2. Some ſmall ſticks like prickles, and others like footſtalks of leaves or fruit.
3. A few narrow-pointed firm ſmall leaves.
4. A large quantity of long reddiſh-coloured pods, of a ſweetiſh gelatinous taſte, containing from one to ſix or ſeven hard, irregular, ſomewhat kidney-like ſeeds, which to the taſte are very acerb. And,
5. Some ſand and earth. Four ounces of the *Manna*, diſſolved in warm water, left one ounce or ſomething more of theſe in the filtre.

The globules (N° 1.) are hard, and break between the teeth like ſugar-candy; they are of a pleaſant ſweet taſte, with much leſs of the *Manna* reliſh than the Calabrian; but with enough to diſcover to what family this ſubſtance belongs.

The ſticks, leaves, pods, &c. ſeem to be parts of the plant that produces the *Manna*. Some of the ſeeds have been ſown, and proved ſo freſh as to afford ſome plants of the *Alhagi*.

About the year 1537, when Rauwolf wrote his Itinerary, it appears, that large quantities of this kind of *Manna* were brought from Perſia to Aleppo, where it was then known under the name of *Trunſchibil* or *Trunſchibin*; a corruption, doubtleſs, of the antient *Terenjabin*; or, as it ought to be wrote, according to Deuſingius *, *Terengjabim*.

* Deuſingius Tract. de Manna et Sacch. p. 11.

Rauwolf

Rauwolf informs us, that this ſpecies of *Manna* was gathered from the *Alhagi*; a plant which is minutely deſcribed by Tournefort *, who alſo confirms the account which Rauwolf had long before given, with the following particulars:

" It is chiefly (ſays he) about Tauris, a city in Perſia, that it is gathered, " under the name of *Trungibin* or *Terenjabin*, mentioned by Avicenna and Se- " rapion. Thoſe authors thought it fell upon certain prickly ſhrubs; whereas " it is only the nutritious juice of the plant."---He adds, " that, during the " great heats, you perceive ſmall drops of honey upon the leaves and branches " of theſe ſhrubs; theſe drops harden, in grains about the bigneſs of coriander- " ſeeds: they gather thoſe of the *Alhagi*, and make them into reddiſh cakes " full of duſt and leaves, which alter the colour, and leſſen its virtue. This " *Manna* is much inferior to the Italian. The ordinary doſe is from 25 to " 30 drams."

Cluſius † informs us, that the *Tereniabin* of the modern Arabs is gathered from a prickly ſhrub, ſuch as the *Alhagi* is deſcribed to be. Avicenna ‡, according to his preſent tranſlation, tells us, that the *Tereniabin* falls *ſuper lapides*; but Deuſingius ‖ ſays, that it ought to be read *ſuper Alhagi*; and that his tranſlators were led into this miſtake from the reſemblance betwixt *Al-Hhagier* (the word in the Arabic text, and which ſignifies a kind of thorny plant, ſuch as the *Alhagi* is ſaid to be) to *Al-Hagio*.

It is therefore evident, that the *Manna Perſicum*, now before us, is the *Tereniabin*, *Terenjabin*, *Terræjenbin*, or more properly the *Terengjabin*, of the old Arabians, and of Cluſius; the *Trungibin*, or *Trunſchibil*, of the latter, of Rauwolf and Tournefort; very probably, the *Manna Maſtichina orientalis* of Matthiolus and Bauhine; as it is the *Maſtichina* and *Alhagina* of Geoffroy; though this author makes the *Tereniabin* a ſpecies of *Liquid Manna* §, in complaiſance to his countryman Bellonius; who, though in general a diligent obſerver, yet, in this caſe, was miſled by the Caloyers, or Monks of Mount Sinai.

Bellonius ſays, in his Obſervations **, and more largely in his Treatiſe *de Arboribus perpetua fronde virentibus*, that theſe Caloyers collect a kind of liquid *Manna*, which they call *Tereniabin*; that this ſpecies was known in the ſhops at Cairo by the ſame name; and that this is the *Mel roſcidum* of Galen, and the *Mel cedrinum* of Hippocrates.

I think it is very plain, that Bellonius was miſtaken in the firſt part of his aſſertion, from what has already been advanced. The Caloyers told him, that they called it *Tereniabin*; and he takes it for granted, that it was the

* Tournefort's Voyage to the Levant, vol. i. p. 247, 248. † Cluſ. Exotic. vol. ii. p. 164.
‡ Avicen. Oper. tom. i. p. 404. ‖ Tract. de Manna, p. 19. § Tract. de Mat. Med. tom. ii. p. 587. ** Bellonii Obſerv. apud Cluſ. p. 129.

Tereniabin

Tereniabin of the old Arabians, contrary to their own accounts ſupported by the teſtimony of their ſucceſſors, who are known to vary as little as any people whatever from the traditions and cuſtoms of their predeceſſors, and ſtill retain a great many of their appellations. For proof of this, I need only refer to the accounts which Rauwolf, Tournefort, and Dr. Shaw, give us of thoſe people.

That this liquid *Manna* was the Δροσόμελι *ſeu* Λερόμελι of Galen *, and the Μέλι κέδρινον of Hippocrates †, (ſuppoſing there is no miſtake in the text), ſeems very probable. The deſcription which Galen has left of the *Mel roſcidum*, and the manner of collecting it on Mount Sinai in his time, tallies exactly with Bellonius's account; and thus far, I believe, all authors agree: but that the virtues of *Manna* were known ſo early as in the times of theſe two authors, will be difficult to prove.

Galen takes notice of this *Mel roſcidum* more as a curioſity than a medicine. He no where, that I know of, mentions its uſe, or deſcribes its qualities. He introduces the account of it with a *Memini aliquando*, and ſays, that the *Mel roſcidum* was rarely met with in his country, but was gathered at Mount Sinai every year: and, indeed, from the manner in which it is ſpoken of by an old Greek writer in Athæneus, as cited by Salmaſius, it would ſeem that it was only uſed for pleaſure, as an agreeable ſweet, *Melle ipſo ſuavius*; and probably continued to be of no other uſe. Meſue tells us ‡, that Galen mixed *Manna* with *Scammony*. In the ſpurious piece *de Dynamiis*, aſcribed to Galen, *Scammony* is ordered to be mixed with honey; but he never once mentions *Manna* in any of his extant writings. As Galen is known to be very minute in his account of the *Materia Medica* of that time, his ſilence is a ſtrong argument againſt the ſuppoſition, that even the *Mel roſcidum* was in pharmaceutic uſe, much leſs any other ſpecies of *Manna*.

If Galen was unacquainted with this ſubſtance, it is very probable that Hippocrates was ſo likewiſe; ſince a drug that muſt have made a conſiderable figure in his *Materia Medica*, would not have ſoon been ſtruck off the liſt, or dropped into oblivion and diſuſe.

But how ſhall we get rid of the Μέλι κέδρινον; the name ſufficiently intimating what ſubſtance was intended? Perhaps Foeſius's ſuggeſtion may help us. He thinks, that the words might have been read with a comma intervening, whereby we ſhould have had two diſtinct well-known ſubſtances, honey, and the reſin of the cedar; two ſimples that were then, and continued long after, in familiar uſe; inſtead of one, which he mentions no where elſe, and ſeems to be unknown ſome ages after.

* Galen. de Alem. Facult. l. iii. c. 39. † Hippocrat. de Ulceribus, p. 876. Edit. Foeſii.
‡ Meſue de Simpl. c. 8.

Upon the whole, I have not hitherto met with evidence ſufficient to induce me to believe, that either the *Mel roſcidum*, or any kind of *Manna*, was in common medical uſe either with Hippocrates or Galen. Actuarius mentions it once *, and, as I know of, only once: he makes it a purgative, and to be ſomewhat ſtronger than *Caſſia*.

It is now pretty generally known, that the *Mannas* in uſe are not a *Mel aërium*, or honey-dew, as was long believed, but a *Succus proprius* iſſuing out of ſome particular trees, at proper ſeaſons, and in ſome climates only; and that, during the ſummer's heats, a great number of vegetables, in almoſt all the temperate countries, afford a juice ſomewhat a-kin to Manna, from whence the bee collects and prepares her honey. It may not, however, be amiſs, nor very foreign to our ſubject, to exhibit a ſhort account how the *Manna Officinarum* is collected.

In Calabria and Sicily, in the hotteſt part of the ſummer-months, the *Manna* oozes out of the leaves, and from the bark of the trunk, and larger branches, of the *Fraxinus*, or Calabrian aſh. The *Ornus* likewiſe affords it, but from the trunk and larger branches only, and that chiefly from artificial apertures; whereas it flows from the *Fraxinus* through every little cranny, and burſts through the large pores ſpontaneouſly.

What is got from different parts of the tree acquires different names; the trunks generally afford thoſe large white pieces to which we give the name of flaky; but the fineſt of all is ſuch as is collected from artificial inciſions, in which little ſtraws, &c. are purpoſely placed in ſuch a manner, as that the flowing juice may concrete upon them, and form thoſe long, white, cylindrical, perforated pieces, which are ſo much valued.

This juice is ſecreted in the largeſt quantity betwixt noon and evening. In the night it is condenſed, if the ſeaſon is dry, otherwiſe the *Manna* is ſpoiled: they ſcrape off the ſmall with wooden knives, early in the morning, and gather the larger flakes; both which are afterwards dried upon clean paper in the ſun, till they ſtick no longer to the fingers; and the different ſorts are then carefully packed up for uſe and exportation.

* Actuar. Method. Medend. l. v. c. 3.

SINCE

SINCE the publication of the ſucceeding paper, ſome Gentlemen have with great humanity united together to promote the recovery of perſons apparently dead, eſpecially from drowning, well known by the name of the HUMANE SOCIETY; *for the eſtabliſhment of which, the public is particularly indebted to the activity and benevolence of Dr.* HAWES.

This Society has publiſhed the proper methods of treating perſons in theſe unhappy circumſtances, and gives a reward of two guineas to the perſons employed, if the caſe be unſucceſsful, provided the perſon has not been more than two hours *under water, and the methods laid down by the Society have been perſevered in for the* ſpace of two hours. *If the perſon recovers, the reward is four guineas.---The Society is ſupported by public ſubſcription.*

As the ſubject is intereſting to the community and public at large, I have thought it not improper, briefly to ſubjoin the methods of treatment, found by the Society to be moſt ſucceſsful on theſe occaſions.

I. *The body ſhould not be rolled on the ground, or over a barrel, nor lifted up by the heels, or be any other way roughly handled or violently ſhook; but be removed to a convenient place, lying as on a bed, with the head a little raiſed, in as natural a poſition as poſſible.*

II. *The body, well wiped with a cloth, ſhould be placed in a warm bed or blanket; but not too near a large fire. Bottles of hot water ſhould be laid to the bottoms of the feet, joints of the knees, and under the arm-pits. A warming-pan moderately heated, or hot bricks wrapped in cloths, ſhould be rubbed over the body, particularly along the back. The natural warmth of a healthy perſon, eſpecially a child, lying cloſe to the body, has been found very efficacious. The room ſhould be kept open and airy, with few perſons in it. The ſhirt of an attendant, or ſkin of a ſheep freſh killed and warm, may be uſed to advantage. Should the accident happen in the neighbourhood of a warm bath, brew-houſe, bake-houſe, glaſs-houſe, ſaltern, ſoap-manufactory, or any fabric where warm lees, aſhes, embers, grains, ſand, water, &c. can be eaſily procured, it will be very proper to place the body in any of theſe, moderated to a degree of heat, very little exceeding that of a healthy perſon.*

III. *The body being placed in one or other of the above advantageous ſituations, various ſtimulating means ſhould be immediately employed. The moſt efficacious are:---Blowing with force into the lungs, by applying the mouth to that of the patient, cloſing at the ſame time his noſtrils:---Throwing the ſmoke of tobacco up the fundament into the bowels, by means of a clyſter-pipe or fumigator; a pair of bellows may be employed till the others can be procured:---Rubbing the belly, cheſt, back, and arms, with a coarſe cloth, or dry ſalt, ſo as not to rub off the ſkin; or with a flannel dipped in brandy, rum, or gin:---Applying ſpirits of hartſhorn, vo-*

latile

latile ſalts, or the like, to the noſtrils, and rubbing them on the temples frequently:---Tickling the throat with a feather, to excite a propenſity to vomit; and the noſtrils alſo with a feather or ſnuff, to provoke ſneezing. The body ſhould at intervals be ſhaken, and varied in its poſition.

IV. *If there be any ſigns of returning life, ſuch as ſighing, gaſping, twitching, beating of the heart, return of natural warmth or colour, a ſpoonful of water may be adminiſtered, to try if the power of ſwallowing be returned; if it be, a ſpoonful or two of warm wine, or brandy and water, may be given to advantage, but not before.*

Early *bleeding has been found pernicious, and even fatal; it is not* always *applicable, though it may ſometimes be employed by a perſon of ſkill, to remove or prevent ſymptoms of inflammation.*

The above methods of reſtoring life are applicable to various other caſes of apparent ſudden death; whether from hanging, apoplectic and convulſive fits, cold, ſuffocation by damps or noxious vapours, proceeding from coal mines, confined air of wells, ciſterns, caves, or from the muſt of fermenting liquors.

The Rules and Reports of this Humane Inſtitution are printed, where they may be ſeen more at large.

Editor.

OBSERVATIONS

OBSERVATIONS

ON A

CASE publiſhed in the laſt Volume of the *Medical Eſſays*, &c. " of *recovering* a Man *dead* in Appearance, " by diſtending the *Lungs* with Air. Printed at " *Edinburgh*, 1744 *."

Read before the ROYAL SOCIETY, February 21, 1745.

THERE are ſome facts, which in themſelves are of ſo great importance to mankind, or which may lead to ſuch uſeful diſcoveries, that it would ſeem to be the duty of every one, under whoſe notice they fall, to render them as extenſively public as it is poſſible.

The caſe which gives riſe to the following remarks, I apprehend, is of this nature. It is an account of " a man, dead in appearance, recovered by diſ- " tending the lungs with air; by Mr. William Toſſack, Surgeon in Alloa;" printed in part ii. p. 605. vol. v. of the Medical Eſſays, publiſhed by a ſociety of gentlemen at Edinburgh; an abſtract of which will be ſufficient in this place: thoſe who deſire an ampler account may conſult the article itſelf.

A perſon ſuffocated by the nauſeous ſteam ariſing from coals ſet on fire in a pit, fell down as dead: he lay in the pit, " between half an hour and " three quarters, and was then dragged up; his eyes ſtaring and open, his " mouth gaping wide, his ſkin cold; not the leaſt pulſe in either heart or ar- " teries, and not the leaſt breathing to be obſerved."

In theſe circumſtances, the ſurgeon, who relates the affair, " applied his " mouth cloſe to the patient's, and, by blowing ſtrongly, holding the noſtrils " at the ſame time, raiſed his cheſt fully by his breath. The ſurgeon im- " mediately felt ſix or ſeven very quick beats of the heart; the thorax con- " tinued to play, and the pulſe was ſoon after felt in the arteries. He then

* Philoſophical Tranſactions, N° 475. p. 275.

 " opened

" opened a vein in his arm; which, after giving a ſmall jet, ſent out the " blood in drops only for a quarter of an hour, and then he bled freely. In " the mean time, he cauſed him to be pulled, puſhed, and rubbed, as much " as he could. In one hour the patient began to come to himſelf; within four " hours he walked home; and in as many days returned to his work."

There were many hundred people, ſome of them of diſtinction, preſent at the time.

This is the ſubſtance of the account; from whence it naturally appears, how much ought to be attributed to the ſagacity of the ſurgeon in the recovery of this perſon. Anatomiſts, it is true, have long known, that an artificial inflation of the lungs of a dead or dying animal will put the heart in motion, and continue it ſo for ſome time; yet this is the firſt inſtance I remember to have met with, wherein the experiment was applied to the happy purpoſe of reſcuing life from ſuch imminent danger.

Bleeding has hitherto been almoſt the only refuge upon theſe occaſions: if this did not ſucceed, the patient was given up. By bleeding, it was propoſed to give vent to the ſtagnating blood in the veins, in order to make way for that in the arteries *à tergo*, that the reſiſtance of the heart being thus diminiſhed, this muſcle might again be put in motion.

But, in too many inſtances, we every day are informed, that this operation will not ſucceed, though the aperture is made with never ſo much ſkill; nor is it likely that it ſhould: when the blood has loſt conſiderably of its fluidity, the motion of the heart, and the contractile force of the ſolids, are at an end.

Chafing, rubbing, pulling, the application of ſtimulants, are too often as ineffectual as bleeding.

The method of diſtending the lungs of perſons, dead in appearance, having been tried with ſuch ſucceſs in one inſtance, gives juſt reaſon to expect, that it may be uſeful to others.

It may be a proper enquiry, In what caſes, and under what circumſtances, there may be a proſpect of applying it with ſucceſs?

It will at once be granted, that when the juices are corrupted, where they are rendered unfit for circulation by diſeaſes, where they are exhauſted, or where the tone and texture of the ſolids is injured or deſtroyed, it would be extreme folly to think of any expedient to recover life.

But where the ſolids are whole, and their tone unimpaired by diſeaſes, the juices not vitiated by any other cauſe than a ſhort ſtagnation; where there is the leaſt remains of animal heat, it would ſeem wrong not to attempt ſo eaſy an experiment.

This deſcription takes in a few diſeaſes, but a greater number of accidents. Amongſt the firſt, are many of thoſe which are called ſudden deaths from ſome inviſible cauſe; apoplexies, fits of various kinds, as hyſterics, ſyncopes, and

and many other diſorders, wherein, without any obvious pre-indiſpoſition, perſons in a moment ſink down and expire. In many of theſe caſes it might be of uſe to apply this method; yet without neglecting any of thoſe other helps, which are uſually called in upon theſe melancholy occaſions.

It is not eaſy to enumerate all the various caſualties, in which this method might be tried not without a proſpect of ſucceſs; ſome of them are the following:---Suffocations from the ſulphureous damps of mines, coal-pits, &c.; the condenſed air of long unopened wells, or other ſubterraneous caverns; the noxious vapours ariſing from fermenting liquors received from a narrow vent; the ſteam of burning charcoal; ſulphureous mineral acids; arſenical effluvia, &c.

Perhaps thoſe, who to appearance are ſtruck dead by lightning*, or any violent agitation of the paſſions, as joy, fear, ſurprize, &c. might frequently be recovered by this ſimple proceſs of ſtrongly blowing into the lungs, and by that means once more communicating motion to the vital organs.

Maleſactors executed at the gallows would afford opportunities of diſcovering how far this method might be ſucceſsful in relieving ſuch as may have unhappily become their own executioners, by hanging themſelves. It might at leaſt be tried, if, after the criminals have hung the uſual time, inflating

* The following extraordinary inſtance of recovery, I have inſerted from the Reports of the Humane Society for the year 1778, p. 83: it is one of thoſe caſes of recovery that cannot be made too extenſively public. *Editor.*

" On Sunday night, July 5, 1778, at about half paſt ten, I was called to the aſſiſtance of " Peter Lucas, aged eighteen, apprentice to Mr. Hicks in White Lyon-ſtreet, Norton Falgate, " who was brought home upon boards, *to all appearance dead*, from a ſtroke of lightning. Upon " entering the room, and examining the body, I found him both ſtiff and cold, not perceiv- " ing the leaſt warmth in any part of the body or extremities: his fingers and toes were con- " tracted, his eyes ſunk, and his countenance livid. I immediately with aſſiſtance ſtripped off " his wet cloaths, and with all poſſible expedition placed him between blankets made very hot. " The aſſiſtants then uſed ſtrong friction over the whole body. During this, I made a very " large orifice in the bazilic vein, and procured by ſlow degrees near twelve ounces of blood. Vo- " latile and cardiac medicines were forced into the mouth, but for a conſiderable time to no ef- " fect, he being totally incapable of ſwallowing. Large bliſtering plaiſters were applied to the " whole ſpine of the back, and to both the feet. In half an hour I procured about eight ounces " more blood, and by the repeated uſe of volatiles, together with the ſtrongeſt frictions the whole " time, at about half paſt eleven I perceived a very ſlight convulſive motion of the diaphragm, " or hiccough; which was ſucceeded ſome little time after by a ſlight warmth and irregular " pulſation of the heart; and ſoon after by a very ſlow interrupted reſpiration. Before twelve " I perceived he began to ſwallow, and by ſteadily uſing the friction and volatiles for *an hour* " longer, a regular pulſation enſued; the lungs performed their office; and a gradual heat, and " recovery of every faculty ſucceeded. About *one* he ſpoke, though not articulately. In the " morning he was in a conſiderable fever, in great meaſure accounted for by the ſtimulus of the " bliſters, and the medicines applied the preceding night: but by the uſe of antiphlogiſtic regi- " men,

flating the lungs in the manner propoſed, would not ſometimes bring them to life. The only ill conſequence that could accrue from a diſcovery of this kind would be eaſily obviated, by prolonging the preſent allotted time of ſuſpenſion *.

But this method would ſeem to promiſe very much in aſſiſting thoſe who have been ſuffocated in the water, under the above-mentioned circumſtances; at leaſt, it appears neceſſary to recommend a trial of it, after the body has been diſcharged of the water admitted into it, by placing it in a proper poſition, the head downwards, prone, and, if it can be, acroſs a barrel, hogſhead, or ſome ſuch-like convex ſupport, with the utmoſt expedition.

It does not ſeem abſurd, to compare the animal machine to a clock; let the wheels whereof be in never ſo good order, the mechaniſm complete in every part, and wound up to the full pitch, yet, without ſome impulſe communicated to the pendulum, the whole continues motionleſs.

Thus, in the accidents deſcribed, the ſolids are ſuppoſed to be whole and elaſtic, the juices in ſufficient quantities, their qualities no otherwiſe vitiated than by a ſhort ſtagnation, from the quieſcence of that moving ſomething which enables matter in animated bodies to overcome the reſiſtance of the medium it acts in.

Inflating the lungs, and by this means communicating motion to the heart, like giving the firſt vibration to a pendulum, may poſſibly, in many caſes, enable this ſomething to reſume the government of the fabric, and actuate its organs afreſh, till another unavoidable neceſſity puts a ſtop to it entirely.

It has been ſuggeſted to me, by ſome of my acquaintance, that a pair of bellows might poſſibly be applied with more advantage in theſe caſes, than

" men, together with occaſional laxatives, he was reſtored to the enjoyment of perfect health " in the courſe of a week. Upon the ſtricteſt examination of the body when firſt brought home, " no external injury appeared, except a bruiſe along the right arm, which I preſume he received " either from the firſt fall, or at the time of being placed on the board for conveyance, either, I " think, ſufficiently accounting for ſuch appearance. Upon being queſtioned as to what had " happened, he knew nothing but from the teſtimony of his companion, who was not in the leaſt " affected. It appears that they had been at Iſlington, and were on their return caught in this " ſtorm near the turnpike at the London Apprentice, Hoxton; at which time the above Peter " Lucas was ſtruck down at the other's feet. It further appears from the beſt calculation, that " before he (James Jaques) could procure aſſiſtance, to have him conveyed home, and make " application to me, an hour at leaſt muſt have elapſed, during all which time he was in " very heavy rain.

" I am, &c.

" *White Lyon-ſtreet,* " J. MILWARD."

" *Norton Falgate.*

Reports of the Humane Society for the Year 1773.

* The Reports of the Humane Society furniſh us with many inſtances of recovery of hanged perſons, who had been apparently dead for a conſiderable time. *Editor.*

the blaſt of a man's mouth; but if any perſon can be got to try the charitable experiment by blowing, it would ſeem preferable to the other, for the following reaſons: 1ſt. As the bellows may not be at hand. 2dly. As the lungs of one man may bear, without injury, as great a force as thoſe of another man can exert; which by the bellows cannot always be determined. 3dly. As the warmth and moiſture of the breath would be more likely to promote the circulation, than the chilling air forced out of a pair of bellows.

To conclude, as I apprehend the method above deſcribed may conduce to the ſaving a great many lives, as it is practicable by every one who happens to be preſent at the accident, without loſs of time, without expence, with little trouble, and leſs ſkill; and as it is, perhaps, the only expedient of which it can be juſtly ſaid, that it may poſſibly do great good, but cannot do harm; I thought it of ſo much conſequence to the public, as to deſerve to be recommended in this manner to your notice. For though it is already publiſhed in a work which is generally read by the faculty; yet, perhaps, it may be overlooked by ſome, forgot by others, and perhaps, after all the care that can be taken, it may never come to the knowledge of a tenth of thoſe who ought not to be ignorant of it.

P. S. As the repreſentation of an extraordinary fact may perhaps induce ſome to try the experiment, when occaſions like thoſe which are ſpecified in the above remarks occur, it is hoped, that humanity will prompt all ſuch to favour the public with an account of their ſucceſs, with the principal circumſtances that attended. And, as the writer of theſe remarks has embarked in the deſign of rendering this fact diffuſively known, he would be glad to have it in his power to inform the public, that numerous experiments confirm what this caſe ſuggeſts, viz. the poſſibility of ſaving a great many lives, without riſking any thing.

White-hart Court,
Gracechurch-Street,
September 1744.

De Diaphragmate fiſſo, et mutatis quorundam Viſcerum Sedibus, in Cadavere Puellæ decem Menſium obſervatis; Epiſtola *

RICHARDO MEAD

JOANNES FOTHERGILL, S.

QUUM non ita pridem de caſu quodam, ut mihi videbatur, omnino ſingulari, coram te verba facerem, ipſe auctor eras, vir clariſſime, ut integram rei hiſtoriam literis conſignarem. Conſilio igitur tuo morigerus opus aggreſſus ſum; eoque lubentius, prout mihi perſuaſum eſt, id minus ingratum multis fore, ſi in publicum prodiret, quod tibi privatim non diſplicuiſſet. Tantum ſiquidem et merito ab omnibus tribuitur illius auctoritati, cui nihil antiquius, optatius nihil, quam bonis quibuſcunque artibus, de civibus ſuis, de humano genere, optime mereri. Quo autem clarius tota res pateſcat, ab ovo, uti dicitur, exordiri animus eſt, eorum omnium hiſtoriam exponens, quorum teſtis eram, fide, ſimplicitate, quâ poſſim, maximâ.

Fœmina generoſa 21 circiter annorum, tam ingenio acri et vivido quam forma ſpectabilis, habitus proceri et gracilis, temperiei ad ſanguineam vergentis, firma ſatis, ut plurimum, ſanitate felix, quinto poſt conceptionem circiter menſe, primò prægnans abortum fecit.

Magno ſuo malo id ei contigit, dum in cognati villâ longe a ſuis diſſitâ hoſpitio excipitur. Proxima, re jubente, obſtetrix advocatur, quæ artis cum primis ignara, et duris tantummodo ruricolarum ilibus aſſueta, uterum tenellulæ eouſque duriter tractavit, ut ex vaſis laceratis immane adeo ſanguinis profluvium exciverit, quantum ars ſiſtere non valuit, uſque demum donec graviſſima ſuperveniens *Leipopſychia* tam fluidorum motum, quam ſolidorum vim, impræſentiarum ſuſtulit.

Tandem vero revixit, atque ita convaluit, ut *ore ac membris in pallorem albentibus, oſtentui eſſet multum vitalis ſpiritus egeſtum.*

* Philoſophical Tranſactions, N° 478, p. 11. Read before the Roya' Society, June 16, 1745.

Ex tantis autem malis vix, et ne vix quidem eluctata eſt, antequam de novo fit gravida. Miſeram vero ſortem, quâ per totum graviditatis decurſum affligatur, referre piget; graviſſima namque mala, quæ uterum gerentes exercere ſolent, hæc noſtram et peſſime exercuerunt.

Puellulam tamen et ſuo tempore enixa eſt, cujus ad hiſtoriam, rebus maternis feliciter compoſitis, quoad morbos, mortem, et cadaveris ſectionem, pertinuerit, referendam me accingo.

Recens natæ forma culpa omni carere videbatur: parvula erat et puſilla, cujuſque cutis juſto flaccidior, et aliquatenus rugoſior, ſe ſuo nutrimento parcius potitam teſtabantur; quod nemini matris hiſtoriam penſitanti mirum videbitur.

Reſpiratio a principio ei erat juſto paullulum frequentior, pauciſque poſt diebus accedit, tanquam a correpto frigore, gravedo, cum ingenti laticis mucoſi ex ore, et oculis, et naribus profluvio, quod quoties ubera nutricis ducere coacta eſt, fere ſpiritum infanti præcluſit. Et hinc ſæpius lachrymæ, hinc etiam iræ, graviores quidem quam adeo teneræ ætati contingere ſolent quæque ſæpius præſentibus metum injecerunt, ne, cum furore brevi, ſimul et extremum halitum efflaret.

Commodis vero medicamentis, alvum præcipue leniter ducentibus, a gravedine utcunque liberari videbatur: viribus etiam cum mole pedetentim auctis, in ſpem adducti ſunt parentes olim delicatulæ ſanitatem magis conſtantem fore.

Sæpius tamen quam in pleriſque aliis infantibus ſolet, ex improviſo vomitio eam corripit: ejecta nec cibum crudum referunt, nec coctum, ſed pultem quaſi purulentam, interdum acidum, ſæpe fetidum redolentem: dejectiones etiam juſto frequentiores et ejuſdem omnino indolis erant. Reſpiratio interim frequens, laborioſa, noctuque difficillima. Hæc eo magis integræ ſalutis ſpem minuebant, quo minus auſcultabant remediis, quæ in hujuſmodi malis plerumque opem ferre ſolent.

Septimo tandem circiter menſe, exanthemata quædam ſive tubercula per faciem imprimis, deinde per collum, humeros, thoracem, et ad extremos manuum digitos, diſſeminata ſunt. Erant rotunda, pulicum inſtar morſûs lata, rubentia, duriuſcula, pruritu moleſtiſſima, ſenſim in veſiculas parvas, ſero tenui pellucido tandem repletas, elevata: quæ in ſquamas furfureas tandem exſiccata, decidebant, relictis veſtigiis livido-rubellis diu permanentibus.

Hæc in conſpectum venerunt paucorum poſt dierum febriculam; quum vero neque ortu, neque deceſſu juſtum aliquem typum ſervaverunt, pruriebant demum infenſiſſime, et nova ſemper ſeges demeſſam ſubſecuta eſt, diuturnum fore malum exiſtimabam, altiuſque radices egiſſe, quam quæ febre inordinata eruendæ forent: quumque exanthematum prorumpentium vis atque pruritus indies augeretur, ab impuro aliquo hoſpite, vitium humoribus inferente, morbum

bum incrementa capere putabam. Ad purgantia itaque mitiſſima, acidum aut acre obtundentia, eaque quæ ad viſcidum ſolvendum apta viderentur, confugi; et ne forte victûs ratio, quanquam nutrici optime, minus tamen molli alumnulæ competeret, utraſque non niſi juſculis, carnibus tenerrimis, et id genus coctu facillimis alendas juſſi. Hinc tuberculorum numerus, pruritus, cæteraque mala brevi diminuta fuerunt; atque dubia hucuſque ſalus quodammodo ſtabilita.

Decimi vitæ menſis initium attigerat, quum parentum juſſu nutrix parvulam ablactare ſategit. Hoc ſine magna moleſtia tulit: die ſexto, propter alvum paulo aſtrictiorem, aſſuetum ſibi ſolutivum hauſit, unde bis dejecit, et bene ſe habuit.

Sub veſperam enormi vomitione corripitur, ex nulla quantum patuit cauſa oriunda, quæ ſine ulla fere intermiſſione miſellam laceſſebat, donec tragœdiâ per 24 horas circiter actâ, vitæ brevis ſcenam clauſit.

Cuncta, quibus uſa eſt medicamenta, ſingulatim referre haud opus eſt. Tam notis pleriſque, quam novis auxiliis, intus, foras, novo et pertinaci malo obviam itum eſt. Præ aliis per totum vitæ (nam et idem erat morbi terminus) decurſum, profuerunt tinctura rhabarbari ex aqua cinamomi tenui parata, parca et ſæpius repetita doſi exhibita; et linctus ex oleo amygdalino, ſyrupo pectorali et ſapone pauciſſimo confectus. In ipſis vero extremis angoribus ad vomitum ſedandum adhibita ſunt ea quæ acidum aut acre temperare, obtundere ſolent; aromata grata, mitiſſima, anodyna, demum et ipſa ſoporifera, at fruſtra omnia: alvus interea nec ſponte ſoluta eſt, neque ullis ceſſit irritamentis.

Atrocis morbi cauſas atque ſedes rimari animus erat; quod, impetrata venia, poſtridie aggredior; priuſquam vero ad diſſectionem manus admoveo, præcipuorum ſymptomatum conſpectum, quibuſcum à carceribus ad metam uſque colluctabatur, coram ſiſtere haud forte abſonum videbitur.

1. Pulſus nunquam non turbatus erat, parvulus, tremulus, frequentiſſimus.

2. Reſpiratio ſemper naturali crebrior, noctu quam interdiu difficilior.

3. Id quoque obſervandum, quo laxior amictus, etiam interdiu, eo crebrior reſpiratio; quanto veſtis arctior thoracem et abdomen cingens, tanto erat reſpiratio naturali ſimilior.

4. Decumbenti etiam eadem actio difficilior; inde evenit, ut poſtquam primum carpſiſſet ſomnum, cætera noctis pars plerumque ſedenti in gremio nutricis abiit.

5. Tuſſis, inquietudo, febricula, plus minus, dum ad ſanitatem proxime accedere viſa eſt, noctu aderant, et ſemper quam interdiu moleſtiores.

6. Vomitiones frequentes ſine cauſa evidenti ſæpius eam fatigabant: egeſta, cruda, et varia; nunc acida, nunc putreſcentia, ſubpinguia, fetida.

7. Dejectiones ſurſum egeſtis ſimillimæ.

8. Carnium quolibet modo præparatarum odor, vomitiones crudeles haud raro ciebat; tanto tamque infelici ſenſu prædita erat.

9. Quoties alvus aſtrictior, toties major aderat ad vomendum proclivitas; at ventris fluxus quandoque enormis et diuturnus plus damni intulit, quam vomitio.

10. Urinam inſigni imbutam eſſe acrimonia docuit odor, ſpiritus inſtar urinoſi plerumque acris: linteamina colore flavo tingebantur.

11. Et cutis quandoque ſimili tinctura ſuffuſa eſt.

12. Humor iſte, qui pone aures infantum excerni ſolet, in noſtra etiam maxime fetidus erat.

13. Ingenium ei erat mite, placidum, et malorum patiens: ſi quando autem accenſa eſſet ira, mirum quantum excandeſceret: pari tamen celeritate extinguebatur, alioquin a ſuffocatione illico periiſſet.

Crederet, opinor, unuſquiſque rerum medicarum gnarus, ex hiſtoria jam tradita morbum eſſe inſolitum; vim ventriculi imprimis labefactatam; turbatas ſecretiones, vitiatum ſanguinem, pulmones male functos officio; forte et hepar culpa non caruiſſe. Quis vero unquam conjecturis aſſecutus eſſet diviſum fuiſſe ſeptum tranſverſum; per ejus rimam in ipſa pectoris penetralia ventriculi amplam portionem et inteſtinorum partem inſignem irrupiſſe? Hæc vero et plura docuit ipſa cadaveris diſſectio, quam poſtero mane, comite H. Delanoy Pigot, chirurgo Wandſworthienſi perito, inſtitui.

Corpuſculum exſuccum, et mirum in modum unius Νυχθημέρου intervallo exinanitum luſtramus. Quoad partium formam et magnitudinem omnia recte, niſi quod thorax naturali longior videretur et anguſtior: coſtæ ſiquidem, minus quam ſolent obliquè poſitæ, ad corporis axin rectiùs ſpectabant.

Ilia ſiniſtra livor occupaverat, tanquam gangræna fuiſſent affecta: circa humeros et brachia haud paucæ veſiculæ cernebantur; quarum aliæ liquore rubello, aliæ virideſcenti, flaveſcenti aliæ ſcatebant.

Diviſam cutem, muſculoſque tenues ſubtus jacentes, tunica cellularis omni omnino adipe vacua intercurrebat.

Ventre aperto, inferior omenti margo ne vel minima fæta pinguedine, vixque ad umbilicum protenſa in conſpectum venit. Inteſtinorum etiam tenuium portio, imuſque ventriculi fundus; deinde hepar magnum palleſcens; ſub cujus coſta latebat veſica fellea, ampla, turgida, fundo ſurſum, cervice deorſum rectius quam in ſanis ſolitum ſpectante. Hæc forfice recluſa bilis ſpiſſæ, nigricantis ferme ſeſcunciam effudit: at quanquam ex plaga patula haud ſine preſſura; uſque adeo craſſa tenaxque erat. Vicina omnia ſumma flavedine tingebantur. Ileon inteſtinum hinc inde inflammari videbatur: Colon ſuo loco abfuit: ſplen, renes, reliqua, ſana.

Reſciſſis deinde cute muſculiſque, caute ſternum ad jugulum uſque dividimus. Aſt diductis plagæ marginibus, ſpectaculo, quantum novi, nunquam antea

antea viſo, percellimur. In ſiniſtrum quippe pectoris antrum, magna ventriculi portio ſeſe intruſerat, tam pulmonum lobos, quam ipſum pericardium, et in eo cor, ex integro abſcondens.

Diducto tandem ventriculo, quid ſubtus lateret inſpecturi, ilei partem tres circiter palmas longam; cæcum, ejuſque appendicem, una cum coli portione haud parvâ, omnia uno eodemque tecta hoſpitio detegimus.

Rei novitate commotus, omnia rurſus intueor; anceps ne forte vulnus inter ſecandum diaphragmati inflictum viſceribus portam aperuiſſet. At inſpectio quam maxime accurata dubium omnino ſuſtulit; docuitque id olim fiſſum, diviſum vel perruptum fuiſſe: nam ſepti hiantis margines perfecte occalluere; neque ullibi conſpicienda erant plagæ recentis indicia.

Quum itaque conſtabat nullam a nobis diaphragmati illatam fuiſſe vim, cuncta in locis quibus antea collocata erant ſtudioſe reponimus, ſingulatim omnia et adhibita diligentia luſtraturi.

Septum tranſverſum ab oſſe ſterno, et cartilaginibus anterius diremptum, et ad centrum uſque tendinoſum, diviſum, retractumque, arcum lunatum tenſum formaverat; cujus cornua ad coſtarum fines cartilaginoſos, dextro latere ſterno propiùs, remotius ſiniſtro, pertingebant: ſicque ſinus effectus eſt inæqualis, ſiniſtro quàm dextro latere patentior.

Per hunc amplum ſinum, ſublata viſcera, in ſiniſtro thoracis angulo, inter coſtas et cordis apicem tutas adeo adepta ſunt latebras, ut neque proprio pondere, neque valida ſuccuſſione, neque mutato, quacunque demum ratione, corporis ſitu, in priſtinas ſedes unquam deduci potuiſſe judicabam: In *priſtinas* dico, quoniam primitus ante partum ſic ſita fuiſſe haud temere credendum eſt. In ipſo etenim partu malum accidiſſe, plurima ſunt quæ, ut ita credam, faciunt.

Saccus ille ventriculi, qui ingeſta per œſophagum immediate accipit, multo quam ſolet amplior, ſuum locum obtinebat; ſolito etiam pallidior et tenuior: reliqua pars ſurſum protruſa, deinde oblique retrorſum, ſupra ſepti arcum elevabatur; in ipſo tamen tranſitu a margine ſepti anguſtatum notavimus.

Has tandem emenſus fauces in amplum ſatis utriculum rurſus excrevit; qui arcuato ſepto, tanquam ſcamno incumbens, omnem pectoris ſiniſtri ambitum ſibi vindicabat. Corculum interea, nam tale revera fuit, ſupra ipſam dorſi ſpinam detruſerat; pulmonumque lobos ejuſdem lateris eouſque coarctaverat, ut omnino ſedibus pulſos, aut nullos fuiſſe, pene crediderimus.

Pylorus ex hoc utriculo juxta tertiam coſtam emergens, et ſinuoſâ flexura deorſum vergens, in duodenum abiit; quod, qua parte ſepti jugum in deſcenſu tranſivit, et ipſum coanguſtari debuerat, quotieſcunque ventriculus aut cibis aut flatibus intumuit. Quumque ita a naturali curſu devium aberrare neceſſe habuit, nil mirum ſi ductus communis biliarius, a recto inteſtini itinere tenſus

ez

et fere connivens, ſuo ſemper munere fungi non poterat: hinc cutis, hinc urina quandoque diſcolores; et hinc ſine bile dejectiones.

Tubi inteſtinalis anfractus preſſe ſequentes iterum in thoracis antra ducimur: nam ſupra ipſum diaphragma, et pone ventriculum, portio ilei aliquot palmas longa convoluta delituit: exitum finemve quærentibus in conſpectum venit appendix vermiformis, et cæcum fecibus diſtentum, amplum, incumbente ventriculi mole compreſſum, ejuſque niſu extremo antri angulo adaptatum: denique annexa coli pars circiter dimidia, crebris et profundis ſinubus notabilis.

Qua parte colon tenſum ſepti limbum ſuperabat, id tantum non abſciſſum invenimus; nam ventriculus ſæpius repletus, cedentis inteſtini latera contra membranæ renitentis marginem obſiſtens, ea ita attriverat, ſeu premendo anguſtaverat, ut ne quidem fecibus craſſioribus trajiciendis aptum videbatur.

His demum attente perſpectis, cætera ejuſdem cavi contenta exquirere ſategimus; et ſub firma tectos membrana, quam mediaſtini parietem eſſe ſiniſtrum judicavimus, pulmonum lobulos detegimus, arctiſſime poſticæ thoracis regioni undique non adhærentes modo, at firmiter agnaſcentes dudum officio ſuo defuiſſe videbantur. Plexus præterea fibrarum validus, ex membrana celluloſa quaſi contextus, totam lobulorum compagem, pleuræque ſuperficiem ſic intercedebat, ut nulla ratione ſeipſos expandere valerent pulmones, ſi a tergo liberum movendi ſpatium permiſiſſent inteſtina et ventriculi portio.

Alterius deinde lateris cavum excutimus, et pertuſa membrana firma, quam pro altera mediaſtini plica habuimus, pulmo dexter ſanus ſatis et integer ſeſe prodidit; quique proculdubio utriuſque munere diu perfunctus eſt.

Paulo infra pulmonis marginem inferiorem, ſupra diaphragma, ſaccus erat quaſi ex membrana cellulari conflatus, qui, forfice apertus, binas circiter uncias liquoris flavo-viridantis, albuminis inſtar gelatinoſi, loculamentis membranaceis contenti, profudit. Num ex hoc fonte profluxerat iſta ſanies, quæ indomabilem tuberculorum vim, faciem, collum, cæteraſque partes ſedantem, enutriverat? Ita quidem veroſimile videtur; nam liquidi in utriſque color idem erat.

Pericardium proxime reſeratur, quod et ipſum liquore ſimili ſcatebat: effluxit quippe ex apertura ad duas fere uncias humor deſcripto, modo paullulum tenuior magiſque flaveſcens, ſimillimus.

Cor erat exiguum, tactui durum, et in bina æqualia quaſi loculamenta diſcretum: hic enim auricula dextra ſanguine diſtenta, vix cordi magnitudine cederet; ibi ventriculi cruore atro pauco craſſiſſimo farcti: inter utroſque vinculi partes agunt vaſa coronaria, cordis baſin arcte adſtringentia.

Ex ſecta auricula cruor aterrimus, ſpiſſus, corio tenaci opertus exprimitur; ipſius ſacci latera ex venulis varicoſis liveſcentibus tantum non conſtare videbantur.

Sæpius

Sæpius inter ſecandum tam caſu, quam dedita opera, majores venas pertudimus, at nunquam alias, tam parum ſanguinis effluxiſſe memini, iſque erat craſſus et niger, tanquam ſero omni et diluente lympha orbatus.

Luſtratis jam et ſua ſede viſceribus, ventriculum eximere partemque inteſtinorum libitum eſt, ut quantum ad formam ſitumque mutata eſſent, exploratum haberem: dum vero manus operæ admoveo, leniterque ventriculi fundum prehendo, ecce omnino putris, et ne tactus quidem levis patiens, pars ima intra digitos collabaſcit.

Nulla aderant inflammationis gangrænoſæ indicia: non rubor, non ſtriæ, nulla ſtigmata liveſcentia: omnis albore pallet, et ſic tam nulla vi in tabem defluebat, ut potius acribus eroſam, vel humidis laxatam fuiſſe compagem, quam gangræna corruptam judicarem.

Nec intuenti ventriculi ſitum hoc abſonum videbitur. Heic enim ex imo viſceris hujus fundo, ad ſummum pylori jugum, aſcenſus omnino acclivis: in noſtra etiam ſublata erat vis ſepti renitens, cujus ope in altum attolli unice valuerant ventriculi contenta: plus itaque laboris muſculis ventris ſolis peragendum erat, quod quam in aliis peragitur, ſociato diaphragmatis nixu. Ingeſta proculdubio ſuam ſequi indolem, favente mora et quiete debuerant; quibus conditionibus ſi addamus perpetuum humoris gaſtrici ſtillicidium in unum quaſi ventriculi punctum, tam vomitus funeſti ortum, quam putredinis cauſam perſpectam habere poſſumus.

Hinc quoque manifeſtum erit, quare noctu quam interdiu, procumbens quam erecta, laxe quam arcte veſtita, pejus ſe habuit: et quantas anxietates, ægritudines, et moleſtias, pati oportuit, quoties ſitus horizontalis, habituſque parum ſtrictus, aſcenſum facilem cibis in pectora præbuere? Cor ipſum mole prægravari neceſſe erat; luctamque dubiam contra hoſtes irruentes ſolum ſuſtinere.

Tradita hucuſque rerum hiſtoria ſymptomatum explicationem promptam, ni fallor, reddidit, ideoque mihi ſupervacaneam: ſupereſt tantum modo, ut aliqua, quæ in mentem mihi ſæpius morbum immedicabilem penſitanti venerunt, at pauciſſimis, referam.

1. Patet enim imprimis, animal poſſe vivere, vegere, lætari, et quodammodo valere, cui finditur vel diſrumpitur diaphragma.

2. Ideoque minus huic metuendum, in pectore pertundendo, quoties empyema aut hydrops remedium anceps experiri ſuadeant.

3. Ita affectum eſſe diaphragma, (1.) ſi ampla hianſque plaga fuerit, forte dignoſcendum, ex ipſa thoracis figura productiore, minus obliquo coſtarum ſitu, et læſa ſimul reſpiratione.

4. In morbis infantum, quorum natura videatur reconditior, ex accurata partium externarum contemplatione, indagine, fortaſſis aliquid lucis elici queat: ideoque nequaquam prætermittendum.

5. Quotieſcunque tubercula, puſtulæ exanthemata, ſingularem aliquam corporis regionem occupant, ibi ſubtus, in vicinia, malum fomitem latere ſuſpicandum.

Ita tandem caſum, nulla arte ſanabilem, et forte nimia diligentia expoſui; id vero ægre te laturum haud quidem exiſtimo: nollent enim neſcire cordatiores in arte viri, quibus ex cauſis præmatura mors ſuperveniat, quotieſcunque cadavera luſtrandi copia conceditur: ipſos etenim medentes non ſolum rerum gnaros peritoſque reddit, verum etiam tam orbatis dolorem minuit, quam dedecus aufert arti, palam perſpectum habere, nullis remediis, nulla ope, ne quidem tua, ſupremam ſortem potuiſſe protrahi.

Vale, vir candide, diuque felix orbi interſis, bonarum artium patronus, medicæque juventutis pater atque princeps.

TRANSLATION

TRANSLATION

OF

A LETTER

ON A

Ruptured Diaphragm, and a Change in the Situation of ſome Viſcera, obſerved in the Body of a Female Child Ten Months old;

ADDRESSED TO

RICHARD MEAD.

WHEN I lately made mention, in thy preſence, of a caſe which appeared to me altogether ſingular, thou adviſedſt that I ſhould commit the whole hiſtory of it to paper: I have therefore attempted to comply with thy advice; and this I have done the more willingly, as being certain, that what had not diſpleaſed thee in private, would be agreeable to many if made public. Thus much will certainly be attributed, and that with juſtice, to the authority of a man, whoſe deareſt object and ſtrongeſt wiſhes are, to deſerve well of every uſeful art, of his fellow citizens, and of human-kind in general.

But that the caſe may appear more clear, I intend to commence my hiſtory from the firſt origin of it, giving a relation of every thing I was witneſs of, with all the fidelity and ſimplicity in my power.

A woman, about twenty-one years of age, of a genteel family, reſpectable both for her keen lively wit and agreeable perſon, of a tall ſlender habit, a temperament verging towards the ſanguineous, generally happy in moderate health, miſcarried, about the fifth month of pregnancy of her firſt child.

Unfortunately for her, this happened while ſhe was on a viſit to a relation, in a village far diſtant from her friends and home. The caſe being urgent, the neareſt midwife was called in; who being in great meaſure ignorant

of the art, and only uſed to the robuſt women of the country, treated the uterus of this delicate perſon ſo rudely, that ſhe excited from the lacerated veſſels an hæmorrhagy, or flooding, ſo violent that no art could ſtop it: at length a moſt alarming *ſyncope*, or fainting, ſupervened, which, for the preſent, both took off the motion of the fluids and the action and force of the ſolids. After ſome time, however, ſhe revived, and at length recovered, but in ſuch a manner, that the paleneſs of her face and limbs evidenced great loſs of the vital ſpirits.

She was ſcarcely recovered from theſe great misfortunes, when ſhe again became pregnant; but it would be melancholy to relate her miſerable condition through the whole courſe of her pregnancy; all the moſt dangerous complaints which uſually afflict pregnant women, afflicted our patient in the worſt degree.

At the proper time, however, ſhe was brought to bed of a girl; whoſe hiſtory, with reſpect to diſeaſes, death, and opening the body (the circumſtances of the mother having terminated happily) I now undertake to relate.

The body of the new-born infant ſeemed free from fault: it was, however, little and weakly; its ſkin too flaccid, and ſomewhat too much wrinkled, which evidenced its having received too little nouriſhment; but no one will wonder at this, who conſiders the hiſtory given of the mother.

The reſpiration of the infant was too frequent from its birth, and a few days after came on a ſtuffing and heavineſs of the head, as if from having caught cold, with a conſiderable excretion of a watery mucus from the eyes, noſe, and mouth, which, as often as it was obliged to ſuck, almoſt threatened ſuffocation. On this account it would cry, and go into more violent paſſions than is uſual at ſo tender an age; ſo that the attendants would often fear, leſt in a ſhort guſt of paſſion it ſhould expire.

By proper medicines, eſpecially gentle laxatives, it ſeemed in ſome meaſure freed from the cold and ſtuffing of the head: ſtrength alſo gradually increaſed as it grew bigger, and the parents were induced to hope, that the health of their little delicate daughter would now become more ſtrong and firm.

The infant was ſeized with a ſudden vomiting, more frequently than is common to moſt other children; the matters thrown up, neither reſembled crude nor digeſted food, but a kind of purulent pap, ſometimes acid, ſometimes of a fœtid ſmell; the ſtools alſo were too frequent, and exactly of the ſame kind of matter: the reſpiration in the mean time frequent, laborious, and during the night extremely difficult. Theſe ſymptoms were the more diſcouraging, as they did not yield to remedies which uſually give relief in ſimilar complaints.

About the ſeventh month ſome exanthemata or eruptions appeared, firſt on the

the face, then on the neck, ſhoulders, breaſt, and to the ends of the fingers. They were round, broad, like flea-bites, red, hardiſh, and extremely troubleſome, with itching; by degrees they were raiſed into little veſicles, and at length filled with a thin pellucid ſerum: being dried into chaffy ſcales, they fell off, leaving marks of a livid red colour, which remained a long time.

Theſe eruptions had appeared after a fever of a few days continuance; but as they obſerved no regular type either in their coming on or going off, as the itching was extremely troubleſome, and a new crop always ſucceeded the old one, I concluded the diſeaſe would be of long duration, and had taken a deeper root than what could be accounted for from an irregular fever; and as the force and itching of the exanthemata coming out, daily increaſed, I ſuppoſed the diſeaſe derived its increaſe from ſome impure matter lodged within, vitiating the humours. I therefore applied to the mildeſt purgatives, ſuch as would obtund the acid or acrid matter, and thoſe which ſeemed proper to reſolve the viſcid. And, leſt the manner of diet, though the moſt proper for the nurſe, ſhould not ſo well agree with the tender infant, I ordered both of them to eat nothing but broth, the moſt tender animal food, and ſuch as was of moſt eaſy digeſtion. By this means the number of tubercles, the itching, and other complaints, were in a ſhort time diminiſhed, and the health of the infant, hitherto doubtful, was in ſome meaſure eſtabliſhed.

It had reached the beginning of the tenth month of its age, when the nurſe, by order of the parents, began to wean it. It bore this without much inconvenience; on the ſixth day, being coſtive, it took its uſual ſolutive draught, from which it had two ſtools, and was well. Towards evening it was ſeized with a moſt violent vomiting, ariſing, ſo far as could be perceived, from no cauſe; but which harraſſed the little ſufferer, almoſt without intermiſſion, for the ſpace of twenty-four hours, and then cloſed the ſcene of a ſhort life.

It is not neceſſary to mention ſingly all the remedies made uſe of. This new and obſtinate diſeaſe was oppoſed, both by moſt known remedies and ſome new ones, internal and external. Through the whole courſe of life (for this was the terminus of the diſeaſe) the tincture of rhubarb, made with weak cinnamon-water, and given in ſmall doſes often repeated; and a linctus made of oil of almonds, pectoral ſyrup, and a little ſoap, were more uſeful than any other remedies. In the laſt fatal ſtruggles, the moſt mild, grateful aromatics, anodynes, and even ſoporific medicines, which uſually moderate and obtund the acid or acrid matter, were exhibited in order to take off the vomiting, but all in vain. No ſpontaneous motion to ſtool now occurred, nor did the bowels yield to any ſtimulating remedies.

I had a wiſh to ſearch out the cauſes and ſeat of this violent diſeaſe; and having obtained permiſſion, I attempted it the next day. But before I enter

upon the diſſection, it will not be amiſs, perhaps, to bring into one view the principal ſymptoms under which the infant laboured from firſt to laſt.

1. The pulſe was always diſturbed, ſmall, tremulous, and very frequent.

2. Reſpiration was always quicker than natural, and more difficult in the night than the day.

3. It muſt be obſerved alſo, that even in the day-time, the reſpiration became more difficult, in proportion as the cloaths were put on more looſely: and the more tightly they bound the breaſt and belly, the more natural was the reſpiration.

4. The action of breathing alſo was more difficult when lying; hence it happened, that, after the firſt ſleep, it commonly ſpent the reſt of the night ſitting in the boſom of the nurſe.

5. When the child ſeemed in its beſt ſtate of health, it was afflicted in the night, more or leſs, with cough, reſtleſſneſs, and feveriſh heat; and theſe were always more troubleſome in the night than the day.

6. It was often diſtreſſed with frequent vomiting, without evident cauſe: the matters thrown up were crude and various; ſometimes acid, ſometimes putreſcent, fattiſh, or fœtid.

7. The diſcharges by ſtool were like thoſe thrown up by vomiting.

8. It was endowed with ſo ſtrong and unhappy a ſenſe of ſmelling, that the ſmell of animal food, any-way prepared, often excited ſevere vomitings.

9. Whenever it was coſtive, there was a greater tendency to vomit; but a diarrhœa, ſometimes violent and continuing long, did more harm than vomiting.

10. The urine was affected with great acrimony, as appeared by the ſmell, which was commonly acrid, like the ſpirit of urine: it tinged cloths of a yellow colour.

11. The ſkin was ſometimes covered with a ſimilar taint.

12. The humour commonly excreted behind the ears of infants, was alſo in this extremely fœtid.

13. Its diſpoſition was mild, placid, and patient under ſufferings: but if at any time its paſſion was kindled, it roſe to a wonderful pitch; the paſſion, however, was extinguiſhed with equal celerity, otherwiſe it would immediately have periſhed from ſuffocation.

Every one ſkilled in medicine, I think, will ſuppoſe, from the hiſtory now given, that the diſeaſe was a new one; that the powers of the ſtomach eſpecially were debilitated, the excretions diſturbed, the blood vitiated, and that the lungs did not properly perform their office; perhaps alſo they may ſuppoſe the liver had not been free from fault. But who would ever have conjectured that the *ſeptum tranſverſum* was divided aſunder, and that a large

portion of the ſtomach, and great part of the inteſtines, had ruſhed through this opening into the cavity of the breaſt? Yet this, and even more, the diſſection of the body diſcovered to us; which the next morning I performed, accompanied by H. Delanoy Pigot, a ſkilful ſurgeon of Wandſworth.

We found the body ſhrivelled, and wonderfully ſhrunk, in the ſpace of twenty-four hours. As to the figure and magnitude of the parts, every thing was right, except that the breaſt ſeemed longer and narrower than natural. The ribs, indeed, were not ſo obliquely placed as uſual, but lay too flat towards the axis of the body.

The left iliac region was of a livid colour, as if it had been affected with gangrene: many veſicles were viſible about the ſhoulders and arms, ſome of which contained a reddiſh, ſome a greeniſh, and others a yellowiſh liquor.

Having cut through the ſkin and thin muſcles lying underneath, we found the *tunica cellularis* quite free from fat.

The belly being opened, we found the lower margin of the omentum wholly free from fat, and ſcarcely reaching to the navel. A portion alſo of the ſmall inteſtines, and the loweſt part of the ſtomach, were viſible; next we obſerved the liver, large and pallid; under the ſide of which lay concealed the *veſica fellea*, large and turgid, the bottom lying more directly upward, and the neck more directly downward, than what is uſual in healthy perſons. This being opened with the ſciſſars, it was found to contain nearly an ounce and an half of a thick blackiſh bile; but though the wound was open, it was too thick and tough to run out without preſſure. The neighbouring parts were all tinged of the deepeſt yellow; the ileon ſeemed here and there inflamed; the colon was removed from its proper place; the ſpleen, kidnies, and other parts, were ſound.

Having again cut through the ſkin and muſcles, we cautiouſly divided the *ſternum* up to the *jugulum*. But, the edges of the wound being drawn aſide, behold! a ſight, never, that I know of, before ſeen. A great portion of the ſtomach had thruſt itſelf into the left cavity of the breaſt, wholly covering the lobes of the lungs, the pericardium itſelf, and in it the heart.

Having drawn aſide the ſtomach, to ſee what might be concealed under it, we found a part of the ileon, about three times the breadth of the hand, the cæcum and its appendage, together with no ſmall portion of the colon, all concealed in one and the ſame cavity.

Struck with the novelty of the thing, I again examined the whole; doubtful leſt a wound made in the diaphragm, in diſſecting the body, might have opened a paſſage to theſe viſcera. But an inſpection, as accurate as poſſible, removed all doubt, and convinced me that the diaphragm had been ſplit, divided, or ruptured for ſome time; for the edges of the rupture were

perfectly

perfectly hardened, nor were there any marks of a recent wound any where to be ſeen.

As therefore it appeared that no injury had been done to the diaphragm by us, we carefully replaced all the parts in the ſituation they had been in before, that we might examine them one by one with proper attention.

The *ſeptum tranſverſum* being torn off from the *os ſternum* and cartilages on the anterior part, and divided and drawn back to its center, had formed a tenſe lunar arch; the corners or horns of which, on the right ſide, reached nearer the cartilaginous terminations of the ribs; on the left they were more diſtant; and thus there was an unequal ſinus formed, more open on the left than on the right ſide.

The viſcera having been carried upward through this ample ſinus, had gained ſo ſafe a ſeat in the left angle of the breaſt, between the ribs and apex of the heart, that I judged it impoſſible that they could ever have fallen back into their *priſtine* ſituation, either by their own weight, or any ſhaking or change in the poſture of the body, in whatever manner this had been made. I ſay their *priſtine* ſituation, becauſe we are not haſtily to ſuppoſe that they were in this ſituation before the birth of the child. Many reaſons induce me to believe that the miſchief happened in the birth.

The bag of the ſtomach, which immediately receives the ingeſta from the œſophagus, was much wider than uſual, and alſo paler and thinner, but remained in its proper ſituation. The other part, being puſhed upwards, and then obliquely bent backward, was elevated above the arch of the ſeptum: in this paſſage, however, we obſerved that the margin of the ſeptum had made that part of the ſtomach narrower, *or formed a kind of ſtricture upon it.*

Having paſſed theſe ſtraits, it was again enlarged into a bag ſufficiently capacious, which lay upon the arcuated ſeptum, as on a bench, and occupied the whole ſpace of the left breaſt. It had thruſt the little heart, for ſuch it really was, upon the ſpine of the back, and had ſo ſtraitened the lobes of the lungs on that ſide, that one would almoſt have thought they had been driven from their ſituation, or that there had been none at all.

The pylorus emerging from this bag near the third rib, and bending downward with a ſinuous flexure, ended in the duodenum; both of which muſt have been ſtraitened or conſtricted, in the part where it paſſed over the ridge of the ſeptum, as often as the ſtomach had been ſwelled with food or wind. As therefore the duodenum had been under a neceſſity of deviating from the natural courſe, it is no wonder if the common biliary duct, bent from the ſtrait line of the inteſtine, and almoſt cloſed, had not always been able to perform its office: on which account the ſkin and urine were ſometimes diſcoloured, and diſcharges by ſtool, without bile.

We cloſely followed the winding tract of the inteſtinal tube, and were again led

led into the cavity of the thorax: for a convoluted portion of the ileon, ſome hands breadth in length, lay concealed above the diaphragm, and behind the ſtomach. Searching for its exit or end, we found the vermiform appendage, and the cæcum diſtended with fæces, large, and compreſſed with the incumbent load of the ſtomach, by the motion of which it was adapted to the extreme angle of the cavity. About half the colon, annexed to it, was remarkable for frequent deep ſinuoſities.

Where the colon had ſtretched beyond the tenſe border of the ſeptum, was the only part of it we found not cut and worn; for the ſtomach, often full, preſſing the ſides of the yielding inteſtine againſt the edge of the reſiſting membrane, had ſo worn or conſtricted it by preſſure, that it ſeemed by no means ſuited to admit the thick fæces to paſs through it.

Theſe being at length attentively viewed, we ſet ourſelves to examine the other contents of the ſame cavity; and under a firm membrane, which we took to be the left ſide of the mediaſtinum, we found the lobules of the lungs concealed, and every where not only cloſely adhering to the poſterior region of the thorax, but firmly growing to it, ſo that they ſeemed long to have failed in performing their function. A ſtrong plexus of fibres alſo, formed as it were of the cellular membrane, connected the whole ſtructure of the lobules and ſuperficies of the pleura, ſo together, that the lungs could by no means have expanded themſelves, if the inteſtines and part of the ſtomach had left a free ſpace behind.

We next examined the cavity on the other ſide; and, having cut the firm membrane, which we took to be the other folding of the mediaſtinum, the right lung appeared ſufficiently ſound and compleat; and which, no doubt, had long performed the office of both.

A little below the inferior edge of this lung, above the diaphragm, was a bag, formed as it were of cellular membrane, which being opened with the ſciſſars, was found to contain about two ounces of a yellowiſh-green liquor, gelatinous like the white of an egg, and contained in membranous follicles.---Had the ſanies, which gave ſuch irreſiſtible force to the tubercles affecting the face, neck, and other parts, ariſen from this ſource? It ſeems very probable, for the liquids in both were of the ſame colour.

The pericardium was opened next, and was found to abound with a ſimilar liquor. There flowed out from the aperture about two ounces of an humour exactly like that deſcribed above, only it was a little thinner and more yellow.

The heart was ſmall, hard to the touch, and divided as it were into two equal partitions; for the right auricle, diſtended with blood, almoſt equalled the bulk of the heart; the ventricles were ſtuffed with a ſmall quantity of black thick blood: between both ventricles the coronary veſſels acted as vinculi, or ties, binding tightly the baſis of the heart.

The

The auricle being cut open, a moſt black ſpiſſid blood, covered with a tenacious membrane, was ſqueezed out from it. The ſides of the bag itſelf ſeemed almoſt wholly formed of ſmall livid varicoſe veins.

We often, in diſſecting, both by accident and with deſign, wounded the larger veins; but I never remember that any thing iſſued out but a little blood, which was thick and black, as if deprived of all its ſerum and diluent lymph.

Having now examined the viſcera, and their ſituation, I wiſhed to take out the ſtomach and inteſtines, that I might ſee how much their form and ſituation had been changed. But on attempting this, and gently taking hold of the bottom of the ſtomach, behold it was altogether putrid, not bearing the ſlighteſt touch, but the lower part of it fell to pieces between my fingers!

There were no ſigns of a gangrenous inflammation; no redneſs, ſtriæ, or livid ſpots appeared: every part was of a pale white, ſo that I imagined the ſtomach had not fallen into this waſte from any violence or force, but that its ſtructure had rather been eroded by ſome acrid matter, or relaxed by moiſture, than corrupted by gangrene.

Nor will this ſeem improbable to any one viewing the ſituation of the ſtomach; for the aſcent from the bottom of this viſcus to the higheſt point of the pylorus, was altogether ſteep; in this ſubject, alſo, the reaction of the diaphragm was loſt, by the help of which only the contents of the ſtomach can be raiſed upwards. More labour therefore reſted on the muſcles of the belly, than in other caſes where the action of the diaphragm is joined with them. The ingeſta muſt, without doubt, from their delay and reſt in the ſtomach, have retained their own nature; to which, if we add the conſtant dropping of the gaſtric juice as it were on one part of the ſtomach, both the origin of the fatal vomiting, and the cauſe of the putridity, will be evident.

Hence alſo it will appear why the infant was worſe in the night than the day, when lying than in an erect poſture, and when looſely clad than when tightly bound; and how great anxiety, ſickneſs, and inconvenience, it muſt have ſuffered, as often as its horizontal ſituation, and looſe dreſs, gave an eaſy aſcent to the food into the breaſt. The heart itſelf muſt have been greatly incommoded by the bulk of the unnatural contents of the breaſt, and have alone ſuſtained a doubtful conteſt againſt the ruſhing foes.

The hiſtory of what appeared on diſſection, thus far delivered, gives, if I miſtake not, an eaſy explication of the ſymptoms, and therefore unneceſſary for me to attempt; it only remains, that I relate briefly a few things which occurred to me, when often contemplating this incurable diſeaſe.

1. Firſt then it appears, that an animal may live, be ſtrong, chearful, and in ſome meaſure well, in which the diaphragm is ſplit or ruptured.

2. Therefore

2. Therefore leſs is to be feared from this accident, in opening the breaſt, as often as an empyema, or dropſy, perſuade us to try this doubtful remedy.

3. If the wound be wide and open, we may, perhaps, know that the diaphragm is thus affected, (1.) from the figure of the breaſt being too long; from the leſs oblique ſituation, than uſual, of the ribs; and the reſpiration being at the ſame time injured, or rendered difficult.

4. In diſeaſes of children, the nature of which ſeems very abſtruſe, ſome light may perhaps be gained from an accurate view and examination of the external parts; and therefore it ſhould not be omitted.

5. As often as tubercles, puſtules, exanthemata, affect ſome particular part of the body, we may ſuſpect that the fomes of the diſeaſe lies not far beneath.

Thus, at length, I have explained a caſe curable by no art; but, perhaps, I have been too minute: this, however, I think will not diſpleaſe thee, as the ſincere in the art are unwilling to be ignorant from what cauſes premature death may ſupervene, as often, at leaſt, as an opportunity of examining the body is granted them: for the diſſection of ſuch bodies not only renders the phyſicians more ſkilful, but it alſo leſſens the grief of parents or friends for the deceaſed, and takes off the odium from our art, when it is publicly known, that by no remedies, by no help, no not even by thine, the final period of life could have been protracted.

Vale, vir candide! May'ſt thou long be happy in life, the patron of uſeful arts, the father and encourager of medical youth!

IT was a cuſtom very early introduced into the Royal Society, to inſert Remarks on important Publications, that had any reference to the objects of its inſtitution. It was not unuſual to refer ſuch works to ſome junior member, who made an epitome of them, or offered ſuch critical remarks as he deemed proper to lay before this learned body. Of this kind is the following Eſſay. The ſucceeding volume was put into the hands of the learned Dr. William Watſon, of Lincoln's-inn-fields: his obſervations were printed in the Philoſophical Tranſactions, vol. xlviii. *p.* 141. *ann.* 1753; *and this is followed by a letter from Philip Miller, F.R.S. to Dr. Watſon, concerning a miſtake of Profeſſor Gmelin, reſpecting the* Spondylium vulgare hirſutum *of Caſpar Bauhin, vol.* xlviii. *p.* 153.

For ſeveral years paſt, the Society has not been in the practice of thus epitomizing the works of the learned; it was probably ſuggeſted, that it gave the Tranſactions of the Society too much the form of a Bibliotheque: it may, however, be doubted, whether this reformation has added to the merit and reputation of this collection of immenſe literature, or been the means of admitting more original and important communications.

Editor.

AN ACCOUNT OF SOME OBSERVATIONS AND EXPERIMENTS MADE IN *SIBIRIA*;

Extracted from the Preface to the "*Flora Sibirica*, ſive "*Hiſtoria Plantarum Sibiriæ, cum tabulis æri inciſis.* "Auct. D. *Gmelin.* Chem. et Hiſt. Nat. Prof. *Petropoli* "1747. 4to, vol. i.* "

Read before the Royal Society, February 11, 1748.

BY direction of the late Empreſs of Ruſſia, ſeveral Members of the Royal Academy of Sciences at Peterſburg undertook a journey into Sibiria, in order to enquire into the natural hiſtory of that country, and to make ſuch experiments and obſervations as might tend to give a juſt idea of that almoſt unknown region, and to the improvement of phyſics in general.

Dr. John George Gmelin, Profeſſor of Chemiſtry and Natural Hiſtory at Peterſburg, was ſent at the head of this deputation, who, beſides ſeveral of his colleagues, and ſome ſtudents, had a painter or two, a miner, huntſman, and proper attendants in his retinue.

He ſet out upon this expedition in Auguſt 1733, and returned to Peterſburg in February 1742, after having ſpent nine whole years in viſiting almoſt every part of Sibiria.

The fruits of this undertaking are deſigned to be communicated to the public; and one volume of the Hiſtory of Plants has already appeared, under the title of "*Flora Sibirica, ſive Hiſtoria Plantarum Sibiriæ, Tom.* I. *continens* "*Tabulas Æri inciſas L. Auctore D.* Joh. Geo. Gmelin, *Chem. et Hiſt. Natur.*

* Philoſophical Tranſactions, N° 486, p. 248.

"*Prof.*

" *Prof.* Petropoli *Typis Academiæ Regiæ Scientiarum* 1747." This is intended to be followed by ſeveral others, containing not only a deſcription of the plants, their *locus natalis*, &c. but their uſes among the inhabitants, ſo far as the Profeſſor could get information concerning them.

In a large preface to this firſt volume, the ingenious and indefatigable author has given us a conciſe account of Sibiria in general, its rivers, lakes, mountains, mines, the nature of the ſoil, fertility, &c. with ſeveral judicious experiments and remarks on the altitude of the earth above the level of the ſea; but eſpecially on the qualities of the air in that climate; an abſtract whereof, at firſt drawn up for private entertainment, was thought not unworthy of more public notice, and is therefore addreſſed to the Royal Society.

The country, whoſe natural hiſtory Dr. Gmelin has collected, is of vaſt extent. It is bounded by a chain of mountains called the Werchoturian and Vralian, on the weſt; by the ſea of Kamtſchatka, on the eaſt; and comprehends all thoſe countries that lie betwixt the *Mare Glaciale*, and the borders of the Kalmucks and Mongales, to the very confines of China.

The rivers which water this tract are numerous; ſome of them large, and even receiving ſtreams in their courſe, which in other countries would be looked upon as capitals themſelves. The ſpace they meaſure is no leſs conſiderable. The Jaïk is the firſt river of note on the weſtern ſide. It riſes under the latitude of 54, of longitude 78, and runs into the Caſpian in 47 of latitude, and 74 of longitude. The Irtiſch riſes in the country of the Kalmucks, latitude 46½, longitude 103; and empties itſelf into the Oby, latitude 61, longitude 86. The Oby riſes under 52 latitude, 103½ longitude, and loſes itſelf in the *Mare Glaciale*, latitude 67, longitude 86, after running a courſe of near eight hundred leagues, and receiving a great number of rivers of conſiderable note. The Jeniſea is not much leſs than the Oby. The Selenga takes its riſe under latitude 48, longitude 114, runs into the lake Baical in 51° 20″ latitude: with many others equally conſiderable, which it would be tedious to mention.

The water of theſe rivers is for the moſt part freſh, clear, and ſalubrious. In ſome it is a little brackiſh, by the mixture of currents from ſalt lakes and ſprings, which abound in many places. They contain fiſh of various kinds in great plenty, and moſtly of an excellent flavour.

The lake Baical may deſerve ſome mention to be made of it, being one of the greateſt freſh water lakes yet diſcovered. It extends, according to our author, from the one hundred and firſt degree of longitude, to the one hundred and twenty-ſeventh, being upwards of five hundred leagues in length, and is from twenty-five to eighty leagues in breadth. It is every where deep and navigable; the water is extremely clear, and abounds with great plenty of fine fiſh. It receives a great number of rivers; but the Angara alone runs out of

it: which joining the Tunguſca, loſes its name; as this likewiſe does, when it runs into the Jeniſea.

Salt lakes are common in many parts of Sibiria: ſome contain a pure white ſalt, well taſted, and fit for uſe; which, in ſummer, is cryſtalliſed by the heat of the ſun alone, and forms a cruſt on the top of the lake. In ſome this grows ſo heavy, as to break and fall to the bottom. Beſides this kind of pure common ſalt, which is fit for uſe, there is another ſort, of a bitter taſte, much reſembling the *ſal mirabile*, found in ſeveral lakes in this country. Springs of ſalt water are ſometimes obſerved to riſe in the midſt of freſh water. Our author aſſures us, that he has ſeen ſeveral ſuch; one eſpecially he obſerved riſing through a ſtone, in the bed of the river Angara.

Before we diſmiſs the ſalt lakes, we may juſt mention, that on the banks of the river Kaptendei, where it runs into the Wilvius, are a great number of ſalt ſprings, which afford excellent ſalt; and that, about thirty leagues above this place, along the ſame Kaptendei, on the right hand, is a hill about thirty fathom high, and two hundred and ten long, conſiſting entirely of *ſal gem*.

There are ſome lakes, which, our author informs us, in the memory of man, contained only freſh water, but now are very ſalt. One of this kind, about forty years ago, abounded with freſh-water fiſh, but is now become ſalt, ſmelling ſtrong of ſulphur, with a bitter taſte, and all the fiſh are killed.

The inhabitants aſſured our author, that ſome freſh-water lakes have been by degrees dried up, and that others have appeared where formerly it was dry ground; and that even ſome of theſe new-formed lakes, which at firſt had no fiſh in them, are now very plentifully ſtocked. They have not recourſe to ſubterranean caverns or paſſages for a ſolution of this phænomenon; but aſſert, that ducks, ſea-mews, &c. that live upon fiſh, carry the eggs from one lake to another.

In the deſcription which our author gives us of the courſe of rivers, ſituation of lakes, &c. he takes notice of the ſoil, its barrenneſs, fertility, &c. Theſe are different, as it may be ſuppoſed, in the different parts of ſuch an extenſive climate under ſuch latitudes. About the lake Baical is the moſt fruitful tract, and thence is called the granary of that part of Sibiria. They grow ſome little corn about the latitude of 61. They have made of late ſome trials ſtill further; but the ſucceſs was not known.

In his paſſage through Sibiria, he tells us, that he could ſcarce think himſelf in Aſia, till he got over the river Jeniſea; till then, he ſaw no animals, but ſuch as are common in Europe, at leaſt may be ſeen in the plains waſhed by the lower part of the Volga. The plants and ſtones were of the ſame kind, and the face of the country in general, like other parts of Northern Europe. But from the Jeniſea, to the eaſt, north, and weſt, the climate ſeemed to be

wholly

wholly different, and as if enlivened with new vigour. It is mountainous; but theſe mountains are intermixed with rich delightful valleys and fruitful plains. The animal that affords the muſk, and the *muſimon* of the ancients, were now to be met with. Many of the moſt common European plants by degrees diſappeared, and others became frequent, which are ſtrangers in Europe. The purity, clearneſs, and ſalubrity of the waters, the exquiſite taſte of the fiſh and fowl, but more eſpecially the different genius and way of life of the inhabitants, plainly proved they were got into another climate. This remark our author ſubmits to the conſideration of geographers.

Amongſt the curioſities of Sibiria the Profeſſor mentions a place remarkable for its exceſſive coldneſs in the midſt of ſummer. It is in the province of Jacutſki, about the middle way to Ochotz along the river Jucanan; it is called by the Ruſſians Springing Ice, by the natives the Icy Lake. Three other ſuch places occur within the circuit of eighty leagues.

The provinces beyond the lake Baical are mountainous, with high and wide-extended plains lying betwixt them, which in many places are only covered with barren ſand; ſo that in ſome places one may travel through ſuch deſerts one, two, or three days together, without finding wood enough to make a fire, or any other water than that of ſalt ſprings, which are very frequent; and being dried up by the ſummer heats leave a ſaline cruſt, very much reſembling *Natron*, being of an alcaline nature, with a ſulphureous ſmell.

The country that borders on the rivers Uruncan and Gaſimur is extremely rich and fruitful. The face of the country is delightful, and its produce to the huſbandman almoſt exceeding his hopes: but what renders it ſtill more ſurpriſing is, that a country, whoſe ſoil yields to few in fertility, and the beauty of its bloom, ſhould yet cover immenſe riches in its boſom. Here are mines of gold and ſilver, which have long been worked to advantage: the veins are rich, and lie ſhallow; yet communicate no poiſonous effluvia to the vegetables that cover them: nor do thoſe diſtinguiſhing marks of ſterility appear here, which in moſt other mining countries are ſo obſervable.

The higheſt part of Sibiria is towards the ſprings of the rivers Argun, Schilca, &c. about the 49th degree of latitude, 130th longitude. This part is deſtitute of marble and lime-ſtone, which are almoſt every where to be met with in the lower tracts both of Sibiria and Ruſſia: no petrifications are to be found here, either of the teſtaceous or cruſtaceous animals; and the veins of ore are always found near the ſurface, never entering deep into the earth. Beſides the mines of gold and ſilver above-mentioned, copper and iron are found in ſeveral places; likewiſe the *Glacies Mariæ*, or Muſcovy Glaſs, is dug near the river Mama. Loadſtones are alſo got in Sibiria; and in ſeveral of the rivers, beautiful tranſparent pebbles and cryſtals occur.

I ſhall only add, that there are ſome natural warm baths in ſeveral parts of Sibiria,

Sibiria, and ſome of them of a moſt agreeable temperature; and proceed to the account of our author's obſervations and experiments on the height of the earth, &c.

Pauda is allowed to be the higheſt of all that ridge of mountains called Werkoturian. Our author endeavoured to take the height of it by means of the barometer.

On the 11th of December 1742, at our author's lodgings at the foot of Pauda, the mercury in the barometer, in a cold place, but within doors, ſtood at $26\frac{83}{100}$ Paris meaſure. He then carried it up the mountain as high as he could go, which was about one-third of the whole height, where he hung up the barometer on a tree, from nine to eleven in the forenoon, making a good fire pretty near it, leſt the intenſe cold, which ſunk the quickſilver in De Liſle's thermometer to 201, ſhould affect the barometer, and lead him to aſcribe that to gravity, which was only owing to the contraction of cold.

Under theſe circumſtances the quickſilver ſunk to $25\frac{32}{100}$.

Hence, according to M. Caſſini's calculation, our author's firſt ſtation will be 941 feet higher than the level of the ſea: the ſecond on Pauda 1505 feet, and the whole height of this mountain 4515, or 752 Paris toiſes; which added to 941 feet, the height of his lodgings at the foot of Pauda, makes 5456 feet, or 909 toiſes, the height of Pauda's top above the ſea; ſuppoſing the level of the ſea to be 28 inches, as the Paris academicians have fixed it: though this differs from obſervations made on the barometer at the ſea-coaſt of Kamtſchatka at Bolcheretz; where, from experiments made above two years, the mean height of the mercury was 27 inches, $6\frac{1}{2}$ lines. And at Ochotz, during a year's obſervations, the mean height was found to be 27 inches and about $8\frac{1}{2}$ lines.

Hence it would appear, that the ſea of Kamtſchatka is higher, with reſpect to the earth's center, than the Ocean and Mediterranean; and at Bolcheretz higher than at Ochotſki.

The following liſt of barometrical obſervations, made in various parts of Sibiria, will ſhew the different heights of the different tracts in it.

	Feet.	Toiſes.	Inches.
The mean height of the barometer, from a year and 10 months obſervations at Ircuts, was —	——	——	$26\frac{38}{100}$
Its height above the ſea will then be — —	1355 or	226	———
At Selengia, 1 month's obſervations — —	——	——	$25\frac{95}{100}$
Its height above the ſea — — —	1779 or	296	———
At Kiachta, a town on the confines of China, 12 days obſervations in April and May, mean height —	——	——	$25\frac{35}{100}$

Its height — — — —	2400 or 400*	———
At Nertſchia, from 20 days obſervations in June — —— ——		25 $\frac{99}{100}$
The height above the ſea —	1738 or 298	———
At the ſilver mines at Argun, 9 days in July — —— ——		25 $\frac{62}{100}$
The height above the ſea —	2121 or 353$\frac{1}{2}$	———

Our author adds ſeveral judicious reflections upon the time and manner of making theſe obſervations, in order to determine any thing with certainty, which he has endeavoured to keep ſtrictly to in theſe experiments; and concludes, that the plains in ſome parts beyond the lake Baical, are almoſt as high as the tops of high mountains in ſome other countries; Mount Maſſane, according to the French geometricians, being but about 408 toiſes high, which differs but little from the plain country at Kiachta; which yet has conſiderable mountains riſing in its neighbourhood.

From whence our author concludes, that the elevation of the earth, in this tract, above the level of the ſea, is very great, compared with the weſt part of Sibiria and Europe †.

The air of Sibiria, with reſpect to its gravity, is, as in other countries, the nearer the ſea the heavier; and the more remote, the lighter: ſo that at Kiachta, ſcarce one perſon in our author's retinue eſcaped without ſome indiſpoſition. They were ſeized after their arrival, ſome with acute fevers, others complained of extreme laſſitude and dejection. It was in the ſpring ſeaſon, the weather moderate, their manner of living regular, nor had they been much fatigued with their journey; in ſhort, they could attribute it to no other cauſe than the lightneſs of the air.

In theſe provinces, viz. beyond the lake Baical, our author tells us, that

* In the copy before me appears to be a great miſtake, either of the printer, or in the manuſcript; it being put down in words at length, *bis mille quadringentarum Orgyarum cum dimidia*; which is impoſſible; and the number of feet is not exact, according to other calculations.

† M. De la Condamine, in his voyage through the inland part of South America, makes Quito to be between 14 and 1500 toiſes above the level of the ſea.

Suppoſe ——— —— ——	1450
He tells us, that Pichincha is 750 higher ——— ——	750
This makes in the whole, above the level of the ſea — ——	2200 toiſes.

P. Martel, engineer, in his account of the Glacieres in Savoy, printed at London 1742, tells us, that the barometer at Geneva, by the ſide of the Rhone, ſtood at 27 $\frac{2}{12}$ I. which is 656 feet above the level of the ſea, according to Scheuchzer; and that the higheſt point of Mont Blanc, meaſured partly by the barometer, and where inacceſſible from the ſnow that covers it, by trigonometrical operations, is 12,459 feet, or ſomewhat more than 2,076 toiſes above the level of the Rhone; which, added to the height of this above the ſea, makes 13,115 French feet, or about two Engliſh miles and two-thirds.

intermittents

intermittents are ſeldom heard of, and ophthalmies are endemic; but that, in the fenny tracts which lie near the Oby and Janiſea, intermitting fevers are very frequent.

The coldneſs of the air of Sibiria is of all others, of the moſt remarkable quality. In ſome places it ſnows frequently in September, and not ſeldom in May. In Jacutſk, if the corn is not ready to cut in Auguſt, which often is the caſe, the ſnow ſometimes prevents it, and buries the harveſt all together. At Jacutſk, the Profeſſor ordered a hole to be dug in the earth, in a high open place, on the 18th of June; the mold was 11 inches deep; below that was ſand about $2\frac{1}{2}$ feet; it then began to feel hard, and in half a foot more it was froze as hard as poſſible. In a lower place, at no great diſtance from this, he ordered another hole to be dug: the ſoil was 10 inches; ſoft ſand 2 feet 4 inches; below this, all was congealed; ſo that the earth is ſcarcely thawed even in ſummer above four feet deep.

Our author inclines to the received opinion, that the eaſtern climates under the ſame latitude are colder than the weſtern; and thinks this is confirmed by experiments made in different parts of Sibiria.

The mercury in De Liſle's thermometer often ſunk in winter in very ſouthern parts of this country, as near Selinga, to near 226, which is equal to $55\frac{1}{2}$ below 0. in Fahrenheit's thermometer. But the cold is often much more intenſe than this, as appears by the following experiments, made at Kirenginſki.

Feb. 10, 1738. At eight in the morning the mercury ſtood at 240 degrees in De Liſle; which is 72 below 0. in Fahrenheit's.
On the 20th it ſunk one degree.
At the ſame place in 1736,
Dec. 11. At three in the afternoon, 254 in De Liſle.
Almoſt 90 below 0. in Fahrenheit.
Dec. 20. Four o'clock, p. m. 263 in De Liſle.
$99\frac{44}{100}$ below 0. in Fahrenheit.

		D.	F.
Nov. 27.	Twelve at noon,	270 =	$107\frac{73}{100}$ below 0.
Jan. 9.	— —	275 =	$113\frac{65}{100}$.
1735, Jan. 5.	Five in the morn.	260.	
	Six —	280 =	120.
	Eight —	250, and roſe by degrees till eleven at night, when it ſtood at 252.	

Such an exceſs of cold could ſcarcely have been ſuppoſed to exiſt, had

not experiments, made with the greateſt exactneſs, demonſtrated the reality of it.

During this extreme froſt at Janiſea, the magpies and ſparrows dropped down as they flew, and to all appearance dead; though they moſtly recovered when brought into a warm room. This was quite new to the inhabitants of that country; though it frequently happens in Germany in much leſs intenſe cold, when the weather ſets in at once very ſevere.

The air, ſays our author, was at that time extremely unpleaſant; it ſeemed as if itſelf was froze, being dark and hazy; and it was ſcarce poſſible even to bear the cold in the door-way for three or four minutes.

Theſe experiments, our author aſſures us, were made with all poſſible exactneſs, and agree with many others, made in different parts of Sibiria by his direction; and from theſe we may conclude, that the cold in Sibiria is more intenſe than it has yet been found to be in any other part of the world.

It was not apprehended that a greater degree of cold exiſted any where, than that artificial one produced by Boerhaave, by means of concentrated ſpirit of nitre, which ſunk the mercury 40 degrees below 0. in Fahrenheit's thermometer; which was ſuppoſed to be the point beyond which no animal could bear it.

But the utmoſt limits of cold are yet unknown; or to what degree an animal can ſubſiſt in it, when inured to it by little and little. The hiſtory of heat is alike imperfect. The celebrated Profeſſor above-mentioned was induced to think, that a man could not bear, without the utmoſt danger, a greater heat than that which would raiſe the mercury to 90 in Fahrenheit's; but an ingenious and accurate correſpondent of our author's at Aſtrachan informs him, that it not only riſes there to this degree frequently, but even to 100, and he has ſeen it 103½. Even in the bagnios in Ruſſia, the heat is often equal to 100: it ſometimes makes the quickſilver aſcend to 108, 10, and to 116, as may be tried every day; and yet people not only bear them with impunity a few minutes, but often ſtay half an hour or an hour.

One neceſſary obſervation our author makes, which is, that the ball or tube containing the mercury ought to be as dry as poſſible on the outſide, during theſe or any other trials with the thermometer: for the adhering moiſture, by forming a cooler atmoſphere round it, has ſometimes occaſioned a difference of ten degrees.

Theſe are ſome principal facts given us by our author in his preface, relative to the natural hiſtory of Sibiria in general: what follows chiefly regards the work it is prefixed to.

As a juſt idea of this part cannot be exhibited in a narrow compaſs, the curious in this branch of ſcience muſt be referred to the book itſelf.

I have only to acknowledge with gratitude the inſtruction and entertainment I have received from this elaborate work: it is a tribute juſtly due to the learned and ingenious author, in return for the pains he has taken, and the fatigue he has endured in this inhoſpitable region; and to entreat your indulgence, if I have flattered myſelf too much, in apprehending this excerpt might afford you ſome amuſement.

AN

ACCOUNT

OF THE

PUTRID SORE-THROAT.

PREFACE*.

WHEN the following treatiſe was firſt publiſhed in the year 1748, the diſeaſe which is the ſubject of it was not generally known in England, though it had ſpread like a plague through many of the ſouthern parts of Europe about a century before, and had carried off great numbers of people, children eſpecially.

From the time of its firſt appearing in this nation, it has viſited many parts of the kingdom, with different degrees of violence, as different cauſes contributed to render it more or leſs malignant.

It is probable that this kind of Sore-throat may continue amongſt us for the future, breaking out with more or leſs ſeverity, as ſeaſons, ſituations, and other circumſtances, may concur. And,

Though its aſpect has ſometimes varied, according to the epidemic conſtitution, yet upon the whole it has ſeldom, in any place that I have heard of, deviated ſo far from the following deſcription, as to leave it doubtful under what ſpecies of diſeaſe it ought to be ranked.

Warranted by the authority of thoſe Phyſicians who had early and extenſive opportunities of obſerving this diſtemper in Italy, Spain, and other countries, at its firſt breaking out in Europe, as well as by the experience of ſome Phyſicians at home, the late very eminent and learned Dr. Letherland particularly, inſtead of treating it as an inflammatory diſeaſe, which a Sore-throat was generally deemed to be in this country, a warmer regimen was propoſed, and ſuch as is moſt commonly purſued in putrid fevers, and diſorders allied to them.

This method has for the moſt part ſucceeded very happily; and it now ſeems to be the concurrent opinion of the moſt experienced in the faculty, that a generous and cordial regimen, is in this ſpecies of Sore-throat the moſt ſalutary.

Amongſt all the ſymptoms which attend this diſeaſe, there is none more formidable than perpetual watchfulneſs, with a delirium. Theſe ſymptoms moſt commonly affect adults, and eſpecially the ſanguine and plethoric.

The throat, in theſe circumſtances, is ſeldom much ulcerated; this part is the leaſt of their complaints: the patients are hot, reſtleſs, and, though

* The ſixth and laſt edition of this intereſting production was reprinted in 1777; to which, and the preceding edition only, this Preface was prefixed. *Editor.*

delirious, are ſenſible for a moment, and anſwer queſtions put to them, not improperly. The ſkin is covered with a deep eryſipelatous redneſs, and always dry, as they are continually moving about. The pulſe is quick, ſmall, and hard; the urine various, often turbid, yet ſometimes clear and flame-coloured.

In ſuch caſes bleeding ſeems not only allowable, but neceſſary, eſpecially by cupping from the back of the head, or by leeches from the temples; from the arm perhaps it might occaſion too great faintneſs; and a retreat of that eruption, which though no critical diſcharge, but rather a ſymptom of malignity, ought not to be repreſſed.

After bleeding, the Bark, conjoined with alexipharmacs, as the ſimple or compound powder of *Contrayerva*, *Confectio Cardiaca*, or the like, may be exhibited, in quantity and frequency proportioned to the age and ſymptoms.

The uſe of the Bark in the cure of this diſeaſe, was unknown to the early practitioners. It is but of late that this celebrated medicine has been uſed with freedom in this as well as in other putrid diſeaſes, and with great advantage.

The difficulty of prevailing upon children afflicted with this diſtemper to take any kind of medicine, put me early on trying the Bark in clyſters, and ſometimes when there ſeemed very little chance of relieving them by any means. To very young children, two or three drachms of the Bark, in fine powder, have been given every ſix hours, in three or four ounces of broth, as a clyſter, adding a ſmall quantity of the *Elect. è Scordio* to the ſecond or third, if the firſt was diſcharged too ſpeedily; and this has ſaved many, when not a drop of any medicine, and ſcarcely any kind of nouriſhment, could be ſwallowed.

Adults may take half a drachm of the powder in an ounce and a half of the decoction, warmed with any grateful compound water, every two or three hours; taking particular care to prevent any conſiderable tendency to a diarrhœa, from the uſe of the medicine.

Free, but not cold air, plenty of liquid nutriment and generous, with conſtant attention to keep the patients clean, their mouths and throats often waſhed, and their linen changed, contribute greatly to the cure of this diſeaſe. While their ſkin is covered with that deep efflorescence, if they are at all ſenſible, they often complain of the leaſt admiſſion of cold air, and very frequently of much ſickneſs and oppreſſion, if this efflorescence ſpeedily diſappears.

To favour this eruption, it will always be proper to put thoſe who are ſeized with this diſtemper to bed as early after ſeizure as poſſible, and to give the mild and cordial diaphoretics. And, as a preſervative, I have often recommended

recommended the Bark to be given both in decoction and ſubſtance, with the addition of ſuch a quantity of the volatile tincture of *Guaiacum*, as may render it gently purgative.

Though the Faculty and the Public are now ſufficiently convinced of the exiſtence of this diſtemper, and it may ſeem, therefore, needleſs to continue ſo many teſtimonies of it; yet as this recapitulation may ſerve as an index to ſome of the moſt approved authors on the ſubject, it may not be without its uſe to inquiſitive practitioners; and others may eaſily paſs it over to a part in which they are more immediately intereſted, viz. the knowledge and cure of this diſeaſe, as it has appeared, and ſtill continues to appear, in many parts of this nation.

J. F.

Nov. 25, 1769.

PART I.

Of the SORE-THROAT attended with ULCERS;

As it appeared in SPAIN, ITALY, SICILY, &c.

THE diſeaſe which is called, by the Spaniards, *Garrotillo* *; by the Italians, and other nations, *Morbus ſtrangulatorius*, *Peſtilens Faucium Affectus*, *Epidemica Gutturis Lues*, and by divers other appellations †; is ſaid to have appeared firſt in Spain about the year 1610; to have ſpread from thence to Malta, Sicily, Otranto, Apulia, Calabria, and the Campagnia, in the ſpace of a few years; and to have broke out at Naples in 1618, where it continued upwards of 20 years ravaging the different parts of that kingdom ‡.

It is not certainly known how much longer it remained in theſe countries, or to what others it was communicated at that time, its declenſion being as obſcure as the cauſes it ſprung from. That it wholly diſappeared in theſe parts, ſoon after the time above-mentioned, ſeems probable, from the ſilence of thoſe phyſicians, who have publiſhed their obſervations made in the places, which had ſo ſeverely felt the effects of this diſtemper.

Several writers, as Wierus §, Forreſtus ‖, Ramazzini **, and others, take notice of epidemic affections of the throat, in ſome reſpects reſembling the diſeaſe here deſcribed; but a little attention to the ſymptoms of each will, I

* Ab Hiſpanis Garrotillo appellatur, ut eadem patiantur Angina laborantes, quæ facinoroſi homines, cum injecto circa collum fune ſtrangulantur. Epiſt. R. Moreau ad Th. Barth. Epiſt. Med. Cent. i. p. 336.

† Affectus ſuffocatorius, Carbunculus anginoſus, Phlegmone anginoſa, Angina peſtilentialis, Morbus Gulæ, Morbus Puerorum, Peſtilens ac præfocans pueros abſceſſus, Tonſillæ peſtilentes, Ανχόνη λοιμώδης, Apthæ malignæ, Paſſio anginoſa, Laqueus gutturis, &c. Vide Corteſ. Miſcel. Med p. 666. Severin. et Epiſt. Ren. Moreau ad Th. Barthol. de Laryngotomia.

‡ Severin. de recondita abſceſſum natur. p. 446.

§ Joh. Wieri Obſervat. lib. vi. de Angina peſtilenti epidemica, Oper. p. 910.

‖ Pet. Forreſt. Obſervat. lib. vi. de Febribus publice graſſantibus, p. m. 150.

** Bern. Ramazzini Conſtitutiones Epidem. Oper. p. 195, & ſeq.

think,

think, diſcover an eſſential difference between them. The ſame, I think, may be ſaid of the ſore-throat and the ſcarlet fever, which ſhewed itſelf at Edinburgh in 1733 *.

Tournefort, in his voyage to the Levant †, ſeems to have met with this diſeaſe in the iſlands of the Archipelago; at leaſt ſo far as one can judge from the imperfect deſcription we have of it. His account is as follows:

"When we were in this iſland (Milo) there raged a terrible diſtemper, "not uncommon in the Levant; it carries off children in twice 24 hours: "it is a carbuncle or plague-ſore in the bottom of the throat, attended with "a violent fever. This malady, which may be called the child's plague, "is epidemical, tho' it ſpares adult people. The beſt way to check the "progreſs of it, is to vomit the child the moment he is perceived to grow "heavy-headed. This remedy muſt be repeated, according as there is oc- "caſion, in order to evacuate a ſort of *aqua fortis* that diſcharges itſelf on "the throat. It is neceſſary to ſupport the circulation of the juices, and the "ſtrength of the patient, with ſpirituous things; ſuch as the *Theriaca, Spir. "vol. oleoſ. aromat.* and the like. The ſolution of liquid ſtyrax in brandy "is an excellent gargariſm upon this occaſion. Tho' it is a caſe that requires "the greateſt diſpatch, the Levantines are ſeldom much in haſte in the cure "of any diſeaſe."

This account does not diſagree in general with that which has been left us of the *morbus ſtrangulatorius*; only he is ſingular in aſſerting it to ariſe from a kind of *aqua fortis* diſcharged upon the parts; but his favourite ſtudy had engroſſed his attention, and to this we muſt impute both the preſent miſtake, and his want of accuracy and preciſion too frequently, when he treats upon medical ſubjects.

When it firſt broke out in the countries above-mentioned, it ſoon engaged the phyſicians of thoſe times, as well to obſerve its nature, effects, and whatever might contribute to its cure, as to vindicate their reſpective ſyſtems and opinions; and out of ſuch of the tracts then publiſhed as I have had an opportunity of peruſing, the following account of it, as it appeared at that time, has been collected.

Ludovicus Mercatus, phyſician to Philip II. and III. Kings of Spain, among his Conſultations, publiſhed in tome V. of his works ‡, has one upon this diſeaſe §. He mentions it as a calamity which had but newly appeared, and

* Medical Eſſays, vol. iii. p. 26.

† Tournefort's Voyage to the Levant, vol. i. p. 135.

‡ D. Ludovici Mercati, medici a cubiculo Philippi III. Hiſpaniarum Regis, &c. Oper. Tom. 5. Francof. 1614.

§ De Faucium et Gutturis anginoſis et lethalibus Ulceribus. Conſultatio xxiv. p. 137.

at

at that time affected ſeveral provinces and cities of that kingdom. He has related only one caſe; but in commenting upon it, according to the method of writing on diſeaſes then in uſe, he takes notice of ſeveral circumſtances relative to it, and makes ſome obſervations reſpecting the cure, which, tho' they ſeem to have been neglected by many who ſucceeded him, experience hath ſince ſhewn to be juſt: ſome of theſe will be pointed out in their proper places; and, conſidering that he wrote very ſoon after the diſtemper broke out, the approbation prefixed to this part of his work being dated in 1612, they are a proof of his attention and ſagacity.

Johannes Andreas Sgambatus, a phyſician of Naples, publiſhed a treatiſe upon this ſubject in 1620 *. He gives us a methodical and pretty exact hiſtory of the ſymptoms, and method of cure both general and topical, together with a ſummary view of the diſputes, which were at that time managed with ſufficient heat and acrimony, in relation to its name, cauſe, and nature; about which they were as much divided as they were about the method of cure; each party appealing to Hippocrates, Galen, Avicenna, &c. for the ſupport of their opinions concerning a diſeaſe, which it is not certain that thoſe whom they appeal to ever knew.

Johannes Baptiſta Corteſius, in his *Miſcellanea Medica* †, takes notice of this diſeaſe, and deſcribes its principal ſymptoms, in a letter to Jo. Anton. Anguilloni, phyſician in chief to the Malteſe gallies. He conſiders it indeed as a different diſtemper from that which infeſted Naples, and other parts of Italy; tho', from his own account of it, there appears little reaſon to queſtion its being the ſame. He ſeems to have been led into this miſtake, by conſidering the diſeaſe he treats of, as contagious only in a certain limited ſenſe, whilſt the Italians, as ſome of the Spaniards had alſo done, declared theirs to be peſtilential and contagious without reſtriction. He allows, that the breath of a perſon affected might convey the contagious effluvia to another near at hand; and gives an inſtance of one who got the diſeaſe, and died of it, by trying, at his friend's requeſt, who then laboured under this diſeaſe, if his breath was affected ‡; for from this circumſtance they gueſſed at the degree of danger attending the ſick.

In

* De peſtilente faucium affectu Neapoli ſæviente, opuſculum, auctore Jo. Andrea Sgambato, philoſopho ac medico Neapolitano, et academico otioſo. Neapoli excudebat Tarquinius Longus, 1620, in 4to.

† Joannis Baptiſtæ Corteſii, medici ac philoſophi, in Meſſanenſi academia praxim ordinariam e prima ſede interpretantis, Miſcellaneorum Medicinalium Decades Denæ. Meſſanæ 1625, in fol.

‡ Divi Franciſci Cuſtos, vir doctrina et moribus inſignis, hac lue obſeſſus, tonſillas ſolummodo et gargareonem inflammatione læſa habebat, et continuo querebatur ſe percipere in ore fœtorem quendam; et ut hac de re certior redderetur, ad ſe vocavit baccalaureum quendam ſibi amiciſſimum, qui maximo affectu aſſiſtebat, rogavitque ut vellet olfacere, percipereque naribus, an verum

In 1636, Ætius Cletus, of Signia in Italy, publiſhed his treatiſe *De Morbo ſtrangulatorio* *. He mentions ſome facts relating to it, that had eſcaped Sgambatus and Corteſius, which will be taken notice of hereafter.

Marcus Aurelius Severinus, Profeſſor of Anatomy and Surgery, and phyſician to the Hoſpital of Incurables at Naples, wrote a diſſertation upon this diſeaſe, under the title of *Pædanchone Loimodes, ſeu de peſtilente ac præfocante Pueros Abſceſſu*; and annexed it to the ſecond edition of his book *De recondita Abſceſſuum Natura*, which was printed in 1643 †. From a perſon of his capacity, and furniſhed with the beſt opportunities of ſeeing the diſeaſe in every ſtage and condition, we might reaſonably have expected ſuch obſervations as would enable one to form a juſt idea of this diſtemper; but we meet with little of this kind in his performance. He has indeed mentioned ſome circumſtances relating to its hiſtory, not taken notice of by the other writers I have ſeen, and his method of cure is different from the reſt; but he refers us to others for an account of the ſymptoms, and contents himſelf with reciting and commenting upon Aretæus's deſcription of the *Ulcera Syriaca*, which he takes for granted to have been the ſame with the diſeaſe at that time infeſting Naples; tho' very probably without ſufficient reaſon.

Petrus Michael de Heredia, phyſician to Philip IV. King of Spain, in his *Diſputationes de Morbis acutis*, treats of this diſeaſe expreſsly in ſeveral chapters under the title of *Angina Maligna*. His hiſtory of the ſymptoms contains ſeveral circumſtances which were not taken notice of by any other writer I have ſeen; ſo that though he was probably among the laſt of the Spaniſh phyſicians who wrote upon this ſubject, yet the diligence of his predeceſſors had not wholly exhauſted it. In the ſecond edition of Heredia's works, which was that I made uſe of ‡, nothing appears whereby to aſcertain the time exactly when he wrote his account; but as he mentions the *Polyanthea* of De la Parra, which, according to Ren. Moreau in Bartholine's

verum eſſet talem fœtorem emittere, an ab ejus imaginatione prodiret: olfecit baccalaureus, me (ſcil. Corteſio) præſente, et multis aliis: at ſtatim non multis elapſis horis decubuit ſola faucium et glandularum inflammatione vexatus, abſque aliqua manifeſta corruptione partium, omnibuſque præſidiis ex arte factis, quarto die ſuffocatus periit; et tamen Cuſtodem non tetigerat, ſed ſolo olfactu aerem ab ore prodeuntem naribus traxerat: quare ab hujuſmodi exemplo veni in ſententiam hunc morbum non eſſe abſque aliqua contagione. Cort. Miſcel. p. 698.

* De morbo ſtrangulatorio, opus Ætii Cleti Signini, doctoris medici et philoſophi. Romæ 1636, 8vo.

† De recondita abſceſſuum natura, libri 8. Marci Aurelij Severini Tharſienſis, philoſophi et medici, regio in gymnaſio Neapolitano anatomes et chirurgiæ profeſſoris. Editio ſecunda, Francofurti ad Mænam 1643. And again printed with Bartholine's Exercitationes, as a commentary upon it, and Villani's Therapeuta Neapolitanus, ſeu Veni mecum Conſultor. Neapoli 1653.

‡ Petri Michaelis de Heredia Complutenſis—Philippi IV. Hiſpaniarum regis archiatri—Opera medicinalia—Lugduni 1673. fol.

Epiſtles, was printed at Madrid in 1625, it is plain that he muſt have written after this time.

One might juſtly expect ſome curious obſervations upon this diſeaſe, from a perſon ſo well qualified for it as Thomas Bartholine: he was in Italy whilſt it raged there, and, it might be ſuppoſed, would be attentive to the minuteſt circumſtance relating to it, and be inquiſitive enough to know what men of character had ſaid upon it. But the Treatiſe which he wrote upon this diſeaſe, and publiſhed in 1646 *, contains ſo little to the purpoſe, that it is difficult to conceive for what end it was written, unleſs to compliment his maſter Severinus, which he does very liberally †.

According to the accounts which have been left by theſe Authors, it appears, that the diſeaſe which they deſcribe was extremely malignant, and moſt particularly fatal to children, though adults, if they were much converſant about the ſick, were very often ſeized with it; yet more of theſe recovered in proportion than of children; and it was obſerved, that more boys got well through the diſeaſe than girls: ſome thought, that ſuch of this ſex as had black eyes ſuffered more from it than others.

As it was ſometimes obſerved to carry off whole families together, and to ſpread to thoſe places firſt, between which, and the countries affected by it, the communication was moſt frequent; and alſo that children, ſent away from the towns where it raged, in order to avoid it, eſcaped whilſt they were kept at a diſtance, but had it on their return, if the diſeaſe was not extinguiſhed; it was almoſt univerſally allowed to be contagious ‡.

Thoſe who were ſeized with it, firſt complained of a pain or ſoreneſs in the throat, with a ſtiffneſs of the neck, an uneaſineſs on moving it, as if a

* Thomæ Bartholini de Angina Puerorum Campaniæ Siciliæque epidemica exercitationes, Lut. Pariſior. 1646.

† Zacutus Luſitanus alſo mentions this diſeaſe, and relates an unhappy inſtance of its effects in the following terms:

In his partibus (ſcil. faucibus) ex humoris virulenti affluxu gignuntur carbunculoſæ inflammationes, quæ peſtis diræ, aut veneni promptiſſimi inſtar, contagio quodam, pueros et adultos corripiunt; et ſævis maleficentiſſimiſque ſtipatæ ſymptomatis citiſſimam necem inferre ſolent. Malum in Hiſpania non multis abhinc annis frequens, vulgus medicorum Hiſpano ſermone *Garrotillo* nuncupat; de cujus eſſentia, periculo, brevitate, et complicatione uſtivi et ulceroſi tumoris, ac deleteria corruptione, laconice dicam. Hoc fuit preſſus biennis infans, ſanguineus et obeſus. Primo die ex catarrhoſa defluxione in ſuffocationem pene incurrit, difficulter reſpirabat, et lac deglutiebat, et febri acuta affectus, nec plorare poterat. In parte gutturis dextra externa glanduloſus apparuit tumor cum dolore multo. Secunda die intra fauces ulcus viſum eſt ad nigrum vergens, quod putrilago et mollities multa comitabantur; et ab ore fœtor horribilis prodibat, magnum certe corruptionis completæ indicium. Tertio die nullis adjutus auxiliis ſtrangulatus eſt extinctus. De Praxi Medic. Admiranda, lib. 1. obſerv. 20.

‡ Quod ad contagium attinet, hoc communi omnium conſenſu atque experimento evincitur. Severin. p. 442.

cord was twiſted about it, a difficulty in ſwallowing, and frequently in breathing alſo, with a diſagreeable fetid ſmell and taſte. On inſpection, the *Uvula*, the *Tonſils*, *Pharynx*, and the whole *Fauces*, appeared of a remarkably florid red colour, like that attending an *Eryſipelas:* this colour was not uniformly intenſe, but ſome parts ſeemed to be of a deeper dye than others. The parts above-mentioned were ſwelled more or leſs, though not always ſo much as to affect reſpiration, as in a common *Angina*.

If the attack was violent, they had an extreme difficulty in breathing, and alſo in ſwallowing, with a kind of compreſſive pain and ſtraitneſs of the breaſt and back, a redneſs of the whole face and neck, great heat of all the parts affected, the voice much injured, an unquenchable thirſt, and the patient ſeemingly in danger of being choaked *. In ſome, the ſwelling and ulcers of the *fauces* were apparent upon looking into the mouth; in others, nothing could be ſeen, but a moſt offenſive putrid ſmell was perceivable. A fever came on with the other ſymptoms, and was frequently accompanied with ſmall pimples and eruptions like flea-bites. In very bad caſes, this fever, which Mercatus calls a moſt malignant one †, did not always diſcover its violence or malignity at firſt; but it was not the leſs formidable on this account ‡.

On the ſame day, or the day following, ſuch parts of the *fauces* as at firſt ſeemed to be of a deeper colour than the reſt, turned white, aſh-coloured, or black: this was not occaſioned by any cruſt or matter ſuperinduced upon the parts, but proceeded from a gangrenous colliquation of them, the ſubſtance itſelf being mortified.

The voice was hoarſe and obſcure, not as in a common cold, but as it is in thoſe people who have venereal ulcers in the throat: ſo that, from this affection of the voice alone, ſome were able to gueſs at the diſeaſe §.

The neck and throat ſoon after began to ſwell externally; the tumour was of a ſoft œdematous kind, and increaſed in magnitude as the diſeaſe advanced. All the ſymptoms were aggravated during the night. If the patients had any interval of quiet, it was commonly in the day-time ‖.

* ——— difficultas reſpirandi, et non raro deglutiendi, cum pectoris et dorſi dolore ac veluti compreſſione ſuffocante, ſimul cum peſtilente odore, et vehementi harum omnium partium ardore, et rubore totius oris et colli, cum vocis et loquelæ vitio, ac linguæ extractione, et ſiti incompeſcibili. Mercat. Conſult. p. 136.

† Maxime ob maligniſſimam febrem, quam plerumque ſibi adjunctam habet, &c. Conſult. p. 136.

‡ — nec multum fidere oportet, ſi febris mox non apparuit aut ſuccreſcat, nam ſæpe citius ſuffocat affectio, quam cauſa ſuccendatur; ac non raro malignitas humoris corrumpit ſpiritus et mortem accelerat, ſine eo quod febris ſuccendatur. Mercat. Conſult. p. 137.

§ Severin. p. 442.

‖ Sgambat.

About the fourth day this tumour was generally grown very large, and the white places in the *fauces* began to turn black; a putrid corroſive ſanies was diſcharged by the mouth and noſtrils *; the breath grew extremely offenſive; reſpiration, if hitherto not much affected, now became difficult, and the patient expired in a very ſhort time.

Though this was the common progreſs of the diſeaſe, where it terminated unhappily, yet it often varied from this type, and was attended with very different ſymptoms. Some had an extreme difficulty of breathing almoſt from the firſt; ſome had a violent cough; ſome were comatous; others had a delirium; ſome died in a lethargic ſtupor; others bled to death at the noſe; whilſt others again had none of theſe ſymptoms, but were carried off ſuddenly by an inſtantaneous ſuffocation. The *æſophagus* in ſome was ſphacelated down to the ſtomach; the *aſpera arteria*, in others, to the lungs. As theſe could only breathe in an erect poſition; ſo thoſe could ſwallow nothing when the parts were ſo affected. The noſtrils diſcharged a fetid ichor, ſometimes mixed with blood; and ſometimes blood alone, without mixture. This bleeding at the noſe ſeemed at firſt, in one caſe, to give relief; but the patient ſoon after died †. Mercatus relates an inſtance of a child that had the diſeaſe, in which the acrimony of the humour diſcharged from the ulcers was ſo great as to inflame the nurſe's breaſt, and brought on a mortification. He alſo tells us, that the father of the child whoſe caſe is deſcribed above, having frequently put his finger in the child's mouth, to draw out the viſcid phlegm, had his finger inflamed, and was ſeized with the ſame diſtemper ‡.

Theſe were the ſymptoms in general, and they judged of the event by the mildneſs of their progreſs, or the contrary: though it was agreed, that nothing could be more fallacious than this diſeaſe; and that the moſt experienced were often deceived in their prognoſtic.

If the redneſs of the *fauces* above deſcribed, which appeared at firſt being ſeized, was ſucceeded by an ulceration, without any of that whiteneſs (which

* Quibus etiam accedit ſublimis reſpiratio et alta ac ſpirituum revulſio, cum maxima pinnarum naſi diſtenſione.—Saniei per os et nares excretio, variis ulcerum coloribus et intenſiſſimo fœtore nauſeam plerumque movente cum ſordida excretione. In aliquibus vero extra, prope cervicem, et infra mentum glandulæ apparent, peſtiferi morbi naturam redolentes, et univerſa cervix, et collum intumeſcunt, et fauces cum robore ſaturato, inſtar laqueo ſuffocatorum. Merc. Conſult. p. 136.

† Severin. p. 440.

‡ —— erat quidem dira humoris conditio adeo pernicioſa, efficax et contagioſa, quod digitum patris indicem, quo extrahebat eum ſuccum ab ore filii, mordicaret, et in ruborem moveret cum dolore: tandem mox pater conquerebatur de difficultate reſpirandi et deglutiendi cum dolore et tumore faucium, ac ſaturato colore, et glandulis extra apparentibus juxta mentum. Ex quibus ſecundo die halitum prave olentem expirabat; ita ut jure optimo poſſis colligere, contagio filii patrem fuiſſe affectum. Mercat. Conſ. p. 139.

for the future I ſhall call ſloughs), if the ſwelling about the neck and throat was not large, if the patient diſcharged by the mouth conſiderable quantities of thin pituitous matter, if the breath was not fœtid, and the patient had no diſguſt to his food, if the eyes retained their proper luſtre, all was judged to be ſecure.

On the other hand, if the luſtre of the eyes was conſiderably faded *, if the external œdematous tumour was very large, if the breath ſtunk, if the *fauces* were livid or black, with a coma or delirium, if with theſe the patient had an averſion to his nouriſhment, and his breathing became difficult or laborious, the danger was judged to be extreme.

It was not obſerved that the diſeaſe had any ſtated criſis; or that the ſigns of recovery, or death, appeared on any certain day. Some died on the firſt, others on the ſecond, third, and on every day, to the ſeventh; though the greateſt part died before the fourth †. Thoſe who ſurvived the fourteenth were thought to be out of danger, at leaſt from the diſeaſe itſelf ‡; though ſome dropped off unexpectedly, after a much longer reprieve §.

The conſequences of this diſeaſe were often felt a long time after it had ceaſed. An exceſſive languor and weakneſs continued for many months; and the voice or deglutition was frequently affected, ſo as to be perceivable in ſome almoſt a year after ‖.

It was however obſerved, that notwithſtanding the diſeaſe moſt frequently was accompanied with ſymptoms of peſtilential malignity, yet it ſometimes appeared with a much more favourable aſpect; its progreſs not being ſo quick, nor its ſymptoms ſo violent and dangerous, as hath here been deſcribed to be the caſe in general **. At its firſt breaking out in any place, it was commonly the moſt ſevere; it then ſpared no age or ſex, but ſwept off adults together with infants ††. By degrees it became leſs violent, and at length either wholly diſappeared, or was of ſo little conſequence as to be diſregarded.

We are directed, by moſt of the authors I have ſeen, to begin the cure of this diſtemper, whenever we are called in time, with evacuations, the chief whereof are bleeding and purging: which of the two ought to precede, was not a little diſputed; but it was on all hands agreed, that unleſs theſe re-

* Hoc unum ſalutis eſt indicium vel interitus: dum oculorum nitor adſervatur, ſalutis ſpes ſemper adeſt; quo tempore hic deperiit, in propinquo mors eſt. Ætii Cleti Op.

† —— indies magis ac magis hæc accidentia creſcunt, donec breviſſimo tempore laborantium majorem partem perimat, idque non raro intra quartum diem. Merc. p. 137.

‡ Ætii Cleti Op. de Morbo ſtrangulatorio.

§ Quinimo poſt xxx dies, et xl. jam prærepti morbi furoribus, præter omnium opinionem ex improviſo ſunt extincti. Adeo ſcil. latitans et recondita veneni vis eſt. Severin. p. 440.

‖ Æt. Clet.

** Severin.

†† — ut peſtis more in citiſſimam mortem pueros et adultos deducat. Merc. Conſult. p. 135.

medies

medies were very early applied, as they were principally uſeful by way of revulſion, they were not only of no advantage to the patient, but highly injurious *. Obſervations of this kind, we are told †, induced ſeveral phyſicians to omit bleeding entirely; and it was, probably, the reaſon why thoſe who were friends to veneſection ordered it more ſparingly in this, than in moſt other acute diſeaſes ‡. Severinus, who was by no means a timid operator, orders from four to eight ounces to be taken away; which, conſidering the common practice in thoſe countries, is a very ſmall quantity §.

Some not only gave the precedence to purging, but imagined it alone was ſufficient; alledging as a reaſon for it, that ſome children have recovered where this evacuation only had been employed; whilſt bleeding had been injurious, by leſſening the ſtrength ‖. Purging was however commonly allowed the ſecond place by thoſe who were advocates for bleeding, but under the like reſtrictions **. They generally made uſe of manna, rhubarb, ſenna, tamarinds, ſyrup of roſes, and the like, for this purpoſe. But it was always inculcated, that, in directing theſe evacuations, the patient's ſtrength was eſpecially to be regarded; ſince whatever diminiſhed this, in the end was undoubtedly prejudicial ††.

* —— diſputare cœpimus de ſanguine extrahendo: "ſiquidem non defuerunt medici, qui "id renuerunt:" cæterum unanimi conſulentium conſenſu, primo die ſanguinem miſimus, cruribus ſcarificatis, et mox octava noctis hora brachiis, aut ſi ultra duos annos fuerit natus, ex vena brachii; "in hoc malo plurimum vereri oportet, vires plurimum dejicere." Mercat.

Breviſſime ſecandam eſſe venam in hoc confitentur omnes. P. Mich. de Heredia de Morb. acut. p. 101.

†. Circa quod præſidium (venæſectionem) in pueris exequendum, conſulo ne differatur, quia ejus occaſio ſolum eſt, antequam fluxio in partibus contenta ad putredinem commigret. Nam tunc temporis, ſi ſanguinem ſuderis, ſummopere lædes, quæ cauſa fuit quod multi medicorum, viſo hoc damno, renuerint ſanguinem mittere. Mercat. Conſult. p. 138.

‡ In hoc ſacro igne non mittendus eſt ſanguis in ea quantitate ac in angina exquiſita.—Placuit quibuſdam in hoc morbo ſecare venas ſub lingua; alii admoverunt hirudines collo; mihi nulla iſtarum evacuationum unquam probari potuit. Nam cum tumor ſuperveniens ex ſanguine non oritur, fruſtra adhibentur ea auxilia quæ ad ſanguinem ex parte affecta evacuandum excogitata fuerunt. Sgambat. de Peſt. Faucium Affect.

Eſſe vero efficiendas parcas miſſiones in quantitate, dum revellere intendimus, docuit antiquitas.—Quod præceptum magis obſervandum in morbo præſenti, in quo nimis timemus virium jacturam. Copioſa enim ſanguinis miſſio, præterquam quod minus proprie revellit, dejecit vires. P. M. de Heredia, ubi ſupra.

§ Severin. ubi ſupra.

‖ — hoc ſolo præſidio aliquando viſum fuit, pueris ad integram ſanitatem recuperandam ſufficere, ſicut aliis ſanguine detracto, vires plurimum fuiſſe dejectas. Merc. Conſ. p. 138.

** Quod evacuandum morbus expoſcit, evacuetur breviſſime. Idem, p. 102.

†† — in morbis malignis breviter deſtruentibus vires, at poſcentibus ſimul robur animalis virtutis ad ſui ſanationem, multum evacuare non licet. Heredia, p. 102.

Severinus

Severinus orders an antimonial vomit to be given at the firſt attack, and a cooling gently aſtringent gargle to be uſed night and day. He then orders a clyſter, takes away ſome blood from the jugular, and gives from fifteen to twenty-one grains of bezoar mineral twice a day, or oftener, as occaſion requires, with thin diluting liquors, in order to raiſe and promote a moderate ſweat. He gives five or ſix grains of the ſame medicine to children at the breaſt, and commends it highly. He ſcarifies the diſcoloured parts in the *fauces*, in order to let out the corroſive virus; a practice which, though it was recommended by the Spaniards *, was diſliked by ſome of the moſt eminent Italians †.

Cupping, with ſcarification, was univerſally approved, and commonly practiſed. Leeches were alſo applied, by way of revulſion, to different parts.

Conſiderable benefit was expected from ligatures made on the extremities, and from chafing the limbs with the hand, or a cloth; alſo from cupping without ſcarification; apprehending that a revulſion from the parts affected was by this means procured; and that ſome portion of the morbific matter was carried off by the pores of the ſkin.

Some of the Spaniſh phyſicians recommended veſicatories of cantharides, and other acrid or cauſtic ſubſtances, to be laid on each ſide of the neck; but they had not the ſame opinion of their uſefulneſs, when applied to the back or ſhoulders. Heredia expreſsly tells us, that he had ſeldom found any benefit from them ‡. Neither do the Italian phyſicians ſeem to have been fond of them; the progreſs of the diſeaſe was, in their opinion, too ſwift to admit of any relief from either cauſtics or veſicatories §, both of which had been made uſe of in Spain ‖.

To moderate the continual and malignant fever which accompanied this diſeaſe from the firſt, and which was thought by ſome to be only ſymptomatical, and had therefore the laſt place in their conſideration **, they had recourſe to ſuch internal medicines as were deemed cordial and alexipharmac. Armenian bole, bezoar both animal and mineral, and, according to the philoſophy of thoſe times, the precious ſtones were reckoned of this claſs. Of vegetable products, the juices of citrons, lemons, oranges, pomegranates, and

* Si vero malum non miteſcat, ſed gravius affligat partem, quod conſtabit ex lucido aut nigro colore, vel ex nimia mollitudine—cum intolerabili fœtore, ſcarificabitur profunde, prout partis natura tulerit. Heredia, p. 105.

† Cort. Miſcel. p. 697.

‡ Multi etiam veſicatoria conſulunt ſpatulis applicata.—Quod auxilium parum prodeſſe ſemper vidi. Heredia, p. 108.

§ Sgambat.

‖ Heredia, ubi ſupra.

** Febris etiam continua ſtatim in initio apparet, ſymptomatica quidem. Heredia, p. 97.

ſorrel;

ſorrel; vinegar, the juice and decoctions of borage, bugloſs, *Carduus Benedictus*, endive, ſcabious, ſcorzonera, ſcordium, with many others of the like nature, were recommended. But a decoction of the contrayerva root was in the higheſt eſteem in this diſeaſe, both as an alexipharmac in general, and for its peculiar efficacy, when applied as a gargle; to which Mercatus, from his own repeated obſervations, gives a very ample teſtimony *.

But as they found from experience, that no regular criſis or concoction of the humours was to be waited for; that no evacuations, except by way of revulſion, after the acceſs, were of uſe †, they began to conſider the diſeaſe as local, as a particular ‡ morbid affection of the *fauces*, and applied themſelves chiefly to topics, without laying much ſtreſs on internals.

In this part of their directions they have therefore been more explicit; and ſome of them, in order to point out their applications with more propriety, have divided the courſe of this diſeaſe into four different periods §.

The firſt they called the ſtate of inflammation. In this, mild repellents were thought neceſſary; ſuch as vinegar in barley-water, juice of the pomegranate, ſyrup of roſes, mulberries, purſlain, or a decoction of barley, red roſes, liquorice, and plantain; to two pounds of which were added *acet. roſar.* ℥jſs. *ſyr. Diamor.* ℥j. *M.* ‖ If it was required yet more repellent, a ſmall quantity of allum was added.

The ſecond ſtage is that wherein the white ſloughs begin to appear, which is a ſtep towards a gangrenous colliquation. In this they ordered mild abſtergents and antiputreſcents; ſuch as a decoction of lupins, beans, vetches, with honey of roſes **.

The third is, when the ulcers appear foul and ſordid, and begin to look black, a real mortification being come on, ſometimes penetrating to a conſiderable depth, with great putrefaction. More powerful aſtringents and exſiccants were requiſite in this caſe; ſuch as powder of myrrh, and a little allum mixed with honey, or honey of roſes; bole diſſolved in treacle-water; a ſolution of *unguent. Ægyptiacum* in barley-water was alſo much in uſe ††.

* Hoc unum obſervantiſſimum habeo, nimirum omnes oris et gutturis collutiones efficere ſupra decoctum ejus celeberrimi medicamenti, quod medici Hiſpani Contrayerva nuncupant, maxime ſi mucoſa et viſcida pituita abundaverit. Mercat. Conſult. p. 138.

† — Experimento monſtratur, quamcunque evacuatio nem per alvum, aut ſudorem inutilem eſſe et nocivam, quia cum non proſit, neceſſario debilitat. Hered. p. 100.

‡ Corteſ. Miſcel. p. 703.

§ Sgambat. de Affectu Faucium peſtilente.

‖ Heredia, p. 105.

** Idem, ibid.

†† Celebris utiliſſimaque eſt unguenti Ægyptiaci lotura: ſumuntur quidem ℥ij. et infunduntur in ℥ij. aquæ hordei, plantaginis, vel ſeri lactis: poſt infuſionem percolatur per linteum, et colatura tangitus ulcus. Idem, ibid.

Allum,

Allum, ſulphur, copperas, verdigreaſe, oil of vitriol, oil of ſulphur, ſpirit of ſalt alone, or mixed, or diluted in different liquors, were much employed. In this caſe, ſometimes the acid ſpirits were dexterouſly applied to the parts affected, by means of an armed probe; but they were oftener diluted with ſyrup or honey of roſes, and in children poured into the mouth.

Though many had recourſe to theſe powerful remedies, and even to arſenic itſelf, yet the moſt experienced were juſtly afraid, that the uſe of ſuch cauſtic and acrimonious applications was often attended with pernicious conſequences, both to children and adults; and they are therefore, with good reaſon, condemned by Mercatus *.

Nevertheleſs ſome went ſo far as to adviſe the actual cautery, if the potential ones did not ſucceed, and gave directions for the time and manner of their application †; but as this operation will be liable to all the objections made to the former, to have mentioned it will, I imagine, be thought ſufficient.

Though the author laſt quoted adviſes us to ſcarify the black or livid cruſts or ſloughs, yet he gives us a caution not to tear them off, or forcibly to ſeparate them, as the conſequences would be an increaſe of pain and inflammation; whence the ulcers would ſpread, and at the ſame time eat deeper ‡.

In the fourth ſtage the putrefaction is ſuppoſed to be extinguiſhed, the mortified parts caſt off, and an ulcer only remains. In this caſe, the fume of white amber thrown on live coals, and received into the mouth, as a *ſuffitus*, was adviſed; alſo the *vinum myrrhites*, a decoction of guaiacum, roſes, balauſtines, pomegranate-peels, by way of gargle; medicines that were ſuppoſed to dry with ſome degree of aſtringency.

Such was the appearance of the *Angina maligna*, or ulcerated ſore-throat, at its firſt being taken notice of in Europe; and ſuch were the methods of treating it then in uſe. In this recital I have been the more prolix, inaſmuch as the diſeaſe deſcribed in the following pages, is the ſame with the *Angina maligna* of theſe writers, with whoſe experience and obſervations it may doubtleſs be of uſe to us to be acquainted.

* Ego quidem arbitror, plures pueros interfeciſſe uſum horum medicamentorum, quæ cauſtica ſunt, quam affectionem ipſam. Merc. Conſult. p. 139.

— compertum habuimus in hoc viro, et aliis laborantibus, hæc cauſtica inflammationi et ulceri ſummopere eſſe nocua: ſuppurantia corruptioni. Id. p. 40.

† Heredia, p. 106.

‡ Idem, p. 109.

PART

PART II.

Of the SORE-THROAT attended with ULCERS;

As it has appeared in THIS CITY, and Parts adjacent.

ACCORDING to the information I have received from ſeveral eminent perſons of the Faculty, it was in the year 1739, that a diſeaſe was firſt taken notice of, which was thought to be the *Morbus ſtrangulatorius*, already deſcribed, and which differed in no eſſential circumſtance, as far as I can learn, from the diſtemper which is the ſubject of this treatiſe.

The ſudden death of two children in a family of diſtinction, and of ſome others near the ſame part of the town, whoſe complaints had chiefly been of a Sore-throat, ſeem to have occaſioned this ſuſpicion: but as very few caſes of the like nature occurred after theſe, or, if they happened, paſſed unobſerved, little mention was made of it during ſeveral years.

It began however to ſhew itſelf again in 1742, but not in ſo general a way as to render it the ſubject of much public diſcourſe; for though ſuch of the Faculty as were in the moſt extenſive practice met with it now and then, in the City eſpecially, it remained unknown to the greateſt part of practitioners, till within theſe two or three years, in which time its appearance has been more frequent, both in town and the villages adjacent.

I am informed, that in the winter of 1746, ſo many children died, at Bromley, near Bow, in Middleſex, of a diſeaſe that ſeemed to yield to no remedies or applications, that ſeveral of the inhabitants were greatly alarmed by it; ſome loſing the greater part of their children, after a few days indiſpoſition. Some others of the neighbouring places were affected at the ſame time with the like diſeaſe; which, from all the accounts I have met with from thoſe who attended the ſick, was that here treated of. I am informed likewiſe, that it raged at Greenwich about the ſame time *. It ſtill continues in this City,

* The Reader may be pleaſed to take notice, that the facts contained in the following narrative, where the contrary is not expreſsly mentioned, have all come under the Author's obſervation,

City, and ſometimes ſhews itſelf in the villages about it, though at preſent with ſo mild an aſpect as ſeldom to prove fatal; unleſs the ſubject is very unfavourable, or the diſeaſe hath been neglected, or improperly treated at the beginning; which circumſtances, though of ſome importance in all caſes, yet are of the utmoſt in this; as a wrong ſtep at the firſt may put it out of the power of art to afford relief.

Though this diſeaſe has now been amongſt us ſeveral years, and has conſequently ſurvived the different ſeaſons, and all the variety of weather to which we are expoſed, yet it ſeems to ſhew itſelf moſt frequently in autumn, and the beginning of winter; at leaſt I have met with many more caſes from September to December incluſive, than in all the other months together.

It may likewiſe be remarked, that the ſummers of 1747 and 1748 were dry, with ſome days in each uncommonly hot, for this climate; the mercury in Fahrenheit's thermometer riſing in the ſhade, and within doors, one day to 78, and during ſeveral to 75 and 6. The autumns of the ſame years were as unuſually temperate and warm; the wind continuing longer in the ſoutherly points than has often been known at this ſeaſon.

In this country, as well as in thoſe where the *Angina maligna* was firſt taken notice of, children and young people are more expoſed to it than adults: a greater number of girls have it than boys; more women than men; and the infirm of either ſex are more liable to have the diſeaſe, and to ſuffer from it, than the healthy and vigorous: I have ſeen but few adults of this conſtitution affected by it, and not one who died of it.

When it breaks out in a family, all the children are commonly affected with it, if the healthy are not kept apart from the ſick; and ſuch adults as are frequently with them, and receive their breath near at hand, ſeldom eſcape ſome degree of the ſame diſeaſe.

It generally comes on with ſuch a giddineſs of the head as commonly precedes fainting, and a chilneſs or ſhivering like that of an ague-fit: this is ſoon followed by great heat; and theſe interchangeably ſucceed each other during ſome hours, till at length the heat becomes conſtant and intenſe. The patient then complains of an acute pain in the head, of heat and ſoreneſs, rather than pain, in the throat, ſtiffneſs of the neck, commonly of great ſick-

who has endeavoured to relate what he has ſeen, and in ſuch a manner as he thought would beſt contribute to public advantage. It may alſo be neceſſary to obſerve, that the diſeaſe is deſcribed as it appeared in 1747 and 1748, that if the ſymptoms ſhould hereafter vary in any circumſtance, the diverſity may be attributed to the nature of the diſtemper, and not imputed to deſign or inattention.

neſs,

neſs, with vomiting, or purging, or both *. The face ſoon after looks red and ſwelled, the eyes inflamed and watery, as in the meaſles; with reſtleſſneſs, anxiety, and faintneſs.

This diſeaſe frequently ſeizes the patient in the fore part of the day: as night approaches, the heat and reſtleſſneſs increaſe, and continue till towards morning; when, after a ſhort diſturbed ſlumber (the only repoſe they often have during ſeveral nights) a ſweat breaks out; which mitigates the heat and reſtleſſneſs, and gives the diſeaſe ſometimes the appearance of an intermittent.

If the mouth and throat be examined ſoon after the firſt attack, the *uvula* and *tonſils* appear ſwelled; and theſe parts, together with the *velum pendulum palati*, the cheeks on each ſide near the entrance into the *fauces*, and as much of them, and the *pharynx* behind, as can be ſeen, appear of a florid red colour. This colour is commonly moſt obſervable on the poſterior edge of the palate, in the angles above the *tonſils*, and upon the *tonſils* themſelves. Inſtead of this redneſs, a broad ſpot or patch, of an irregular figure, and of a pale white colour, is ſometimes to be ſeen, ſurrounded with a florid red; which whiteneſs commonly appears like that of the gums immediately after having been preſſed with the finger, or as if matter ready to be diſcharged was contained underneath.

Generally on the ſecond day of the diſeaſe, the face, neck, breaſt, and hands, to the fingers ends, are become of a deep eryſipelatous colour, with a ſenſible tumefaction; the fingers are frequently tinged in ſo remarkable a manner, that, from ſeeing them only, it has not been difficult to gueſs at the diſeaſe.

A great number of ſmall pimples, of a colour diſtinguiſhably more intenſe than that which ſurrounds them, appear on the arms, and other parts. They are larger, and more prominent in thoſe ſubjects, and in thoſe parts of the ſame ſubject, where the redneſs is leaſt intenſe; which is generally on the arms, the breaſt, and lower extremities †.

As the ſkin acquires this colour, the ſickneſs commonly goes off, the vo-

* The vomiting and purging were but ſeldom obſerved to accompany this diſeaſe, at its firſt appearance amongſt us, as I have been informed by ſome phyſicians of eminence, who ſaw it early; but it is generally agreed, that theſe ſymptoms almoſt conſtantly attended, in the manner here deſcribed, during the years 1747 and 1748, the time in which theſe obſervations were collected: and I have ſince found, that the above-mentioned ſymptoms have not ſo regularly appeared as at that time.

† The redneſs and eruption have not accompanied this diſeaſe ſo regularly, during the latter part of this winter ‡, as they did in the preceding ſeaſons: in ſome caſes they did not appear at all; in others, not till the third or fourth day; and, as I have heard, in ſome not till the fifth, and even later.

‡ 1754.

miting and purging ceaſe of themſelves, and rarely continue after the firſt day.

The appearance in the *fauces* continues to be the ſame, except that the white places become more aſh-coloured; and it is now diſcoverable, that what at firſt might have been taken for the ſuperficial covering of a ſuppurated tumour, is really a ſlough, concealing an ulcer of the ſame dimenſions.

All the parts of the *fauces* above-mentioned are liable to theſe ulcerations; but they generally are firſt diſcernible in the angles above the *tonſils*, or on the *tonſils* themſelves; though they are often to be ſeen in the arch formed by the *uvula* and one of the *tonſils*; and alſo on the *pharynx* behind, on the inſide of the cheeks, and the baſe of the tongue, which they cover in the manner of a thick fur. Inſtead of theſe ſloughs, where the diſorder is mild, a ſuperficial ulcer, of an irregular figure, appears in one or more of theſe parts, ſcarce to be diſtinguiſhed from the ſound, but by the inequality of ſurface it occaſions.

The parotid glands * on each ſide commonly ſwell, grow hard, and are painful to the touch: if the diſeaſe is violent, the neck and throat are ſurrounded with a large œdematous tumour, ſometimes extending itſelf to the breaſt; which, by ſtraitening the *fauces*, increaſes the danger.

Towards night, the heat and reſtleſſneſs increaſe, and a *delirium* frequently comes on. This ſymptom, which appears in ſome even on the firſt night, ſeems to differ conſiderably from the like affection in other diſeaſes. The ſick commonly anſwer the queſtions put to them properly, but with an unuſual quickneſs; they talk to themſelves incoherently when left alone, and frequently betray the firſt tendency to this diſorder, by affecting too great a compoſure: this, for the moſt part, happens to thoſe who ſleep but little; for ſome are comatous and ſtupid, and take little notice of any thing that paſſes.

In this manner they continue during two, three, or more days: they commonly grow hot and reſtleſs towards the evening; which ſymptoms, and the *delirium*, increaſe as night comes on: a ſweat more or leſs profuſe breaks out towards morning; and from this time they are eaſier during ſome hours, a faintneſs only continuing, of which they frequently complain more than of the reſt of their ſufferings.

The diſeaſe ſeems to have no ſtated period which can properly be called its Ἀκμή, or height. Some grow eaſier from the firſt day of the attack; but,

* Heredia takes notice of the ſame ſymptoms, and aſſigns a very probable reaſon for it.—In Angina maligna non tument externa, quia in illas ex externis tranſlata materia fuerit, ſed quia ita adimplentur interna, ut materiam fluentem non capiant, et ſic ad externa dilabitur. Heredia, p. 99.

in

in general, the ſymptoms of recovery appear on the third, fourth, or fifth day, and proceed in the following manner:

Firſt, The redneſs of the ſkin diſappears; the heat grows leſs; the pulſe, which was hitherto very quick, becomes ſlower; the external ſwellings of the neck ſubſide *; the ſloughs in the *fauces* caſt off; the ulcerations fill up; the patient ſleeps without confuſion, is compoſed when awake, and his appetite begins to return.

The pulſe, during the whole courſe of this diſeaſe, is generally very quick; frequently 120 ſtrokes, or more, in a minute: in ſome, it is hard and ſmall; in others ſoft and full, but without that ſtrength and firmneſs which uſually accompany equal quickneſs and heat, in genuine inflammatory diſorders.

If a vein be opened ſoon after the diſtemper is come on, the blood generally appears of a freſh florid red; the *craſſamentum* is rather of a lax gelatinous texture, than denſe or compact; the *ſerum* yellow, and in a large proportion †.

The urine is at firſt crude, and of a pale whey-colour: as the diſeaſe advances, it turns yellower, as if the bile was diluted in it; and, ſoon after the patient ſhews any marks of recovery, it commonly grows turbid, and depoſits a farinaceous ſediment.

They ſeldom have any ſtools, if the ſymptoms are favourable, from the time when the purging, which generally attends the acceſſion, ceaſes. This diſcharge is frequently bilious, and without any pain: though theſe evacuations differ in different habits.

They complain of thirſt commonly leſs in this than in other acute diſeaſes. The tongue is generally moiſt, and not often furred: in ſome nevertheleſs it is covered with a thick white coat or fur, and theſe generally complain of ſoreneſs about the root of the tongue.

The *uvula* and *tonſils* are ſometimes ſo much ſwelled, as to leave but a very narrow entrance into the gullet, and this entrance frequently ſurrounded with ulcers or ſloughs; yet the patients often ſwallow with leſs difficulty and pain than might be expected under ſuch circumſtances ‡.

They frequently complain, ſoon after they are taken ill, of an offenſive putrid ſmell affecting their throats and noſtrils, which oft occaſions ſickneſs before any ulcerations appear.

In thoſe who have this diſeaſe in a ſevere manner, the inſide of the

* At leaſt, of all the parts about the neck, except the parotids themſelves; which ſometimes continue ſwelled and hard a long time after the other ſymptoms abate, and at length ſuppurate.

† But it is often ſizy when the diſeaſe has continued two or three days; and in ſome inſtances which lately occurred, it was ſo ſoon after the firſt attack.

‡ I have ſeen many caſes, where theſe glands were ſo enlarged, as to force back through the noſtrils moſt part of what was attempted to be ſwallowed.

noſtrils,

noſtrils, as high up as can be ſeen, frequently appears of a deep red, or almoſt livid colour: after a day or two, a thin corroſive *ſanies*, or with it a white putrid matter of a thicker conſiſtence, flows from them, which is ſo acrid, as to excoriate the part it lies upon any conſiderable time. This is moſt obſervable in children, or in young and very tender ſubjects, whoſe lips likewiſe are frequently of the colour above-mentioned, and covered on the inſide with veſicles containing a thin *ichor*, which excoriates the angles of their mouths, and the cheeks where it touches them.

It is probable, that part of the ſame acrid matter paſſes with the nouriſhment into the ſtomach; eſpecially in children; and it is perhaps owing to this cauſe in part, that they ſuffer much more from the diſtemper than adults; this corroſive fluid, without doubt, producing the ſame effects on the ſtomach and bowels, as it does when applied to the much leſs ſenſible ſkin of the face; *i. e.* it excoriates the parts it touches; which, in fact, ſeems to be the caſe: for, if they get over this ſtage of the diſorder, a purging ſometimes ſucceeds, attended with the ſymptoms of ulcerations in the bowels; and after enduring great pain and miſery, perhaps ſome weeks, they at length die emaciated. I have been informed, that ſome children have had the parts about the *anus* excoriated *; the *ſanies* retaining its virulency through the whole tract of the inteſtines.

The ſick ſometimes bleed at the noſe towards the beginning of the diſeaſe; and the *menſes* very often appear in thoſe of the female ſex who are of age to have them, ſoon after they are ſeized, notwithſtanding the regular period is at a conſiderable diſtance: if they are taken ill about the uſual ſeaſon, the diſcharge is commonly greater than it ought to be. Some young perſons, who never had the leaſt appearance of them, have had this evacuation during their illneſs.

In ſtrong and full habits, theſe evacuations are ſeldom attended with much benefit, or with manifeſt ill effects, unleſs they are very copious; for in this caſe they occaſion great faintneſs, and an increaſe of the other ſymptoms, in proportion to the exceſs. In tender weak ſubjects they are often prejudicial.

It has happened in this diſtemper, that hæmorrhages from the noſe and mouth have ſuddenly carried off the patient. I have heard of the like accident from bleeding at the ear: but theſe fatal diſcharges moſt commonly happen after the patient has been ill ſeveral days; and it ſeems more probable, that they proceed from the ſeparation of a ſlough from the branch of an

* Some adults, who have had the diſeaſe in a violent degree, have ſuffered very much from the ſame cauſe: emollient mucilaginous liquids taken plentifully, and alſo applied externally, by way of fomentation, to the part affected, frequently give ſpeedy relief.

artery,

artery, rather than from a fulneſs of the veſſels, or an effort of nature to relieve herſelf by a ſalutary criſis *.

Bleeding in this diſeaſe has in general been obſerved to be prejudicial: ſome indeed admit of it at the firſt attack, without any ſenſible inconvenience; but a repetition of it, even where the diſeaſe is mild and favourable, ſeldom fails to aggravate the ſymptoms; and in ſome caſes it appears to have produced very fatal conſequences. The heat, reſtleſſneſs, delirium, and difficulty of breathing, which this evacuation commonly prevents or mitigates in other caſes, in this are increaſed by it: nor does the ſwelling of the *tonſils*, *fauces*, &c. ſeem to receive the leaſt benefit from it; on the contrary, though the fulneſs of theſe parts decreaſes, yet the ſloughs thicken, and change to a livid or black colour, the external tumour grows large, and the ſpitting commonly diminiſhes †.

Nor has purging been obſerved to be more beneficial: gentle cathartics have brought on very dangerous ſymptoms. Upon procuring a few ſtools with manna, eſpecially when the diſeaſe has continued two or three days, the redneſs of the ſkin has diſappeared, and the flux to the throat has been ſurpriſingly increaſed: if it happens that this diſcharge by ſtool continues, the ſwelling of the neck commonly grows larger; the *fauces* become flaccid, dry, and livid; and the patient in a few hours after this expires: ſo that purgatives ſeem to have no better effects in diminiſhing the tumour, and abating the ſuppoſed inflammation, than bleeding.

Nitrous cooling medicines frequently produce the like effects; they increaſe that faintneſs which accompanies this diſeaſe, and either diſpoſe the patient to copious ſinking ſweats, or to ſtools.

Upon the whole it appears, that all evacuations which tend to leſſen the natural ſtrength of the conſtitution, are in this diſeaſe injurious; and that thoſe perſons in common are in the greateſt danger, if attacked with it, who have been previouſly indiſpoſed, or have had their ſtrength impaired by grief, or any other accident. Of this it may not perhaps be improper

* This, I find, was alſo Heredia's opinion, who conſiders a diſcharge of blood, either from the mouth or noſe, as a ſign of the utmoſt danger.—Malignam ſignificationem præbet ſegnis ſanguis ſtillans e naribus; ex corroſione quippe vaſorum, et putrilagine emanat, innuitque certiſſimam mortem, quia putredo interne cohiberi non poteſt:—ideo periculoſiſſimus cenſetur ſanguinis fluxus ex naribus aut ore. Quidam cum hoc ſigno nullum vidiſſe liberatum docent: nos vero unicum ſolum ægrotum ſumma diligentia a tanto periculo vindicavimus. Heredia, p. 100. Of three whom I attended, and who had this ſymptom, two recovered: the third died of a bleeding at the noſe, before any aſſiſtance could be procured.

† The heat, indeed, and quickneſs of the pulſe, ſeem at firſt to be affected by this evacuation, but they commonly return after a fallacious reſpite with greater violence; the patient is ſeized with a difficulty of breathing, falls into cold ſweats, a ſtupor, and dies ſuddenly.

to relate an inſtance or two in this place, as it will alſo tend to explain the uſual progreſs of the ſymptoms in the worſt caſes we meet with.

A young gentlewoman, about twenty-ſix years of age, of a pale lax habit, but of an active chearful diſpoſition, had enjoyed a pretty good ſhare of health in common, till a year or two before her laſt illneſs; about which time ſhe unhappily made uſe of ſome external and empirical application to remove a redneſs attended with pimples, which now-and-then broke out in her face. She was ſoon relieved from this complaint by the medicine ſhe uſed; but was quickly after ſeized with ſickneſs, vomiting, loſs of appetite, and either an obſtinate coſtiveneſs, or a troubleſome diarrhœa; the *menſes* were pale, and in ſmall quantities; and her health in general was greatly impaired.

She had ſcarce recovered from this weak ſtate, when the death of a near relation brought her almoſt into the ſame circumſtances, from which ſhe was ſlowly recruiting, when ſhe married. Her ſickneſs, vomiting, and loſs of appetite, ſoon returned; which ſhe concealed as much as poſſible.

Under theſe diſadvantages, ſhe was ſeized with this diſtemper, a day or two after ſhe had viſited an acquaintance labouring under the ſame diſorder: it came on with a coldneſs and trembling like that of an ague-fit, great faintneſs, and an acute pain in her head, with a vomiting more violent than ſhe was uſually affected with, and a purging. Towards evening ſhe grew very hot and reſtleſs, complained of a ſoreneſs in her throat, and the diſcharges abated. Her face, neck, and hands were intenſely red: ſhe frequently ſighed, and from her aſpect and geſtures there was reaſon to ſuſpect a delirium approaching. She ſlept little that night; and next morning her pulſe, which before was very quick and ſmall, ſeemed to be ſomewhat more full, but not ſenſibly ſlower; and ſhe complained of faintneſs and anxiety. The parts about the *fauces* were much relaxed, very red, in ſome places almoſt livid, with a kind of gloſſy dryneſs upon them. She continued in this manner, without any remarkable increaſe of ſymptoms, till night, when the looſeneſs returned, and in a very ſhort time exhauſted her ſtrength to a great degree: the redneſs upon the ſkin diſappeared, the extremities grew cold, her eyes became dim, her pulſe ſcarce perceptible, ſhe breathed with difficulty, and expired in the morning, on the third day of the diſeaſe.

Another young woman, who frequently viſited, and ſometimes aſſiſted, a relation who had this diſeaſe, was attacked with it in the uſual manner. She was about ſeventeen, of a pale and ſomewhat bloated lax habit, naturally inactive, averſe to exerciſe, and was thought to have indulged ſome painful ſolicitude, to the prejudice of her health, and making way for an obſtinate chloroſis.

Under theſe circumſtances ſhe was ſeized with the uſual complaints, but in a violent manner. The purging continued till the day following; when it yielded

yielded for a time to the power of opiates; but conſtantly returned when their effects were over. The other ſymptoms, ſuch as heat, reſtleſsneſs, anxiety, and faintneſs, increaſed with the purging; the pulſe was ſmall, quick, and hard; a difficulty of breathing came on; the ſmall remains of luſtre in the eye periſhed; and ſhe died early on the fourth day of the diſtemper.

No marks of any ſloughs in the throat appeared in either of theſe caſes; but the redneſs became daily more intenſe, and approached nearer to lividneſs, whilſt the *fauces* could be inſpected, which, from the great difficulty they had in breathing, was impracticable, ſeveral hours before the patients expired.

Warm aromatic cordials, and anodyne aſtringents, were adminiſtered aſſiduouſly, with ſuitable nouriſhment, and veſicatories applied ſucceſſively to the neck, back, and arms, but without effect.

If the purging therefore continues long after the firſt exacerbation of the diſeaſe, it may be looked upon as a dangerous ſymptom: for though it be ſometimes reſtrained for the preſent by opiates or aſtringents, yet it commonly returns with more vehemence when their efficacy ceaſes, and in a ſhort time exhauſts the ſmall degree of ſtrength remaining.

In this caſe they generally ſpit very little; the *fauces* appear dry, gloſſy, and livid; the external tumour grows large; they void their excrements without perceiving it, and fall into profuſe ſweats; reſpiration becomes difficult and laborious; the pulſe ſinks; the extreme parts grow cold, and death in a few hours cloſes the ſcene: and in no diſeaſe that I have ſeen, is the eye ſo early deprived of its luſtre as in this; for it is ſometimes opaque or dim ſeveral hours before death; and, as Ætius Cletus hath obſerved, is a fatal preſage of its approach *.

A copious flux of pituitous matter to the glands, and other parts about the *fauces*, ſeemed to be the cauſe of ſudden death, in a girl about twelve years old. She was ſeized in the common way, with ſhivering, head-ach,

* Heredia's deſcription of the fatal progreſs of this diſeaſe, and the neceſſary cautions he gives in reſpect to the prognoſtic, deſerve particular notice.

Fallaciſſimam eſſe hujus morbi naturam, confitentur omnes.—Ulceribus oris, et partium quæ viſui exiſtebant conſpicuæ, recte curatis, et ſedata inflammatione æger periclitatur.—Ex eo quod paulatim ſerpit putredo per aſperam arteriam ad cor, aut per gulam ad ventriculum, ſine aliquo dolore, aut febri ſenſibili, cujus ſit habenda cura: et cum medicis auxiliis, ablata fuerint ulcera, et inflammationes ſedatæ in partibus viſui patentibus, occulta putredo, paulatim mortificans partes internas, tabe, parviſſimis et debiliſſimis pulſibus extinctione caloris, refrigeratione extremorum, faciei extenuatione, inappetentia perpetua, et moleſta mutatione decubitûs, ſomno fallaci, et apparente, quia vigilandi impotentia, ſomnum verum æmulatur, miſere ægrotantes interficit, ut viſum jam ſit ſubita et inopinata morte periiſſe aliquos,—e lecto ſurgentes, et intra domos ambulantes; ob quod etſi quæ vitiata apparebant in faucibus, aut partibus aliis, in melius mutata conſpiciantur, non licet ſalutem polliceri, quia ſolet communicari paulatim putredo, et gangræna partibus internis. Heredia, p. 99.

ſickneſs, vomiting, and purging. The diſcharges abated in a few hours, and were ſucceeded by great heat, redneſs of the ſkin, and a ſore-throat; the *uvula*, *tonſils*, and contiguous parts, were red, and ſo ſwelled in eight or ten hours, as to touch each other, and ſeemed to cloſe the entrance into the *pharynx*. She breathed without much difficulty, ſwallowed with leſs pain than could be imagined, and ſpit up large quantities of phlegm. About ſix in the evening ſhe was ſeized with a difficulty of breathing, as if ſtrangled: thoſe about her raiſed her up, thinking ſhe was in a fit; ſhe recovered herſelf a little, but expired upon being again laid down in bed, in ſomewhat leſs than twenty-four hours from the firſt attack. A large quantity of viſcid phlegm, with which, after ſhe was dead, her mouth appeared to be filled, together with the tumefied *uvula*, *tonſils*, and *velum palati*, had perhaps jointly cloſed the *rima glottidis*, and put a ſtop to reſpiration.

By a fall in her infancy ſhe was reduced to the neceſſity of uſing crutches. She was big-boned, had a good appetite, and, for want of that exerciſe which perſons at her age commonly enjoy, ſeemed to be plethoric. Theſe circumſtances, perhaps, might contribute to this ſpeedy and unhappy event.

Accidents of the like kind ſeem not to have been uncommon while this diſeaſe continued in Italy, according to a remark of Corteſius *.

From the preceding account of the Sore-throat attended with Ulcers †, it will, I believe, appear, that this diſeaſe is widely different from a common Sore-throat, or ſimple inflammation of any of the parts about the *fauces*; both as to the ſubject commonly affected by it, the manner of its attack, the progreſs of the ſymptoms, and its concluſion: for the Sore-throat with Ulcers generally attacks children; and of theſe, girls more frequently than boys, as hath been obſerved. If adults are ſeized with it, they are commonly ſuch as have been very much converſant with the ſick, or elſe are weak and infirm: and it ſeems to affect thoſe adults in the ſevereſt manner, who have been previouſly indiſpoſed, or whoſe ſtrength has been reduced by unſeaſonable or immoderate evacuations.

On the contrary, the common *Angina*, or an inflammation of the *tonſils*, moſt frequently attacks the healthy, the vigorous, and robuſt; the weak, the delicate, and infirm, are leſs expoſed to it, at leaſt ſuffer leſs from it, than the former.

* —Ad prædictarum partium (Uvulæ, Tonſillarum) inflammationem ſubſequebatur interdum materia quædam pituitoſa a capite tam repente et inopinato deſcendens, ut miſeri ægrotantes ſubito ſuffocarentur. Corteſ. Miſcell. p. 697.

† The diſeaſe here treated of is, ſtrictly, "a Sore-throat;" ſince by ſoreneſs we aptly expreſs the uneaſy ſenſation accompanying an ulcer (i. e. a ſore) and not that which attends an inflammation, which is indeed pain, but not properly ſoreneſs.

As

As both diſeaſes are attended with a fever, and as moſt fevers come on with ſhivering, or chillneſs, this ſymptom may at leaſt appear equivocal: but if ſickneſs, or vomiting, or purging, or an acute pain of the head, towards the back parts or top eſpecially, or if all theſe come on in the ſpace of a very few hours, which they generally do where the diſeaſe is vehement, it may juſtly be eſteemed to be of the putrefactive kind; but if with theſe ſymptoms an eryſipelatous redneſs diſcovers itſelf in the *fauces*, with ulcerations or ſloughs, the diſeaſe is evident.

In ſome caſes, the ſymptoms have been ſo obſcure, that it was difficult to determine to which diſeaſe they properly belonged: but in theſe circumſtances they were commonly ſo favourable, that, ſuppoſing the diſorder not to be of the ulcerated kind, no other inconvenience ſeemed likely to enſue from treating it as ſuch, than a ſuppuration; which is often an event rather to be choſen than avoided.

The redneſs of the ſkin in the face, neck, breaſt, and hands, is another obvious and diſtinguiſhing characteriſtic, which in children, and young people eſpecially, ſeldom fails to accompany this diſorder.

In the common Sore-throat, a local inflammation is the diſeaſe; all the ſymptoms are derived from this ſource; and an acute throbbing pain, greatly increaſed upon ſwallowing even liquids, is the principal grievance. In the other, the whole habit ſuffers, as if by a *ſtimulus* of a peculiar nature; and although the throat is always more or leſs affected, yet it is ſometimes the leaſt part of the patient's complaint; and inſtances have occurred to me of conſiderable ſloughs being formed, before any ſoreneſs or pain in the *fauces* hath been mentioned.

Again, this diſeaſe is accompanied with a greater tendency to a delirium, than either a common *Angina*, or almoſt any other diſtemper we are acquainted with. To have this ſymptom appear, in the diſeaſe we are treating of, on the firſt night, is not uncommon; and on the ſecond, frequent. A girl about eight years of age, whom I attended, was ſcarce known to be indiſpoſed, till ſhe alarmed the family, by appearing to be light-headed. She had made no complaint of her throat, nor was this part thought to be affected, till, upon examination, I found it ſo; being led to ſuſpect it by the colour of her hands, and the delirium. She got well through the diſeaſe, though its progreſs, at firſt, appeared to be very ſwift.

A common Sore-throat, if the patient recovers, either goes off by reſolution, or the parts affected ſuppurate; or, if glandular, become hard and ſchirrhous.

In that attended with ulcers, none of theſe circumſtances happen; for it terminates in a ſuperficial ulceration of ſome of the parts about the *fauces*, if the diſeaſe is very mild, with little appearance of any ſloughs, and with

large and deep ones, of a white cineritious, livid, or black colour, if it is more violent.

It will not, perhaps, be difficult, from ſuch a comparative view, to diſtinguiſh this diſeaſe from a common Sore-throat, or an inflammatory affection of thoſe parts, in moſt inſtances: but there is another no leſs certain criterion, though too often a fatal one, which is the conſtant increaſe of ſymptoms upon bleeding, purging, and the liberal uſe of cooling antiphlogiſtic medicines: a method, which, as it ſeldom fails to remove a genuine inflammation, if it is early enough and aſſiduouſly purſued, ſo it is too often injurious in the preſent caſe; an inſtance whereof I think evidently appeared in the following ſubject.

A youth about fourteen years old, of a briſk, lively diſpoſition, who had enjoyed a good ſhare of health, ſaving that, for a few years paſt, a cutaneous diſeaſe, a-kin to a leproſy, had ſometimes appeared on his head and arms, was ſeized one morning with a general uneaſineſs, and a diſpoſition to vomit; he was put to bed, and a ſevere ſhivering enſued; his ſickneſs increaſed, he vomited up every thing, had ſeveral purging ſtools that day, and complained much of his head, with ſome ſoreneſs in his throat. He was ordered to be bled, and had an emetic given him: this operated but little; he grew hot and reſtleſs, a deep redneſs ſpread itſelf over his face, hands, and arms, with a plentiful eruption of ſmall pimples, which induced thoſe about him to apprehend it was a common ſcarlet fever.

The next day, which was the ſecond of the diſeaſe, his throat continuing ſore, and the feveriſh ſymptoms increaſing, a purge of manna was given him, which operated gently; and at night his head and throat being more uneaſy, his heat ſtill continuing, with a tendency to delirium, a bliſter was applied.

On the third, the ſymptoms not abating, he loſt about ten ounces of blood. He had taken a cooling nitrous powder every four hours; this was now changed for one more cordial. At night he grew delirious, his fever increaſed, and he had ſome looſe ſtools, which were rather encouraged than reſtrained, as it was hoped they might relieve him. Bliſters were applied to his head and arms.

On the fourth in the morning I was ſent for: I found him delirious, with convulſive twitchings; his hands were in conſtant motion, gathering the bedclothes; his pulſe was quick and weak, and his tongue parched. With ſome difficulty I looked into the *fauces*; they ſeemed to be pale in ſome places, intenſely red or livid in others, with a gloſſy brightneſs: his excrements came away involuntarily; his eyes were languid and dim: he breathed with difficulty, fell into profuſe clammy ſweats, and died in a few hours after.

In ſome of the firſt caſes I met with, the quickneſs of the pulſe, the degree of heat, the apparent inflammatory redneſs of the eyes and face, and

pain

pain in the head, ſometimes urged me to order bleeding, eſpecially if there were any marks of a plethora; but in theſe caſes it did not appear to have any advantageous effects: ſo that, notwithſtanding the vehemency of the ſymptoms above mentioned, it ſeems proper in general to omit this evacuation.

Cupping with ſcarification has been applied to the ſhoulders and back of the head, in order to remove an acute pain of this part, which is often complained of, but, as far as I have been able to obſerve, without much benefit.

It is neceſſary that the patient ſhould keep in bed as much as may be, though the diſeaſe ſhould ſeem to be ſlight: it has happened, for want of care in this reſpect, that a purging has come on, the redneſs of the ſkin diſappeared, and a diſorder which, with confinement alone, would probably have gone off in twice twenty-four hours, has been rendered tedious and difficult.

If we are called in at the firſt, while the ſickneſs or vomiting continues, it will be of uſe to promote this diſcharge, by giving an infuſion of green tea, camomile-flowers, *carduus*, or a few grains of *ipecacuanha*. In ſome inſtances, where the attack has been ſevere, and this method practiſed, the diſorder has gone off with more eaſe than was at firſt apprehended.

If theſe ſymptoms do not abate with the operation of the emetic, ſmall draughts of mint-tea, with a ſixth part of red-port added to it, may be given frequently; together with ſome grateful and warm aromatic, cordial medicine, every four or ſix hours. The *Pulvis Contrayervæ ſimp.---comp. Confect. cardiac.-------Raleigh. Spec. arom. Vinum croceum; Aq. Menth. ſpirit. Aq. Alex. ſpirit. cum Aceto**; with others of the like nature, may be uſed for this purpoſe.

In this diſeaſe, it is at all times neceſſary to attend very carefully to the diarrhœa. For the moſt part it ceaſes with the vomiting, in leſs than twelve hours from the firſt attack: if it continues longer than this period, it is neceſſary to check it, otherwiſe it occaſions great faintneſs, ſinks the ſtrength, and in the end produces very dangerous conſequences. The aromatic cordials above mentioned, if they are given plentifully, commonly take off this ſymptom, as well as the vomiting; but if they prove ineffectual, recourſe muſt be had to aſtringents and anodynes, in proportion to the exigence of the caſe; ſuch as the *Confectio Fracaſtorii*, or *Elect. e Scordio*, diſſolved in ſmall cinnamon-water, and given *poſt ſingulas ſedes*.

It is common for the redneſs, ſo often mentioned, to appear upon the ſkin, as theſe diſcharges abate: it has happened that this colour has gone off ſome-

* Vegetable acids, ſuch as the juice of lemons, oranges, wood-ſorrel, verjuice, vinegar in ſmall doſes, and the like, as they are undoubtedly antiputreſcents, may ſeem to be indicated; but their proneneſs to increaſe the diſcharge by ſtool, or profuſe ſweats, ought to render us very circumſpect in uſing them.

times,

times, and the patient has been brought into imminent danger, upon giving a mild cathartic: which circumſtances, as they point out a cloſe connection between them, indicate the uſe of a warm regimen, notwithſtanding the heat and other ſymptoms might ſeem to forbid it.

A girl about nine years old, of a ſlender make, but healthy and active, was ſeized with this diſorder. The ſickneſs and vomiting went off, and the redneſs of the ſkin appeared ſoon after: the apothecary who attended her, judging it an inflammatory caſe, as ſhe complained of her throat, bled her, gave her a cooling purge the next day, and afterwards ſome nitrous draughts. A plentiful efflorescence which covered the face, neck, and arms, ſuddenly diſappeared; a diarrhœa came on; ſhe grew reſtleſs, faint, and inſenſible. In this condition I firſt ſaw her on the third day of the diſeaſe; ſhe frequently ſighed, her pulſe was quick, ſmall, and hard, without any remarkable colour upon her ſkin; and the ſwelling on each ſide the neck large: it was not poſſible to examine the *fauces*, as ſhe lay in a comatous motionleſs condition, her ſtools and urine coming away inſenſibly. A warm cordial mixture * was frequently given her, upon which the diarrhœa ſoon abated; and the next day the efflorescence again appeared upon her face and arms. From this time ſhe continued to recover, though ſlowly, and was for ſome time attended with a cough and hectic heat.

Another ſymptom, which requires our attention in the cure of this diſeaſe, is an exceſſive faintneſs: of this they generally complain ſoon after they are taken ill, and continue to do ſo, if ſenſible, till the diſtemper begins to abate: the urgency of this ſymptom ſeems to indicate the degree of danger: it is more or leſs violent, as the diſeaſe is mild or malignant; and an abatement of it may be looked upon as a pretty ſure preſage of recovery.

Warm aromatic and gently ſtimulating medicines, ſuch as have been already mentioned, as the moſt effectual to ſuppreſs the vomiting, and check the looſeneſs attending this diſeaſe, have likewiſe been found uſeful in removing this ſymptom: and though the degree of heat, and quickneſs of the pulſe, would be enough to diſſuade a perſon who has not ſeen the diſeaſe, from giving them in ſo liberal a manner as neceſſity requires; yet we are not to be governed ſo much by theſe ſymptoms, as by the faintneſs, depreſſion of the pulſe, and increaſe of putreſcency in the *fauces*. One dram of the *Confectio Raleighana* has been given to a youth not quite 15 years of age, every four hours, which was ſoon followed by a ſenſible amendment, and the decreaſe of the patient's reſtleſſneſs, faintneſs, and heat.

Some of the Italian phyſicians forbad the uſe of wine in the cure of this

* ℞. Aq. Alexit. ſimp. ℥vj. Alexit. ſpir. cum acet. ℥jſs. Conf. cardiac. ℥ſs. Pulv. Contray. ſimp. ℥ſs. Syr. Croc. ℥ſs. *f.* mixt. de qua capiat ægra coch. ij. tertia quaque hora.

diſeaſe, and the warmth of their climate might perhaps make this caution neceſſary; but as it is a generous cordial, and at the ſame time antiſeptic, it ſeems to be in no reſpect improper here; and, beſides, in whey, I have allowed it to be given, freely, mixed with mint, baum, or ſage-tea, barley-water, gruel, panada, ſago, and the like; and alone, where the faintneſs has been exceſſive; the age, the former way of life, and the ſymptoms, affording the neceſſary rules as to quantity and kind. Chicken-water, or thin broth, may alſo be allowed, which is frequently very acceptable to the patient. And I don't remember to have obſerved ſo general and early an inclination after animal food, in any acute diſeaſe, as in this: for at a time when one would imagine, both from the condition of the *fauces*, and the degree of heat, that liquids would be the moſt acceptable, it is not uncommon to find children, who have this diſeaſe, extremely deſirous of chicken, and chearfully complying with directions, in hopes of being gratified in this reſpect.

Bliſters are likewiſe of uſe to relieve the faintneſs. At firſt I was in doubt, leſt the flies, by their acrimony, ſhould increaſe the putreſcent diſpoſition, and conſequently aggravate the diſorder they were intended to remove: but no ſuch effect having appeared from their uſe, I have ordered them to be applied, and I think with advantage, both to the uſual parts, and to the neck on each ſide from below the ear almoſt to the clavicle, as occaſion required *.

The ulcers in the throat demand our early and conſtant attention, as a conſiderable loſs of ſubſtance cannot here be ſuffered without immediate danger to life itſelf, or the moſt injurious conſequences to the future action of the parts, if the patient ſurvives.

Where the diſeaſe is of the mildeſt kind, a ſuperficial ulceration only is obſervable; which may eaſily eſcape the notice of a perſon unacquainted with it. A thin, pale, white ſlough ſeems to accompany the next degree: a thick, opaque, or aſh-coloured one is a further advance: and if the parts have a livid or black aſpect, the caſe is ſtill worſe. Theſe ſloughs are not formed of any foreign matter ſpread upon the parts affected as a cruſt or coat, but are real mortifications of the ſubſtance; ſince, whenever they come off, or are ſeparated from the parts they cover, they leave an ulcer of a greater or leſs depth, as the ſloughs were ſuperficial or penetrating.

When the tendency to putrefaction is ſtopped, theſe ſloughs in moſt caſes come off ſpontaneouſly; or their ſeparation may be promoted by ſuitable remedies and applications: but it ſeems by no means adviſeable to attempt it by force, or to ſcrape them off with the fingers or inſtruments, as Severinus

* It has been obſerved by ſeveral, that the diſcharge from bliſters in this diſeaſe is in general both more copious at firſt, and continues longer than is uſual in other caſes.

propoſes;

propoſes; ſince the experiment has been tried, but with ſuch unhappy conſequences *, as are ſufficient to diſcourage one from perſiſting in this method †.

In a caſe where I was concerned, previous to my being called in, a ſurgeon had endeavoured to ſeparate the ſloughs by the aſſiſtance of his probe: he ſucceeded in his attempt without much difficulty; but was ſurpriſed to ſee the ſame parts covered the next day with thick, dark, aſh-coloured ſloughs, penetrating deep into the ſubſtance.

It is true, the ſloughs have been ſometimes ſcarified, from an apprehenſion that matter was lodged underneath them, without any manifeſt inconvenience; but as there are inſtances of fatal mortifications having enſued, it ſeems moſt prudent to decline the practice.

From under theſe ſloughs, and from every part of the ulcers which they cover, a thin corroſive *ichor* is diſcharged, ſo acrid as to excoriate the external parts upon which it is ſuffered to remain. This is ſometimes obſervable in adults, when the parts above the *fauces* are affected; the *ichor* in theſe caſes flows through the noſtrils, and frequently raiſes pimples and ſmall bliſters on the ſkin of the upper lip; but it is moſt obvious in children, who often have this part, the corners of the mouth, and the cheek on which they commonly lie, bliſtered or excoriated.

It is probable, as hath been already hinted (p. 206), that part of the ſame virulent matter, paſſing down the *æſophagus* into the ſtomach and inteſtines, acts upon them as it does upon the ſkin, when applied to it externally; it frets and corrodes the parts it touches, and produces that ſickneſs, vomiting, purging, and faintneſs, which ſometimes accompany this diſeaſe in different parts of its progreſs.

In children, and very young ſubjects, the ſymptoms ariſing from this cauſe

* Si quis tamen vel digitis, vel aliquo inſtrumento levi ipſam (materiam albam) auferre tentâſſet, quamvis operatio hæc fieret abſque dolore, ea tamen ablata breviſſimo tempore peribant ægrotantes; quod præ cæteris in Petro Soprano genero meo obſervatum eſt, cui cum hujuſmodi mortificatio apparuiſſet in ſuprema ſuperficie dictarum glandularum faucium, et palati, ita ut videretur eſſe maximo reſpirationi et deglutitioni impedimento, chirurgus exiſtimans poſſe facillimo negotio a ſubjectis partibus eam ſeparari ſolis digitis, leviſſime quidem eam abſtulit; quæ ablata, tantum abeſt ut juverit deglutitionem aut reſpirationem, ut utraque potius actio læſa magis fuerit, unde breviſſimo tempore miſer, meo cum maximo dolore, mortem oppetiit; id quod etiam in aliis quamplurimis pueris ſæpius obſervavi, et præſertim in ejuſdem Petri filiolo nepoti ex filia, quinque annorum, mihi cariſſima, qui poſtpaucos dies eodem modo, quo pater, vitam cum morte mutavit. Corteſ. Miſcel. Med. p. 697.

† Quod ſi enim adhærentem adhuc cruſtam avellere aggrediamur, ulcerationes magis in profundum procedunt, et inflammationes conſequuntur, augentur dolores, et in ulcera ſerpentia proficiunt. Heredia, p. 109.

are

are yet more dangerous: the natural ſoftneſs and laxity of the parts liable to be affected, diſpoſes them to ſuffer by it much more than adults: at the ſame time they are commonly alike incapable of promoting the diſcharge of this matter themſelves, and of admitting aſſiſtance from others, being generally, if the diſtemper is not very mild, either comatous and ſtupid, or delirious and untractable. If gargles are injected, they either prevent them from reaching the ſeat of the diſorder, by their tongues, or they ſwallow them, and the putrid taint of the ulcers, together; the miſchief ſpreads beyond the power of art to reſtrain it; violent purgings enſue, or fatal hæmorrhages from the penetrating gangrene. And to this, perhaps, it may in part be owing, that children ſuffer ſo much more from this kind of Sore-throat, than adults *.

That this corroſive matter produces theſe effects is farther confirmed, by obſerving, that thoſe whoſe throats are ſeverely affected, if they have a plentiful diſcharge from the *fauces*, are ſeldom attended with ſickneſs, vomiting, or exceſſive faintneſs; tho' after longer ſleeps than ordinary, or a neglect of encouraging this evacuation, they have complained of ſickneſs, and have had retchings come on: and in ſuch caſes, where there has been little or no diſcharge of this kind, the ſymptoms are commonly the moſt dangerous.

From hence it is obvious, that great advantages may be expected from the conſtant uſe of gently ſtimulating aromatic gargles; as they promote the diſcharge of the pituitous matter flowing to the *fauces*, and doubtleſs, with it, of ſome part of the corroſive fluid above mentioned: to which if we add antiſeptics and detergents, in order to check the progreſs of the mortification, and cleanſe the ſordid ulcers it produces, every indication is provided for.

Where the diſeaſe is mild, the ſymptoms favourable, the ſloughs ſuperficial, or ſcarce perceptible, it may be ſufficient to order a gargle of ſage-tea, with a few roſe-leaves added in the infuſion; three or four ſpoonfuls of vinegar may be mixed with half a pint of the tea, and as much honey put to it as will leave it agreeably acid.

But where the ſymptoms are urgent, the tendency to putrefaction great, the ſloughs large and thick, and the breath offenſive, recourſe muſt be had to more efficacious remedies: a compoſition like the following, varied only as the patient's age and the circumſtances of the diſeaſe required, has in general been attended with very good effects. The proportion here

* Heredia takes notice of the ſame thing, and gives it as a principal reaſon why ſo many infants and children ſuffered by this diſeaſe.

Infantum et puerorum multitudo maxima periit, quia nec exſpuere, nec excreare lentas et cruſtaceas materias poſſunt, et minus auxiliis obediunt. p. 100.

given may be uſed for adults, and the more active parts leſſened for younger ſubjects.

℞ *Decoct. Pectoral.* ℥xij. *cui inter coquendum add. Rad. Contrayerv. contuſ.* ℥ſs. *Liquori colato admiſce Acet. Vin. Alb.* ℥ij. *Tinct. Myr.* ℥j. *Mel. opt.* ʒvj. *f. Gargariſma.*

As the parts about the gullet are frequently ſo much affected, as to render it painful or impracticable for the ſick themſelves to make uſe of the gargle ſo freely as they ought, it is commonly ordered, that a few ſpoonfuls of this liquor, made ſomewhat warm, ſhould be very often injected into the *fauces* with a ſmall ſyringe; and eſpecially before the patient ſwallows any thing, in order to waſh off as much as poſſible the putrid *ſordes* adhering to the ulcers, and prevent it from paſſing into the ſtomach and bowels *. In young ſubjects this method is the more neceſſary, as they don't always know how to manage a gargle to any purpoſe, did the ſoreneſs of the parts permit them to do it †.

As ſo much depends upon the frequent uſe of gargles, or rather of injections, a ſtrict attention to this affair can ſcarcely be too ſtrongly enjoined on thoſe who have the care of the ſick committed to them; ſince an aſſiduous repetition of theſe lotions not only promotes a diſcharge from the glands of the throat, which is probably of great uſe ‡, but retards the progreſs of the ulcers, by waſhing off the putrefactive corroding *virus*, and prevents a large train of very dangerous ſymptoms (ſee p. 216.); and has therefore been ſtrenuouſly inſiſted on by ſeveral writers, by Mercatus eſpecially §.

If the ſloughs are large, and caſt off ſlowly, they may be touched with *Mel. Egyptiacum*, by means of an armed probe; or if the condition of the *fauces* is ſuch, that this cannot conveniently be done, a ſpoonful of the following mixture may be injected, and retained in the throat as long as the patient can endure it; the parts may then be waſhed two or three times with the gargle alone.

* The ſame caution was given by Heredia, and almoſt in the ſame terms.—Cujuſque rei deglutitionem [præcedat excrementorum oris excreatio, deterſio, ne lotione venenoſa excrementa cum rebus deglutiendis ferantur ad viſcera. p. 109.

† — cum pueri nequeant gargariſmatis uti, injiciantur cum ſyringa. Idem, ibid.

‡ Heredia, after having obſerved, that no evacuations by ſtools or ſweat were of uſe in this diſeaſe, admits that ſome advantages may be expected from this diſcharge. Eſt autem aliqua ſpes in frequenti exſpuitione, quando craſſa et glutinoſa excreatur. p. 100.

§ Cavendum eſt diligenter, ne ſic affecti deglutiant propriam ſalivam, quinimo ora puerorum diligentiſſime ſunt abluenda. Mercat. p. 137.

℞ *Gargariſm. præſcript.* ℥ij. *Mel. Ægypt.* ʒj. *m.*

By the conſtant and regular uſe of theſe applications, if the patient is kept warm, and the method of treating him in other reſpects is obſerved, agreeable to what has been mentioned above, it ſeldom happens but that the febrile ſymptoms diſappear, the ſloughs come off, and the ulcers are diſpoſed to heal in a few days; unleſs it be where miſmanagement at firſt, malignity of the infection, or an unfavourable conſtitution, have one or all contributed to increaſe the diſeaſe, and to render its conſequences more laſting and miſchievous.

What effects improper treatment produces in this caſe, has already been obſerved. With regard to the matter of contagion, or the nature of that cauſe which ſo ſuddenly brings on ſuch a train of ſymptoms as hath been deſcribed, little can be ſaid with any degree of certainty: thus much, however, ſeems to be true in fact, that in ſome caſes this diſeaſe appears to be of ſo mild a nature, and ſo benign, as to require but little aſſiſtance from art: perſons even recover from it under the diſadvantages of unſkilful and injurious management; whilſt, in others, the progreſs of the ſymptoms is ſo rapid, and the tendency to corruption ſo ſtrong, that nothing ſeems able to oppoſe it. Juſt as it happens in the ſmall-pox; the benign and diſtinct ſort bears ill treatment without injury; in the malignant flux kind, the utmoſt art and experience are too often inſufficient to conduct the diſtemper to a happy iſſue. Whether this diverſity in the Sort-throat we are ſpeaking of, is owing to a difference of conſtitutions, or of ſeaſons; to the different quality or quantity of the contagion, or the manner of receiving it; or whether there are in reality diſtinct ſpecies of it; may perhaps hereafter be more certainly determined.

With reſpect to conſtitution, it may be further obſerved, that, in ſoft, lax, leucophlegmatic habits, and languid, inactive diſpoſitions, every thing elſe being equal, the diſeaſe ſeems to proceed more ſlowly, to go off more irregularly, and to leave behind it more laſting effects. In ſome perſons of the temperament deſcribed, though the fever has grown leſs, and all the ſymptoms abated in four or five days, yet the ſloughs in the throat have continued almoſt a week after; whilſt in the oppoſite conſtitution, though the diſeaſe has been much more acute, yet the ſymptoms have no ſooner abated, than the ſloughs have caſt off, and the ulcers healed of their own accord.

A copious hæmorrhage from the noſe, mouth, or ears, the laſt eſpecially, coming on after the diſeaſe has continued three or four days, or longer, is a dangerous *phenomenon:* for, at this time of the diſtemper, it moſt probably proceeds from the branch of an artery deſtroyed by the mortification, and

laid open by the ſeparation of the ſlough, as hath been already obſerved. If the veſſel is therefore large, the bleeding may prove fatal to the patient in a very ſhort time; or if he eſcapes for the preſent, the loſs of a conſiderable quantity of blood at this time of the diſeaſe will occaſion various ill conſequences.

It is therefore abſolutely neceſſary to endeavour to ſtop this diſcharge with all the expedition poſſible. If the patient is coſtive, it will be of uſe to procure relief in this reſpect, by clyſters or ſuppoſitories, as ſoon as can be done: to apply vinegar, by means of tents, or otherwiſe, as near to the orifice of the veſſel as we can: to convey the ſteam of it into the *fauces* and noſtrils plentifully, and to keep the patient in a ſitting poſture, or his head raiſed as high as may be, and his upper parts moderately cool: if theſe methods do not immediately take effect, recourſe muſt be had to more efficacious ones, amongſt which we may rank the *bark* and *opium*.

It is not uncommon for hectic heats, night-ſweats, want of appetite, and dejection of ſpirits, to attend thoſe a conſiderable time, who have had the diſeaſe in a ſevere manner. Freſh air, aſſes milk, and other uſual means of recovering the waſted ſtrength, in a ſhort time reſtore to ſuch invalids their priſtine vigour.

Having thus related the moſt material circumſtances that have occurred to me in reſpect to the ſymptoms, progreſs, and event of this diſtemper, the *juvantia*, *lædentia*, and the accidents chiefly to be regarded in its cure, in ſuch a manner as I hope will enable thoſe who have not ſeen or known it, to diſtinguiſh it from a *common Sore-throat*, and to treat it with ſome degree of propriety and ſucceſs when it occurs, I ſhall conclude with obſerving,

1. That the *Sore-throat attended with Ulcers*, ſeems to be accompanied with a ſtrong diſpoſition to putrefaction, which affects the habit in general, but the *fauces*, and the parts contiguous, in particular. And it ſeems not unreaſonable to ſuppoſe,
2. That the cauſe of this tendency is a putrid *virus*, or *miaſma ſui generis*, introduced into the habit by contagion; principally by means of the breath of the perſon affected.
3. That this *virus*, or contagious matter, produces effects more or leſs pernicious, according to the quantity and nature of the infection, and as the ſubject is diſpoſed to receive or ſuffer by it.
4. That putrefactive and malignant diſeaſes, in common, admit of the moſt ſenſible and ſecure relief, from diſcharges of the peccant matter, either upon the ſkin in general, or on particular parts of the body.
5. That the redneſs, and cutaneous efflorescence, in the preſent caſe, may

may be conſidered as an eruption of the like nature, and therefore to be promoted by ſuch methods as have proved ſucceſsful in ſimilar diſeaſes.

6. That a cordial, alexipharmac, warm regimen, has been found by experience to be of the moſt uſe in ſuch caſes; and that bleeding, purging, antiphlogiſtics, liberally employed, either retard or wholly prevent theſe diſcharges.

Therefore, as to expel the morbific matter (3) ſeems to be the deſign of Nature, to promote this deſign by the meaſures that are approved by experience in analogous diſorders, is the duty of the Phyſician.

A DESCRIPTION

ARBUTUS *Andrachne*.

Jn.º Lodge sculp

ARBUTUS *Andrachne*.

A DESCRIPTION OF THE ANDRACHNE*,

WITH ITS BOTANICAL CHARACTERS:

By G. D. Ehret, F. R. S. †

Read before the Royal Society, February 26, 1767.

FROM a ſhort and crooked ſtem go off irregularly ſevera branches bending in various directions; but the younger ſhoots moſtly pointing upwards. The height of the ſhrub is now about four feet.

The ſtem and branches are of different colours at different ſeaſons. In the ſpring, they appear of a greeniſh cinnamon colour: this is gradually heightened to almoſt a red during winter; towards the end of which, the epidermis peels off, and the new bark exhibits the like appearance as it had the ſpring before.

On the extremities of theſe branches, the ſhoots of the preceding year, which are of a deep red colour, are many leaves of different ſizes, placed irregularly; the largeſt leaves were in length, when the figure was drawn, about four inches, and two inches and an half in breadth, of an oval figure: they are moſtly entire, though the edges of ſome are lightly ſerrated: their ſurface is ſmooth and lively, but not gloſſy or ſhining. They are ſupported on the branches by footſtalks about an inch long, of a red colour, and ſmooth.

* I have introduced this deſcription of the Andrachne, though written by Ehret, as I have reaſon to think it was done under the influence of Dr. Fothergill. This beautiful exotic is now in a flouriſhing ſtate at Upton, in the open ground: it is about twelve feet high. *Editor.*

† Philoſophical Tranſactions, vol. lvii. anno 1767, p. 114.

The

The young leaves, at their firſt appearance, are of a faintiſh green, with a caſt of yellow, yet beautifully ſhaded with red: their footſtalks and middle rib are then hoary, but they loſe this appearance as they grow older.

This very rare ſhrub produced its flowers, for the firſt time in England, in the garden of Dr. John Fothergill, at Upton, near Stratford, in Eſſex, May 1766. The principal ſpikes of flowers in this ſpecies of arbutus are erect, producing many ſide ones in a horizontal direction, their extremities inclining downwards. Each of theſe ſimple ramifications contain many white globular flowers, hanging on long hoary glutinous pedunculi, which are ſituated alternately. Theſe ſpikes of flowers, forming a kind of looſe tuft, with the bright bunches of leaves, have an elegant appearance.

Characters of the Flower.

TAB. VI.

Fig. *a*. repreſents a ſide view of the flowers; they are of a globular ſhape, and open into five obtuſe reflex laciniæ, in the manner of the common arbutus.

Fig. *b*. a back view of the flower, upon which appears the calyx ſpread open, and cloſely adhering to the flower; it conſiſts of five oval pointed leaves or diviſions: around this calyx appear on the corolla ten viſible nectaria.

When theſe flowers drop off, the calyx cloſes up, and embraces the tender germ. See Fig. *c*.

Fig. *d*. repreſents a flower ſeparated from the calyx; it is inſerted at the baſe of the germen. The ten nectaria, which are ſomewhat ſwollen, or raiſed from the corolla, and have tranſparent appearances, are alſo diſcoverable, whilſt the magnified figure *e* lays the parts more diſtinctly in view. This is a remarkable character in this flower.

Fig. *f*. exhibits the flower laid open: it is ſmooth without, and hoary within; it contains ten ſtamina, which are inſerted at the baſe of the flower; their filaments and apices embrace half the ſtyle.

Fig. *g*. two ſtamina magnified, the baſe whereof is a tender fleſhy ſubſtance, hoary, and of a club-like ſhape; this diminiſhes gradually into a filament, upon which is ſituated a ſingular anthera: this anthera burſts at two apertures (as the figure repreſents), and diſperſes its farinaceous duſt towards the ſtyle: from the top of this apex, comes forth, at the oppoſite ſide, two crooked forked horns, bending downwards in length of the anthera.

Fig. *h*. the germen or rudiment magnified. This is hoary; its baſe conſiſts of a red fleſhy ſubſtance, with ten obtuſe angles. The ſtyle ſupports a ſmall globular ſtigma, and does not exceed the length of the flower.

Fig.

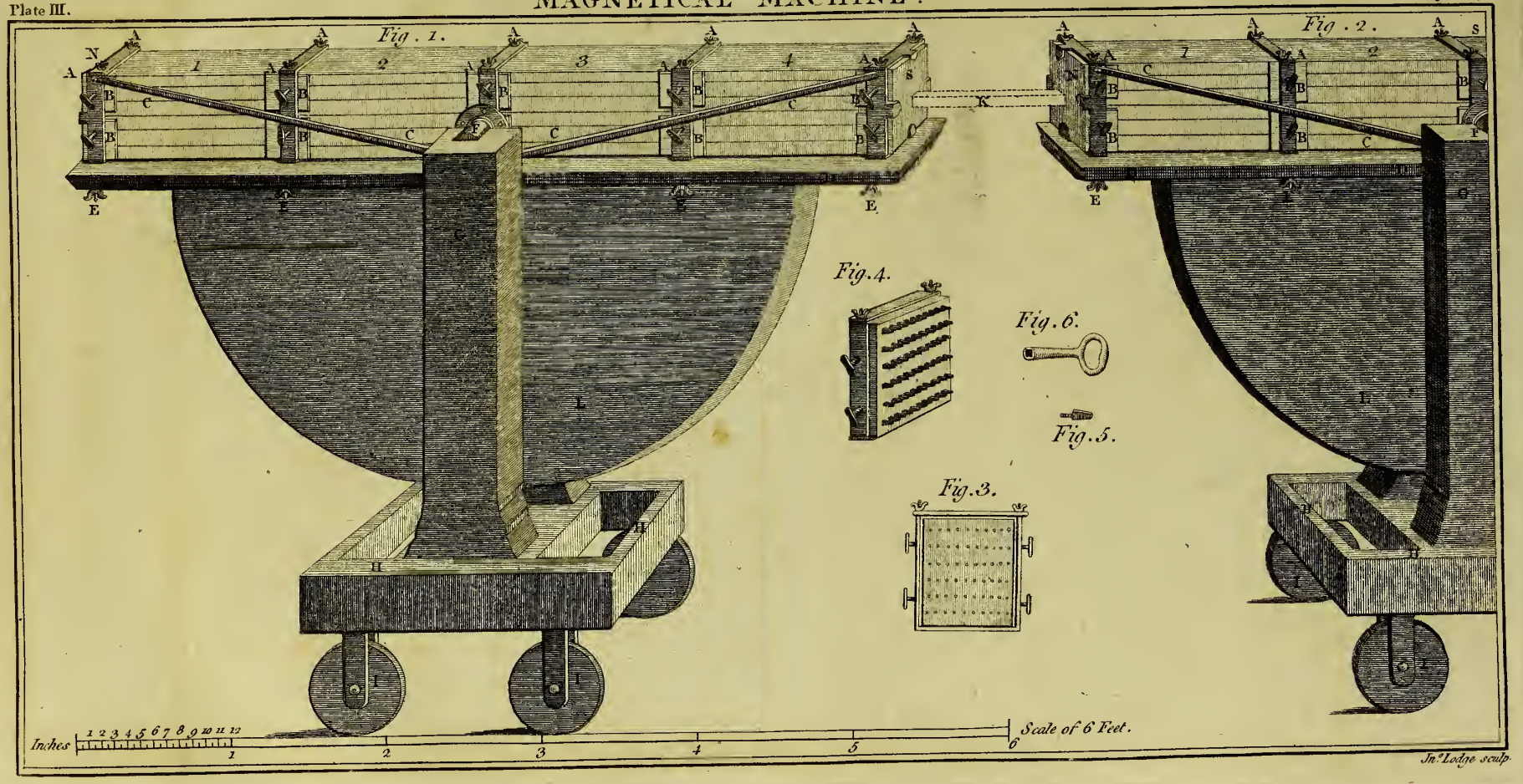
Fig. *i.* repreſents a horizontal view of the germen, as obſerved through a lens: it has five regular loculaments or cells, though ſeemingly but one ſeed; but by a cloſer inſpection, there appeared ſeveral embryo ſeeds in each cell.

Fig. *k.* a dried fruit or berry of the Andrachne in its natural ſize, with an horizontal ſection. This fruit, which is tuberculous, I drew from a ſpecimen conſiſting of the whole branch, leaves, flower-ſpikes, with many ripe berries, which was brought from Aleppo, by Dr. Alexander Ruſſell; all which I examined and deſcribed at that time for my own ſatisfaction, and find them to agree exactly with the recent ſhrub above deſcribed. It likewiſe ſeems worthy of obſervation, that the plants raiſed by the gardeners by grafting or inarching the Andrachne upon the common arbutus, which is the method chiefly uſed in propagating this elegant ſhrub, differ conſiderably from the plants raiſed from ſeed, particularly in this, that the young branches, and the footſtalks of the leaves, are very hairy, and the leaves themſelves are all, without exception, deeply ſerrated like the arbutus. Dr. Ruſſell alſo informs me, that the outer bark of the old ſtem and branches abroad, are for ſome months of the year of as beautiful a crimſon, as the young ſhoots are here deſcribed to be, and doubts not but it will be ſo in this country, as the ſhrub grows older *.

* It may not be improper to mention, that the flower ſpike above deſcribed, with the glandular prominences, which were the rudiments of future flowers, made their appearance ſoon after Midſummer 1765: they advanced very ſlowly during the remains of ſummer; ſtood the winter under a ſlight cover, and made no great progreſs, till within a month of their flowering.

That plant, which produced theſe flowers, was one of ſeveral, which J Gordon, of Mile End, was fortunate enough to raiſe from ſeed, ſent by Dr. Ruſſell from Aleppo, in 1754; and that this ſhould be the only plant which has hitherto produced flowers, is probably owing principally to its having been divers times tranſplanted. J. Fothergill.

MAGNETICAL MACHINE.



AN

ACCOUNT

OF THE

MAGNETICAL MACHINE

Contrived by the late Dr. *Gowin Knight*, F. R. S. and preſented to The Royal Society, by *John Fothergill*, M. D. F. R. S. *

Read before the Royal Society, June 27, 1776.

To the Preſident and Fellows of the Royal Society.

Gentlemen,

BY being left executor to your late worthy member, Gowin Knight, M. B. a very extraordinary Magnetic Machine of his contrivance, and which had coſt him much labour and expence, came into my poſſeſſion. This, I thought, might not be unworthy of a place in your repoſitory; and I therefore deſire your acceptance of it, as a monument of Dr. Knight's very ſingular abilities, and of my regard to the purpoſes of your inſtitution.

I muſt, however, inform you, that this Machine, which, by the annexed figure, and its explanation, may be obſerved to conſiſt of two parts, is by no means ſo ſtrongly magnetical as it was at the Doctor's deceaſe. Not long after this event, it was neceſſary to remove this apparatus from his apartments in the Britiſh Muſeum. One of theſe parts was fixed up in your Muſeum, the other was left at the lodgings of one of your very uſeful, ingenious members, J. H. de Magellan, for the purpoſe of ſome experiments, and alſo for impregnating ſtrongly the needles of ſea-compaſſes. Here it was accidentally deſtroyed by fire, and the parts it conſiſted of rendered almoſt wholly uſeleſs. A new one has, however, been made, and impregnated with the magnetical power, by the ingenious gentleman above-mentioned, accord-

* Philoſophical Tranſactions, vol. lxvi. anno 1776, p. 591.

ing to the method of Dr. Knight. It has acquired a conſiderable degree of magnetic force, by being placed in the polar line with the other part of this machine that was unhurt, and where in time it will, perhaps, acquire a conſiderable degree of magnetic energy.

I wiſh it had been in my power to have given a minute and pertinent detail of my deceaſed friend's diſcoveries in this branch of knowledge. He acquainted me, it is true, at different times in converſation, of the progreſs he had made in theſe diſcoveries; but, as I then thought he intended to leave behind him an exact account of his experiments and reſearches, and their reſult, I only liſtened to his relations as matters of inſtructive amuſement, not thinking it would ever be neceſſary for any other perſon than himſelf to give the public an account of his labours. Indeed, there are many uſeful memorials of his on this ſubject, in your collections, to which I muſt refer the inquiſitive reader. I ſhall only mention ſome circumſtances relative to this machine, which I do not know have been related either by himſelf or any other perſon.

The firſt thing, I believe, that engaged the Doctor's attention more particularly to magnetiſm, was the accident that befel a ſhip's compaſs from lightning; and of which, I think, he gave a very circumſtantial account to the Society. This affair led him to conſider the ſtructure of the compaſs more minutely. He procured compaſs-cards ready-armed, as it is called, from different makers both at home and abroad. He found moſt of the needles ſtrangely erring from due polarity; ſome being many points to the Weſt, others as many to the Eaſt, of the right poſition. Amongſt them all there was only one, which to him ſeemed conſtructed on a rational plan, and was of French make, procured from Marſeilles; but even this was not without very evident faults.

To fix upon the proper form of a needle through which the magnetic effluvia could paſs with the leaſt interruption, to give the needle ſuch a degree of hardneſs as to retain the magnetic influx the longeſt, and with the greateſt force, were material objects; and, I imagine, a view to have ſuch a degree of magnetic power at his command, as to force the magnetic virtue through the moſt conſolidated bars, was his firſt inducement to try, whether he could not collect ſuch a magazine of magnetiſm, as would be ſufficient for every purpoſe of this kind, and at the ſame time exhibit ſome new phenomena in phyſics yet undiſcovered. With this view he planned and executed the machine, deſcribed at the end of this relation.

His firſt attempt, however, was much ſmaller; a few bars were laid in the due courſe of the magnetic flux, and impregnated by conſtant attrition. To theſe, other bars were added ſucceſſively, after they had been impregnated, both by the force he could give them by attrition, and what he could de-

rive from the preceding ſtock collected in the bars. To theſe he added ſtill freſh bars, till he had formed the whole maſs as it is now preſented to you, and reſting on wheels and pivots, in ſuch manner as to be eaſily manageable for the purpoſe of impregnating the needles he was employed to ſee prepared, for the ſervice of government, and others, who had generoſity enough to think, that the compaſs, on which depended the lives of the ſhip's crew, could not be made too perfect, and that it deſerved a reaſonable compenſation. It is to the Doctor's ingenuity and indefatigable attention to this uſeful inſtrument, that it has acquired amongſt us a degree of perfection unknown to our predeceſſors.

When the machine was compleated, he ſtill was adding continually to its power. He impregnated every ſingle bar of which it is compoſed, by repeated attritions, and applied it to the remaining bars in their magnetic poſition. After this operation, he always found its efficacy, for a ſeaſon, conſiderably diminiſhed; for the effluvia of each bar, though increaſed in virtue, ſeemed not immediately to have acquired a communication with each other. However, it grew always more powerful after each of theſe operations; and it is more than probable, if a perſon could be found, who, with equal patience and ſkill, would, at proper diſtances, repeat the ſame proceſs, that the preſent machine would acquire a degree of force ſuperior to what the original ever poſſeſſed; for much depends upon time, and a due poſition. If to theſe was added a freſh impregnation of each ſingle bar, by the means hitherto made uſe of, you would probably poſſeſs a larger fund of magnetic power, than exiſts in any artificial magnet now in being.

But if this cannot be obtained, if an able perſon cannot be prevailed upon to renew its vigour in this manner, it might poſſibly afford the curious ſome ſatisfaction to know, whether, in its preſent ſtate, it loſes any force, or acquires freſh virtue; to know, with ſome degree of preciſion, how much weight it will now ſuſpend; and to obſerve annually its variation. I need not ſuggeſt, that a trial of this nature demands no ſmall attention. Even the motion of a carriage in the ſtreet, though at ſuch a diſtance as the Society's apartments, will make a conſiderable variation.

I do not know, that the Doctor left behind him any deſcription of a compoſition he had made to form artificial loadſtones. I have ſeen in his poſſeſſion, and many other of his friends have likewiſe ſeen, ſuch a compoſition; which retained the magnetic virtue in a manner much more fixed, than either any real loadſtone, or any magnetic bar, however well tempered. In the natural ones he could change the poles in an inſtant, ſo likewiſe in the hardeſt bars; but in the compoſition the poles were immoveable. He had ſeveral ſmall pieces of this compoſition, which had ſtrong magnetic powers. The largeſt was about half an inch in breadth, very little longer than broad, and

near

near a quarter of an inch thick. It was not armed, but the ends were powerfully magnetic; nor could the poles be altered, though it was placed between two of his largeſt bars, and they were very ſtrongly impregnated. The maſs was not very heavy, and had much the appearance of a piece of black lead, though not quite ſo ſhining. I believe he never divulged the compoſition; but, I think, he once told me, the baſis of it was filings of iron, reduced by long-continued attrition with water to a perfectly impalpable ſtate, and then incorporated with ſome pliant matter, to give it due conſiſtence*. Perhaps ſome

* The following account of Dr. Knight's method of making artificial Loadſtones, was communicated by Benjamin Wilſon, F. R. S. in a letter to Sir Joſeph Banks, Baronet, P. R. S. Read before the Royal Society, December 17, 1778. *Editor.*

Sir,

The method of making artificial Loadſtones, as it was diſcovered and practiſed by the late Dr. Gowin Knight, being unknown to the Public, and I myſelf having been frequently preſent when the Doctor was employed in the moſt material ſteps of that curious proceſs, I thought a communication thereof would be agreeable to you and the philoſophic world.

The method was this:—Having provided himſelf with a large quantity of clean filings of iron, he put them into a large tub that was more than one-third filled with clean water: he then, with great labour, worked the tub to and fro for many hours together, that the friction between the grains of iron by this treatment might break off ſuch ſmaller parts as would remain ſuſpended in the water for a time. The obtaining of thoſe very ſmall particles in ſufficient quantity, ſeemed to him to be one of the principal *deſiderata* in the experiment.

The water being by this treatment rendered very muddy, he poured the ſame into a clean earthen veſſel, leaving the filings behind; and when the water had ſtood long enough to become clear, he poured it out carefully, without diſturbing ſuch of the iron ſediment as ſtill remained, which now appeared reduced almoſt to impalpable powder. This powder was afterwards removed into another veſſel, in order to dry it; but as he had not obtained a proper quantity thereof by this one ſtep, he was obliged to repeat the proceſs many times.

Having at laſt procured enough of this very fine powder, the next thing to be done was to make a paſte of it, and that with ſome vehicle which would contain a conſiderable quantity of the phlogiſtic principle; for this purpoſe he had recourſe to linſeed-oil in preference to all other fluids.

With theſe two ingredients only he made a ſtiff paſte, and took particular care to knead it well before he moulded it into convenient ſhapes. Sometimes, whilſt the paſte continued in its ſoft ſtate, he would put the impreſſion of a ſeal upon the ſeveral pieces; one of which is in the Britiſh Muſeum.

This paſte was then put upon wood, and ſometimes on tiles, in order to bake or dry it before a moderate fire, at a foot diſtance, or thereabouts.

The Doctor found, that a moderate fire was moſt proper, becauſe a greater degree of heat made the compoſition frequently crack in many places.

The time required for the baking or drying of this paſte was generally five or ſix hours, before it attained a ſufficient degree of hardneſs. When that was done, and the ſeveral baked pieces were become cold, he gave them their magnetic virtue in any direction he pleaſed, by placing them between the extreme ends of his large magazine of artificial magnets for a few ſeconds or more, as he ſaw occaſion.

By this method the virtue they acquired was ſuch, that when any one of thoſe pieces was held between two of his beſt ten guinea bars, with its poles purpoſely inverted, it immediately of itſelf turned about to recover its natural direction, which the force of thoſe very powerful bars was not ſufficient to counteract. I am, &c.

of

of his acquaintance may have been more fully informed of this circumſtance; and it may be rendering great aid to future enquirers, to know every thing that can be collected relative to ſo curious a ſubject.

Leſt the machine itſelf ſhould be deſtroyed by the ſame accident as that which deſtroyed a part of it, I thought an exact repreſentation of it, and its ſeveral parts, might be the beſt means of preſerving it to future times, if inſerted in the Tranſactions of the Royal Society.

Explanation of the Plate.

Plate III. ſhews the magazines according to the Doctor's laſt diſpoſition of them. The two being perfectly alike, therefore fig. 2. contains only the half of one of them. Each magazine conſiſts of 240 bars, diſpoſed in four lengths, marked 1. 2. 3. 4.; every length containing ſixty bars, placed in ſix courſes or layers, in contact one on another; and ten in each courſe, placed ſide by ſide, in contact alſo. The bars being very nearly of a ſize, the ends of thoſe in one length are in contact with the correſponding ends of thoſe in the adjacent lengths. The magnetical North-ends of theſe bars, in each magazine, are all directed one way towards N; and the South-ends the contrary way toward s; thick plates of iron cover theſe ends N and s; the junction of the ends of the bars fall under the braſs braces AA.

As it has been found difficult, after the final hardening of theſe bars, to preſerve among them a perfect equality in ſize; therefore, the contact of their ſides are perfected by thin iron plates BB, ſlipped in between the braces AA and the junction of the ends of the bars: and theſe plates BB, being preſſed by the ſcrews paſſing through the ſides of the braces AA, keep the ends of the bars in as cloſe contact as their figures will permit; and, that the bars may be kept end to end in contact, the iron plate at the North-end in fig. 1. and at the South-end in fig. 2. is perforated with ſixty holes, one againſt the end of each bar, as ſhewn at fig. 3. with a ſcrew fitted to each hole, as ſhewn at fig. 4.: every ſcrew having a ſquare head as at fig. 5. may, by help of the key, fig. 6. be turned, and, by preſſing againſt the end of the bar in the fourth length, force it againſt its abutting bar in the third length, and ſo on till the bars, end to end, are brought into contact and kept ſo. The braces are in two pieces; the ſides and bottom in one; and the other piece forms the top AA, which is held cloſe to the bars by the ſcrews paſſing through it into the upright ſides of the braces; and, to keep the braces at N and s ſteadily in their places, the two long braces cc are affixed.

As each of theſe magazines weighed about 500 lbs. it became neceſſary to have them ſo placed as to be conveniently uſed. The Doctor, therefore, by

ſcrews

ſcrews fixed the braces, containing the bars, to a ſtrong mahogany plank DD, about 1 inch and $\frac{3}{4}$ thick; the ſcrews paſſing through the plank entered the bottom parts of the braces AA. Againſt the middle of the whole length, two ſtrong braſs plates are well fixed to the ſides of the plank; to theſe braſs plates are fixed two cylindrical gudgeons F, which projecting from the ſides, like the trunnions of a cannon, lie in the ſockets of the ſtandard G, whereby the magazine eaſily turns, as on an axis; and is ſo well poized as to ſtand in any inclination of the line NS; and in this the equilibrium is aſſiſted by the ſtrong mahogany ſemi-circular pieces LL, fixed in a vertical poſition to the middle of the under part of the plank DD, on which the magnetic apparatus reſts. The ſtandards G are fixed to the ſquare frame HH, and the whole ſupported on the four trucks II, whereby the two magazines are eaſily brought end to end, or ſet at a convenient diſtance, ſo as to admit a bar K, to be placed between the ends, to be made magnetical.

A few

*A Few years ago * ſome Phyſicians in London agreed to meet together for their mutual improvement in the practice of their profeſſion. The reigning diſeaſes of the ſeaſon, with the methods of cure that were found moſt effectual; and new diſcoveries in phyſic, either here or abroad, more eſpecially ſuch as they themſelves had either made or examined, were intended to be the principal topics of converſation.*

The perſons who formed this ſociety, were either ſuch as had the care of hoſpitals, or were otherwiſe in ſome degree of repute in their profeſſion; and conſequently had frequent opportunities of making obſervations themſelves, and of verifying, in the courſe of their practice, the diſcoveries of others. When difficult caſes occurred to any of them, the reſt were conſulted, and that method of cure, which appeared moſt likely to be attended with ſucceſs, was tried, and the event communicated.

When theſe meetings had continued a conſiderable time, ſome of the members became deſirous of making the public partakers of the advantages that might be derived from ſuch an aſſociation: accordingly they, with ſome other Phyſicians, formed themſelves into a ſociety, for collecting and publiſhing Medical Obſervations *and* Enquiries.---Preface to the Medical Obſerv. &c. Vol. I.

Dr. Fothergill, if not the firſt projector of this important publication, has certainly been a very conſiderable contributor to it, as the many uſeful papers of his, extracted from it, will abundantly teſtify. Editor.

* *The Society's firſt volume was publiſhed in* 1758.

OF THE

USE OF THE CORTEX PERUVIANUS

IN SCROFULOUS DISORDERS*.

AS I do not remember to have met with many inſtances recorded of the effects of the Bark in Scrofulous Diſorders, I take the liberty to offer the following obſervations on this ſubject to the Society, and ſubmit them entirely to their correction and diſpoſal.

About the year 1744, a poor woman brought her child, a boy between twelve and fourteen months old, and requeſted my aſſiſtance for a diſorder in its eyes, that ſeemed to threaten total blindneſs. The eyelids were ſo ſwelled, and ſo exquiſitely tender, that it was with difficulty I obtained the ſlighteſt view of one eye, the coats whereof ſeemed only to be affected: the lips were likewiſe much ſwelled; the glands about the neck enlarged; and the whole aſpect denoted a ſcrofulous tendency.

I ordered a ſpoonful of a decoction of the Bark to be given three times a day, adding to each doſe from ſix to ten drops of the *balſ. polychreſt.* or ſo many as might be ſufficient to procure a laxative ſtool every day, the child being naturally of a coſtive habit.

The child was ordered to live upon light broth, and ſuch tender animal food as the poor woman could procure; and to be kept from much fruit and vegetables.

By this method, in about a fortnight, he was able to bear the light; and, in a month, I had the ſatisfaction to ſee him perfectly recovered.

The ſucceſs of this experiment induced me to repeat it as occaſion offered. Not long after, a boy was brought to me, about ſeven years old, of a thin ſpare habit, pale ſickly look, with the eyelids ſo much ſwelled, and the eyes ſo tender, as to be incapable of bearing the leaſt glimmering of light; and his face was here and there cruſted with moiſt ſcabs, which had almoſt covered his chin.

* From the Medical Obſervations and Enquiries, vol. i. p. 303. Read November 29, 1756.

I ordered a decoction of the Bark to be given, to the quantity of a ſpoonful and a half, three times a day; and a ſmall pill, with one grain of calomel in a little conſerve of roſes, every other night.

This proceſs was continued about ten days, when he was brought to me again: the eyes were leſs tender, and his face was ſomewhat cleared of the ſcabs: but as the ſeaſon was then growing colder, the decoction was continued alone about a month, when the child had recovered better health than he had enjoyed during the preceding year: he could bear any light without pain, the ſcabs had diſappeared, and the glands were become ſmall and ſofter.

The ſpring following, his eyes again growing tender and painful, and other ſymptoms appearing of his former indiſpoſition, the ſame remedies were repeated, and produced the ſame effects as before; and that he might be ſecured from the like returns for the future, I adviſed that he ſhould take the decoction and pills for ten days or a fortnight, once in three months, for about a year. This advice was punctually complied with, and he remained free from any ſymptom of the diſorder about four years, from the laſt repetition of the medicines, when he was ſeized with the confluent ſmall-pox, at that time very rife and fatal, and died of the ſecond fever.

In the year 1750, a poor woman brought her child, ſomewhat more than a year old, affected with a very painful ſcrofulous ophthalmy, to Dr. Clephane and me, then at Scarborough. A method like the former was directed, and we had the ſatisfaction to find, ere we left the place, that the child had reaped from it all the benefit we could wiſh.

A young gentleman, about ſeventeen, of a thin habit, in an employment that admitted but of little exerciſe, accuſtomed to a plentiful table, and deriving from his parents a ſcrofulous taint, deſired my aſſiſtance for a large indurated parotid.

I directed a two-ounce draught of the decoction of the Bark, with about forty drops of the *tinct. guaiac. volatilis* to be taken twice a day, and to be continued during two months.

By the uſe of this remedy he grew ſtrong and more florid: the tumour did not increaſe, but felt ſomewhat ſofter than at firſt. Having thus ſtopped its progreſs, I adviſed him to deſiſt about two months, and then to repeat the ſame remedy: but no conſiderable benefit accrued from this ſecond courſe; the tumour, though leſs than at firſt, was ſtill obſervable.

Things remained in this ſituation about a year, when his chin and upper lip began to be covered with a thick yellow ſcab, moiſt and itching. This was both troubleſome and diſagreeable. I had recourſe again to the Bark in various forms, but without the advantage I hoped for: it ſeemed to ſtop the progreſs of the diſtemper, but did not cure it. A courſe of *calomel* and *ſulphur aurat. antimon.* in ſmall doſes, *viz.* a grain of each every night, gradually cleared

cleared his face of this diſagreeable gueſt; but it ſoon broke out again. Bathing in the ſea, and the uſe of Scarborough water upon the ſpot, at length extirpated this cutaneous diſorder. The parotid however ſtill continued ſwelled; but as he now began to acquire a more manly habit, it ceaſed to be conſpicuous.

In this caſe I had juſt reaſon to apprehend that the Bark put a ſtop to the tumour's increaſe, and rather ſoftened it; but this was all: and I have met with many other caſes, in which the Bark has had the like effects; checked the ſpeedy progreſs of the diſeaſe, reſtored a better ſtate of health in various reſpects, and laid a proper foundation to proceed upon, in attempting a cure by other methods. I have likewiſe made uſe of the Bark in ſcrofulous ulcers, but hitherto not with the ſucceſs one might expect.

I have at preſent under my care a boy about fourteen, a girl about ten years of age, and a third about ſeven of a very delicate habit. The two firſt are poor, and a charge to their parents, from a foreneſs in their eyes, that renders them incapable of bearing the light, or doing any thing towards their ſupport. The laſt is obliged to live in conſtant darkneſs, though the child of perſons in better condition. They have been in the courſe deſcribed above ſeveral weeks, and are daily recovering.

Sometimes I give the *calomel* pills above-mentioned with the decoction, eſpecially if any ſymptoms of the worms appear, or if the caſe is attended with coſtiveneſs, and a diſcharge of acrimonious moiſture on any part of the ſkin. But the Bark is the remedy I think chiefly to be depended on; and the doſe ſhould be as much as the patient can be prevailed upon to take; providing with equal care againſt coſtiveneſs and its oppoſite.

As I imagine the reſult of repeated obſervations will be more agreeable to your plan than a detail of particular caſes, I ſhall conclude this narrative with remarking, that I have given the Bark, in caſes ſimilar to thoſe above deſcribed, to children of different ages, to adults of both ſexes, and in various conditions of life; and have found, that it may not only be given with great ſafety, but to manifeſt advantage, in many ſcrofulous complaints: inveterate ophthalmies generally yield to it; incipient glandular tumours are very frequently reſolved, and their farther progreſs ſtopped; ſwelled lips, cutaneous blotches ariſing from the like cauſe, are healed, and the tendency to a ſtrumous habit corrected, by a proper uſe of the *Cortex Peruvianus*.

There are few, I believe, who are converſant in the practice of phyſic, who do not find occaſion, at one time or other, to be diſſatisfied with the ſeveral methods and medicines hitherto recommended in the cure of the diſorders I have been mentioning. A ſwelled lip, a blood-ſhot eye, will frequently baffle a courſe of efficacious remedies under prudent directions. When the diſeaſe is farther advanced, it grows more obſtinate; the greater the number of parts that

that are affected, the more the difficulties are increaſed. We have indeed a copious choice of alteratives handed down to us, all which, perhaps, have been, in particular inſtances, beneficial; but nevertheleſs they too often diſappoint us. Moſt of the remedies propoſed for this diſtemper, are ſuch as ſeem recommended more with a view to alter the juices, than immediately to affect the ſolids: but we hitherto know much leſs of the nature of fluids circulating in an animal body, or how to alter them, than we do how to apply ſuch medicines as affect the ſolids, and, in conſequence thereof, produce certain alterations in the fluids.

It is not ſafe to infer, that the various kinds of ſalts have the ſame effects upon animal juices, whether taken from the animal, or circulating in their proper canals. Experience does not always warrant ſuch concluſions. The digeſtive powers of the ſtomach, by the ſame means that they convert different ſorts of aliments, ſome of them ſufficiently acrid, into a mild and milky fluid, ſeem able to deprive the moſt pungent ſalts of great part of their activity. And this circumſtance alone, in my opinion, renders a dependence upon one part of the *Materia Medica*, on which many pleaſing expectations have been formed, much to be ſuſpected; I mean the different kinds of ſalts recommended in ſtrumous diſorders. It is very certain that the effects of the acid and the alkaline ſalts greatly depend on the preſent diſpoſition of the juices in the ſtomach and firſt paſſages. The neutral ones are not altogether exempt from the ſame influence; and ſhould they paſs unaltered into the blood, we cannot aſcertain their effects upon it: and could we even do this, can it reaſonably be ſuppoſed that a few drams of any kind of ſalt, however active, and properly adapted, mixed with ſo many pounds of blood, and other animal juices, could produce the effect we wiſh for, or be able to extirpate a diſeaſe, as the ancients expreſſed themſelves, *totius ſubſtantiæ*, and fixed in the moſt inacceſſible parts of the animal œconomy? The chance therefore of curing this diſtemper, by means of remedies deſigned to act on the fluids alone, is but little. It may indeed be urged, that ſalts, as ſtimulants, affect the ſolids as well as fluids; and that they may do ſo is granted: but in this caſe their operation is much confined; for it may be doubted, whether their *ſtimulus* extends beyond the firſt paſſages.

The aſpect, habit, and age of ſtrumous perſons; the nature of their tumours in reſpect to their formation, progreſs, and iſſue, ſeem to indicate a general laxity of the ſolids, as well as great viſcidity of the fluids, eſpecially thoſe contained in ſome particular ſeries of veſſels; which cauſes, when combined, proceed with a ſlow but conſtant efficacy to produce the worſt of miſchiefs, unleſs prevented by the interpoſition of ſome favourable change in the non-naturals, or by medical aſſiſtance.

It may indeed be diſputed, whether the ſolids being firſt relaxed, the fluids do not become viſcid, and unfit for their office, in conſequence of this relaxa-

tion; or whether the juices are not firſt vitiated, and from them a laxity of the ſolids is inevitably derived. Caſes may happen in which one or the other of theſe ſuppoſitions may, with great probability, be admitted; but in either caſe, ſince it ſeems beyond diſpute, that the power of affecting the ſolids is more under our command than that of altering the fluids, it is reaſonable to direct our applications in the cure of this diſtemper more immediately to the ſolids, as, without their aſſiſtance, the fluids muſt ſtill remain in a morbid condition.

All internal remedies given by the mouth, and deſigned to act beyond the ſtomach, muſt be expoſed to the efficacy of the powers by which digeſtion is performed: it is therefore incumbent upon the preſcriber to conſider how far the virtues of the medicines he gives, are liable to be affected in their tranſit to the parts where he is deſirous they ſhould act. Moſt of the ſaline remedies, as hath already been obſerved, are liable to great alterations in the ſtomach. Alcaline and acid ſalts may become neutral and ſaponaceous; neutral ones may be diluted, and diſpoſed to run off immediately by the emunctories, and all of them contribute as little towards eradicating this diſtemper, as they do towards effecting the change we call digeſtion; a change whereby ſubſtances very remote from it are converted into an animal nature.

And it ſeems to me, that in the cure of all chronic complaints, however diſtant their ſeat may be from the ſtomach, thoſe will have the greateſt ſucceſs, who attentively conſider the preſent ſtate of this organ; who remove every obſtruction to its performing the office of digeſtion with eaſe, conſtancy, and expedition. For if digeſtion is well performed, the chyle is proper; the blood produced from this chyle is natural; the ſecretions, nutriment, and excretions, will be regular; health, ſtrength, and activity, enſue; and diſeaſes vaniſh. If digeſtion languiſh, the contrary happens, in ſpite of the beſt ſpecifics, unleſs one part of their virtues be to reſtore the injured faculties of digeſtion to their priſtine and natural ſtate.

And from the moſt attentive conſideration of the cure of many chronic complaints, and the moſt unprejudiced diſquiſition what ſhare the medicines applied have had in effecting ſuch cures; by much the greateſt part of theſe diſtempers ſeem to have been removed, rather in conſequence of the medicines given having had a certain effect on the ſtomach, and thereby enabling nature to do her own buſineſs, than by any ſpecific operations on the particular ſeat of the diſtemper.

If the immediate cauſe of intermittents does not reſide always in the ſtomach and firſt paſſages, it often does undoubtedly. An emetic ſometimes cures it, bitters of all kinds often; aſtringents likewiſe: and, in a word, whatever has a power of aſſiſting digeſtion, has, at one time or other, been recommended in the cure of agues. The Bark enjoys a degree of bitterneſs and aſtringency, that few other drugs are poſſeſſed of in the ſame proportion. Some are more bitter,

bitter, but with leſs aſtringency; others are more aſtringent, but leſs bitter. There are many caſes that yield to aſtringents, upon which bitters have no effect. There are others, that chamomile-flowers, wormwood, gentian, and the like, will often cure, in which aſtringents are of no uſe. But all theſe give way to the Bark, if the obſtacles to its efficacy are once removed.

Strumous diſeaſes are known to affect the glandular parts of the body particularly: they have been judged to proceed from obſtructions of theſe parts; and it has likewiſe been the opinion of ſome, that, in all glandular obſtructions, the Bark was an improper and injurious remedy.

It is well known how great prepoſſeſſions were raiſed againſt the Bark, ſoon after its diſcovery; ſo that thoſe who were its greateſt advocates, and, from experience, had the weightieſt reaſons to be ſo, could not altogether diveſt themſelves of many apprehenſions concerning it.

Sydenham imagines it capable of producing rheumatiſms. It has been found ſince his time, to be an effectual remedy in this diſeaſe, under certain circumſtances. Thoſe who are ſubject to intermittents, are frequently liable to rheumatiſms. Sydenham did not obſerve, that a tranſition from one to the other, was eaſy and natural. The ſtate of the blood, in both caſes, is nearly the ſame; the colour of the urine, regular exacerbations of pain, going off in profuſe ſweats, and many other particulars, are ſimilar in both. Had more of the Bark been given, no ſuch rheumatiſm had enſued: had the Bark been given before the rheumatiſm was fully formed, the Bark would have prevented it: had it been given when the pains remitted, ſo as to form a manifeſt apyrexy, the rheumatiſm would moſt probably have been cured.

The vulgar, at that time, took the advantage of ſuch circumſtances to ſtrengthen their prejudices againſt this remedy. Nothing was more common at that time, and nothing more firmly believed by many now, than that the Bark produces "pains in the bones," that is, rheumatic pains; which however were not owing to its uſe, but exiſted, only becauſe ſufficient quantities of it had not been given.

Sydenham was not the only eminent perſon of the faculty, who entertained ſuch unjuſt prejudices againſt this remedy: the great Boerhaave, who did much in the theory of phyſic, in reſpect to ſeparating truth from falſehood, certainty from hypotheſis; yet, in practice, ſubmitted to the faſhion of his country in too many inſtances. An unconquerable dread of the Bark was one of theſe: he ſaw many chronic complaints, wherein the Bark had been given, and attributed them, too readily, and from opinion, rather than experience, to the uſe of this drug; though probably thoſe complaints aroſe from its not having been given in ſufficient quantities. This induced him to forbid the Bark to many Britiſh ſtudents at Leyden affected with agues, till thoſe very evils had befallen them, which he apprehended from the Bark; and ſome of them, to my knowledge,

fell

fell a ſacrifice to this unhappy prejudice, which ſeems in part to have proceeded from the following circumſtance:

The Bark commonly ſold in Holland, is not ſo good as that which we keep in the ſhops in England; for whatever is unſaleable here, will find a market in Holland; part of which no doubt is conſumed there; and from hence might ariſe many inconveniencies ſufficient to diſcourage the profeſſor. If a certain quantity of good Bark is neceſſary to take off an intermittent, and a much ſmaller quantity is given, and the kind greatly defective in point of efficacy, it is very certain, that little benefit can be derived from it. The violence of the paroxyſms may perhaps thereby be moderated, and the aſpect of the diſtemper changed, though the diſeaſe itſelf may ſtill remain, and be followed by a train of obſtinate complaints, not proceeding from the uſe of the Bark, but merely from its not being good, and not being given in ſufficient quantities.

The firſt attempts I made in the cure of ſome ſcrofulous complaints, by the Bark, afforded me ſufficient encouragement to proceed: and I have now the ſatisfaction to know many young people, of both ſexes, free from any appearance of this diſeaſe, who, in their infancy, had been infeſted with very painful ophthalmies, ſwelled lips, and the like complaints, in ſpite of many efficacious remedies which had been applied.

It will not however ſucceed in all caſes; but there are few in which a trial can be attended with much detriment. I have never known it avail much, where the bones are affected, nor where the ſcrofulous tumour is ſo ſituated, as to be attended with much pain, as in the joints, or under the membranous covers of the muſcles; for when it attacks theſe parts, the *perioſteum* ſeldom eſcapes without ſome injury, in which caſe the bone will of courſe be likewiſe injured.

Here the Bark is of no effect: inſtead of leſſening, it rather adds to the fever that accompanies theſe circumſtances; and, if it does not increaſe the force of the miſchief, it ſeems at leaſt to haſten its progreſs.

I commonly make uſe of a decoction like the following, as a form in which a ſufficient quantity may be given, with the leaſt diſguſt:

℞ *Pulv. Cort. Per.* ʒi. *coque in aq. puræ* lb. ii. *ad* lb. i. *ſub finem addendo rad. glycyrrh. inciſ.* ʒſs. *Colaturæ adde aq. nuc. M.* ʒii. *M. capiat coch.* ii. iii. *vel* iv. *cum tinct. guaiac. vol. gut.* x. xx. *ad* lx. *uſque, bis terve quotidie.*

The powder ſoon becomes extremely diſagreeable to very young patients; and the extract, I think, is not ſo much to be depended upon, as may have been imagined. In making the extract, it is expoſed to ſo much heat, as muſt have ſome effect upon its virtues, and perhaps not to their advantage: and in adminiſtering it, if great care is not taken to mix it intimately with a proper

vehicle, or ſome very ſoluble ſubſtance, in weak bowels it often purges, and not only diſappoints the preſcriber, but injures the patient. A ſmall quantity of the *Cortex Winteranus* added, gives the medicine a grateful warmth, and renders a quantity of compound water leſs neceſſary. And a little liquorice, a few raiſins, gum Arabic, or the like, added to the decoction before it is taken from the fire, by making the liquor viſcid, enables it to ſuſpend more of the fine particles of the Bark, and thereby improves the efficacy of the medicine, and, at the ſame time, renders it leſs diſagreeable.

A LETTER

A LETTER TO THE MEDICAL SOCIETY, CONCERNING AN ASTRINGENT GUM BROUGHT FROM *AFRICA**.

IN hopes that ſome of your correſpondents may have it in their power to procure us a drug, which, from a few trials already made of it, promiſes great advantage to the public; I take the liberty to ſend the following deſcription and account of it.

It is a hard brittle gum, of a deep red or almoſt black colour, and opaque; except the very minute fragments of it, which appear like bits of garnet, red and tranſparent.

It has no ſmell; but, applied to the tongue, it ſoon diſcovers a ſtrong, but grateful aſtringency; and great part of it diſſolves readily in the mouth, with ſomewhat of a mucilaginous ſweetneſs, joined with its ſtypticity. When it is coarſely powdered, and thrown into water, about five or ſix parts in ſeven, as near as I can gueſs, ſoon diſſolve, and communicate a deep red colour, and a ſtrong aſtringent taſte to the water: moſt of what remains undiſſolved appears to be reſinous. This gum differs from the red lumps of the common gum Senegal, in being much more brittle; and from the *ſanguis draconis* of the ſhops, in diſſolving in water; and from both, in having ſo remarkable a ſtypticity when taſted.

Its external appearance, indeed, is ſo much like that of the genuine or unmanufactured *dragon's blood*, that a good judge may eaſily be deceived thereby; but its aſtringent taſte and ſolubility in water manifeſt an eſſential difference.

I have had ſpecimens ſent me of an opaque reddiſh gum, but ſeemingly the produce of a very different tree, as it does not diſſolve ſo readily in water as the former, and its taſte is bitter and auſtere.

* From the Medical Obſervations and Inquiries, vol. i. page 358.

The firſt time I had any intimation of the gum I have been deſcribing, was in a conſultation with the late Dr. Oldfield, on account of an obſtinate chronical *diarrhœa*, in which ſeveral efficacious medicines had been uſed in vain. On this occaſion the Doctor one day mentioned the good effects he had met with in ſome ſuch caſes from a gum which he called the *true gum Senegal*, and deſcribed it to be of a deep red colour, a ſweetiſh aſtringent taſte, and brittle.

As I was at that time intent upon collecting and examining whatever had relation to the *Materia Medica*, I enquired for ſuch a gum amongſt the moſt conſiderable dealers and importers, but met with nothing that anſwered the Doctor's deſcription.

A few years after this, in my return from Scarborough, I called upon an eminent druggiſt at York, who, amongſt other curious parcels of drugs, ſhewed me the gum above deſcribed, for ſome of the fineſt dragon's blood, or *ſanguis draconis off.* he had ever ſeen.

Upon taſting it, I ſoon diſcovered it was very different from any kind of dragon's blood yet known, and indeed that it ought not to be ranged under that name; as it was, for the moſt part, aqueous, manifeſtly aſtringent, and mucilaginous; from which circumſtances, and its external appearance, I judged it was the gum that Dr. Oldfield had deſcribed to me under the title of the *true gum Senegal*; though I think there is good reaſon to object to this appellation, as the little we have yet received comes principally from the river Gambia, and the common gum Senegal has been in poſſeſſion of that name, ſo far as appears to me, from its firſt diſcovery*.

The gentleman who ſhewed me this drug, informed me, he had purchaſed it on board a Guinea ſhip *at Hull:* the whole parcel amounted but to a few pounds; all which he bought, and ſold to the moſt curious of his cuſtomers, as a rare ſort of the true dragon's blood.

This information induced me to look into the books of ſome of the later African travellers, in one of which, viz. *Moor's Travels into the Inland Parts of Africa*, we have the following accounts of it. In a letter of inſtructions from the Governor of James's Fort, in the mouth of the river Gambia, to our author at Brucoe, a factory up this river, dated May 27, 1733, is the following paragraph, p. 113, edit. 2d.

" There is a red liquor that bleeds plentifully from the bark of a tree " called † *pau de ſangue*, upon the inciſion, and in little time hardens to the " conſiſtence of gum, which is of great value: and therefore you are deſired " to uſe your utmoſt to procure large quantities of it."

* If a name was to be given to the drug in queſtion, it may not be improper to call it, *Gummi Rubrum aſtringens Gambienſe.*

† The word *pau* ſeems to be a corruption of the Portugueſe *palo*, ſignifying wood.

In

In reply to this, our author writes, the next month, to the Governor as follows:

"I have ſent a piece of gum, which I believe was taken from the *pau de* "*ſangue*; I deſire you will pleaſe to examine it, and let me know if it is the "right ſort; becauſe, if it is, I will do my utmoſt to procure large quantities "of it." And gives this further account of it at p. 148: "I had always the "utmoſt regard to all their (the Directors) orders, and therefore applied my- "ſelf to enquire after any new kind of goods that could be had, particularly "gum. The ſame having been repeated to me by Mr. Hull (Governor of "James Fort) I ſent him a ſample from Brucoe, as I mentioned before, which "proved gum dragon. I ſtrove to get more of that kind, but, it being a new "thing, the natives could not be prevailed upon to follow it, ſo as to bring in "any quantities; for they would bring me in all kinds of gum, ten or twelve "pounds at a time, which I picked, and did not find, perhaps, above two "pounds of gum dragon in that quantity: the reſt was like gum Senegal, but "not ſo good.

"Gum dragon comes out of a tree" (adds our author) "called *pau de* "*ſangue*, which has a very rough bark; upon wounding of it, it ſweats out in "drops like blood; which joining together, and being dried by the ſun, con- "geal into lumps. I have had ſome as large as pullets eggs."

Perhaps it may be mentioned by other writers; but this account I think ſufficient to direct any perſon, into whoſe hands your collection may come, and who may have occaſion to traffic in that part of the world, to make proper enquiries after it.

You will obſerve, from the inſtructions given to our author, that at leaſt ſome expectations had been formed of its uſefulneſs; and indeed, from the trials that have been made, from its ſenſible qualities, and Dr. Oldfield's experience, I cannot but think it an article worth enquiring after, as it may in time become a valuable addition to the *Materia Medica*, as well as of ſome little benefit in commerce, and perhaps in colouring likewiſe.

The diſtempers in which this drug ſeems to promiſe ſome advantage, are, in particular, habitual *diarrhœas*, *fluor albus*, immoderate menſtrual diſcharges; and, in general, all ſuch diſeaſes as proceed from laxity and acrimony.

EXPERIMENTS

EXPERIMENTS ON MIXING OILS, RESINOUS AND PINGUIOUS SUBSTANCES WITH WATER,

By Means of a VEGETABLE MUCILAGE:

In a Letter from Mr. *James Bogle French*, Apothecary in *London*, to Dr. *John Fothergill*: With REMARKS by the ſame *.

Wood-Street, January 18, 1757.

SIR,

I MADE the experiments you deſired, and I own with a ſucceſs that exceeded my expectations. I may venture to aſſure you, they have been performed with ſo much accuracy, that, I believe, you may ſafely rely on any inferences to be made from them.

I am, with great eſteem,
Sir,
Your moſt obliged humble ſervant,
JAMES BOGLE FRENCH.

Experiments on mixing Oil and Water by means of a Mucilage.

THE mucilage I firſt made trial of was the following:

I diſſolved four ounces of clean gum Arabic in eight ounces of New-River water, which formed a mucilage of the conſiſtence of a thick ſyrup.

EXPERIMENT I.

To two drachms of this mucilage, I put half an ounce of olive-oil, and one ounce of water. By agitation, the mixture aſſumed the appearance of an emulſion, and continued ſo, after ſtanding about three or four minutes, when the oil and water began to ſeparate.

* From the Medical Obſervations and Inquiries, vol. i. p. 412.

EXPERIMENT II.

I put the ſame quantity of oil and water to half an ounce of the mucilage. This mixture likewiſe, by agitation, ſoon became like an emulſion, and remained ſo as long as the former.

EXPERIMENT III.

I tried the ſame experiments with a like quantity of oil of almonds. A perfect uniform emulſion was produced; but, on ſtanding three or four minutes, a ſeparation enſued.

EXPERIMENT IV.

Two drachms of oil of almonds, half an ounce of the mucilage, and two ounces of water, were put together; theſe, by ſhaking, ſoon had the appearance of an uniform emulſion; though, on ſtanding, they ſeparated as in the former experiments.

EXPERIMENT V.

I put half a drachm of the powder of gum Arabic to the ſame ingredients as in Experiment I. and found, that, by means of a ſomewhat longer agitation, the like union was obtained; and this was alſo more laſting. Of the ſeveral oils made uſe of in the experiment, I think the oil of almonds unites the moſt ſpeedily, and remains united in the form of an emulſion, much longer than any of the others.

EXPERIMENT VI.

To one drachm of ſymple ſyrup, and one drachm of the mucilage, I put half an ounce of olive-oil, two drachms of proof ſpirit, and one ounce of water. Theſe, by a ſhort agitation, produced a very uniform emulſion, and retained this appearance ſeveral minutes.

EXPERIMENT VII.

The ſame ingredients without the ſyrup, in the ſame proportions, ſhook together an equal time, did not afford ſo equable a mixture, and a ſeparation ſooner enſued.

EXPERIMENT VIII.

To one drachm of oil of almonds, I put two drachms of honey, and one ounce of water. Theſe, by agitation, were ſeemingly united; but ſoon parted upon ſtanding.

EXPERIMENT IX.

Inſtead of the mucilage, I made trial of ſome of the more viſcid ſyrups, but none of them ſucceeded ſo well as the mucilage: the ſyrup of marſh-mallows anſwered the beſt; though this but indifferently, and not without labour.

EXPERIMENT

EXPERIMENT X.

One ſcruple of the powder of gum Arabic, with one drachm of *balſam. Peru. capivi*, and *balſam. guaiac.* two drachms of proof ſpirit, and one ounce of water, unite eaſily by agitation. The balſam *guaiac.* by this means affords a mixture of a fine blue colour, laſtingly uniform; with the *balſam. Peru.* it did not long continue mixed, tho' on ſhaking, it re-aſſumed a good appearance.

EXPERIMENT XI.

To one drachm of *balſam. capivi*, was put one drachm of the mucilage of gum Arabic, and one ounce of water. Theſe, by agitation, preſently formed a neat ſmooth draught, tho' the parts ſeparated a little upon ſtanding.

Experiments on mixing Oils, &c. by Attrition.

EXPERIMENT XII.

To one drachm of the mucilage of gum Arabic, I put two drachms of olive-oil, and one ounce of water. Theſe, by moderate attrition in a mortar, formed a neat emulſion, and continued perfectly mixed many days.

EXPERIMENT XIII.

Oil of almonds and linſeed, in the ſame proportions, treated as in the former experiment, made as perfect an emulſion, and kept united in the ſame manner.

EXPERIMENT XIV.

I varied the proportions of mucilage and oil, but found the mucilage would not keep more than double its quantity of oil, united with water, any conſiderable time.

EXPERIMENT XV.

A drachm of mucilage, and a drachm of *balſam. capivi*, being firſt well rubbed together, and an ounce of water added, formed an homogeneous milky liquor, which remained intimately mixed many days.

EXPERIMENT XVI.

The ſame quantity of yolk of egg, mixed the balſam and water as ſpeedily, and the mixture remained united as long as the former; but the taſte of this was more unpleaſant.

EXPERIMENT XVII.

A ſcruple of the mucilage mixed half a drachm of *balſ. Peru.* with an ounce of water, as perfectly and expeditiouſly as a like quantity of the *vitel. ovi*, and covered the taſte of the balſam much better, though it parted ſooner from the mucilage than the *vitel. ovi*, when thus mixed in equal quantities.

EXPERIMENT XVIII.

Balſam of Gilead, the thinner Straſburgh turpentine, the fine liquid reſin of late years brought from Newfoundland and Nova Scotia, commonly called *balſamum Annapolitanum*, treated in the ſame manner, united with water as readily, by the means of the mucilage, as when the *vitel. ovi* is uſed, and the taſte at the ſame time was better.

EXPERIMENT XIX.

To half a drachm of mucilage of gum Arabic, I put one drachm of *balſam. guaiac.* one drachm of proof ſpirit, and one ounce and a half of water, which, by attrition, made a very ſmooth draught, and did not ſeparate: that by agitation (EXP. X.) was of a deeper blue colour; perhaps this was owing to the parts not being ſo perfectly divided; but both ſucceeded well.

EXPERIMENT XX.

I took one ſcruple of *gum guaiac*, in powder, one ſcruple of mucilage, and one ounce and a half of water, which I rubbed carefully in a marble mortar; I did the ſame with the *vitel. ovi*; and, on ſtanding ſome days, it appeared that the gum was beſt ſuſpended by the mucilage.

EXPERIMENT XXI.

Gum benzoin diſſolved almoſt entirely by this management, and continued perfectly mixed with the water a conſiderable time.

EXPERIMENT XXII.

One ſcruple of *balſam. Tolu*, one ſcruple of the mucilage, with the ſame proportion of the other ingredients as in the former experiment, ſucceeded rather better, and made a neat draught full of the flavour of the balſam.

EXPERIMENT XXIII.

Myrrh half a drachm, mucilage of *gum Arabic* one drachm, firſt rubbed together, and then mixed with one ounce and half of water, formed a ſmooth uniform mixture, which continued equally united ſeveral days, when a ſmall part ſubſided, but, upon ſhaking the mixture, ſoon reſumed its former appearance.

EXPERIMENT XXIV.

The ſame quantity of myrrh readily diſſolved, by attrition, in the ſame quantity of water, without the mucilage, but the different parts ſoon ſeparated.

EXPERIMENT XXV.

Half a drachm of the common ſtyrax, treated as the myrrh, (EXP. XXIV.) ſo far diſſolved, as to communicate a ſtrong but fine flavour to the water.

EXPERIMENT

EXPERIMENT XXVI.

I took five grains of camphire, with a ſcruple of mucilage of *gum Arabic*, and an ounce and half of water, and it formed a very agreeable draught, which, on ſtanding ſome nights, ſeparated but very little.

EXPERIMENT XXVII.

I melted bees-wax in ſpirits of wine upon the fire, and filtered off the ſpirit: half a drachm of the wax ſo treated, rubbed with a drachm of mucilage, mixed with an ounce and a half of water, ſo as to appear like an uniform emulſion; but this requires ſome labour: the wax ſoon ſwims at top, but eaſily mixes again by agitation.

EXPERIMENT XXVIII.

A ſcruple of *ſperma ceti*, rubbed with an equal quantity of mucilage, makes an elegant draught: but more labour is here required than in the common ſolution with yolk of egg; the mixture continues, however, much longer homogeneous, the *ſperma ceti* appearing only like a cloud on the top of the phial ſome days after; but, on agitation, becomes perfectly ſmooth, and its taſte as little rancid as when the mixture was freſh made.

EXPERIMENT XXIX.

Four grains of muſk, one ſcruple of the mucilage of *gum Arabic*, one ounce and half of water, of ſpirituous water and ſimple ſyrup, of each a drachm, with very little labour, form an agreeable draught; which appeared uniform, and continued ſo for ſome time, when the muſk ſubſided a little, but, by a ſlight agitation, ſoon reſumed its firſt uniform appearance.

EXPERIMENT XXX.

I took one ſcruple of *balſam. ſulph.* with a ſcruple of mucilage, and one ounce and half of water; and this alſo mixed agreeably, and ſeparated but little on ſtanding ſome time: the taſte was likewiſe leſs offenſive than might have been expected.

EXPERIMENT XXXI.

With ten drops of oil of cloves, one ounce of water, and a ſcruple of mucilage of *gum Arabic*, a perfect union may eaſily be produced, and the mixture continues uniform many days.

EXPERIMENT XXXII.

I tried the ſame experiment with five drops of oil of cloves, anniſeeds, and nutmegs, by means of the mucilage of *gum Arabic*, and an ounce and half of water, which readily united.

EXPERIMENT XXXIII.

A mucilage was prepared of clean *gum tragacanth*, diſſolved in the ſame water, and of a ſimilar conſiſtence with that made from *gum Arabic:* with this mucilage I repeated the preceding experiments by agitation, but could not unite oil and water by this medium ſo ſpeedily or laſtingly as by the mucilage of *gum Arabic*, though I made uſe of double the quantity of mucilage to that of oil in ſome of the experiments.

EXPERIMENT XXXIV.

The mucilage of *gum tragacanth* was alſo tried with the balſams, by attrition, but a larger quantity was required, and the union was neither ſo perfect nor ſo laſting; though by ſimple agitation, double the quantity of mucilage mixed the balſam and water ſo well as to have the appearance of an uniform emulſion; but the parts ſoon ſeparated.

EXPERIMENT XXXV.

Many of theſe experiments, by attrition, I repeated with mucilage of quince-ſeeds, made of the like conſiſtence with the others I had uſed; and found the mixture ſucceeded very well, and in moſt of them better than with the mucilage of *gum tragac.*

EXPERIMENT XXXVI.

I likewiſe made trial of ſtarch, reduced to a jelly by boiling it with water, and found that this alſo united many of the liquid reſins; though on ſtanding they ſeparated: ſeveral ſyrups were likewiſe made uſe of for the like experiments, but ſcarcely any of theſe ſucceeded: ſyrup of marſh-mallows anſwers the beſt; but even this is inferior to a much ſmaller quantity of the mucilage of *gum Arabic* of the ſame conſiſtence.

EXPERIMENT XXXVII.

I tried to cover the acid of vitriol by theſe mucilages, and found that of *gum Arabic* anſwered beſt; the quince-ſeeds better than the *tragacanth*; and that better than the *ſyrup altheæ:* theſe I did by agitation.

REMARKS

REMARKS

ON THE PRECEDING EXPERIMENTS;

By *J. FOTHERGILL*, M.D.

IT may not be improper to acquaint the Society with what view the preceding experiments have been made, and what purpoſes they are intended to ſerve: I ſhall do this with as much conciſeneſs as I can, and ſhall point out ſome of the advantages which I think may reſult from them.

In 1748, I received a MS. from a correſpondent at Dublin, intituled, *A new method for the improvement of the manufactures of drugs*, in a treatiſe on the *elixir proprietatis*, which was printed here the ſame year under this title: at that time I aſcribed it to Dr. Rutty, from whom I received it, though it was ſent to me as the work of an anonymous acquaintance: but I have ſince been informed, the public is indebted for it to H. Barton, an ingenious apothecary in Dublin.

Though theſe circumſtances may ſeem foreign to the ſubject, yet as I think the treatiſe above mentioned contains much uſeful inſtruction, and as I am obliged to it for the hint which gave riſe to the preceding experiments, and for the advantages received from them, I think it is but juſtice to give the public this information.

Our author tells us (in page 20) that he diſſolved gum Arabic in water to the conſiſtence of a thick mucilage, with this made an union of turpentine with water, in the form of a neat, ſmooth emulſion: he likewiſe acquaints us, that the ſame mucilage, with ſome oil of almonds and common water, were mixed together in the form of an emulſion.

At this time I was engaged in ſome enquiries into the origin of amber; and, as I had many reaſons to believe that it was a vegetable reſin, reduced by time and a vitriolic acid into the condition we now ſee it, I imagined it not impracticable to produce a ſubſtance reſembling amber in many of its properties.

To mix a ſtrong vitriolic acid intimately with any of the vegetable reſins, was a difficulty I could not ſurmount, till I met with the treatiſe above mentioned; for the oil of vitriol burns that part of the reſin which it touches, the moment they come in contact; and if the oil is lowered with water, it will not mix by any other means I am acquainted with, ſo intimately, and without

burning

burning the reſin, as by the aſſiſtance of a mucilage; and I had the pleaſure of obſerving, from the firſt eſſay I made, that the mixture inſtantly gave the fragrance of amber ſufficiently ſtrong and diſtinct.

Other affairs took me off from proſecuting this enquiry any farther at that time; but I have ſtill made uſe of the ſame contrivance to exhibit ſeveral medicines in a liquid form, which, with reſpect to extemporaneous preſcription, are ſome of the moſt untractable in the *Materia Medica*.

Expreſſed and eſſential oils, balſams, reſins, gummi-reſins, reſinous tinctures, pinguious animal ſubſtances, by the means of a vegetable mucilage, are rendered to a certain degree miſcible with water, and capable of being adminiſtered, in this form, as ſpeedily and effectually, as by means of the *vitellum ovi*, the common medium now in uſe.

The mucilage has beſides this further advantage; it is ſeldom foreign to the preſcriber's intention; when he gives theſe ſubſtances, it is not known to diſagree with the ſtomach in any caſe; which cannot be ſaid of the *vitel. ovi*; it is not liable to become rancid and exceſſively prejudicial; and, what will be of weight with ſome compounders, it is much leſs expenſive.

When I was ſatisfied, from my own experiments, that this method was in moſt caſes preferable to any other commonly practiſed; and thought it might be of uſe to others; I prevailed upon J. Bogle French, an ingenious apothecary, with whom I was caſually converſing upon the ſubject, to be at the pains of making ſome experiments, on purpoſe to determine, whether the proportions I had commonly uſed, were the moſt proper; whether any other mucilage would ſucceed better than that which I had commonly uſed, *viz.* the mucilage made from gum Arabic; and whether ſimple agitation would not, in many inſtances, render the mixture ſufficiently uniform to be exhibited without diſguſt.

With this view divers experiments were tried, by putting the ſeveral ingredients mentioned into a phial, and ſhaking them together. This is all that is meant, when the union is ſaid to be performed by agitation. And it appears from ſeveral of the experiments, that this proceſs is all that is neceſſary to mix ſeveral liquids together, which have hitherto required much more labour by any other method, *viz.* expreſſed and diſtilled oils, the more liquid reſins, and reſinous tinctures.---There are however ſeveral ſubſtances, *viz.* the thick balſams, reſins, and many others, that cannot be treated in this manner. Theſe were firſt rubbed with mucilage in a glaſs or marble mortar, the other liquids then added, and, by rubbing them together, were well mixed. This is all that is intended when mention is made of mixture by attrition.

It will appear from the preceding experiments, that the mucilage of *g. Arabic* is, of all others yet tried, the moſt proper, and ſucceeds the moſt eaſily and laſtingly of any. That by means of this mucilage, and in ſome caſes even by the

the powder of *g. Arabic* alone, not only oils and reſins, but even pinguious ſubſtances may be reduced to the form of an emulſion with water. That though even a viſcid ſyrup alone effects this union with difficulty, yet an addition of ſyrup to the mucilage, renders the union more perfect. (Exp. VI. VII.) That the addition of a diſtilled ſpirituous liquor does not prevent this union.

And that a proportion, like the following, will ſeldom diſappoint the preſcriber's expectation of forming a neat compoſition.

℞ *Aq. ſimp.* ℥iſs. *Spirit.* ʒii. *Balſam.* ℈i. *Mucilag. g. Arab.* ʒſs. *Syr. ſimp.* ʒi.

Or,

℞ *Aq. ſimp.* ℥i. *Ol. amygd.* ℥ſs. *Syr. & aq. ſpir.* āā. ʒi. *Pulv. g. Arab.* ℈i. *Vel mucil. g. Arab.* ʒſs. *M. agitando.*

That, in ſome caſes, the mucilage not only acts this part the beſt of any, but conceals diſagreeable taſtes, and covers extreme pungency.

That it preſerves the ſubſtance it is thus united with, and cannot be in hazard of contracting the putrid rancidity that the yolk of eggs, the medium hitherto moſt generally uſed, is liable to.

That camphire and muſk may thus be exhibited in a liquid form, with certainty in regard to the doſe; whereas nothing is more uncertain than the preſent method of adminiſtering them in a liquid form; which, where the doſe can be aſcertained, is often the beſt.

For camphire given in ſubſtance, either in pills or bolus, unleſs it is very carefully mixed, will often occaſion great anxieties, from the pungency of a large particle of camphire vellicating the ſtomach. And the preſent *julepum e camphorâ* is ſeldom prepared alike in any two ſhops.

The ſame uncertainty attends the muſk when given in a liquid form; for if the compounder values himſelf on the appearance of neatneſs, perhaps great part of the muſk is thrown away. The mucilage, however, unites it with water ſo readily and intimately as to make the whole ſmooth and uniform.

Bees-wax, from the difficulty of giving it in a liquid form, has hitherto been very little uſed *internally*; though in painful diarrhœas and dyſenteries, it ſeems to promiſe conſiderable benefit. From Exp. XXVII. it appears, however, that this ſubſtance likewiſe may be rendered miſcible with water, by firſt making the *Butyrum Cerae Bateanum*, and then dividing it farther by the powder or mucilage of *gum Arabic*. Half an ounce of the wax ſo diſſolved, with a pint of barley-water, a proper quantity of ſpirituous water, and a little ſyrup, forms an emulſion that in the caſes ſpecified may be given to advantage.

Sperma ceti beat fine in a marble mortar, with an equal quantity of the Arabic mucilage, forms a ſmooth paſte, which may be kept for uſe in this condition many days. It grows ſomewhat dry and hard by keeping, but contracts

no apparent acrimony or rancidity. This paſte eaſily mixes with water by attrition, and ſpeedily forms an homogeneous milky liquor. This method of manufacturing the *ſperma ceti* for extemporaneous preſcription, ſeems the more worthy of notice, as the preſcriber is ſupplied with a medicine leſs diſguſtful, and with more expedition, by this than by the uſual means, and at the ſame time with more eaſe to the compounder.

The moſt common method of uniting oils and waters at preſent, is, by means of ſome volatile alcaline ſalt or ſpirit; but there are many diſeaſes in which theſe are improper: oil is often preſcribed in nephritic caſes; to give it alone adds to the *nauſea* which the diſorder itſelf produces; here volatile ſpirits are foreign to the intention. The mucilage coincides with the general deſign, and produces an emulſion both grateful and ſalutary.

Another circumſtance that renders this method of exhibiting oils preferable in many caſes to that with volatile alkalies, is, that acids may be eaſily and agreeably given at the ſame time.

When I firſt began to uſe the mucilage for the purpoſe of mixing oil and water, in order to ſucceed the more effectually, I ſometimes directed a ſmaller quantity of mucilage, and likewiſe of the volatile, than would, of themſelves alone, be ſufficient to unite the oil and water together. But this, inſtead of promoting, prevented it entirely: the mucilage curdled; its latent acid deſtroyed the alcali; and no laſting union could be obtained, even by long attrition. Hard calcareous waters likewiſe render the mixture difficult, ſometimes impracticable.

But acids have no ſuch effect; the union ſucceeds as well when dulcified ſpirits of nitre, elixir of vitriol, oil of vitriol, or any other acid I have yet tried, are added, as without them. Nay, their acidity is ſo far concealed, that a quantity may be given under this diſguiſe, in a ſmaller compaſs than by any other way I am acquainted with.

A LETTER

A

LETTER

RELATIVE TO THE

CURE OF THE CHIN-COUGH*.

To the Medical Society in London.

Gentlemen,

THE *tuſſis convulſiva*, or Chin-cough, is for the moſt part ſo troubleſome a diſeaſe, and ſometimes ſo fatal, that every hint conducive to abate its violence, and prevent the dangers ariſing from it, will, I doubt not, be acceptable to you and the public.

I have for ſome years made uſe of the following antimonial medicine, in the cure of this diſeaſe, and often with ſo much benefit to the patient and ſatisfaction to myſelf, as to induce me to mention it caſually to many of my phyſical acquaintance.

From ſeveral of theſe, I have received ſuch favourable accounts of its ſucceſs, as to ſtrengthen my own opinion of its efficacy; and to eſteem it, though not a certain cure in all caſes, yet perhaps as uſeful a medicine in this diſtemper, as any we are yet acquainted with.

The compoſition is the following:

℞ *Pulv. e chel. cancr.* ʒß.
Tartar. Emetic. gr. ij.
Accuratè miſceantur.

The teſtaceous powder, in this caſe, is not particularly deſigned for any other uſe, than that of making the *emetic tartar* diviſible into very ſmall doſes with preciſion, and without difficulty. This proportion was fixed upon, as the

* From the Medical Obſervations and Inquiries, vol. iii.

whole is diviſible without a fraction; each grain of the powder containing one-ſixteenth part of *emetic tartar*. Where a very ſmall portion of this is wanted, the bulk may eaſily be increaſed by the addition of ſome other, or the ſame teſtaceous powder: where more of the *emetic tartar* is wanted, the quantity of the doſe is then ſufficient.

One grain, one grain and an half, or two grains of this compoſition, may be added to five or ſix of any teſtaceous powder, and given in a ſmall ſpoonful of milk and water, in the forenoon between breakfaſt and dinner, to a child of a year old: if this quantity does not prove ſufficient to excite vomiting, it ſhould be increaſed the next day to ſuch a doſe as will produce that effect; and, in this manner, let it be daily repeated about the ſame hour.

This time of day, *viz.* between breakfaſt and dinner, has been fixed upon preferably to any other, on theſe conſiderations, *viz.*

If the puke is given early, the ſtomach being empty, a ſtraining, too great to be borne without detriment, might be occaſioned.

Was it given in the evening, the child would, perhaps, be robbed of too great a quantity of nutriment. Children's breakfaſts are, for the moſt part, ſoon digeſted; at leaſt, ſo much nutriment is taken up in a ſhort time, as that much inconveniency cannot enſue from the loſs of aliment.

At night, when the fever is vehement, half the former doſe of antimonial powder is given, with a few grains of *nitre*, and the *pulv. contrayerv. c.* This generally procures an agreeable *diaphoreſis*, and takes off ſome part of that moiſture which might probably have otherwiſe increaſed the irritation and oppreſſion of the lungs.

It is but ſeldom that phyſicians are conſulted at the beginning of this diſeaſe, as, for the moſt part, its acceſs is ſlow, and gives but little alarm, till it becomes ſo evident, as to render it difficult to do any thing more than mitigate the ſymptoms.

But, in moſt caſes, and in every ſtage of the diſeaſe, I have chiefly truſted to this proceſs; ſeldom having occaſion either to bleed, or to uſe any other kind of evacuation, unleſs to procure a ſtool or two daily, if the medicine above mentioned fails in this reſpect.

In this caſe a proper doſe of *magneſia*, given at bed-time, with the antimonial, ſeldom fails of anſwering our expectations. Sometimes no very manifeſt advantage appears to be gained by this proceſs in ſeveral days; but, if no material inconveniency ariſes, it will be right to proceed.

The firſt ſymptom of amendment uſually is, that the fits of coughing become leſs frequent, the fever abates, and the breathing is not ſo difficult; the fits however do not ſeem to leſſen much in point of violence, for ſome days; at length, however, the cough decreaſes, and every other ſymptom abates.

The child is then directed to take the puke only two days together, and omit

omit it the third. Every other day will ſoon ſuffice, and, then, once or twice a-week till the cough is wholly gone.

During this proceſs, they are directed to drink aſſes milk, to eat ſparingly of the lighteſt meats, broth likewiſe, and milk in any ſhape. Quantity is ſtrictly to be regarded; for the more and oftener the ſtomach is filled, to the leaſt degree of oppreſſion, the longer the diſeaſe continues, and with greater violence.

The ableſt of the faculty, and thoſe of the moſt extenſive experience, have found, that to empty the ſtomach of its contents frequently has been the means of affording moſt relief. Oxymel of *ſquills* and *ipecacuanha* have ſtood foremoſt in the liſt of remedies for the Whooping-cough, a conſiderable time; and this apparently from the good effects obſervable from their operation.

This induced me to make trial of the remedy in queſtion, as having theſe particular advantages.

The medicine is almoſt taſteleſs, is in quantity very ſmall, and may be given in the moſt unſuſpected vehicle; no inconſiderable benefits, where we have to do with ſuch patients as are moſt expoſed to this terrible diſtemper.

It is, undoubtedly, more antiphlogiſtic than either of the medicines above mentioned, is leſs irritating in general, yet operates with equal certainty, and, perhaps, more energy.

It is a powerful diaphoretic; the good effects of which, in this caſe, have been already mentioned.

One thing, however, may be neceſſary to obſerve, in reſpect to the preparation I have deſcribed. It has been hinted to me, that it will not long preſerve its efficacy; and this decay is ſuppoſed to ariſe from the tartar being robbed of its acid by the abſorbent powder. This, if true, ſhould induce perſons to mix but a ſmall quantity at once, to keep it perfectly dry, taking care eſpecially, that the *emetic tartar* be prepared by a ſkilful hand.

I have purpoſely omitted any reflections on the nature of this diſeaſe, or particular deſcriptions of its progreſs, any farther than as they were connected with the hiſtory of this medicine, as I know your deſign is rather to collect matters of fact than to build ſyſtems.

I would not, however, be underſtood to ſuppoſe, that this medicine will alone complete the cure of the Whooping-cough, at all times, and under all circumſtances: I know it will not; and that this, as well as every other medicine, is uſeful or otherwiſe, juſt as it is indicated. *Cantharides*, the *bark*, *muſk*, *caſtor*, and many other medicines, have doubtleſs been of great uſe in particular caſes, and may be in peculiar epidemic conſtitutions.

OBSERVATIONS ON THE USE OF HEMLOCK*.

SOON after Dr. Storck's account of the *cicuta* was publiſhed, I had ſeveral opportunities of trying it in the diſorders for which it was ſo ſtrongly recommended; but, with many others of the Faculty, I had too great cauſe to lament, that a ſpecific remedy for cancerous complaints was ſtill undiſcovered.

Nevertheleſs it appeared to be a medicine of great efficacy; and though it by no means anſwered my wiſhes in the cure of cancers and cancerous tumours, yet it ſeemed ſtill worthy of farther trials, has proved beneficial in various obſtinate complaints, and though I cannot produce one inſtance of a cancer cured by the *cicuta*, yet I can recollect ſeveral in which the pains have been mitigated for a time, the progreſs checked, and the diſcharge changed for the better in reſpect to colour, ſmell, and conſiſtence.

The following caſe may perhaps deſerve a place here, as one proof of theſe effects:

A gentleman, from one of our South American colonies, middle-aged, healthy, temperate, and active, had a wart-like ſubſtance grew up on one ſide of his noſe, not far from the inner *canthus*; and as I remember from an accidental injury. It gave him no pain, nevertheleſs he frequently endeavoured to pluck it off; by which it grew ſore and uneaſy. A practitioner there, promiſing him a certain and ſpeedy cure, applied *eſcharotics*, and increaſed the miſchief.

Being thus diſappointed of a cure, and the diſeaſe every day increaſing, he came to England in the ſummer of 1763. The ulcer had, by this time, deſtroyed the teguments almoſt round the orbit, and eat deep into the upper ſide

* From the Medical Obſervations and Inquiries, vol. iii.

of

of the ſocket. The globe of the eye remained, but wholly uſeleſs in reſpect to viſion, and almoſt without motion, the muſcles being deſtroyed. The pains were acute both in the globe itſelf, and parts ſurrounding, which were exquiſitely tender, and the ichorous diſcharge was extremely fœtid. He had long been under the neceſſity of taking large doſes of laudanum to procure ſome remiſſion from pain during the nights.

Under theſe circumſtances the *hemlock* was recommended to him. He took at firſt twenty grains a day, eight at noon, and twelve at night. This in a few days leſſened his pain, and the quantity of laudanum was reduced in proportion. At length it was wholly laid aſide, the *hemlock* mitigating the pain intirely, without producing coſtiveneſs, thirſt, or head-ach. The doſe of *hemlock* was gradually increaſed to ſeventy grains a day: if he proceeded farther, it either made him ſickiſh, or created a ſingular kind of head-ach and giddineſs. Sometimes he grew weary of taking it, and omitted it for ſeveral days, and returned to it again as his pain or other circumſtances required. He is ſtill living, and ſtill continues to make uſe of the *hemlock*; and though the ulcer yet ſpreads, and moſt probably will do whilſt he lives, yet its progreſs has been remarkably ſlow, compared with its advances before the uſe of this medicine; its aſpect is more kindly, the diſcharge of a better conſiſtence, and the ſtench, while he takes the medicine, is ſo much diminiſhed, that thoſe who have occaſion to be near him can eaſily diſtinguiſh when he is taking the *hemlock*.

Various attempts were made with the *cicuta* externally, in infuſions, decoctions, and ſolutions of the extract in different liquids and different proportions; but they all gave more or leſs pain, and left an uneaſy ſtiffneſs round the edges of the ſore.

In a cancerous affection of the tongue, the extract of *hemlock* procured great relief; it abated the ſtench and eaſed the pain: but the relief was only temporary, and at length it failed in affording any eaſe, or retarding the progreſs of the fatal diſorder.

It is not very uncommon to perceive, in theſe dreadful evils, ſome abatement of the ſymptoms ſoon after taking the *cicuta*, but the effects are too ſeldom laſting.

I have given it repeatedly in tumours apparently of a cancerous tendency; it has ſeldom ſucceeded to my wiſhes, in large ones eſpecially; in ſmall incipient hardneſſes in the breaſt, and other parts, I think it has been of uſe.

But the trials I have made of the medicine have not been confined to this claſs of diſorders. In ſcrophulous diſtempers, I think it has been much more beneficial than in the preceding: the firſt caſe in which it was given, turned out ſo favourably, as to induce me to think of it with ſome partiality; and to uſe it freely, though I own not always with equal ſucceſs. When the *cicuta*

was

was introduced into public notice by Dr. Storck, the following caſe was under my care, *viz.*

A young gentlewoman of a thin habit, pale complexion, about twenty-eight years of age, had been afflicted at times, from her infancy, with ſcrophulous complaints, ſevere *ophthalmies*, glandular ſwellings, and other concomitants of this diſeaſe.

To remove theſe, no endeavours had been wanting; the ableſt of the Faculty had ſucceſſively been conſulted, and many famed empirical medicines had likewiſe been made uſe of. She had taken, under my directions, a decoction of ſarſaparilla, the bark, mild mercurials, ſea-water, and other efficacious medicines, but without benefit.

When a trial of the *cicuta* was thought of, ſhe laboured under the acuteſt *ophthalmy* ſhe had ever endured; her pulſe ſmall and feeble, her reſt and appetite diminiſhed, the *menſes* in ſmall quantities and pale, and every ſecretion irregular. The glands on each ſide the neck down to the clavicles, were ſwelled and hard, on one ſide particularly. And ſuch was her extreme ſenſibility of light, that ſhe ſat conſtantly on her bed within thick ſtuff curtains, and the light was excluded with the utmoſt care; the opening of her chamber-door gave her much pain.

Such was her ſituation when we began the *hemlock*; it was in the infancy of its uſe, and the doſes at firſt were ſmall. Some weeks had eſcaped before we got up to twenty grains a day. But the extract we uſed was good, and, ſmall as the doſes were, ſo much benefit was ſoon perceived as encouraged a ſteady perſeverance and an augmentation of the doſe. The *ophthalmy* quite went off, the ſwelling of the largeſt glands was conſiderably reduced, that of the ſmaller diſperſed, a better ſtate of health returned than ſhe had known for any length of time together, and has continued ſo ever ſince. She perſiſted in the uſe of the extract conſtantly for more than a year, and without perceiving then or ſince any ill effects from it, in any reſpect.

I have ſince given it in many other ſcrophulous caſes, and frequently with advantage, to adults eſpecially; and indeed it is to them that I have for the moſt part preſcribed it, as children ſeldom can take any quantity of pills, and in any other form it is diſguſtful, if long continued. If the extract in any reſpect diſagrees, it is more difficult to learn this from children than adults; and, when given to children even in very ſmall doſes, I think it has produced ſlight ſpaſmodic affections. For theſe reaſons, I ſeldom uſe it in very young ſubjects, or in others of extremely irritable habits.

At the ſame time that the *cicuta* was adminiſtered in the caſe above mentioned, I made trial of it in the following:

A perſon of a thin and rather delicate habit, naturally healthy, about the thirtieth year of her age, began to have numerous red pimples break out about

her mouth, noſe, and cheeks, with frequent and violent head-achs. The *menſes* became too copious, a *fluor albus* conſtantly followed; ſhe grew coſtive, loſt her appetite and ſtrength; obvious indications of acrimonious juices, and relaxed ſolids; the conſequences of much anxiety, labour, and ſolicitude.

Her face grew daily worſe, the pimples increaſing in number, magnitude, and hardneſs; forming ſmall tumours that ſometimes ſuppurated, but always ſlowly and with great pain; now and then ſome of the largeſt aſſumed a livid hue, and continued long in that condition.

The utmoſt care was taken in reſpect to diet, both as to quantity and kind; ſhe was extremely temperate in reſpect to liquors of any ſort; and, if any errors were committed, they aroſe from too much exerciſe in her family, and too conſtant ſolicitude.

To deſcribe all the attempts that were made in order to mitigate theſe complaints, with their various ſucceſs, would be uſeleſs, as they were ineffectual: it may ſuffice to obſerve, that ſhe followed the methods preſcribed for her with unremitting diligence, but without the deſired effect.

She was attacked with a tedious depreſſed fever while theſe endeavours were uſing, which left the hairy ſcalp of her head almoſt covered with ſmall *ſteatomatous* tumours, from the bigneſs of half a pea to the ſize of half a large walnut; the appearances in her face continuing the ſame, both in reſpect to number as well as pain, which, in froſty weather, was almoſt inſupportable.

Though nothing cancerous could be ſuſpected from her parents or her natural conſtitution, yet the hard livid tubercles on her face, yielding to no method hitherto attempted, created fears of their tending to miſchief: and this put me on trying the *hemlock*. She took it at firſt in ſmall doſes, increaſing the quantity as ſhe found ſhe could bear it; and ſhe kept to it ſteadily, during the autumn, winter, and following ſpring.

The good effects ſoon became viſible in every reſpect. Her face grew clearer and better than it had been for ſome years; the immoderate diſcharges were reduced to a reaſonable quantity; the *ſteatomatous* tumours on her head were much leſſened, and ſhe enjoys better health, by the uſe of this medicine ſingly, than ſhe has done for ſeveral years. When ſhe finds any return of her former complaints, ſhe conſtantly has recourſe to the extract, which always gives her relief.

Permit me to mention a few more caſes, in which I have uſed this medicine with advantage.

A middle-aged man, healthy, active, and temperate, was attacked with a pain in one cheek-bone, about the *antrum Highmorianum*, and for which he could aſſign no cauſe. It grew to be ſevere, and continual, but was ſometimes heightened to a degree almoſt beyond bearing. Though a native of England, his reſidence was then in one of our North American colonies. He applied

to

to many very able practitioners there, but without obtaining more than a temporary mitigation, by opiates. Mercurials, antimonials, alteratives, the bark, warm, cold, and ſea-bathing; drains of every kind were made uſe of, but to no purpoſe. Several teeth were drawn, and an opening made into the *antrum*, but fruitleſly. The pain ſometimes was abated, but it never wholly went off; its returns were frequent, ſeveral times in an hour; and ſo excruciating, as to produce ſpaſmodic contractions of every muſcle about the face and neck, and even affecting the whole body.

Under theſe circumſtances he arrived from America, and brought with him an exact detail of the progreſs of his diſeaſe, and the means made uſe of for his relief.

Until I could have leiſure to conſider the caſe attentively, and what farther might be reaſonably propoſed, I ordered him to take the extract of *hemlock*, beginning with twenty grains a day, and directed him how to proceed in increaſing it.

He called about a week after (the time I had fixed), when I obſerved his countenance to be ſomewhat leſs diſturbed, and he owned himſelf rather better. He was adviſed to continue in the ſame method, which he did very conſtantly during the autumn and winter. In the ſpring, as he found himſelf much better, he took the medicine leſs regularly, and returned to America almoſt free from pain, and entirely ſo from any of thoſe ſpaſmodic contorſions, which accompanied him almoſt inceſſantly at his arrival. He took no other medicine during the whole time.

The following caſe, perhaps, may likewiſe be worth reciting:

A healthy ſober young man applied to me in the ſpring 1766, on account of a pain in his arm. The part affected was from about the middle of the *biceps*, down the inſide of the arm to the wriſt. He knew of no particular accident that had brought it on, except taking cold; it was deemed rheumatic, and he had endured it a conſiderable time before I ſaw him. It was neither ſwelled, diſcoloured, or ſore to the touch; and alike uneaſy, both day and night.

It was treated as a rheumatiſm; mercurial alteratives, decoctions of the woods, the bark in various ſhapes, antimonials likewiſe and anodynes, were made uſe of; but without gaining any conſiderable benefit. He then took the extract of *hemlock* in a full doſe about a fortnight, when he found the pain began to abate. He continued it during the ſummer regularly, got perfectly well, and ſo remains.

A few inſtances of this kind naturally induce one to apply a remedy like this, in very diſſimilar caſes.

A married woman, between thirty and forty, a long time infirm, ſubject to coughs, hectic heats, and a train of complaints, ariſing from ſmall *vomica's* be-

ing frequently formed in the lungs and diſcharged, applied to me ſoon after a large one had broke. She had then a copious purulent *hæmoptoe,* inceſſant cough, quick ſmall pulſe, night ſweats, with loſs of appetite, and loſs of ſtrength. Soft demulcent cooling pectorals were given, with anodynes frequently in ſmall quantities, but to no purpoſe. A light decoction of bark with elixir of vitriol and anodynes ſucceeded no better. The extract of *hemlock* was then ordered to be taken three times a day, and to be waſhed down with a few ſpoonfuls of tincture of roſes. The patient was ordered into the country, and I ſaw her no more, nor heard any thing of her, till I was informed, ſeveral months afterwards, that, from the time ſhe commenced this courſe ſhe began to recover, kept in town, and grew well.

I was induced to make trial of it in this caſe, from conſidering the moſt uſual effects of *hemlock.* It is anodyne, corrects acrimony, and promotes the formation of good matter.

I have ſince made uſe of it in various pulmonic diſorders, though but ſeldom with the like ſucceſs. Where there are ſymptoms of tubercles forming, a ſtrumous habit, and a tendency to *phthiſis* from theſe cauſes, I believe it will often be ſerviceable. But to deſcribe the various trials I have made, and the various ſucceſs, would lead me beyond the bounds of an eſſay ſuitable to your deſign.

There are ſome things, however, which I muſt beg leave to mention more particularly, as they ſeem to me of conſequence in the uſe of the *cicuta.*

It is well known with what avidity the public embraced the expectations given by Dr. Storck. Every body made the extract, and every body preſcribed it. We ſoon found it would not perform all the wonders aſcribed to it, and, falling into the oppoſite extreme, many declared it would do nothing, and diſmiſſed it with diſgrace.

Much of the extract hitherto uſed, has not, I believe, been made with due attention to the ſeaſon when the plant is in its greateſt perfection. So ſoon as the plant appeared ſtrong and ſucculent, it was commonly gathered for uſe. But I know from repeated experiments, that the extract, prepared from *hemlock* before the plant arrives at maturity, is much inferior to that which is made when the *hemlock* has acquired its full vigour, and is rather on the verge of decline: juſt when the flowers fade, the rudiments of the ſeeds become obſervable, and the habit of the plant inclines to yellow, ſeems the proper time to collect the *hemlock.* It has then had the full benefit of the ſummer heat; and the plants that grow in expoſed places, will generally be found more viroſe than thoſe that grow in the ſhade.

In reſpect to the manner of preparing this extract, it may be neceſſary to obſerve, that the leſs heat it undergoes the better. Therefore, if a conſiderable quantity of the dry powder of the plant, gathered at a proper ſeaſon, is

added,

added, the leſs boiling will be neceſſary, and the medicine will be the more efficacious.

But let the extract be prepared in what manner ſoever it may, provided it is made from the genuine plant, at a proper ſeaſon, and is not deſtroyed by boiling, the chief difference obſervable in uſing it, is, that a larger quantity of one kind is required to produce a certain effect, than of another.

I have found that twenty grains of one ſort of extract have been equal in point of efficacy to thirty, nay near forty of another, yet both of them made from the genuine plant, and moſt probably prepared with equal fidelity.

To prevent the inconveniencies ariſing from this uncertainty, it ſeems always expedient to begin with ſmall doſes, and proceed, ſtep by ſtep, till the extract produces certain effects, which ſeldom fail to ariſe from a full doſe.

Theſe effects are different in different conſtitutions. But, for the moſt part, a giddineſs affecting the head, and motions of the eyes, as if ſomething puſhed them outwards, are firſt felt; a ſlight ſickneſs, and trembling agitation of the body; a laxative ſtool or two. One or all theſe ſymptoms are the marks of a full doſe, let the quantity in weight be what it will. Here we muſt ſtop till none of theſe effects are felt, and, in three or four days, advance a few grains more. For the general experience of all who have uſed this medicine to any good purpoſe, with whom I have any acquaintance, agrees, that the *cicuta* ſeldom procures any benefit, though given for a long time, unleſs in as large a doſe as the patient can bear, without ſuffering any of the inconveniencies above mentioned.

Patients commonly bear a greater quantity of the extract at night, than at noon; and at noon, than in the morning. The method I commonly follow is to order ℥ij. to be divided into thirty pills, not gilt. Adults begin with two in the morning, two at noon, and three or four at night, with directions to increaſe each doſe, by the addition of a pill to each, as they can bear it.

The extract of *hemlock*, given in this manner, is apparently anodyne; it promotes reſt, and eaſes pain. It ſeldom creates thirſt, or that kind of morning head-ach, which ſucceeds an opiate of any kind.

It ſeldom occaſions coſtiveneſs, but, in moſt, it procures a laxative ſtool the day following.

In ſome habits very ſmall doſes offend the ſtomach, excite ſpaſmodic twitchings, heat, and thirſt. In ſuch caſes I immediately forbid its uſe.

From the certain quality it poſſeſſes of altering the property of a thin, corroſive, cancerous ichor, and changing it to a milder fluid, I have been induced to try it in ſanious ulcers, and gleety, painful diſcharges from the *vagina*, and often with ſucceſs. Alſo in fixed excruciating pains, probably ariſing from acrimony, not diſſimilar to that of cancers.

The *Materia Medica* is already loaded with a number of very inefficacious ſimples, and it would give me extreme concern to aſſiſt in adding another to the catalogue: but, from the obſervations I have had an opportunity of making, and from the concurrent opinion of ſeveral of my medical acquaintance, I perſuade myſelf, that the *cicuta* will be an uſeful acquiſition, and will aſſiſt us in the cure of many diſeaſes, in which the medicines now in uſe are inadequate auxiliaries.

REMARKS

REMARKS

ON THE

HYDROCEPHALUS INTERNUS*.

I Have for a long time propoſed to myſelf, to lay before you ſome account of a diſeaſe which occurs more frequently, I believe, than is generally apprehended, and is very often confounded with another, to which, in many reſpects, it appears not diſſimilar; yet ariſes from a very different cauſe. At the ſame time, I muſt own to you, it is not in my power to ſuggeſt any probable means of curing the diſeaſe of which I treat: it has baffled all my attempts, both when confided in alone, and in conſultation with the ableſt of the Faculty. All that I pretend to do is, to exhibit ſuch an idea of this diſeaſe as may ſerve to make it known when it occurs in practice, and to form ſuch a prognoſtic of its progreſs and event, as may juſtify practitioners to themſelves, and to the families in which ſuch fatal occurrences may preſent themſelves.

I have juſt peruſed Dr. Robert Whytt's hiſtory of this diſtemper, in his works, lately publiſhed, in a tract at the end. The Doctor has done more in elucidating this ſubject, than any of the writers I have ſeen. It will appear from what I have to ſay on this ſubject, that we perfectly agree in the ſeat of the diſeaſe, in moſt of its ſymptoms, and in its fatality. Nevertheleſs, in ſome points, our obſervations have led us to make different concluſions.

The diſeaſes to which this I am treating of bears the neareſt reſemblance, are ſuch as are ſuppoſed to proceed from worms; and what increaſes the reſemblance is, that they are, for the moſt part, diſeaſes of the ſame age. I have ſeldom met with the *Hydrocephalus* in ſubjects younger than three years; moſt frequently it has happened, in my practice, from five to ten; two or three from ten to thirteen, and two caſes between ſeventeen and nineteen years of age. The laſt four were girls; the former moſtly boys; and none of them peculiarly unhealthy before they were attacked with this diſeaſe. Moſt of

* From the Medical Obſervations and Inquiries, vol. iv. page 40. Read Auguſt 8, 1768.

them

them had gone through the ſmall-pox, ſome the meaſles likewiſe; but without any reaſon to ſuſpect that theſe had left any foundation for this terrible complaint.

It happened, that ſeveral of thoſe who firſt of all came under my care in this diſeaſe, were either the favourites of the family, or the ſole hopes of their parents. I do not mention this as having any thing to do with the diſeaſe itſelf, but as the cauſe of my not being able to learn what the diſtemper really was, ſo ſoon as I could have wiſhed. It was difficult to aſk, and ſtill more difficult to obtain leave, under ſuch tender circumſtances, to examine the ſubject. At length, however, I ſucceeded, and, in ſeveral diſſections, found the ſame cauſe ſubſiſting; *viz.* a collection of clear pellucid lymph, amounting in quantity, by appearance, to two, three, or four ounces, contained in the ventricle of the brain, under the *corpus calloſum*, from whence it was impoſſible to diſcharge it by any medicine or operation hitherto diſcovered.

The firſt caſe I met with I ſuſpected was owing to worms, and thought myſelf fully juſtified in exhibiting the moſt efficacious anthelminthics I was acquainted with, applying ſuch other remedies as particular exigencies required. When another caſe like this occurred, I early took the alarm, and requeſted aſſiſtance; but we were as unfortunate as I had been before. Once, ſometimes twice in a year, for ſeveral ſucceeding years, I had occaſion to ſee theſe unhappy objects. Of late years, they have not occurred to me quite ſo frequently, though I am now lamenting a diſaſter of this ſort, which has deprived a large and honourable family of the only male amongſt them.

Two or three inſtances I have met with, that had very ſtrong appearances of being entered into the laſt ſtage of this diſorder, but were happily recovered; they were actual worm-caſes, and were cured by anthelminthics. I had been led, from theſe appearances that were ſo ſimilar to thoſe which attend the *Hydrocephalus*, to judge it was the ſame, and to form an unfavourable prognoſtic.

Dr. Whytt ſuppoſes, that the commencement of this diſeaſe is obſcure; that it is generally ſome months in forming; that, after ſome obvious urgent ſymptoms make aſſiſtance neceſſary, it continues ſome weeks before it ends fatally. This, in general, differs from what I have hitherto obſerved. I have ſeen children, who, from all appearance, were well, healthy, and active, ſeized with this diſtemper, and carried off in about fourteen days. I have ſeldom been able to trace the commencement of it above three weeks. We know very well how often thoſe who are unacquainted with theſe things aſcribe the beginning of diſorders to wrong cauſes, and date them from æras with which they have no connection. Thus every malady to which a child may be incident through the courſe of many years, ſhall be attributed to the ſmall-pox, a worm-fever, or ſome other diſeaſe, that has thoroughly rouſed the parents fears, though that

very diſeaſe may have been happily terminated. One cannot be ſufficiently upon one's guard in aſcribing effects to cauſes that exiſted at a remote period.

In moſt of thoſe whom I have ſeen in this diſtemper, a pain in ſome part or other below the head was the firſt thing they complained of; moſt commonly about the nape of the neck and ſhoulders, often in the legs, ſometimes in the arms, but more rarely.

This pain was not always alike acute, nor always fixed to one place; ſometimes it ſeemed not to affect any of the limbs. In theſe caſes, the head and ſtomach ſeemed to be more diſordered; and indeed were always diſordered more or leſs from the beginning, as far as I could learn. When the pain was in the limbs, the ſickneſs or head-ach was leſs; when the head became the ſeat of complaint, the pain in the limbs was ſeldom or ever mentioned: ſome had very violent ſickneſſes and violent head-achs alternately.

From being perfectly well and ſportive, ſome were ſeized with theſe pains in the limbs, or with ſickneſs, or head-ach ſlightly, in a few hours, commonly after dinner. Some have been obſerved to droop a few days before they complained of any part being much indiſpoſed. In this manner they continued three, four, or five days, more or leſs, as the children were healthy and vigorous, when the diſtemper begins to ſhew itſelf in an alarming manner.

They then commonly complain of a moſt acute pain in the head, deep ſeated, and extending acroſs the forehead from temple to temple. They are generally very ſick between whiles, crying out in the moſt affecting manner, *Oh, my head! Oh, I am ſick!* alternately, and with ſhort intervals; doſing a little in theſe intervals, breathing irregularly, and ſighing much while awake. Sometimes they only ſeem to breathe in ſighs for ſome minutes together.

The pulſe, from being regular as in health, as the diſeaſe creeps on becomes irregular; ſlower, for the moſt part, at firſt than it ought to be; it grows ſtill ſlower as the pain increaſes, gradually likewiſe irregular, the ſtrokes being made both with unequal force and in unequal times. The limbs, for the moſt part, are temperate, in reſpect to heat, after the firſt acceſs, which is often attended with feveriſh heats, eſpecially towards evening and the fore-part of the night, and till within a day or two of their diſſolution; the pulſe then becomes extremely quick, the breathing deep, irregular, and laborious, the heat exceſſive, and more general. The head is always hot from the firſt attack, and the *præcordia* likewiſe.

Almoſt every ſymptom that is known to attend an irritating cauſe exiſting in the brain, appears in its turn; firſt, pain in the limbs, ſickneſs, and head-ach.

Short diſturbed ſleeps, ſtartings, irregular pulſe, watchfulneſs, and the pupils of the eyes much dilated.

They are unwilling to be diſturbed for any purpoſe, are averſe to light, take things greedily, and cannot bear any poſture but that of lying horizontally.

They

They attend leſs to objects; when aſleep, great part of the whites of the eyes are ſeen, and they are undiſturbed by any thing but moving them. Their urine comes away inſenſibly, and their ſtools likewiſe. They often ſcream out moſt piercingly, but complain of nothing. One or both hands are moſt commonly about their heads. At length the eye-lids become paralytic, the *iris* immoveable: an attempt to raiſe the eye-lids with the finger, two or three days before they die, gives them no apparent uneaſineſs. The heat of the head and trunk becomes exceſſive; a great heat and ſweat ſpreads over the whole body, reſpiration is altogether ſuſpirious, the pulſe trembling, and quick beyond the poſſibility of counting, and the patient goes off gradually as the ſtrength fails; ſometimes a ſpaſm finiſhes the cataſtrophe.

In this recital, many ſymptoms appear, that are familiar to worm-caſes, teeth, and other irritating cauſes. Perhaps, it will be difficult to point out any that ſhall particularly characteriſe this diſeaſe. The pains in the limbs, and inceſſant head-ach, and ſickneſs, ſeem to me the moſt certain intimations of the danger. Theſe happen in other diſeaſes of children, but neither ſo uniformly nor ſo laſtingly.

Another circumſtance likewiſe is familiar, if not peculiar to this diſeaſe: I recollect not one inſtance, in which the patient was not coſtive, and in which likewiſe it was not without ſingular difficulty that ſtools were procured.

The ſtools are moſt commonly of a very dark greeniſh colour, with an oilineſs or a glaſſy bile, rather than the ſlime which accompanies worms. They are, for the moſt part, ſingularly offenſive. The urine ſhews nothing to be depended on: it is various both in colour and contents in different ſubjects; depending chiefly on the quantity of liquids they get down, and the time between the diſcharges of urine. From their unwillingneſs to be moved, they often hold their water a long time; twelve or fifteen hours, ſometimes longer: they ſeldom complain of their belly: indeed when they complain of ſickneſs, they mention their belly; but, if one deſires them to point to it, they always lay their hand on the ſtomach. In diſorders from worms, this is not ſo generally the caſe. In theſe complaints, and thoſe attending dentition, ſpaſms are more frequent than in the diſtemper I am deſcribing. Children ſubject to fits, are ſometimes ſeized with them a few days before they die; ſometimes they continue for twenty-four hours inceſſantly, and till they expire; but this is not conſtant.

The moſt certain character marks itſelf indeed but too evidently, when one ſees all thoſe ſymptoms gradually advancing which attend a violent depreſſion of the ſcull; when a comatous oppreſſion ſeizes the brain, and diminiſhes, by degrees, all the faculties, till they are at length totally extinguiſhed, either by ſome violent ſpaſmodic efforts, or the *vires vitæ* being exhauſted.

With Dr. Whytt, I have called this diſeaſe the *Hydrocephalus internus*, or dropſy

dropſy of the ventricles of the brain, till ſome more appoſite name can be given to it. From what remote cauſes it may proceed, I am not ſo well ſatiſfied as to decide on this point. Whether the breach of a lymphatic may not more commonly be the proximate cauſe, is ſubmitted to conſideration. It is a diſorder that happens, ſo far as I have had an opportunity of obſerving, more commonly to healthy, active, lively children, than to ſuch in whom, from previous indiſpoſition, there is room to ſuſpect an unequal or weakened abſorption.

And indeed, if we conſider the numberleſs little feats of activity that children of both ſexes are diſpoſed to, we cannot wonder that a veſſel of ſlight texture ſhould give way on ſome occaſion or other. I am the more inclined to be of this opinion, from the progreſs of this diſeaſe in many of the caſes that I have ſeen of it; from reflecting on the *juvantia* and *lædentia*; and, from this circumſtance being generally true, that in ſtrong vigorous conſtitutions, the diſeaſe is fatal in a ſhorter time than in the tender and diſeaſed, though perhaps not leſs active diſpoſitions. Sometimes I have been told, that the diſeaſe was thought to have taken its riſe from jumping from a conſiderable height upon a hard floor, a fall, or ſome pretty ſmart exerciſe: but however favourable ſuch accounts may be to the opinion already mentioned, yet I offer them with diffidence, and only with a view to promote further inquiry.

Were I to recite the different attempts to cure this diſeaſe, made both alone, and conjunctly with ſome of the ableſt in the profeſſion, it would carry me beyond the bounds you have a right to preſcribe. It may be ſufficient to mention, that, whenever I am called to a patient in the earlier ſtages of this diſtemper, I proceed in the ſame manner as if the diſeaſe was ſuppoſed to ariſe from worms, or ſome cauſe of irritation capable of being removed.

Three or four grains of *calomel*, or more, according to the age and habit of the patient, with *rhubarb* and the *pulv. e ſcam. compoſ.* are given to empty the bowels, if this has not been done before ſufficiently. If the ſtomach appears to be loaded, a quarter or half a grain of the *emet. tartar.* may be joined with it, and the ſtomach waſhed with any ſuitable liquor.

After this, it ſeems prudent to abate the vomiting by the ſaline, abſorbent medicines, adding a few drops of the *tinct. Theb.* as occaſion requires, giving broth, thin decoctions of hartſhorn-ſhavings, and other ſuitable ſupport, as may be neceſſary.

Anthelminthics in broth are thrown up in clyſters, and ſmall doſes of anodynes occaſionally exhibited. A decoction of *ſem. ſanton.* with thirty or forty drops of *ol. terebinth.* in three or four ounces of broth; or aloes boiled in milk. All heating medicines ſeem to increaſe the malady; ſo does much warmth in the room.

If the diſeaſe actually proceeds from worms, the ſymptoms are moſt com-

monly at a ſtand after this proceſs, and, by a repetition at proper diſtances, it ſoon gives way; but, if the ſymptoms not only continue, but increaſe after a prudent repetition of theſe medicines, or ſuch as different practitioners may have found to be ſucceſsful in worm-caſes, there is too much reaſon to fear that the diſtemper is of a more fatal kind, and that the moſt ſtrenuous and well-directed endeavours will probably afford no relief.

One ought not, however, to ceaſe attempting to mitigate the moſt preſſing ſymptoms, by all the means in our power. The application of bliſters, ſinapiſms, embrocations externally; the leſs heating antiſpaſmodics, internally; and, at all times, taking care to keep the bowels, as much as may be, free from impurities, will, perhaps, afford ſufficient means to anſwer every reaſonable indication.

I need ſcarcely mention, that every opportunity of inſpecting the body ſhould be ſought for by the Faculty. Dangerous and incurable as it ſeems to be, its ſeat only known, and its fatal iſſue, we ought not to deſpair of tracing its beginning a little higher, aſcertaining the cauſes, and fixing its character with more preciſion. By treating the complaint, however, in the manner above mentioned, we loſe no advantage: we are almoſt ſure to ſucceed if the caſe be only worms; but if otherwiſe, we at leaſt are treating it in the moſt rational method, increaſing all the ſecretions, and thereby preventing any addition to the quantity of extravaſated fluid, to the utmoſt of our power.

From the preceding deſcription of this caſe, it will not be difficult to account for the ſymptoms; nor will it appear ſurpriſing, that the patients go off in the ſame manner as thoſe who die of a depreſſion of the ſcull; for it makes very little difference whether the external parts of the brain are crouded on the more central parts, or a fluid is perpetually preſſed into the cavities, near the center, ſtrongly forcing their ſides and the brain itſelf againſt the ſcull. So far as one can learn from the unhappy ſubjects themſelves, the kind of pain they feel, is not quick and darting, or like that of a boil or inflammation; but, though acute, is tenſive, and as if forcing the head aſunder.

When this paper was read to the Medical Society, Dr. Huck ſaid, he believed that this diſeaſe was not confined to children, or ſuch as were under puberty only; for he imagined that he had ſeen it two or three times in adults, and gave me the following caſe, where diſſection put it out of doubt.

Hannah Hargrave, aged thirty, was admitted into the Middleſex hoſpital, on the 25th of October 1768. She was extremely languid, and ſo oppreſſed, that ſhe could not give a very diſtinct account of her illneſs. She ſaid, that ſhe had been ſick a week; that her chief complaint was a moſt excruciating pain in her head, with a vomiting of every thing ſhe took, mixed with green ſtuff: ſhe ſaid ſhe was coſtive, giddy, thirſty, had great palpitations, and could get no ſleep: her heat was not greater than in health: her pulſe beat ſeventy-eight

eight ſtrokes in a minute; ſhe had her menſes at that time. No means that were uſed gave her any relief: the head-ach, vomiting, though leſs frequent, and watchfulneſs, continued. On the 4th of November ſhe was light-headed, ſighed and moaned frequently: the pupils of her eyes were greatly dilated, and I thought ſhe could not ſee. On the 5th, I firſt obſerved a *ſtrabiſmus*; ſhe gathered up the bedclothes; her teeth were furred; but her tongue was not very dry; her pulſe was almoſt like to that of a perſon in health.

On the 6th, ſhe ſeemed every way worſe, continued muttering, moaning, always without ſleep, and paſſed her urine involuntarily. Her pulſe beat eighty-eight ſtrokes in a minute.

She died on the 7th, and her body was opened by Mr. Tickel, houſe-ſurgeon, the next day, in preſence of ſome of the pupils and myſelf. Nothing very remarkable was found, except about four ounces of water in the ventricles of the brain, and a larger quantity than uſual in the *theca vertebrarum*.

I have likewiſe ſeen two caſes lately of the like kind to appearance. Both were women: the firſt about ſeventeen, unmarried; the ſecond about twenty-five, married; and both apparently healthy, till they were ſeized with ſymptoms much reſembling thoſe deſcribed by Dr. Huck. Though there was no opportunity of confirming this opinion by diſſection; yet, from the ſimilarity of the ſymptoms, there was juſt ground to conclude, that this diſtemper is not ſolely confined to the age of childhood.

OF THE CURE OF THE SCIATICA*.

IT is always the object of my wiſhes, and endeavour, in the duties of my profeſſion, to reduce the cure of diſeaſes to all poſſible ſimplicity: and nothing affords me ſo much ſatisfaction, as when, by repeated cautious trials, a method occurs to me, of curing any diſtemper with ſome degree of certainty, eaſe, and expedition.

I am in hopes, that the method now offered to your conſideration, will be found, by experience, to anſwer the end propoſed, and aſſiſt practitioners in removing an obſtinate painful diſeaſe with leſs difficulty, than by the methods hitherto employed for the purpoſe.

The *Morbus Iſchiadicus*, or, as it is called in this country, the *Sciatica*, is a diſeaſe too well known by phyſicians to need any deſcription; too painful not to require the ſpeedieſt relief; and ſo obſtinate as to reſiſt many powerful remedies.

In the courſe of my buſineſs, many caſes of this nature have occurred to me, and, during a conſiderable part of my time, whenever they occurred, gave me much uneaſineſs. I found the remedies recommended for the cure of this diſtemper often inſufficient, always ſlow in producing a cure, and very often as painful almoſt as the diſeaſe itſelf.

It is at leaſt amuſing to ourſelves, if not inſtructive to others, to mention by what means we become acquainted with uſeful hints. I was deſired, many years ago, to viſit a man ſomewhat above forty years of age, who had long been confined to his bed, from the effects of a *lumbago* imperfectly cured. The violence of the pain was abated, but he was incapable of moving, or being moved, from the place he was laid, without ſuffering grievous torture. The part affected was the lower part of the *lumbar* region, from ſide to ſide, acroſs the loins. His fleſh was much reduced, his appetite decayed, and a feveriſh

* Medical Obſervations and Inquiries, vol. iv. p. 69. Read Auguſt 22, 1768.

heat conſtantly attended him, the conſequence of pain and inanition. He had been many weeks under the care of a very able phyſician, who had attended with much diligence, and preſcribed, with judgment, very efficacious medicines. The patient was reduced to the neceſſity of taking opiates to procure a temporary relief. He had taken them a conſiderable time, and in doſes rather more than moderate, though not very large, before I ſaw him.

Not finding any reaſon to ſuſpect either an internal abſceſs, or a tendency to it; but that the ſeat of the pain was in the tendinous parts about the loins, and deep, I directed a ſmall doſe of *calomel* to be given every night.

The following was the preſcription:

℞ *Calom. levig. gr.* x.
Tereb. e Chio. q. ſ. f. pil. x. *non deaurandæ. Capiat* j. *omni nocte.*

A laxative mixture was provided, to be taken in the morning, to procure ſtools, if he ſhould be coſtive. The opiate was gradually omitted.

Finding a grain of *calomel per diem* to have no effect, I ordered him to take two one night, one the next, and ſo to proceed.

His pains rather grew leſs by the time theſe pills were taken; but not the leaſt appearance of any effect from the *calomel* as a mercurial. I increaſed the doſe, till he got up to ſix grains of *calomel* every day, three at night and three in the morning; without ever perceiving any tendency to a ptyaliſm, purging, remarkable micturition, or diaphoreſis. The pains, however, gradually leſſened; he got up every day, recovered his appetite, got ſtrength, and, in five or ſix weeks time, was able to go abroad. He halted conſiderably, and made uſe of a walking-ſtick; but enjoyed tolerable health, and has not ſince been afflicted with any complaint of this nature.

Six grains of *calomel per diem*, for near a fortnight together, may ſeem a very large doſe to be taken without producing the common effect of mercurials. It ſurpriſed me at the time; and I ſhould by no means have proceeded to ſuch a length, if experiment, conducted with ſome degree of caution, had not led me ſo far in this particular inſtance.

A gentleman of great eminence in chymiſtry had aſſured me, that he had found very good effects from *calomel* given in the manner above mentioned, with the *Chio turpentine*, in worm-caſes, and all the diſeaſes of children. Thinking that ſmall doſes of *calomel* would be as likely to remove a diſeaſe ſo deeply ſituated ſooner than any other remedy, I had recourſe to this medicine, and gave it in the manner above deſcribed.

On reflecting, however, on its effects, I found cauſe to ſuſpect, that exhibiting *calomel* in the manner I had done, was uſing it in the moſt uncertain method. Moſt kinds of *turpentine*, I believe, are indigeſtible in the human ſtomach; the more ſolid their conſiſtence, the more difficult they are to be diſ-

ſolved

ſolved in the human body. Great part of the *calomel* might, therefore, be ſo effectually wrapped up in the *Chio turpentine*, the hardeſt and moſt indiſſoluble of the whole claſs that are uſed in medicine, that I apprehend a very ſmall proportion of the *calomel* ever came into action. From this conſideration, I have ſeldom ſince given mercurials made into pills with this ſubſtance, unleſs where I wanted to give the ſmalleſt quantity poſſible; but have generally ordered it to be formed into pills, with ſome ſubſtance that was eaſily diſſolvable, as ſome conſerve or confection. From the ſucceſs attending this caſe, I determined to make trial of a ſimilar proceſs in the *Sciatica*, and the event has generally anſwered my wiſhes. I recollect divers caſes of both ſexes, and different ages, in which a proceſs like the following has been of ſingular ſervice, after various other medicines and operations, recommended for the cure of this complaint, had been uſed to very little purpoſe.

℞ *Calom. levig. gran.* x.
Conſ. Roſ. q. ſ. f. pil. x. *non deaur.*
Capiat j. *omni nocte ſuperbibendo hauſt. ſeq.*

℞ *Aq. Alexit. ſimp.* ℥iſs.
Alexit. ſpir. ℥iſs.
Vin. Antimon. gut. xxx.
Tinct. Theb. gut. xxv.
Syr. ſimp. ℥j. *m.*

If the pain does not abate by the time this quantity is taken, I increaſe the doſe of *calomel* to two grains one night, one the next, and thus proceed alternately. When the pain abates, the anodyne and antimonial are gradually leſſened; perhaps omitted every other night, or wholly dropped. I have ſeldom met with a genuine *Sciatica* but has yielded to this proceſs in the ſpace of a few weeks, and has as ſeldom returned.

My inducement to make trial of this method at firſt was, that this kind of pains are deep ſeated in the moſt fleſhy parts of the human body, and to which it is extremely difficult to convey the efficacy of any medicine entire, either given internally, or applied without.

That mercurials, of all the medicines we are acquainted with, moſt certainly pervade the inmoſt receſſes of the muſcular and tendinous parts, and remove diſeaſes which we know have in them their reſidence.

That, till theſe could take effect, it was neceſſary to mitigate the pain; for all painful diſorders increaſe in proportion to the irritation attending them. The anodyne, above directed, has other properties than that of an opiate merely. Like as in Dover's famous powder, the anodyne in this compoſition, when duly proportioned, reſtrains the antimonial from exerting its uſual efficacy

cacy on the ſtomach and firſt paſſages, and conducts it to the remoteſt parts of the circulation, rendering it an uſeful and efficacious medicine in many painful diſorders.

If the diſeaſe does not yield to the doſe above mentioned, I gradually increaſe it till ſome little tenderneſs is perceived in the mouth; but I have ſeldom had occaſion to proceed ſo far, or to ſubject the patient to any confinement, unleſs in very rigorous weather. As the violence of the pain may ſafely be mitigated by this kind of anodyne, which is not merely a palliative, I have always thought it better to proceed with the *calomel*, in the manner above mentioned, as an alterative, than to riſk any thing for the chance only of a few days ſpeedier recovery. Formerly I have had recourſe to the bark, *guaiacum*, the *terebinthinate* ſpirits, and other uſual medicines; but ſeldom to the patient's benefit, or my own ſatisfaction. Fontanels, bliſters, cauſtics, likewiſe, have produced as little advantage. Of late I have truſted to the proceſs above deſcribed, and have very ſeldom been diſappointed.

Bleeding has not been mentioned, becauſe in moſt of the caſes I have ſeen, it was unneceſſary. Phyſicians are ſeldom conſulted on theſe caſes in the beginning of the diſeaſe. In plethoric habits, this evacuation may be neceſſary as well as purging. Thoſe who ſee the patients early, will be the beſt judges of the neceſſity of theſe evacuations.

OF THE

USE of TAPPING early in DROPSIES*.

THERE are ſeveral efficacious remedies in the hands of phyſicians, which are often made uſe of ſo late in the diſeaſe, that they fall into diſgrace, from being applied when nothing could ſave the patient from inevitable deſtruction. Of this kind, perhaps, are bliſters applied to the head. The ſick and the by-ſtanders have conſented to this application, when nothing could be of uſe. The patient dies, and the bliſter to the head bears the blame, both as an ill omen from the phyſician, and as a barbarous application; when, in fact, it deſerves the imputation of neither. The phyſician, well knowing the general prejudice againſt the application of bliſters to the head, ſhifts off the propoſal longer than is right in his own judgment, through fear leſt the terror excited by ſuch a preſcription, ſhould do as much harm as the bliſter could do good. As the danger increaſes, this very bliſter is then often called for by the patient's friends, when neither this nor any thing elſe can avail.

With what difficulty can we perſuade thoſe who are on the verge of a conſumption, and the hectic ſymptoms juſt in their infancy, to leave towns for a purer air, or ſeek the aid of Briſtol waters on the ſpot, while ſuch kind of remedies afford almoſt a certain cure! When the lungs are inflamed and ulcerated, and an incurable hectic, with all its waſting conſequences, are far advanced; then, whether the phyſician thinks any benefit can be received or not, they fly to Briſtol, when neither the water nor any other means can prevent their diſſolution.

Perhaps the operation of tapping may have undergone the ſame fate. Few dropſical patients can bear the name without apprehenſions of terror; and indeed not without reaſon: for, of the many who undergo this operation, how few are ſurviving inſtances of its advantage!

I think there is reaſon to ſuſpect, that tapping has incurred ſome part of its

* Medical Obſervations and Inquiries, vol. iv. p. 114. Read November 14, 1768.

diſgrace, from its being delayed till it could have no other effect than procuring a very ſhort-lived hope to the patient, at the certain expence of the ſmall ſhare of ſtrength remaining.

I have endeavoured to prevail upon ſuch patients labouring under this diſeaſe as have requeſted my aſſiſtance, to ſubmit to it as early as poſſible, after I found that the quantity of water was ſuch as could not be removed by medicines, without doing great violence to the conſtitution. There are ſeveral perſons now living, whom I prevailed on early to ſubmit to this operation. When I found the uſual diuretics had no effect, and the more active purgatives did as much prejudice by weakening the whole frame, bringing on thirſt, loſs of appetite, debility, and fever, as they did ſervice by the evacuation they produced; I deſiſted from medicine; allowed them to drink as much as thirſt required; and, when the fluctuation was ſo evident as to render the operation ſafe, it was performed. In one caſe, one operation alone ſucceeded: for, by diuretics and corroborants, proper diet and ſuitable exerciſe, the urine paſſed the kidneys freely, and the patient recovered perfectly. This was an evident *aſcites*, and came on ſoon after a lying-in; apparently from the power of abſorption being weakened beyond a ſpeedy recovery, and the exhalant veſſels being relaxed immoderately; the balance was deſtroyed, and a vaſt quantity of water was collected in a ſhorter time than I ever ſaw. All the *viſcera* ſeemed to be ſound, and none of the uſual cauſes of dropſies from intemperance had preceded. Had we perſevered with ſtrong purgatives or diuretics much longer, the tone of the abſorbent veſſels would perhaps have been ſo far weakened, as to have rendered tapping, or any other means, ineffectual.

Another caſe was, in a ſingle woman of about thirty-five years of age: the diſeaſe ſucceeded a tedious lingering fever, attended with great thirſt; and very large quantities of thin liquors had been poured down, without diſcretion.

Apprehending the diſtemper proceeded from the diminiſhed power of the abſorbing veſſels, the redundancy of fluid, the general debility of the whole frame; very few medicines, except cordials, were given, till ſhe was full enough to be tapped. This was happily performed; but ſhe ſoon filled again. The operation was repeated. The medicines ordered for her now began to take effect. The urine was increaſed, her ſtrength returned, and ſhe left the town perfectly recovered.

If we conſider, that this operation is far from being one of the moſt painful, and that, if the fluctuation is ſufficiently evident, and the belly moderately tenſe, it is one of the ſafeſt; it ſeems to me, that we have nothing to fear, either in reſpect to ourſelves or our patients, if we recommend it as early as poſſible.

If I am called to a patient tending to a dropſy, the belly beginning to fill, the

the urine paſſing in ſmall quantities and high-coloured, the appetite failing, and thirſt increaſing, with the loſs of fleſh in the upper parts of the body; I have recourſe to ſuch diuretics, purgatives, and corroborants intermixed, as the ſtate of the caſe and the nature of its cauſes indicate. The preparations of ſquills, the neutral and alkaline ſalts, the *terebinthinate* balſams, afford many efficacious compoſitions. The purgatives are known to every one. If, by a reaſonable perſeverance in this courſe, no conſiderable benefit accrues; if the *viſcera* do not evidently appear to be obſtructed and unfit for the future purpoſes of life; if the complaints have not been brought on by a long habitual train of intemperance, and from which there ſeems little hope of reclaiming the patient; if the ſtrength and time of life are not altogether againſt us; I deſiſt from medicine, except of the cordial reſtorative kind; and let the diſeaſe proceed till the operation becomes ſafely practicable: when this is done, by the moderate uſe of the warmer diuretics, chalybeates and bitters, alſo the preparations of ſquills in doſes below that point at which the ſtomach would be affected, I endeavour to prevent them from filling again.

If we recollect what happens in the cure of ſeveral incyſted dropſies, we ſhall find the opinion here advanced confirmed. Divers of theſe are cured by puncture; ſometimes once only; ſometimes the operation is neceſſarily repeated. You will remember many caſes, I doubt not, of the dropſies of the *teſtis* or *tunica vaginalis* particularly. I can recollect ſeveral within my own knowledge; ſome that have required but once tapping, others repeatedly, and yet at laſt have remained perfectly cured.

Should you, gentlemen, be of opinion, that theſe remarks are not ill-founded, I have no doubt but, from the ſhare of buſineſs which paſſes through your hands, the public will receive ſuch confirmations as may tend to diſſipate that dread of tapping, which, I am ſatisfied, is one great cauſe of the diſgrace under which it labours, and is alike injurious to our art, and detrimental to the patient.

Before I quit this ſubject, permit me to mention a method of ſcarification that has often ſucceeded in anaſarcous ſwellings of the legs and thighs; at leaſt, it has ſo far ſucceeded, as to draw off large quantities of water, without either ſo much pain or danger as in the common way by inciſions. Theſe are always painful, and, if large, are dangerous, from the known difficulty of healing wounds in anaſarcous habits.

I generally order this operation to be performed with the common ſcarificator uſed in cupping, and the inſtrument to be placed ſo as to make the wounds tranſverſely. If the ſkin is thick, the lancets may be ſet ſo as to make deeper, and conſequently wider inciſions. By this method, a large quantity of water will often drain from the legs and thighs, without riſk of inflammation, or deterring the patient from a repetition, if neceſſary. To proceed with as

much ſafety as poſſible, I commonly order the inſtrument firſt to be applied about the middle of the calf on each ſide the leg, and either to one leg only, or to both, as occaſion requires. The application of glaſſes, either to raiſe the ſkin, or promote the diſcharge afterwards, is unneceſſary. The inſtrument is gently preſſed upon the ſkin till a ſurface is formed ſufficiently flat to admit the lancets in the ſcarificator to take effect equally. By making theſe little openings in the ſkin tranſverſely, they give vent more freely to the fluid, and are longer before they unite.

Should it be aſked, in what caſes this application is proper; it is anſwered, that in all anaſarcous habits, where the *ſeroſa colluvies* gains upon us faſt, and the ſkin is ſo ſtretched as to threaten a rupture, or inflammation and gangrene, much miſchief may be prevented by theſe means. Likewiſe, where the breath is extremely affected in ſuch habits, a temporary relief may, in this manner, often be obtained, in order to give a fair chance to remedies adminiſtered internally. Your own experience, Gentlemen, will ſuggeſt to you many other uſes of this operation.

ALTHOUGH this case of Hemiplegia, and the two subsequent papers, have been published in the Medical Observations and Inquiries, *under an anonymous title, yet I have the authority of a letter, in which the Doctor adopts them as his performances. In the fourth volume of the* Observations and Inquiries, *in which these are included, many other of his pieces are inserted under his proper signature; but, with a diffidence which no author had less occasion to plead: that his name might not too frequently recur, he chose to suppress it in these three instances: this objection no longer subsists, and the utility of these essays sufficiently warrants me to disclose to the public, what the Doctor had previously disclosed to his friends.*

In the London Bills of Mortality a considerable reform is undoubtedly wanting; the subject had engaged his attention, and he had even sketched some outlines for effecting this reformation, which his want of leisure prevented him from completing for public inspection. Editor.

A HEMIPLEGIA,

A

HEMIPLEGIA,

Attended with Uncommon Circumstances;

Communicated by a MEMBER of the SOCIETY*.

ON the 27th of February, 1762, M. M. in the ſixty-eighth year of her age, was ſeized with a palſy, which entirely deprived her of the uſe of her right ſide, and of her ſpeech. At the firſt attack ſhe was inſenſible, and then ſhe had all the aſſiſtance that an able phyſician could give her; but as ſoon as ſhe recovered her ſenſes, all his preſcriptions were in vain; ſhe perſevered with obſtinacy to refuſe taking any medicine, or to ſuffer any outward application. All the time of her helpleſs condition, ſhe was conſtantly attended by two nurſes in the night, and generally by two likewiſe in the day-time, beſides her relations, who would frequently ſit by her, both to comfort and to amuſe her. She lived till the 5th of October, 1767.

From a little time after ſhe was ſeized with the palſy, till about five weeks before ſhe died, ſhe eat meat (more heartily and more greedily indeed, than in her former ſtate of good health) and by choice, rather the high-ſeaſoned diſhes, both for dinner and ſupper; but drank ſparingly. All this time ſhe was never ſick at her ſtomach, and ſhe never ſweated. Her urine was moderate in quantity; but neither its quantity nor quality could be aſcertained, as it came always from her upon cloths. She had frequently moſt excruciating pains in the urinary paſſages, which were ſuppoſed to be from gravel, and ſhe paſſed many ſmall round ſtones like ſhot. She had a conſtant ſpitting, or drivelling of *ſaliva*. She was coſtive from the beginning of her illneſs: and this complaint increaſed to ſuch a degree, that in a little time, ſhe ſeldom had a ſtool in leſs than a week; more frequently it was a fortnight, ſometimes three

* Medical Obſervations and Inquiries, vol. iv. p. 110. Read October 31, 1768.

weeks,

weeks, and ſometimes four, and twice together only once in thirty days; that is, *twice in two months, while ſhe was eating heartily all the time, and had no ſenſible excretion beſides, except the uſual quantity of urine, and the ſalival diſcharge above mentioned.* And both times, the evacuation probably would have been ſtill later, if four or five grains of *jalap* had not been daily taken (without her knowledge) in the beer that ſhe drank, from the time that ſhe had been a fortnight without a ſtool. After this the coſtiveneſs continued, though not to ſuch a degree, while ſhe lived, except once, that ſhe was taken for a ſhort time with a violent purging, which threatened her immediate diſſolution.

During the laſt four or five weeks of her life, her appetite to food declined gradually. In the laſt eleven days ſhe ſwallowed neither food nor drink of any kind whatever. On the twelfth day ſhe had been prevailed upon to try if ſhe could take a ſip of her favourite liquor, ſmall-beer, with a little wine in it. Whether ſhe got any down or not, in two different attempts, was uncertain; but it could not have been more than a tea-ſpoonful each time. On the thirteenth day before her death, ſhe had taken one diſh of chocolate, which, we may preſume, was the laſt nouriſhment ſhe took.

During theſe laſt twelve days, ſhe was perfectly in her ſenſes (till within a few hours of her death) and never expreſſed the leaſt degree of hunger or thirſt. She made rather leſs urine than before. Her ſtrength ſunk, or failed, in the moſt gradual way that could be conceived; and her breath and her diſcharges became ſo offenſive before death, that though great care was taken, the room could not be kept tolerably ſweet.

She was much extenuated in the courſe of her diſeaſe; and, at one time, it was with great difficulty that a mortification, from preſſure in the region of the *os ſacrum*, was prevented.

This account was drawn up by a relation of the patient, who, from his ſituation, could not be impoſed upon with regard to any of the facts above mentioned; and it is communicated for the ſake of thoſe facts only.

ON PAINFUL CONSTIPATION FROM INDURATED FŒCES*.

To the Medical Society.

Gentlemen,

Permit me to plead the privilege offered in the Preface to your First Volume, of remaining, if a writer pleases, concealed.

Your secretary is informed to whom he may apply, if any of the facts are disputed. I am, &c.

I Know not of any writer who has given himself the trouble to acquaint young practitioners with a complaint that frequently occurs, is very troublesome, may easily be mistaken, and the mistake be productive of very serious consequences to the sufferer.

You who practise in the metropolis, by daily conference with one another, learn many things casually, as it were, of much importance to yourselves and to others, that make their way more slowly to the country.

It is known, that from many causes, from the use of the bark especially, it happens, such quantities of hardened *fæces* are sometimes collected in the *rectum*, as nature, without assistance, is unable to expel. Many such instances have occurred to me in the course of a moderate share of business; and I doubt not, many more to you, Gentlemen, who seem to take the lead so happily in practice, as well as in a disposition to communicate the result of your extensive experience.

I shall relate one single case particularly, as some useful hints may be collected from it, as well as from some other cases of the like tendency, sufficient, I hope, to lead the young practitioner into a method of distinguishing

* Medical Observations and Inquiries, vol. iv. p. 123. Read November 14, 1768.

this diſorder from others, which, though in ſome appearances the ſame, are diametrically oppoſite.

Not long ſince I was deſired to viſit an elderly gentleman, labouring, as it was ſuppoſed, under an obſtinate *diarrhœa*. He was in the country, under the care of a very ſenſible and experienced apothecary, who, from the patient's and attendants complaints and informations, was induced to believe it a *diarrhœa*, and had treated it as ſuch, in a very proper manner.

The gentleman had very frequent motions to ſtool, and the motions extremely urgent. Some thin excrement was always diſcharged on theſe occaſions: the pains gradually leſſened for a time, and then returned with the like violence and the ſame effects.

Rhubarb, teſtacea, demulcents, anodynes, had been occaſionally given; but the diſorder ſtill continued, and the pains and diſcharges, though rather leſs frequent, ſeemed to be more violent. From the violence of theſe returns, I began to ſuſpect they proceeded from ſome obſtruction in the *rectum*. The pains were previous to the diſcharge; a *teneſmus* always ſucceeds it. On enquiry, I found my patient was always diſpoſed to be coſtive; that he had been ſo many days preceding this diſeaſe; that he had not paſſed a figured ſtool of a fortnight: I gueſſed therefore, that the diſcharge of thin excrement was forced by the painful throws, paſt the obſtructing collection.

I requeſted the apothecary's ſervant, who was in waiting, to dip his finger in oil, introduce it into the *rectum*, and try to diſcover if my ſuſpicions were well-founded; and if they were, to endeavour to break the hardened *ſcybala*, and bring them away, either by his finger, or a narrow ſpoon, the beſt inſtrument we could then find.

It proved as I had ſuſpected, and the young man performed his part ſo well as to bring away a very large lump of hardened *fæces*, which could not by any other means have been diſcharged. Emollient clyſters, and oily relaxing draughts, ſoon brought away the reſt, and our patient was effectually relieved from that moment.

Another caſe, not altogether diſſimilar, may be worth mentioning. I was deſired to viſit a gentlewoman near ſixty years of age, of a conſtitution rather plethoric, and, to appearance, healthy, except from the effects of the preſent indiſpoſition. She complained of very ſharp, but intermitting pains of all the parts about the *pelvis*. She compared them to labour-pains in reſpect of violence, but of longer duration; juſt, ſhe ſaid, as if the womb, bladder, and all within her, were forcing outwards: every half hour almoſt they returned, and had ſo continued near a month before I was called to her.

An ingenious apothecary, converſant in midwifery, had ſuſpected that ſome hardened *fæces* in the *rectum* increaſed the malady, if they were not the ſole cauſe of it. He was permitted to examine; but, by introducing the finger as high

high as poſſible, he could diſcover nothing of this kind, but found the *uterus* much enlarged and very hard, compreſſing the *rectum* in ſuch a manner as to prevent any thing but what was in a very liquid ſtate from paſſing, and ſuch kind of liquid ſtools were diſcharged very frequently, ſo as to imitate a genuine *diarrhœa*.

The *uterus*, when examined, was exquiſitely painful to the touch. The urine was diſcharged with much difficulty, owing, as it was ſuppoſed, to the increaſed bulk of the *uterus*.

Upon enquiry, I found the kind of pain was ſuch as is above deſcribed. That the ſtools were always liquid, and theſe only forced away by pretty active purgatives, gentle ones having no effect, which never failed, at the ſame time, to increaſe theſe forcing pains immoderately. This had rendered the uſe of anodynes neceſſary at night, to allay the irritation produced by the purgatives.

Though from the account given me, there was much reaſon to apprehend the *uterus* was in a very morbid ſtate, probably verging to a cancer, as ſeemed afterwards to be more evidently the caſe; yet that ſome hard *fæces* might be one cauſe of the preſent pain, ſeemed to me not improbable.

The apothecary, at my requeſt, examined the *rectum* again with his finger; but found no *fæces*. He then introduced a ſmall tallow candle, and puſhed it gently paſt the compreſſed part. Upon drawing it out, he obſerved ſome excrement ſticking to it. This induced him to paſs it again to the obſtructing place, and, by degrees, he diſlodged a very large maſs of hardened excrement, which fell into the *rectum*, and being there broke with the finger and the ſcoop, was extracted. An emollient clyſter brought away the reſt, and ſhe now complained of nothing but fatigue and ſoreneſs.

Gentle laxatives now took effect, and her ſufferings were greatly diminiſhed. Thoſe ariſing from the morbid *uterus*, nevertheleſs, continued, as I was informed afterwards.

An opinion that purgative, or even laxative medicines deſtroy, or, in ſome degree, fruſtrate the efficacy of the bark, has contributed not a little to produce many troubleſome accidents of this kind: for, as a large quantity of bark is generally uſed in the cure of an ague, and as the bark is indiſſoluble in the ſtomach and bowels, it eaſily unites with the *fæces*, and forms with them ſuch large, hard, compact *ſcybala*, as can by no means paſs the *ſphincter ani*, without exquiſite pain and difficulty, and ſometimes not without the aid of inſtruments.

When this is the caſe, the patient complains of excruciating forcing pains about the *anus*; but remitting. Some thin excrement is diſcharged, and the pain abates. A freſh ſpaſmodic effort follows, and with the like ſucceſs. It is a kind of ſpontaneous ſpaſm of all the parts in, or connected immediately with

the *pelvis*, for the excluſion of this irritating ſubſtance. Should ſuch a thin diſcharge, attended with pain, lead any one to ſuppoſe it a *diarrhœa*, and, in conſequence of ſuch a ſuppoſition, treat it with aſtringents and opiates, it is evident that greater miſchief would enſue.

Should the deſcription given by the patient, and the preceding circumſtances of the caſe, induce one to doubt whether the diſeaſe is owing to conſtipation, a trial attended with no danger, and, in moſt caſes, with little difficulty, will ſoon clear up the matter. If the pain remits, and returns with violence after a ſhort remiſſion, and the patient has either taken the bark, or been long coſtive, there is reaſon to apprehend the complaints are the conſequences of conſtipation, and can probably be relieved by no other means ſo ſafely and ſpeedily, as by manual operation.

But it appears, that a ſearch with the finger only, is not in all caſes ſufficient: the lodgment may be above its reach. A ſmall tallow candle may be paſſed ſo far as to put the affair out of doubt, and ſhould be recommended where, from concurrent evidence, ſuch a lodgment is ſuſpected.

SOME

SOME REMARKS ON THE BILLS of MORTALITY in *LONDON*;

WITH

An ACCOUNT of a late Attempt to eſtabliſh an ANNUAL BILL for this Nation*.

To the Medical Society.

December 30, 1768.

Gentlemen,

THE clerk of the pariſh in which I reſide, having left at my houſe, the other day, the yearly bill of mortality for London, I peruſed it immediately with ſome attention.

If the following hiſtory and reflections relative to this ſubject, fall within the compaſs of your deſign, you may publiſh them if you pleaſe: and although they come from a nameleſs writer, you may be ſatisfied of the truth of the facts, by applying to your ſecretary, who will be informed from whom he received this communication.

About the year 1754, a phyſician in the city, who had for ſome time employed a part of his time in obſerving the ſtate of the weather, the concomitant diſeaſes, and taken ſome account of the weekly bills, applied to the Company of Pariſh-clerks in London, and acquainted them, that to his certain knowledge, their weekly bills were defective in many reſpects; that the liſt of diſeaſes was a very injudicious one; that their preſent labours, therefore, anſwered very little uſeful purpoſe, either to themſelves or the community: however, that it ſeemed practicable to form a plan that would alike conduce to

* Medical Obſervations and Inquiries, vol. iv. p. 214.

the advantage of their Company, and to the intereſt and ſatisfaction of the nation in general.

A memorial on this ſubject was delivered to the Company in form, ſetting forth the particular benefits hence to be expected. That in reſpect to medicine, the increaſe or decreaſe of certain diſeaſes, at different times and places, would be both aſcertained, not only in this city, but throughout the kingdom; from whence much benefit might be derived to the art of healing, as well as to the public.

That the increaſe or decreaſe of the people in general would be aſcertained; in time likewiſe their numbers.

That the increaſe of vice or virtue might alſo be traced, by obſerving what proportion the diſeaſes proceeding from intemperance annually bore to the reſt; and likewiſe in what particular places this was obſervable.

That the firmeſt baſis of political arithmetic might be raiſed on this foundation: and that a work of extreme utility, on ſo many accounts, could not but redound to the benefit of thoſe who had the conduct of it.

The Company, on conſidering the affair, thought the propoſal of ſo much conſequence, as to apply to parliament for powers ſufficient to carry this deſign into execution.

The baſis of this plan was, that not only the pariſhes within the bills of mortality, but all the pariſhes in England, ſhould be obliged to keep exact regiſters of BIRTHS, BURIALS, and MARRIAGES, inſtead of *chriſtenings* and *burials* only, as the bills are at preſent. And that from the ſeveral pariſh regiſters, an annual regiſter ſhould be formed in each county, and tranſmitted to the capital, early enough to be incorporated into one general bill.

In order to render that part of this account which related to diſeaſes more advantageous, ſome phyſicians of eminence met together, and attentively conſidered the preſent liſt of diſtempers, rejected all ſynonymous and obſolete terms, and propoſed to give ſuch an explanation of thoſe that were retained, as might enable thoſe whoſe duty it might become to make report, to do it with much more preciſion than it has been done hitherto.

The affair was brought into parliament, and the bill was ordered to be printed, and ſeemed to be in a way to paſs very favourably.

Unfortunately, however, the gentleman * who undertook the conduct of this affair in the Houſe of Commons, inſiſted on a clauſe being inſerted in the bill which totally overthrew the deſign, and was the principal cauſe of its being rejected by a great majority.

One motive that was urged by thoſe who were friends to the bill was, that it would furniſh the moſt perfect baſis yet extant for political calculations reſpecting inſurances on lives, and other circumſtances of apparent utility.

* The late Thomas Potter, Eſq.

It

It was evident, that could the number of people be known, the foundation of ſuch computations would be laid more ſpeedily and certainly.

This induced the gentleman above mentioned, to inſiſt on a clauſe for numbering the people of both ſexes and all ages, before the act took place. Thoſe who were not the friends of adminiſtration at that time, laid hold of this clauſe; and nothing but the *ſin of David* was heard of, till the bill was laid aſide.

All this, perhaps, you will ſay, is little to the purpoſe of medical knowledge; but indulge me a few moments longer, and ſhould you ſtill be of the ſame opinion, I ſhall ceaſe to urge your admitting theſe remarks.

I know of nothing that would more effectually conduce to ſtate the different degrees of healthineſs or unhealthineſs in the different parts of this nation ſo clearly, as a proper bill of mortality; nor ſuggeſt the neceſſity, nor perhaps the means of ſecuring the firſt, or preventing the latter. The records of the ſeaſons, in reſpect to heat and cold, dryneſs and moiſture, made by ingenious men in different parts of the kingdom, compared with ſuch annual bills, would afford many uſeful reflections to the faculty, much benefit to the community in general.

I have, therefore, thought it not improper to relate what ſteps have been taken in this affair, and by what means they were rendered ineffectual. Another ſeaſon may be more propitious; and ſhould you, gentlemen, approve the plan, your opinion, and aſſiſtance, I am perſuaded, would inſure ſucceſs.

Perhaps it will excite you the more readily to embark in this affair, when you recollect, that our country ſuffers much in the eſteem of foreigners by a grievous neglect in compoſing the preſent bills of mortality. If you will pleaſe to caſt an eye upon the article of *conſumption* in the yearly bill, you will perceive, that in the preſent year, no leſs than 4,379 out of 23,639 are ſaid to have died of this diſeaſe. From whence foreigners conclude, that the climate is ſo much diſpoſed to produce conſumptions, that it may juſtly be called unhealthy; a character it by no means deſerves.

You know that theſe bills are framed from the reports of common ſearchers appointed to view the dead bodies, in order to prevent the concealment of violence. Theſe ſearchers are, for the moſt part, ignorant poor women, who, if they ſee the body emaciated, immediately enter it in their report as conſumption. I need not inform you, how many chronic as well as long-continued acute diſeaſes, in which the lungs are no otherwiſe affected than as ſuffering with all the other parts, waſte the whole frame, and bring it to the ſame ſtate as thoſe who died tabid; but theſe ought not to be ranked under conſumptions, but under the ſeveral heads to which they belong.

It was intended, among other ſalutary attempts, to reſcue our country from theſe unjuſt imputations, and to vindicate its character from the effects of ignorance

norance and inattention. That many die of conſumptions is moſt certain; but by no means in the proportion alledged by theſe erroneous accounts. Perhaps the real number of thoſe who die of the genuine *phthiſis pulmonalis*, would not amount to a third part of the ſum, oppoſite to the article of conſumptions. I have been preſent where the reports of ſome of theſe common ſearchers have been produced, and know, that perſons who have died of mere old age, have been reported conſumptions. Children, waſted by glandular diſeaſes, without the leaſt ſymptom of a pulmonary affection, have been placed in the ſame catalogue, and others yet ſtill more remote from a genuine conſumption, have been added to the liſt.

Theſe remarks, I acknowledge, do not directly tend to the cure of any diſeaſe, your immediate object; yet, as your obſervations, I find, are in the hands of many learned men abroad, theſe hints may tend to correct an error relating to the hiſtory of our climate, which has to our coſt been received, if I am not miſinformed, by many ingenious foreigners, and propagated in their writings to our diſadvantage.

I am, &c.

REMARKS

REMARKS

ON THE USE OF

BALSAMS in the Cure of CONSUMPTIONS *.

To the Medical Society in London.

Gentlemen,

SO much has already been ſaid by different Authors on the ſubject of conſumptions, and the hiſtory, progreſs, and uſual methods of treatment, are ſo well known, that it may ſeem almoſt preſumption to offer any remarks to you upon this diſeaſe. And indeed ſome apology may be neceſſary, when I acquaint you, that I have no new method of cure to propoſe, nothing, I fear, that will conduce more effectually to the relief of this diſtemper, than the remedies you are already acquainted with. My view in ſubmitting theſe remarks to your conſideration, and, if not diſapproved by you, to the public, chiefly aims at preventing inconveniences that may ariſe to conſumptive patients by the uſe of ſome medicines vulgarly applied to the cure of pulmonary diſeaſes, and which, under certain circumſtances, are not only unſuitable, but frequently injurious.

An idea that all balſams are healing, and that in all ulcers, not excepting thoſe of the lungs, they are indicated, has ſo greatly prevailed, that to doubt of its propriety, would ſeem to betray a want of phyſical knowledge. Yet I cannot but ſuſpect, nay, more than ſuſpect, that this idea has been the means of precipitating too many of theſe unhappy invalids prematurely to their grave.

The term *balſamic*, I own, includes a vaſt variety of different ſubſtances. A ſolution of *ſperma ceti*, nay, ſometimes oil mixed with water by the means of a mucilage, is ſtiled by ſome a balſamic, as well as a ſolution of balſam of

* Medical Obſervations and Inquiries, vol. iv. p. 231. Read October 16, 1769.

Peru, Copaivi, olibanum, and other heating reſinous bodies: but there is a vaſt difference between theſe. The former, if free from rancidity, are properly emulſions, and antacrid. The latter are literally balſamics, all of which are more or leſs pungent and acrimonious. Let us juſt take a view of the principal articles of this kind in the *Materia Medica,* as they are ranged in the *Pharmacopœia.* They are chiefly the following: *Balſamum Copaiva,---Peruvianum,---Tolutanum,---benzoinum,---gummi ammoniacum,---myrrha,---olibanum,---opobalſamum, ---ſtyrax, --- terebinthina.* The officinal preparations are, *balſamum Locatelli,---ſulphuris,--- terebinthinæ,--- traumaticum.* Some others I may perhaps have overlooked, but, excepting the *guaiacum, maſtiche,* and *balſamum guaiacinum,* I think I have ſeen, at one time or other, all the reſt made uſe of, and in full doſes, in the cure of conſumptive diſeaſes, where, if it was not evident, there was at leaſt ſtrong reaſon to ſuſpect the lungs were ulcerated.

For the ſenſible qualities of theſe ſubſtances, I ſhall appeal to Dr. Lewis's Hiſtory of the *Materia Medica,* and to the ſubſtances themſelves, and from thence endeavour to point out the effects they are moſt likely to produce on the human body.

Balſamum Copaiva, ſays Dr. Lewis, has a bitteriſh biting taſte, not very intenſe, but durable in the mouth; and quotes Fuller as aſſerting it to be manifeſtly warm and bitter; and that it purges when taken in a large doſe, *viz.* two or three drachms. This medicine, however, Fuller recommends in dry deep coughs, coughing up of blood and pus.

Balſamum Peruvianum, of a very hot pungent taſte: it is one of the hotteſt of the natural balſams.

Balſamum Tolutanum has an agreeable warm ſweetiſh taſte, very ſlightly pungent, and not accompanied, like that of moſt of the other balſams, with any nauſeous reliſh.

Benzoin has very little taſte, impreſſing on the palate only a ſlight ſweetneſs: it imparts by digeſtion to water, a ſlight pungency.

Ammoniacum has a nauſeous ſweetiſh taſte, which is followed by a bitter one.

Myrrha; a lightly pungent, and very bitter taſte; nauſeous on the palate.

Olibanum; a bitteriſh and ſomewhat pungent taſte.

Opobalſamum; a bitter, acrid, aſtringent taſte.

Styrax; of a mild taſte, of no great heat or pungency.

Terebinthina Chia; of a warm pungent bitteriſh taſte.---All the turpentines are hot, ſtimulating corroborants or detergents. So far Dr. Lewis.

Balſamum Locatelli is compoſed of oil, two parts; turpentine and wax, each one part: it participates therefore of the qualities of the turpentine increaſed by heat. The red ſanders only give it colour, and ſome little ſmell.

Balſamum ſulphuris is a pungent acrimonious liquor, if made from ſulphur only;

only; but when it is made either with oil of aniſe-ſeeds or turpentine, the heat and acrimony are much increaſed.

Balſamum traumaticum is a tincture of *benzoin*, *ſtyrax*, *balſam* of *Tolu*, and *ſocotorine aloes* in ſpirits of wine. From the nature of the ingredients and the *menſtruum*, it is evidently heating.

An opinion ſeems to have prevailed amongſt mankind univerſally, that theſe kinds of gummi-reſinous ſubſtances applied externally, promoted the healing of wounds and ulcers without exception. They early found, that it was neceſſary, in order to heal, to defend the parts affected from the external air; that the juices of plants alone, were inſufficient to form a plaſtic body; that unctuous applications eaſily melted; but that theſe tenacious yet pliant bodies afforded the moſt laſting defence. By degrees they apprehended that each balſam was endued with diſtinct properties. Hence they began to form numerous compoſitions, plaſters, balſams, ointments, without end; which a more enlightened ſurgery has at length greatly diminiſhed.

Remedies which appeared to aſſiſt in healing wounds externally, were ſoon apprehended to have ſimilar effects internally adminiſtered, in diſeaſes proceeding from, or attended with ulcerations, or in wounds of any internal parts: and this apprehenſion ſeems to have introduced theſe and many other ſubſtances, ſuppoſed to be poſſeſſed of balſamic qualities, into the train of phthiſical remedies, in all degtees and all conditions of the diſtemper. That this is the fact, I doubt not but you are, from your own obſervations, very fully convinced.

It will be neceſſary to examine with what propriety theſe ideas have been adopted. Let us begin with obſerving what effects theſe medicines have when applied externally; trace them cautiouſly in internal application; and then endeavour to judge impartially of their real virtues.

Balſamics and vulneraries are nearly allied, in our conceptions of theſe bodies. Subſtances that warm and ſtimulate the ſolids, and prevent a tendency to putreſcency in the juices. A little heat, ſome ſmall ſtypticity, ſomething agglutinant, muſt all concur. And theſe are moſtly united in the balſams; ſome containing more, ſome leſs, of theſe reſpective properties.

If, in an inflamed ſtate of an ulcer, in a young and vigorous conſtitution, a warm ſtimulating gummy-reſin is applied, pain, heat, inflammation will enſue, fluxion to the pained part will be great, a very conſiderable diſcharge will follow, conſiſting of the juices emitted from the wounded veſſels, and the veſſels themſelves diſſolved by heat and putreſcence. If theſe are exceſſive, the detriment to the ſick will be in proportion to the degree of the diſcharge and the part affected. The ſame medicines applied to a cold, ſerous, phlegmatical habit, in an advanced age, will be juſt ſufficient perhaps to produce ſuch ef-

fects as would be deemed perfectly ſalutary; that is, bring on a proper digeſtion, the foundation of a perfect cure.

In properly tempering the heat and ſtimulating qualities of balſamic applications, and adjuſting them to the age, habit, and qualities of the patient, conſiſts no ſmall part of the ſkill neceſſary in this part of ſurgery; as I believe will be allowed by the moſt experienced of that faculty.

Suppoſing that theſe remedies have ſimilar effects when internally exhibited, what are phyſicians to expect from medicines endued with theſe properties in ulcerations of the lungs?

If they may be ſuppoſed to paſs the ſtomach, and other offices of digeſtion, unaltered, will they not produce the like effects? Certainly they will. They will ſtimulate; and this, in a great degree, in proportion to their ſenſible qualities: for we know of very few ſubſtances that diſcover much activity on the organs of ſmell and taſte, which do not quicken the pulſe; and whatever quickens the pulſe, occaſions a quicker tranſit of the blood through the lungs; and conſequently, the motion of this organ is more frequently reiterated.

If the medicine can be ſuppoſed to have any ſpecific effect on the diſeaſed part, it muſt be to produce the effects already enumerated. If the ſubject is young and vigorous, the diſcharge of fluids, and diſſolution of the ſolids, will be in proportion to the activity and heat of the medicine, and the temperament of the ſufferer.

I am not more averſe to ſpeculative diſquiſitions, which have only for their object the eſtabliſhment of an opinion, than you are. But I perſuade myſelf you will have patience with me in theſe reſearches. It requires perhaps much more abilities than I am maſter of, to eradicate even a trifling error once received: but this I think of ſome magnitude.

It ſeems not improbable, but that an opinion of ſome healing qualities reſident in this claſs of medicines, may have been ſtrongly impreſſed on the minds of many perſons who practiſe phyſic, from the injudicious encomiums given of many ſuch kind of drugs and compoſitions, by ſome of the Diſpenſatory writers. Fuller's commendation of the balſam of *Copaivi* in ſuch a tendency to inflammation, as muſt certainly accompany a dry deep cough, or coughing up of blood and pus, muſt undoubtedly have made ſuch impreſſions, and may ſerve as one inſtance, among many others that might be adduced, of the dangerous tendency of indiſcriminate praiſe. I do not produce this inſtance of Fuller's mentioned by Dr. Lewis, as including this gentleman in the cenſure. Dr. Lewis produces it only as Fuller's doctrine, which moſt certainly deſerves reprehenſion; as a medicine ſo pungent and heating cannot be ſuppoſed ſafe, much leſs beneficial, in a diſeaſe that requires a very different treatment.

From an attentive conſideration of the manner in which this claſs of medi-

cines

cines has probably been introduced into the cure of pulmonary diſeaſes, it ſeems to me, that an opinion of their virtues and efficacy in healing external wounds and ulcers, opened a way for their admiſſion internally for ſimilar purpoſes; but how well or ill this opinion is founded, that medicines capable of heating, ſtimulating, quickening the pulſe, are likely to abate heat, and leſſen irritation, upon which the healing of all internal ulcers greatly depends, I think will appear from the preceding remarks.

And if we take a conciſe view of the riſe and progreſs of the *phthiſis pulmonalis*, we ſhall perhaps be more confirmed in our ſentiments, that all medicines poſſeſſed of heating ſtimulating qualities, are in general improper in the treatment of it.

This diſeaſe, for the moſt part, takes its riſe from ſome accidental cold occaſioning a cough. This cough neglected, by its frequency and force confirms the inflammatory tendency that firſt ſeized ſome particular point of the lungs. Theſe ſymptoms being neither attended with pain, much fever, or loſs of appetite or ſtrength at firſt, are ſtill farther neglected, till by their violence, ſome portion of the lungs is ſo far affected, as to become unfit for the uſe of circulation; the inflamed veſſels being either diſſolved into pus, or forming with the juices they contain a *ſchirrhus*, or other immoveable obſtruction.

If this obſtruction is ſmall, perhaps it remains without much increaſe, if proper care is taken, during the patient's life. If it is large, and a conſiderable portion of the lungs is affected, the diſeaſe is every moment increaſed, whether it be inflammation tending to ſuppuration, or to form a ſchirrhous hardneſs, and thereby rendering a portion of the lungs impervious: for as the ſame quantity of blood muſt neceſſarily paſs through the lungs, now a part is obſtructed, as was wont to do in time of health through the whole, it is eaſy to conceive, that the action and reaction of the fluids and ſolids muſt be increaſed more than conſiſts with the ſafety of this organ; and this in proportion to the extent and ſituation of the part affected.

And hence in part proceed thoſe flushings in the cheeks, that heat in the palms of the hands, or feet, or both, which are generally perceptible in conſumptive perſons, in the early periods of this diſtemper; and which accompany them throughout, only as they ſeem at length obliterated by more grievous ſufferings.

I omit to take notice of the many other cauſes that produce conſumptions: for when once a ſingle point of the lungs is obſtructed, or the ſmalleſt ulcer formed, the diſeaſe becomes alike formidable, the age and habit of the patient, and the degree of inflammation or ulceration being the ſame, whatever may be the cauſe.

If then, from the firſt beginning of this diſeaſe to its concluſion, the *momentum* of the blood in the lungs becomes greater in proportion to the obſtruc-

tion,

tion, and that the effect of this increaſed *momentum* is an increaſe of the obſtruction; and as the medicines above mentioned have a tendency, ſome more ſome leſs, according to their different degrees of activity, to increaſe this *momentum*, ought we not to be extremely diffident in applying them in ſuch caſes, by whatever authority they are recommended?

Perhaps it will be alledged, that Balſams, in certain ſtages of this diſeaſe, eſpecially where there is a manifeſt ulceration, and great quantities of pus are formed, muſt be of uſe as antiſeptics. I will not deny but they may be poſſeſſed of this property, as moſt heating aromatics and bitters ſeem to be. But ſuppoſing the whole of this antiſeptic efficacy could be conveyed unimpaired to the part affected, through all the changes they are liable to in the courſe of digeſtion, ſtill they would be active ſtimulants; and, whatever effect they might have on the juices, would ſtimulate the ſolids to more frequent and injurious contractions.

It is moſt probable, however, that much of this heating quality is expended before it reaches the part affected; whilſt it is evident, that moſt, if not all the ſtimulating tribe of medicines, whatever effect they produce on certain parts, as the *cantharides* on the urinary paſſages; yet exert a part of their active qualities on the nerves near which they paſs, ſo as in ſome degree to accelerate the motion of the blood.

Should it be farther alledged, that reaſoning is in vain where many facts, much authority, and general uſage, are againſt me, I admit the full force of this allegation; and allow that many facts as ſtrong as Fuller's may perhaps be produced. But as I well know the difficulty of aſcertaining the effect of any medicine by juſt experiments, I cannot but doubt at leaſt of the inferences, when my own ſenſes and diſpaſſionate reaſoning are againſt them. I am not unacquainted with the influence of general prejudice, nor with the difficulties that oppoſe themſelves to us, in endeavouring to ſurmount them. Early prepoſſeſſions, confirmed by general conformity of opinion, in favour of balſams, cannot ſoon be changed or eradicated.

All that I hope for from this eſſay, is, to put young practitioners upon their guard in reſpect to theſe kind of medicines in the treatment of conſumptions. I think I have ſeen much detriment ariſing from them, and very ſeldom any benefit. I believe the practice was firſt adopted on miſtaken principles, and followed too generally without conſideration. And it ſeems not improbable, but the ancient practice of embalming, which is ſuppoſed to have been principally performed by the means of balſams, may have contributed not a little towards eſtabliſhing a general prepoſſeſſion in their favour; and that many might infer, from their efficacy in preſerving dead bodies, they were endued with properties capable of preventing the corruption or decay of the living.

REMARKS

REMARKS ON THE CURE OF CONSUMPTIONS*.

To the Medical Society in London.

Gentlemen,

IN a former paper, I ſuggeſted ſome doubts I had entertained reſpecting the uſe of balſamic medicines, ſtrictly ſo called, in the cure of conſumptions, and offered ſome conjectures in regard to their firſt introduction into internal uſe, and their application to pulmonary diſeaſes in particular. Upon the whole, I am ſtill of opinion, that their uſeful efficacy in theſe diſorders is much to be ſuſpected, and that an indiſcriminate uſe of medicaments of this claſs, has rather a tendency to increaſe than mitigate the ſymptoms attending a genuine *phthiſis pulmonalis*.

Whilſt I am endeavouring to excite ſuſpicions againſt what appear to me the *lædentia* in this diſtemper, I ſhould think myſelf fortunate, could the review of ſeveral years experience afford any uſeful hints to thoſe whom I wiſh to aid, and to whom theſe remarks are particularly addreſſed, the young practitioners.

When we conſider the ſtructure of the lungs, the tenderneſs of their fabric, the multitude of veſſels of which they conſiſt, the importance of their uſe, the many accidents they are unavoidably expoſed to, and, in compariſon of many other parts, their inſenſibility to immediate leſion, we ſhall be much more ſur-

* Medical Obſervations and Inquiries, vol. iv. p. 289. Read June 11, 1770.

priſed

priſed there are ſo few perſons die of conſumptions, great as the number may ſeemingly appear†, than that ſo many periſh by this diſtemper.

To enumerate all the cauſes that are capable of producing a *phthiſis pulmonalis*, is not my intention; but to point out the neceſſity of attending to its commencement, in order to prevent its progreſs. The meaſles, and other inflammatory diſeaſes of the breaſt, to which children, as well as others, are expoſed, often lay the foundation of conſumptions: ſo likewiſe will colds, the ſuppreſſion of ſome ſalutary diſcharge, ſcrophulous and venereal affections, and many other cauſes, all which will operate more certainly and ſpeedily in bringing the diſtemper to a fatal concluſion, in proportion as a certain tenderneſs in the fabric of the lungs, an hereditary *tabes*, and other circumſtances, concur: for, to thoſe who are acquainted with the animal œconomy, it is rather a matter of wonder how the ſtrong and robuſt eſcape affections of the lungs, ſurrounded as we are with ſo many cauſes capable of producing theſe affections, than that perſons of a certain make, and particular delicacy of conſtitution, are ſo ſubject to pulmonary diſeaſes.

We cannot, I think, be too induſtrious in propagating the following doctrine: That the time at which a phyſician can be of moſt uſe in the cure of conſumptions, is at their firſt beginning. The ſlighteſt catarrhal defluxion ought not to be neglected, if it does not go off in a few days.

The beginning of moſt conſumptions is a cough, more or leſs violent. This cough is produced either by a thin ſaltiſh defluxion, irritating the membrane that lines the *trachea*, ſo as to bring on a general ſpaſm of all the parts, in order to diſlodge and diſcharge the irritating matter; or elſe, by an inflammation of ſome part of the lungs or *bronchiæ*, produced by one or other of the general cauſes of inflammation.

If the catarrhal cough is neglected, or is repeatedly increaſed by the cauſes that firſt produced it, this will be ſufficient to bring on an inflammation, which, if not removed, terminates in the uſual manner of inflammations; either by reſolution, in which caſe the lungs receive but little harm; or by ſuppuration, in which the miſchief, however ſmall at preſent, does not fail to be productive of laſting and injurious conſequences, proportioned to the extent of the injury, and the condition of the ſufferer, in reſpect to prediſponent cauſes.

If the inflammation terminates neither by reſolution nor ſuppuration, it often leaves a ſchirrhous hardneſs, whereby this particular part of the lungs, how-

† In this city the weekly bills are ſuppoſed to exhibit a tolerably exact account of thoſe who die of the reſpective diſeaſes mentioned in that liſt. But I am informed, that the article of Conſumptions includes generally all thoſe who die of any lingering diſeaſe, and are much emaciated; by which the liſt is vaſtly enlarged beyond what it ought to be, to the reproach of our country; foreigners imagining that this diſeaſe is much more frequent amongſt us, than it is in reality.

ever ſmall and confined, becomes of little or no uſe in the œconomy of this organ; but by occaſioning an obſtruction of circulation and reſpiration in one ſingle point, ſubjects the ſound parts of the lungs to greater labour, as was before obſerved *.

From hence it is at leaſt evident, that the utmoſt care ſhould be taken at the commencement of this diſeaſe. The moſt trifling cough, if it continues, may either advance gradually till it ends in immediate miſchief, or may leave ſuch impreſſions as may ſubject the patient to perpetual returns: a cough therefore in children, or young perſons, or in perſons of a certain make at any time of life, ought ſpeedily to be cured.

Perhaps it will be needleſs to ſuggeſt the means of doing this moſt ſafely: but there is one part of management neceſſary to be obſerved by thoſe who are about children thus affected, that cannot be too ſtrongly inſiſted on by the phyſician, and that is, the neceſſity of proper diet, proper likewiſe in reſpect to quantity. If ever an extreme attention to regimen is neceſſary, it moſt certainly is ſo to perſons affected with coughs, as will perhaps be more fully mentioned; but to children it is ſtill more ſo, both as they are greater ſufferers by improper diet, and have leſs command over their own appetite and inclinations.

For if a large quantity of the beſt chyle adds ſpeedily to the preſent ſtock of blood, as all muſt paſs through the lungs, this temporary increaſe of quantity will add to their irritation, the quantity itſelf being a *ſtimulus*. But if the chyle thus increaſed has not been properly digeſted, either on account of the quantity or kind of food, the miſchief will be greater. And this poſition will, I believe, be found uniformly true through every ſtage of pulmonary diſeaſes, and will evince the neceſſity of giving very explicit and peremptory orders in relation to diet, and the duty of thoſe who attend the ſick in this diſtemper.

I know, Gentlemen, that you, as well as myſelf, often have occaſion to look back at the fatal neglect, committed both by the ſick themſelves, as well as thoſe who ought to have had their future health more at heart. With what eaſe would many of the moſt incurable conſumptive caſes have been prevented, or cured, at their firſt commencement? A perſon whoſe emaciated figure ſtrikes one with horror, his forehead covered with drops of ſweat, his cheeks painted with a livid crimſon, his eyes ſunk, all the little fat that raiſed them in their orbits, and every where elſe, being waſted; his pulſe quick and tremulous, his nails bending over the ends of his fingers, and the palms of his hands as dry as they are painfully hot to the touch; his breath offenſive, quick, and laborious; his cough inceſſant, ſcarce allowing him time to tell us, that ſome months ago he got a cold, but he knew not, perhaps, how he got it; he

* See a former paper on this ſubject.

neglected it for this very reaſon, and neglected every means of aſſiſtance, till the miſchief was become incurable, and ſcarcely a hope left of palliation. You ſee multitudes of ſuch objects daily, and ſee them with a mixture of anger and compaſſion for their neglect and their ſufferings. Excuſe me for treſpaſſing in this manner on your time and your humanity. Though it is not in your power to prevent all theſe ſacrifices to ignorance and inattention; yet, if the faculty combine in prompting their fellow-citizens to neceſſary care, and prompt them to ſuffer no ſlight beginnings to paſs unregarded, however they may be acting againſt their own intereſt, they will have the ſatisfaction of contributing to the preſervation of many a uſeful life; for, perhaps, among thoſe who periſh by conſumptions, there are many who, in reſpect to the excellencies both of body and mind, have given indications of becoming conſpicuous ornaments of humanity.

When a cough begins, if the patient is very young, let the quantity of diet, eſpecially ſolids, be leſſened; let the deficiency be made up with warm thin ſuppings; barley-water, milk and water, thin gruel, the lighteſt broths, ſuch things of this kind as the age and condition of the patient admit.

If there be much heat, or any pain in the breaſt, bleeding will be indiſpenſably neceſſary. The quantity to be taken away, and how often repeated, muſt be determined by the ſymptoms, the patient's age, habit, pulſe, and other circumſtances.

In reſpect to medicines, the moſt demulcent and cooling are indicated; and when the ſymptoms of inflammation are abated, gentle anodynes will be uſeful. Every thing of a heating, irritating nature, ſuch as the balſams, ſhould be avoided; and even the expreſſed oils of almonds and olives are often to be ſuſpected, and uſed with caution, as they are ſeldom totally free from ſome degree of rancidity, than which ſcarcely any thing is more irritating and diſguſtful. I have known the common doſes of *nitre*, the ſaline mixture, and other cooling ſalts, increaſe a cough by irritation; ſo that even theſe ſhould be adminiſtered, when neceſſary, rather in ſmall doſes, and frequently. The common emulſion made with good freſh ſweet almonds, is a very proper vehicle for the ſeveral remedies indicated in this complaint; but if the almonds are not freſh, or are intermixed with the bitter, as is too frequently the caſe, they are injurious.

Freſh white poppy-ſeeds, in the proportion of half an ounce to a pint of Briſtol or pure water, make an excellent emulſion and unexceptionable; and theſe may be raiſed in any quantity both at home and in our own colonies.

If the thin copious defluxion leſſens, and the liquid grows thicker, and yet comes up without difficulty, the cough will abate, and gradually ceaſe entirely. It muſt depend upon the judgment of the preſcriber to know when and to what extent anodynes are to be uſed. I believe they are never ſafe at the beginning

ginning of a cough, till by proper methods the tendency to inflammation is firſt abated, except where the cough is altogether of the ſpaſmodic kind, as in ſome hyſteric caſes, or when it proceeds from acrimony heretofore diſcharged by an iſſue, an ulcer, or eroſions on the ſkin, and imprudently ſuppreſſed; or from gouty affections; in which caſes anodynes are undoubtedly of uſe: but in coughs ariſing from ſuppreſſed perſpiration, or an inflammatory diatheſis, as in the meaſles and epidemic conſtitutions, in ſuch caſes, anodynes are ſeldom to be allowed, unleſs it be to obtain a truce from temporary violence.

The miſchiefs that have proceeded from *Godfrey*'s cordial, *Bateman*'s drops, *Squire*'s elixir, and other heating anodynes, in the hands of ignorance, are ſcarcely to be enumerated.

When by a proper cooling regimen, and evacuations, the inflammation accompanying the cough is abated, then ſmall doſes of anodynes joined with the medicines above mentioned, to ſuch a quantity as to mitigate a fruitleſs, inceſſant cough, are very beneficial. If this firſt period has paſſed over without any attention paid to the diſorder, the cough becomes more harſh and dry; ſlight lancinating pains are now and then felt, darting, as it were, through the ſubſtance of the lungs, from ſome central point in the cavity of the *thorax*; commonly from under one of the breaſts, ſometimes exactly in the middle. A ſoreneſs is complained of, that is almoſt continually felt: this is augmented much by the cough, but not to ſuch a degree as the pleuritic ſtitches. It is not unuſual, under theſe circumſtances, to ſee the thin frothy phlegm, which is diſcharged by coughing, ſtreaked with blood; ſometimes a ſmall ſpoonful or two, or more, are coughed up at ſome certain time of the day. It is not often that much larger quantities are thrown up in this ſtate of the diſeaſe, unleſs the patient is very plethoric, or the fabric of the lungs extremely tender, or the cough is inceſſant.

The ſame indications point out a ſimilar proceſs, in reſpect to cure. To withdraw as much nouriſhment as can be done, without the riſk of ſuffering from inanition; to ſupply the moſt cooling nouriſhment, and the moſt eaſily digeſted, in moderate quantities, and the more frequently; to bleed in ſmall quantities repeatedly; judging of this neceſſity not from the appearance of the blood alone, for this will often continue ſizy, till more is taken away than is compatible with the patient's ſituation in other reſpects. For if we leſſen the *vires vitæ* by inanition too much, a diſeaſe then takes place, which probably will increaſe our difficulty, that is, debility of the ſolids, and the conſequent vitiation of the fluids. The pulſe, the heat, the pain, cough, reſpiration, ſtrength and age of the patient, ſhould all be taken into conſideration. Many perſons live free from complaints with ſizy blood. The condition therefore of the blood ſingly ought not to determine us; we ſhould examine all the evidence.

It ſeems unneceſſary to ſpecify what I mean by light cooling nouriſhment: it may not however be improper to obſerve, that wine, or any other fermented ſpirituous liquors, are improper alone, and malt-liquor, however weak, ſeems very generally injurious; fleſh-meat, or indeed animal food of any kind, ſeems under theſe circumſtances improper. Spices of all kinds in any quantity, and indeed every thing poſſeſſed of much piquancy. Whey, either from goats or cows, milk, butter-milk, milk and water, light broths, and all the farinaceous preparations, are to be recommended, but ſtill remembering to adviſe caution in reſpect to quantity. For if a larger quantity of the beſt-adapted nutriment is taken in at once than can be well digeſted, the chyle, ſo far from affording that bland and balmy fluid to the blood, that muſt qualify it for the offices of nutrition, communicates a ſharpneſs that defeats our expectations. It matters very little, both in this and many other diſeaſes, what quality the food is of, if the quantity likewiſe does not correſpond to the powers of digeſtion. I have not the leaſt doubt but this is likewiſe your opinion; and that you inforce it in your directions: but that this is the caſe with practitioners in general, may perhaps not be ſo certain.

Under ſuch a ſituation as is above deſcribed, the methods pointed out ſeldom fail to abate the fever and pain, lower the pulſe, and eaſe reſpiration; the diſcharge then becomes thicker, and the cough, inſtead of being violent and continual, juſt comes on when a quantity of well-digeſted phlegm ſolicits its diſcharge, and ſtep by ſtep uſual health returns.

To ſuch convaleſcents, one cannot but recommend the utmoſt diſcretion in reſpect to their conduct. A violent cold, a debauch, long confinement in populous cities, and other ſimilar cauſes, will ſoon bring back the ſame ſymptoms, which, if frequently repeated or neglected, bring on a more formidable diſtemper, from which if the patient recovers, he will have much to attribute to the ability of his phyſician.

In the further progreſs of this diſtemper, medicines of a different claſs are found of advantage: the bark, elixir of vitriol, *Briſtol* and other waters, a total abſtinence from animal food, and other methods of treating conſumptive diſeaſes, have their uſes. Should you think theſe remarks not unworthy of your notice, I ſhall endeavour to collect ſuch further remarks as have occurred to me on this ſubject, and ſubmit them to your conſideration.

I am, &c.

FURTHER

FURTHER REMARKS

ON THE

TREATMENT of CONSUMPTIONS, &c *.

To the Medical Society in London.

Gentlemen,

IN the laſt volume of your Obſervations, you were pleaſed to admit ſome remarks on the uſe of reſinous medicines, employed in the cure of pulmonary conſumptions †, and which ſeemed, in my opinion, to be rather injurious than uſeful. I take the liberty to lay before you ſome further remarks on the treatment of this diſeaſe; rather propoſing to myſelf the prevention of harm, than contributing much to the cure of this very dangerous malady.

It was there pretty ſtrongly urged, and cannot well be too often repeated, that if this diſeaſe has continued till the lungs are affected to a certain degree, all hope of a cure is vain; a doubtful, and often ſhort-lived truce, is all that art can promiſe.

In this paper, I mean to ſubmit to your conſideration, and, if you do not diſapprove them, to that of the Public, ſome reflections on the more capital medicines employed in the cure of this diſtemper;---the bark---elixir of vitriol---repeated bleedings---veſicatories; not omitting Briſtol water, and change of air and climate; exerciſe; with ſuch other obſervations relative to this ſubject as have occurred to me.

With this view I ſhall chiefly attend to the effects I have obſerved: and if I have formed any opinions upon inſufficient ground, I ſhall be glad to be ſet to

* Medical Obſervations and Inquiries, vol. v. p. 345. anno 1775.

† Theſe Eſſays, though inſerted in different volumes of the Medical Obſervations and Inquiries, are here collected together; the date of each Eſſay is annexed to the reſpective paper.

Editor.

rights;

rights; as I think there can be ſcarcely any thing more injurious to ſociety, than to propagate wrong notions reſpecting the treatment of diſeaſes; as they may chance to lead the leſs experienced to a precipice with his patient, where one of them may loſe his life and the other his reputation.

Of late years the bark has been given ſo generally, and in caſes ſo remote from thoſe in which it was firſt uſed as a ſpecific, I mean intermittents of every ſpecies, that it is not to be wondered at, that it is often confided in, as a dernier reſort, in the pulmonary hectic.

The apparently regular paroxyſms of an intermittent, ſo conſpicuous in certain ſtages of this diſeaſe---regular cold fits, ſucceeded by great heat, followed by copious ſweats---a ceſſation of every violent ſymptom enſuing, naturally draw the attention of the practitioner to a remedy, which, under like appearances, had afforded the moſt beneficial relief.

The bark has been puſhed, in this ſtage of the diſtemper, in too many inſtances, with as much vigour as is neceſſary to conquer the moſt genuine autumnal intermittent---till both the patient and preſcriber were weary of the proceſs---the patient loathing the remedy, and the preſcriber finding it ineffectual.

But this is not the worſt: the bark is ſo far from curing the hectic ariſing from diſtempered lungs, that, according to the beſt of my obſervation, it not only takes up that time, which might probably have been better employed in the uſe of other medicines, but, for the moſt part, it aggravates the diſeaſe beyond remedy.

I have ſeen the bark given in almoſt every ſtate of the *phthiſis pulmonalis*, even in the firſt commencement, whilſt the breaſt was in pain, the cough dry and harſh, the pulſe quick and hard, and the heat conſiderable. What was the conſequence? frequently an *hæmoptyſis*, and all its worſt attendants; ulcered lungs, purulent ſpitting, colliquation, and death.

I have ſeen it given in moſt of the ſubſequent ſtages, often indeed with leſs appearance of injury, but at leaſt without benefit.

There are two cauſes of conſumptions, which often produce ſuch a ſimilarity of ſymptoms to the genuine *phthiſis*, as ſometimes to have led me to make uſe of the bark in apparent tendencies to a genuine pulmonary conſumption, with advantage; and I think they may not improperly claim ſome attention from practitioners.

One of the cauſes is, the ſuckling of children longer than is conſiſtent with the mother's ability. This caſe occurs not ſeldom, among the middling and lower claſs of females of naturally tender and delicate conſtitutions. Prompted by maternal fondneſs, or a wiſh to diſcharge a duty they think they owe to their offspring, and ſometimes by narrow circumſtances, they give the breaſt to the child till their own ſtrength is impaired: in ſuch a ſtate of weakneſs,

ſome

ſome ſlight cold brings on a cough; this is increaſed gradually, till it brings on the appearance, at length the reality, of the genuine pulmonary conſumption: here the bark given early, in moderate doſes, and merely as a tonic remedy, is often of excellent uſe. Many, I am ſatisfied, it has retrieved from deplorable ſituations; and under ſuch circumſtances a prudent trial may ſafely be made.

Another cauſe is, any weakening diſcharge, either from abſceſſes, or from the greater operations of ſurgery; or from a copious and conſtant *fluor albus*, or ſimilar enfeebling evacuations. That the bark is, for the moſt part, of uſe in theſe caſes, when the lungs are not inflamed, is indubitable; and if they are ſo affected, and not beyond a certain degree, it is alſo efficacious in preventing the progreſs of this malady.

In phthiſical complaints, ſucceeding ſuch ſituations, a prudent trial of the bark ſeems neceſſary. Small doſes of the decoction, given either alone, or joined with the ſaline mixture, or ſuch other additions as the preſcriber may think proper, may be given: but if the breath becomes more tight and oppreſſed, the cough dry, the pulſe more quick and hard, and eſpecially if ſlight tranſitory pains or ſtitches about the *thorax* are more frequently complained of, a perſeverance in the uſe of the bark will increaſe the diſeaſe: and if ſuch ſhould be the appearances, in the progreſs of conſumptions, or ariſing from what cauſe ſoever, if the bark is accompanied with ſuch effects, it will be prudent to deſiſt from its uſe.

If, on the other hand, no pain, tightneſs, or oppreſſion, is perceived, and a manifeſt abatement of the ſymptoms appears, it will be right to proceed. But the exhibiting of this medicine requires a diſpaſſionate obſerver; and whoever wiſhes to make trial of it, ought neither to give it in the early inflammatory ſtate of this diſtemper; nor continue its uſe in any ſubſequent part of its progreſs, if it produces the effects above mentioned.

By its tonic virtues it will often enable nature to conquer many difficulties. I have ſeen it of uſe in promoting expectoration, where ſtrength was only wanting to perform it, toward the end of peripneumonic fevers; but that it ſtops this diſcharge, changes ſlight wandering pains into fixed ones, and increaſes them with all their conſequences, I have been a witneſs too often, to admit of the leaſt doubt, in a variety of caſes.

It would be treſpaſſing too much on your patience, to deſcend more minutely into the uſe and abuſe of this medicine, or the mode of exhibiting it; ſuffice it to ſay, that for the moſt part much harm or great good may be expected from it, and conſequently too cloſe an attention cannot well be paid to its operations by the preſcriber.

THE

THE elixir of vitriol is often exhibited in conſumptive caſes, and may claim a conſideration in this place, and the more ſo as it ſeems to be frequently uſed with not leſs impropriety than the bark.

Perhaps a ſingle fact has contributed to raiſe the credit of this medicine in phthiſical caſes, without much regard to the ſtate of the diſeaſe, to a very injurious extent. It is ſaid that a perſon took, by miſtake, in a very advanced ſtate of a conſumption, at one doſe, half an ounce of the elixir of vitriol, inſtead of twenty-five drops, the doſe ordered by a juſtly-eminent phyſician (Sir Edward Hulſe), and that the patient not only ſurvived the enormous doſe, but was cured by it.

Medicines, it is well known, that are highly proper in one ſtage of a diſeaſe, are equally detrimental in another. I have ſeen the elixir of vitriol, in a competent doſe, given in the inflammatory part of this diſtemper, while the pulſe was quick and hard, the breathing difficult, the cough frequent, with much heat, and very little expectoration; the effect was, an increaſe of every ſymptom, a ſpitting of blood, and all its conſequences.

In the latter ſtages of this diſeaſe, when a general tendency to putrefaction takes place, it cools and checks this tendency; it reſtrains the colliquative ſweats, and, if the lungs are not injured paſt repair, it is a very uſeful auxiliary.

The compoſition, however, of this medicine, may, perhaps, be found ſomewhat exceptionable for the purpoſes intended; the mineral acid combined with ſpices, may ſeem to be the leaſt eligible. It is true, that aromatics are thought to poſſeſs an antiſeptic virtue; but where the putreſcence proceeds from matter continually mixed with the blood from broken veſſels, every thing irritating ſeems to be forbidden. Perhaps the *ſpiritus vitrioli*, in the tincture of roſes, or in any other proper vehicle, may be the moſt ſuitable method of exhibiting the mineral acid in ſuch diſeaſes.

Probably, there are very few medicines which do not undergo a conſiderable change in the ſtomach and offices of digeſtion; ſo that neither the ſuppoſed contractile tonic powers of the bark, nor the antiſeptic acid of the elixir, penetrates thoſe receſſes which are intended by the preſcriber to receive their efficacy. I ſuſpect that much good or harm is done by theſe medicines in the preſent caſe, by affecting the irritable parts of the ſtomach and firſt paſſages; and by this means I apprehend the bark oftener contributes to produce the ſymptoms we have complained of, than by its action on the lungs, the ſeat of the diſeaſe. If we increaſe for a time the tonic force of the heart, and conſequently the greater flow of blood through the lungs, we are increaſing the malady for which we preſcribe it, let the manner of effecting this be what it may.

The action of allum, when a little of it is diſſolved in the mouth, may perhaps lead to explain this matter. It ſoon occaſions a kind of thrill through the whole habit; by which it may perhaps contribute to ſuppreſs hemorrhages, to cure obſtinate tertians, and produce other ſalutary effects, by acting upon the ſolids only; and the mineral acid in the elixir may, in like manner, ſo affect the organs of taſte, and the nerves of the firſt paſſages, as probably to operate as powerfully in ſuppreſſing immoderate evacuations, by this means, as by any other we can conceive.

When, therefore, the veſſels act with ſufficient force, and are replete with juices; and when theſe ought to be prudently reduced, in order to give all poſſible eaſe to the lungs, and conciliate a repoſe to them, as much as is conſiſtent with their offices; it ſeems highly improper to give medicines which, let their *modus operandi* be what it may, are known to poſſeſs a power of invigorating, and are generally made uſe of in all caſes for that purpoſe. And as there are many ſituations in the progreſs of Conſumptions, in which medicines producing ſuch effects, cannot but be injurious; it will be always neceſſary to regard theſe ſituations with all poſſible attention.

Of the uſe of Briſtol-water in the cure of this diſtemper, ſo much has been ſaid and written, and ſuch are the diverſity of ſentiments concerning its efficacy, that it may ſeem to border upon raſhneſs to hazard an opinion concerning it. I ſhall ſuggeſt, however, the reſult of my own obſervations, and ſubmit moſt willingly to better information.

I have ſeen many perſons recover from pulmonary diſeaſes after drinking the Briſtol-water, whoſe cure ſeemed to be doubtful from any other proceſs; this circumſtance, added to its general reputation in phthiſical caſes, has been a ſufficient inducement to me to recommend a trial of this water in the early ſtages of phthiſical complaints.

And here I would wiſh again to inculcate this remark, that it is before the approaches to a confirmed phthiſis, that patients ought to repair to Briſtol; otherwiſe a journey thither will be, not only without benefit, but will probably be detrimental.

Thoſe who can prevail upon their patients to go thither before the diſeaſe has affected the lungs, beyond a poſſibility of aſſiſtance from this or any other remedy, have often the ſatisfaction of ſeeing their patients return in good health; whilſt thoſe who delay the uſe of theſe waters to the laſt extremity, too often fall ſacrifices to their own irreſolution, and leave an impreſſion on the minds of others injurious to the water.

It may be ſaid, that the journey, a better air, change of ſituation, and of objects, have contributed to the patient's recovery: be it ſo; theſe circumſtances are all of them conducive to health in every chronic diſorder. Perhaps, in none more ſo than in that which is the ſubject of theſe remarks. But why

ſhould it be ſuppoſed that the Briſtol-water has no ſhare in the recovery? Suppoſing the water to be void of any great efficacy, is it of no conſequence to phthiſical patients, to be obliged to be out of their rooms early in a morning, in the cool, freſh air? Are repeated draughts of a light tepid water, of no uſe in waſhing off impurities, allaying heats by mere dilution, and ſupplying the waſte of juices exhauſted by copious perſpiration? Hope itſelf is of vaſt moment in the cure of many diſeaſes; and it is perhaps not inconſiſtent with the duty we owe to our patients to promote it, whilſt we ourſelves retain a hope of their recovery.

But it ſeems to me that the water drank freſh at the pump, actually contains principles conducive to the recovery of patients affected with phthiſical complaints. What theſe principles are, it may be difficult to define. The water ſeems to poſſeſs a ſlight calcareous ſtypticity, and perhaps the air it contains may alſo have an antiſeptic quality. In this place it may be enough to ſay, that I think the Briſtol-water an efficacious medicine, and that I have often found it of ſignal benefit to conſumptive patients.

Were the annals of the Hot Wells conſulted, it would appear, that thoſe records are againſt me. But whence does this ariſe? From two cauſes; firſt, from the patients themſelves, who, in theſe diſorders, being ſeldom apprehenſive of any danger, will not liſten to a preſcription which either thwarts their inclinations, or ſeems inconvenient. Secondly, from the phyſician too eaſily complying with theſe heſitations, and not urging the neceſſity of ſuch a journey, at a time when it might be advantageous. As the diſeaſe advances towards its laſt ſtages, then, perhaps, alarmed by their own fears, or the intreaties of their friends, they conſent to undertake a journey, which waſtes the ſmall remains of ſtrength they have, and brings to the Wells additional proofs of their inability to remove diſtempers totally incurable. Hence it is, that the opinion of the faculty is ſo much divided, in reſpect to the uſe of theſe waters.

Change of air is of much conſequence in all chronic diſeaſes of the lungs, ſometimes even from good to bad. It is not ſeldom that we ſee aſthmatic perſons breathe more freely in the dampeſt confined parts of this metropolis, than in the country; at leaſt I have met with many ſuch inſtances. In conſumptive caſes, however, the air of all large cities is found by experience to be particularly injurious. Whence this ariſes, is in this place unneceſſary to explain; the fact is indiſputable. When the phyſician adviſes his patient to a change of air, to point out the moſt proper change becomes an important object.

In the neighbourhood of moſt great towns in England, as well as London, there are places which have acquired a reputation amongſt the inhabitants for the peculiar healthineſs of their ſituation. I will ſuppoſe theſe ſituations are well choſen; that the ſoil is dry; no ſtagnant waters in the neighbourhood; properly

properly ventilated, yet not expoſed to the keen north-eaſt winds; where it will be eaſy to find ſheltered walks, rides, and every invitation to be abroad in fit weather, without hazard from wet and cold. Such, I believe, from the few places I know of this kind, are thoſe ſelected for the retreat of conſumptive patients, in the vicinage of large towns and cities. And here it may not be improper to take a general view of ſuch as are recommended for the like purpoſe, in the neighbourhood of London.

The town is ſurrounded, almoſt, by a ridge of eminences, incloſing, beſides the city, a low plain to the weſtward, of conſiderable extent; on the north, Highgate, Hampſtead, and Kenſington Gravel-pits; on the ſouth-eaſt, Blackheath, Clapham, and Putney. The ſummits of theſe may be called, comparatively, high ground, and are very much expoſed to the ſharp north-eaſt and eaſterly winds.

To direct our patients to any of theſe places, early in the ſpring, whilſt thoſe winds are for the moſt part as ſtationary as the trade-winds, ſeems to be expoſing them too much to an air that is very unfriendly to ſuch complaints.

The vales, eſpecially to the ſouth-eaſt and weſt of London, as Camberwell, Peckham, the lower parts of Clapham, the drier parts of Lambeth and Batterſea, Fulham, Chelſea, Brumpton, and Kenſington, and other ſheltered dry places about the town, would in the ſpring undoubtedly be the moſt proper.

As the more temperate ſeaſon advances, higher ſituations may be allowed; and it would ſeem as improper to ſend a conſumptive patient in ſummer to the low marſhy grounds on the banks of the Thames, amongſt the gardeners grounds at Batterſea, or at Fulham, abounding with the moſt putrid exhalations of manure and corrupting vegetables; as it would be to order them in winter to the top of Highgate or Hampſtead-hill, or the bleaker air of Blackheath. Iſlington, the general refuge of the city, would be leſs exceptionable, was it not quite open to the keeneſt north-eaſt winds in the ſpring; and in ſummer to the ſmoke of the city, driven upon it by the ſoutherly winds.

Nor is it a matter perfectly indifferent whether we ſend our patients to the villages at the eaſt or weſt end of this metropolis, the ſouth or the north. The town itſelf is covered almoſt continually with an atmoſphere of ſmoke, embodied with other exhalations, ſo as to form a cloud more or leſs denſe, which is viſible at a great diſtance.

This vaſt body of ſmoke is ſeen to extend for ſeveral miles beyond the limits of the city and its ſuburbs, and is driven by the winds that prevail in the ſeveral ſeaſons, according to their direction. In the ſummer ſeaſon, for inſtance, whilſt the ſoutherly winds prevail, this denſe body is driven to the north and north-eaſt parts of the environs, and covers the herbage, the trees, and every thing, both living and dead, with black penetrating ſoot. In the winter and ſpring, while the northerly winds prevail, the oppoſite villages on the ſouth-weſt and weſt ſide of London receive this thick atmoſphere; but with

this moſt remarkable difference, the winter winds paſſing through this warmed atmoſphere, loſe no ſmall part of their rigorous effects; they are ſoftened by it, and are proportionably leſs injurious to animals, and even to plants; for vegetation is much earlier in general to the ſouth and ſouth-weſt of London, than on the oppoſite extremities.

I have ſeen the double-bloſſomed almond-tree in bloom at Chelſea, ſooner by twelve days at leaſt than any where to the north or eaſtward of the town in ſimilar ſituations. It ſeems therefore neceſſary to conſider the ſeaſon and ſituation, before we fix the abode of conſumptive patients: to whom it is not merely ſufficient to adviſe them to go into the country; they muſt be aſſiſted alſo to determine upon a proper place, and proper conduct whilſt they are there. They muſt have had but little experience, who are not perfectly ſatiſfied, how little ought to be left to the diſcretion of the ſick, in moſt diſeaſes, to the conſumptive eſpecially, in reſpect to their conduct. I have known divers inſtances of perſons who have gone into the country, in conſequence of their phyſicians advice in ſuch caſes, and have had ſo little diſcretion, as to ſleep with the windows of their chambers purpoſely left open, for the benefit of the air, in the moſt inclement part of the ſpring. The conſequence was, that in a few nights the malady was increaſed beyond the power of art to relieve it. A phyſician, therefore, muſt deſcend to the minuteſt particulars in his directions.

If an attention to circumſtances like theſe is neceſſary, to enable us to determine upon the choice of a proper reſidence in our own neighbourhood; how much greater muſt be our difficulty, when we propoſe to them a migration to the continent of Europe!

But before I enter upon this ſubject, it may not be improper to ſuggeſt ſome hints, relative to the different parts of our own country.

Briſtol will naturally claim our attention, in the firſt inſtance, when change of air is recommended, as in the neighbourhood of that place there are two great advantages, the water, and a good air.

But if, from any particular diſlike, or other more ſubſtantial reaſon, this is not complied with, perhaps a journey would be much more advantageous than a fixed reſidence in any ſpot, however healthy. I ſhall only add, that a journey is always preferable to an equal number of miles rode over in one and the ſame tract of country.

In the ſpring, this journey ſhould be to the ſouthward; to the weſtern counties, or the ſea-coaſts:---and in the ſummer, to the northward, or to Wales;---the cooler parts of Great Britain:---Buxton or Matlock, or where any ſimilar water is to be met with, ſeems adviſeable. To meet the advancing ſpring, to return from the approaching winter, and by theſe means to avoid the ſeverity of cold, ſo injurious to tender breaſts, is the evident rule of conduct in ſuch caſes.

caſes. If it requires ſome conſideration, a knowledge of places in detail in this country, nay, even in the environs of London, to determine with propriety on the choice of places for the retreat of invalids; what muſt be our difficulty, when called upon to fix the route and reſidence of a conſumptive patient, who ſeeks an aſylum on the continent!

And here I cannot but lament the want of an inſtitution, which, at no great national expence, might be attended with vaſt national advantages. Was a phyſician, or ſome medical perſon, to be placed in the ſuite of every Britiſh ambaſſador, envoy, or reſident, we ſhould ſoon be informed, and with ſome degree of certainty, of the proper places to which we might ſend our patients with the greateſt proſpect of ſucceſs. Neither the partial opinion of the patients who have reſided at different places, nor the tranſient viſits of the moſt obſerving travellers, nor even the obſervations of ingenious ſenſible phyſicians themſelves, without a longer reſidence in the place than falls to the lot of moſt of them, can enable us to judge with accuracy of their comparative advantages.

The ſouth of France, Italy, Portugal, (I mention them in the order they are uſually propoſed to us) are the places of general reſort.

Wherever the winter is ſhorteſt, the leaſt ſevere, and the leaſt changeable, every thing elſe being alike, that is the moſt adviſeable. To which may be added likewiſe, the place of the moſt eaſy acceſs. Thus, for inſtance, Portugal, by ſome, would be ſtrongly objected to, on account of the ſea-voyage; whilſt others, perhaps, would chuſe it for the ſake of this eaſy conveyance. But if there be juſt reaſon to give one place in the neighbourhood of London, and within the compaſs of a very few miles, the preference to another, the difficulty of giving advice in this caſe, with the preciſion we could wiſh, is too apparent; and it muſt remain ſo, till further obſervations enable us to form a better judgment on this ſubject.

Of all the places we are acquainted with, perhaps the iſland of Madeira enjoys the moſt equal temperature; but the voyage, and other circumſtances attending it, afford very formidable objections.

Nice has of late been the general retreat of the Engliſh conſumptive patients. Some places in the neighbourhood of Marſeilles are alſo well ſpoken of. The neighbourhood of Naples in Italy is alſo much commended; and in Portugal, the vicinage of Liſbon, and Cintra, a pleaſant ſpot, not far from that capital. In all theſe places regard ſhould be had to ſituation; that it may be dry, near no ſtagnant water, not environed with thick woods; where the water is good, and the air free, but not ſtormy and impetuous.

To thoſe who object to the continent, a trial of the weſtern counties of England may be properly recommended: ſhould it not prove ſalutary, the paſſage by ſea to Liſbon from thence is, for the moſt part, both ſafe and ſhort.

Even

Even ſea-ſickneſs is often beneficial to the conſumptive, as well as the ſea-air. Impaired digeſtion, and, not ſeldom, a redundancy of bile, attend theſe caſes; and perhaps repeated mild emetics, ſufficient to cleanſe the firſt paſſages, would often be of uſe.

One great misfortune attending theſe migrations, whether from London or other great cities, into the neighbouring country, or to Briſtol and other places in this kingdom, or to the continent, is, that, for the moſt part, they are undertaken too late, both in reſpect to the progreſs of the diſeaſe, and the ſeaſon.

Inſtead of removing at a time when a change of air and its conſequences might prevent the moſt ſerious evils, they are in haſte to quit their country, when perhaps neither this can be beneficial, nor the ſeaſon for a journey a proper one.

It ſeems too often to be the fate of conſumptive patients, to do that laſt, which they ought to have done firſt; and by this prepoſterous conduct, to ſhorten their own lives, and afflict all who have any regard for them. It happens not ſeldom, that when their phyſicians and their friends have in vain urged their departure at the proper ſeaſon, they have reſolved to ſet out on the moſt fatiguing journies in the depth of winter; by which they are expoſed to every kind of inconveniency and hardſhip: if they eſcape with life, they aggravate their diſeaſe, and too frequently die, in the journey, martyrs to their own indiſcretion.

The benefit of exerciſe in this diſtemper, has been ſtrongly urged by many writers. As it has been treated of ſo pertinently by Doctor Dickſon, one of your colleagues, I ſhall ſay little more on the ſubject. It is however evident, that this great auxiliary may be abuſed, and that conſumptive patients may uſe it improperly. They ride out when they ought not, and increaſe their diſeaſe through indiſcretion. Moderate journies, in temperate ſeaſons, and as much as may be on horſeback, are of excellent uſe in conſumptive caſes, obſerving, at the ſame time, exact temperance, both in reſpect to diet and liquors. To ride out early in the ſpring, in very ſharp, or in damp, cold, and foggy weather, and at unſeaſonable hours, as, early in the morning, or late at night, is moſt certainly prejudicial.

Repeated bleedings, in ſmall quantities, are conſidered in theſe caſes as highly advantageous. They are ſo; and yet it is poſſible to carry this point too far: a conſtitution apparently abounding with blood---the blood when emitted extremely ſizy---much pain in the breaſt---and an abatement of every ſymptom enſuing, are juſt motives to proceed. In ſuch caſes bleeding is undoubtedly proper, and to be repeated ſo long as the like effects enſue, and health is reſtored.

But in very delicate conſtitutions, and where the pulſe may be quick, with

ſome degree of fulneſs, and the blood laſt drawn conſiderably ſizy, it may not be of the like advantage.

I do not think the appearance of the blood, though it may ſeem to be much inflamed, is alone a ſufficient reaſon for bleeding. All other evidence ſhould be called in, to aſſiſt us in determining upon it; the patient's age, ſtrength, habit, uſual evacuations, and ſtate of the diſeaſe. I mean only to ſuggeſt care; not to diſſuade from the operation: bleeding carried to exceſs, even in ſmall quantities, is capable of producing various ill conſequences.

It may not be improper in this place, perhaps, to take notice of a circumſtance which often happens in conſumptive caſes, and which as often claims the anxious attention of ſome of their friends.

It is well known that young delicate females, from the age of fifteen or ſixteen, and upwards, are often ſubject to this diſtemper. When it has advanced conſiderably, the *menſes*, if they have made their appearance, moſt generally ceaſe. This alarms their female friends, and they call upon the phyſician to uſe his utmoſt endeavours to aſſiſt in this point, believing this ceſſation to be the cauſe of the complaint. Induced by theſe ſolicitations, medicines have ſometimes been adminiſtered, that, without obtaining this end, have tended to aggravate the diſtemper. This deficiency is often of no real diſadvantage in theſe caſes: in many it would be injurious, by leſſening the ſtrength, which is already inſufficient for the purpoſes of life. Even ſmall bleedings, at the regular periods, have often done more harm than good. A ſudden ſuppreſſion may require bleeding; but when the evacuation fails through want of ſtrength and poverty of blood, it increaſes the diſeaſe.

Drains are alſo deemed to be of great uſe in the cure of diſorders of the breaſt. Iſſues, ſetons, bliſters, both temporary, and, as they are ſtyled, for want of a more juſt epithet, perpetual, are ſtrenuouſly recommended. I confeſs I have but little experience to allege, either for or againſt theſe kinds of applications: whilſt I pay great deference, not only to the experience of my brethren of the faculty, but even to their opinions, they will not wiſh me to give up my own implicitly.

It gives me ſome degree of firmneſs in proſecuting any meaſure, whilſt I can perceive ſome relation between the cauſe and the effect. When I diſcover that a phthiſical patient is deſcended from parents who have been ſubject to cutaneous or ſcrophulous diſeaſes, or that they have had the like themſelves; that ſome iſſue has been ſuddenly ſtopped; ſome eruption has diſappeared; and that the breaſt was ſoon after attacked; it ſeems immediately neceſſary to ſubſtitute an artificial drain, and, perhaps, as near to the part that was the ſeat of theſe diſorders, as conveniency will permit. I believe it happens not ſeldom, that very dangerous attacks upon the breaſt are made by the retroceſſion of ſuch impurities; and that in ſuch caſes theſe auxiliaries ought eſpecially to be recommended.

commended. But as conſumptive complaints exiſt in many conſtitutions, in which it does not appear that they proceed from, or are increaſed by, any ſuch retroceſſions; in ſuch caſes to preſcribe iſſues or bliſters, ſeems to be inflicting a certain pain, or perhaps a grievous inconveniency, to obtain a very uncertain advantage.

In my former paper I omitted to take notice of one medicine, which I have ſeen made uſe of too frequently in the treatment of this diſtemper; the oxymel of ſquills. There is ſcarce a circumſtance in the whole courſe of this diſeaſe, in which one of the moſt powerful expectorants can be of uſe; our utmoſt endeavours ought to be exerted, to cool, to abate inflammation, and to remove every cauſe of irritation to the lungs. Under ſuch circumſtances, to give a medicine the moſt irritating of all others, ſeems highly improper.

Hitherto no mention has been made of the uſe and abuſe of a milk diet in this diſtemper. It may, however, be remarked, that there are conſtitutions in which this moſt excellent nutriment ſeems to diſagree; a proneneſs to generate bile, or too ſtrong a tendency to aceſcency from weak organs of digeſtion, both require the phyſician's attention. Whey, either from cows or goats milk, would probably agree beſt with the former; and lime-water, added to the milk, would counteract acidity.

There is one uſual addition made to milk, which I think ſhould either be totally proſcribed, or the moſt expreſs directions given concerning it: I mean the common addition of rum or brandy to aſſes or cows milk. Theſe have done more miſchief to conſumptive patients, than any but phyſicians can conceive. Theſe additions are moſtly committed to the management of ſervants, who, for the moſt part, think every thing of this nature cordial; an idea they annex to growing ſtrong; and therefore too often give liberal doſes. Ardent ſpirits not only heat, but coagulate milk, added beyond a certain quantity; by which means the milk diſagrees, and the ſpirit augments the diſeaſe.

To enter minutely into the various other circumſtances relative to this diſeaſe, would be encroaching too much on your plan: permit me, however, to add, that to prevail upon the ſubjects of it, early to abſtain from all animal food, and all ſpirituous and fermented liquors; to ſubſiſt entirely on milk, fruit, vegetables, and things prepared from them; to quit the air of populous towns and large cities; to ſhun all occaſions of anxiety, as well as fatiguing diſſipation; to be regular in their hours, riſing early, uſing moderately ſuch exerciſe as is ſuited to their ſtrength, and changing the air as far and as often as their convenience will permit; is to render them the moſt eſſential ſervices in our power. Medicines will then more efficaciouſly contribute to abate the fever, mitigate the cough, and reſtore that ſtrength and vigour which has been waſted by diſeaſe, and their own inattention.

SOME

WINTERANA *Aromatica*.

In Lodge Sculp.

WINTERANA *Aromatica*.

In. Lodge Sculp.

SOME ACCOUNT OF THE CORTEX WINTERANUS, or MAGELLANICUS,

By *JOHN FOTHERGILL*, M.D. F.R.S.

WITH

A BOTANICAL DESCRIPTION by Dr. *SOLANDER*, F.R.S.

AND

SOME EXPERIMENTS by *M. MORRIS*, M.D. F.R.S.*

To the Medical Society in London.

Gentlemen,

THOUGH the improvement of the art of healing is your immediate object, yet I do not perceive, from the plan of your inſtitution, that you propoſe altogether to exclude ſuch parts of natural hiſtory as relate to the *Materia Medica*, and which may tend to explain what has hitherto been obſcure, and thereby created confuſion. Preſuming therefore that the following account of an article well known by name, and by this chiefly, may be conformable to your intentions, I ſubmit it to your conſideration without any further apology.

When the Dolphin, Captain Wallis, returned from the South Seas in 1768, the officers brought with them a conſiderable quantity of the genuine bark, called Winter's Bark. I call it the genuine bark, to diſtinguiſh it from the

* Medical Obſervations and Inquiries, vol. v. p. 41. Read November 22, 1773.

Canella Alba, which has long uſurped the name of Winter's Bark, though it is very unlike in its appearance and ſenſible qualities, the produce of a different tree, and which is brought from a very different part of the globe.

Captain Wallis, ſoon after his return, gave a ſmall branch of the tree to his friend, Captain Middleton, who was ſo obliging as to make me a preſent of it. Some of the bark I had received before from an officer of the Dolphin. Theſe circumſtances induced me to wiſh ſome ſuch account of this bark might be laid before the public, as is here propoſed to you, that the true *Cortex Winteranus* of the Magellanic Streights might for the future be clearly diſtinguiſhed from the *Canella Alba*, the produce of Jamaica and ſome other Weſt-India iſlands.

The ſpecimen I had received was ſo far perfect, that it enabled the late very eminent draughtſman G. D. Ehret to make an elegant drawing of it, with a tolerably exact deſcription of its botanical characters.

But as I wiſhed to lay before you the cleareſt account I could collect of this ſubject, I prevailed upon Dr. Solander to examine the ſpecimen, deſcription, and the drawing I had procured, and to favour me with ſuch a hiſtory and deſcription of it as might enable botaniſts to place the tree in its proper rank. At the ſame time I requeſted Dr. Morris to lend his aſſiſtance in a chymical analyſis of this ſubſtance.

The following is the Botanical Hiſtory and Deſcription of the *Winterana Aromatica* by Dr. Solander:

The tree which produces the Winter's Bark was utterly unknown to the Europeans till the return of Captain John Winter, who, in the year 1577, ſailed with Sir Francis Drake, as commander of a ſhip called the Elizabeth, deſtined for the South Seas; but immediately after they had got through the Streights of Magellan, Captain Winter, on the 8th of October 1578, was obliged by ſtreſs of weather to part company, and to go back again into the Streights, from whence he returned into England in June 1579, and brought with him ſeveral pieces of this aromatic bark; which *Cluſius*, in his *Exot.* p. 75, calls after him *Cortex Winteranus*, or Winter's Bark.

Several authors have mentioned it ſince in their botanical works; but all they have ſaid has been copied from Cluſius, e. g. Dalechamp Hiſt. p. 1818. Parkinſon Theatr. p. 1652. *Bauhin Pin.* 461. *Jonſton Dendr.* p. 232.

No more was heard of this bark * till the Dutch fleet under Admiral Van Nort

* In the account of Amada's and Barlow's diſcovery of Virginia, 1584, it is ſaid that they found there "*Black Cinnamon*, of which Mr. Winter brought ſome from the Streights of Magellan;" *See Hackluyt Voy. vol.* iii. *p.* 246; which is the bark of a very different tree. *Pomet*, in his *Mat. Med. p.* 130, imagined our Winter's Bark to be the ſame with the *Canella Cinnamomea*; *Brown*

Nort returned from the Streights of Magellan, in the year 1600; the author of the account of their voyage calls this tree "Lauro ſimilis arbor licet proce-" rior, cortice piperis modo acri et mordenti." *De Bry. Ind. Occid. vol.* ix. *p.* 18.

Afterwards all the navigators who paſſed through the Streights of Magellan took notice of the tree, on account of the uſefulneſs of its bark; but none furniſhed any deſcription that could make it botanically known, before Mr. George Handaſyd came from the Streights of Magellan, 1691, and brought with him ſome dried ſpecimens, which he gave to Sir Hans Sloane, and are now preſerved in the Britiſh Muſeum, Hort. Sicc. 8. fo. 100. 130. 148. 332. fo. 46. From theſe ſpecimens, and the account Mr. Handaſyd gave of this tree, Sir Hans Sloane drew up a hiſtory, and gave a figure in the Philoſophical Tranſactions, 1693, N° 204, p. 922, t. 1. "Periclymenum rectum, foliis lau-" rinis, cortice acri aromatico."

Still the ſyſtematical botaniſts could not give it a place in their catalogues, being unacquainted with its flowers and fruit.

The following deſcription and annexed figures, which are taken from the ſpecimens brought by Captain Wallis from the Streights of Magellan, and the obſervations made by us *, during our ſtay in Terra del Fuego, in the Streights le Maire, I hope will ſatisfy the curious, and enable botaniſts to refer it to the proper claſſes of their ſyſtems. It ſeems as if the trees in the Streights of Magellan, near the ſea-coaſt, were ſtinted, perhaps from the high winds, and have ſmaller leaves than thoſe upon Terra del Fuego, where again the flowers were not ſo much expanded as in the Streights of Magellan. This laſt difference may be occaſioned by the ſeaſon, as the flowers on Terra del Fuego were ſeen in the month of January, and in the Streights of Magellan in the month of March.

The Winter's-Bark tree, *Winterana Aromatica*, is one of the largeſt foreſt-trees upon Terra del Fuego; it often riſes to the height of fifty feet. Its outward bark is on the trunk grey, and very little wrinkled, and on the branches quite ſmooth and green.

The *branches* do not ſpread horizontally, but bend upwards, and form an elegant head of an oval ſhape.

The leaves come out, without order, of an oval elliptic ſhape, quite entire, obtuſe, flat, ſmooth, ſhining, of a thick, leathery ſubſtance, evergreen, on the

Brown Hiſt. Jam. p. 275, *fo.* 3; *Cateſby Carol. vol.* ii. *p.* 50, 150; which grows in the Weſt-Indies, between the tropics, and is called by the druggiſts *Canella Alba*. This error has been followed by moſt of the modern writers, and the two trees propoſed under the ſame name, viz. *Winterania Canella*. *Linn. Sp. Pl.* 638.

* Joſeph Banks, Eſq; and Dr. Solander.

upper ſide of a lively deep green colour, and of a pale blueiſh colour underneath, without any nerves, and their veins ſcarcely viſible; they are ſomewhat narrower near the footſtalks, and there their margins are bent downwards.

In general, the leaves are from three to four inches long, and between one and two broad; they have very ſhort *footſtalks*, ſeldom half an inch long, which are ſmooth, concave on the upper ſide, and convex underneath. From the ſcars of the old footſtalks the branches are often tuberculated.

The peduncles, or footſtalks for the flowers, come out of the *axillæ foliorum*, near the extremity of the branches; they are flat, of a pale colour, twice or three times ſhorter than the leaves; now and then they ſupport only one flower, but are oftener near the top divided into three ſhort branches, each with one flower.

The *bracteæ* are oblong, pointed, concave, entire, thick, whitiſh, and ſituated one at the baſis of each peduncle.

Calix, or *flower-cup*, it has none; but in its place the flower is ſurrounded with a *ſpathaceous* gem, of a thick, leathery ſubſtance, green, but reddiſh on the ſide which has faced the ſun: before this gem burſts, it is of a round form, and its ſize is that of a ſmall pea. It burſts commonly ſo that one ſide is higher than the other, and the ſegments are pointed.

The *corolla* conſiſts always of ſeven petals, which are oval, obtuſe, concave, erect, white, have ſmall veins, and are of an unequal ſize, the largeſt ſcarcely four lines long; they very ſoon fade, and drop off almoſt as ſoon as the gem burſts.

The filaments are from fifteen to thirty, and are placed on the flat end ſide of the receptacle; they are much ſhorter than the petals, and gradually decreaſe in length towards the ſides.

The *antheræ* are large, oval, longitudinally divided into two, or as if each was made up of two oblong *antheras*.

The germina are from three to ſix, placed above the receptacle, turbinated, or of the ſhape of an inverted fig, flat on the inſide, and ſomewhat higher than the ſtamina; they have no ſtyles, but terminate in a ſtigma, which is divided into two or three ſmall lobes.

The fruit I have never ſeen in its perfect ripe ſtate, but can conclude from the unripe ones, which I ſaw in abundance, that each germen becomes a ſeparate ſeed-veſſel, of a thick, fleſhy ſubſtance, and unilocular: in each I could plainly diſcern the rudiments of three, four, or five ſeeds.

EXPLANATION

EXPLANATION OF THE FIGURES.

Obſ. All but Fig. 1. are magnified.

Fig. 1. The ſpathaceous gem, after it is burſt open.
2. The ſame.
3. The ſame *(a)* with the corolla *(b)* remaining within it.
4. One of the petals ſpread out.
5. The ſtamina *(a)* and the piſtilla *(b)* after the gem and the corolla are taken away.
6. The outſide of an anthera *(a)* with its filament *(b)*.
7. The inſide of the ſame.
8. The germina *(a)* ſituated on the center of the receptacle, after the ſtamina have been removed; the lobated ſtigma *(b)*.
9. The convex, or outermoſt ſide of a germen *(a)* with its ſtigma *(b)*.
10. The inſide of the ſame.
11. A germen cut open longitudinally, ſo as to ſhew the rudiments of the ſeeds.
12. A germen cut through tranſverſely.

To this very accurate hiſtory and ſyſtematical deſcription by Dr. Solander, I take the liberty to ſubjoin an extract of a letter from Captain Wallis, relative to this ſubject, as it contains ſome particulars not unworthy of being preſerved in this account.

" I met (ſays Captain Wallis) with the Winter's Bark at Port Famine, in the Streights of Magellan, in lat. 53. 30. ſouth, and 70. 00. weſt longitude from London. The country is as mountainous as the Alps, and of courſe the tops of them ever covered with ſnow.

" The firſt trees we met with was on Chriſtmas-day, 1766, which is midſummer in that country. The tree had no bloſſom, nor appearance of any at that time. We continued at this place about a fortnight, to wood and water, during which time the ſurgeon, with the aſſiſtance of the ailing people, gathered a pretty large quantity of the bark.

" The trees were of various ſizes, according to the ſoil they grew upon, and their ſituation. Thoſe near the ſea, and in rocky ground, were ſcrubby, the bark ſticking cloſe to the wood, and had a dirty look; thoſe on plain ground and ſheltered were ſtraight and tall, riſing to thirty or forty feet, and as thick

as

as a middle-ſized man. The bark ſmooth, and ſomewhat reſembling the horſe-cheſnut. The trees are exceedingly beautiful; and there were abundance of young ones growing under them, from an inch to ten feet high. I put a great number of theſe ſmall ones into boxes of earth, and ſent them by a ſtore-ſhip to Falkland's Iſlands, where I heard they were planted, but did not live, owing I believe to want of care.

" The leaves of this tree are like thoſe of laurel; its wood is white, light, and neither fit for burning or any other uſe. The wood is inſipid; the taſte is only in the bark and leaves.

" At every place we touched at from Port Famine till we had reached the weſtern end of the Streights, a courſe of about one hundred and twenty leagues, we met with the tree that produced this bark. The weather is much more ſevere in this climate than in England, where, in my opinion, they would thrive very well. We arrived in March at a part of the Streights called Upright Bay, where we were detained a month. The trees here were very ſcrubby, but we found them in bloſſom, as I ſuppoſe they were now alſo at the eaſternmoſt part of the Streights, though we had much ſnow and hard froſts. The flowers were dropped from many of the trees, and the buds or berries were ripening. At that time they were not larger than a pea: I brought many of them home, and gave them to ſeveral of my acquaintance, who ſowed them; but I never heard that any of them came up."

Thus far Captain Wallis.

The bark of the Winterania, or Winter's Cinnamon, brought over by the Dolphin, in reſpect to figure, exactly reſembles that which was delineated by Cluſius. The pieces are about three or four inches ſquare, of different degrees of thickneſs, from a quarter to three quarters of an inch. It is of a dark-brown cinnamon colour, an aromatic ſmell if rubbed, and of a pungent, hot, ſpicy taſte, which is laſting on the palate, though imparted ſlowly. It has the name of Winter's Cinnamon, from a faint reſemblance in colour and flavour to that grateful aromatic, though differing from it greatly in every other reſpect. This bark is only brought to us from the Streights of Magellan, and is the produce of the tree above deſcribed; much celebrated as an antiſcorbutic by the firſt diſcoverers, but unknown in the practice of phyſic, no quantity, except as a curioſity, having been brought to Europe till the return of the ſhips ſent out on the expeditions to the South Seas.

The bark which was ſubſtituted in the room of this, is the *Canella Alba* of the ſhops, the bark of a very different tree, and brought from a different part of the world, diſagreeing with the former in almoſt every particular. It is of a light aſh or grey colour; in thickneſs it ſeldom exceeds two-eighths of an inch.

inch. The pieces are of different lengths and irregular ſhapes, and for the moſt part are taken from trees of ſmall ſize: its taſte is aromatic, and has more of the clove than the cinnamon. It yields an eſſential oil by diſtillation, and is brought to us chiefly from Jamaica, though it is found I believe in ſome other of the Weſt-India iſlands. There are a few plants of it in the ſtoves of ſome curious botaniſts in England, particularly in that belonging to John Blackburne, Eſq; at Orford, Lancaſhire.

Sir Hans Sloane gives a figure of it in his Hiſtory of Jamaica, from which it evidently appears to be a different genus from the *Winterania Aromatica*.

For want of the knowledge of theſe circumſtances, and an opportunity of comparing the genuine Winter's Bark with the *Canella Alba*, ſome of the moſt reſpectable writers on the *Materia Medica* have ſcarcely been able to avoid confuſion in treating this ſubject; which it is hoped for the future will be avoided, and the diſtinction between them ſufficiently eſtabliſhed.

EXPERIMENTS ON THE CORTEX WINTERANUS, OR MAGELLANICUS, BY DR. *MORRIS*.

1. FIVE grains of *Cortex Winteranus*, in coarſe powder, were infuſed in two ounces of cold water for about an hour; on adding to a part of the filtered ſolution gradually ten drops of a ſaturated ſolution of green vitriol, the liquor became of a blueiſh black, and a black ſediment was precipitated.

2. On repeating the experiment with hot water inſtead of cold, five drops of the ſolution of vitriol ſtruck a purpliſh black with the infuſion; the ſediment was next morning of a dark olive colour, not unlike the ſediment from an infuſion of the Peruvian Bark with *Sal Martis*.

3. On a comparative trial with the infuſion of galls, though the phænomena were the ſame with ſolution of vitriol, yet on examining the ſediment of each next day, that of the infuſion of galls was blacker, lighter, and more copious than that of the Winter's Bark.

Two ounces of Winter's Bark coarſely powdered were infuſed in a pound of clear river-water for thirty-ſix hours; the infuſion was filtered, half a pound of water was added to the reſiduum, and infuſed with it for the ſame ſpace of time; being then filtered, it was mixed with the former infuſion, and evaporated to a dry extract, which weighed two drachms and twenty-four grains.

On treating two ounces of this bark with the ſame quantity of proof ſpirit, two drachms and twelve grains of dry extract were obtained.

On proceeding in the ſame manner with rectified ſpirit of wine, two drachms only of extract were produced.

A pound of the ſaid bark in coarſe powder was infuſed in a proper quantity of water for twenty-four hours, and a gallon was carefully drawn off by diſtillation. The diſtilled water was clear, of a pleaſant taſte, and had ſomething of the flavour of cinnamon. There was no eſſential oil.

The decoction evaporated afforded ſix ounces of a ſoft extract, of a grateful aromatic taſte.

From theſe experiments, the *Cortex Magellanicus* appears to be an aſtringent of a particular kind, and therefore likely to be of uſe in ſeveral manufactures. That water is the proper diſſolvent of this bark; though the ſaline, gummy, and reſinous parts are ſo blended in it, as in ſaffron and ſome other vegetables, that it parts with them readily in proof and rectified ſpirits of wine, though not in ſo great a quantity.

The infuſion and decoction of this bark were of ſo grateful an aromatic bitter taſte, that it ſeems likely to be a pleaſant vehicle for ſome of the nauſeous drugs. With this view, on ſubſtituting the powder of this bark for the cardamom-ſeeds in making the infuſion of ſenna, as directed in the London Diſpenſatory, the nauſeous ſmell and taſte of that excellent purgative was ſo effectually covered, as to be ſcarcely diſtinguiſhed by the niceſt palate. Tincture of rhubarb alſo, prepared with this bark inſtead of cardamoms, ſeemed far leſs diſagreeable.

It muſt not be concealed, that the *Canella Alba* from Jamaica, which is generally ſold for the Winter's Bark in the ſhops, was found to have the laſt-mentioned property, but I think not in ſo high a degree.

M. MORRIS.

I ſhall conclude this account, expreſſing a wiſh, that this very elegant and not leſs uſeful tree might ſpeedily be made a denizen of Britain. Here it would moſt probably grow luxuriantly, as in a much warmer region than its own: it would bear our ſevereſt winters, and be a moſt agreeable addition to our evergreens; and, what is ſtill of more importance, it would probably furniſh us with a valuable medicine.

Captain Wallis, though unſucceſsful in his endeavours, has ſet an excellent example; and if thoſe gentlemen who in future may be employed by their country in thoſe parts of the world, take every opportunity of bringing either ripe ſeeds or plants to Falkland's Iſlands, or to England if poſſible, they would merit the thanks of the lovers of ſuch ornaments, and render an eſſential ſervice to the public. I am

Your Friend and Colleague,

J. FOTHERGILL.

OF

OF

A PAINFUL AFFECTION OF THE FACE *.

To the Medical Society in London.

Gentlemen,

WHEN I related to you, at one of our late aſſemblies, the purport of the following narrative, ſeveral inſtances of a ſimilar affection were then recollected; caſes, which, though nearly akin in appearance to the tooth-ach, and that kind of diſorder of the jaw which is ſometimes called the rheumatiſm, ſometimes the ague in the head, and which had not given way to thoſe remedies and applications that in ſuch complaints are moſt commonly ſucceſsful in curing them; you then thought that a more particular account of this diſeaſe, and the method of removing it, might not be unacceptable to the public: for though it does not every day occur, yet to be able to diſtinguiſh and to cure, with ſome degree of certainty, a diſeaſe, that, during the time it laſts, is extremely excruciating, is an addition, however ſmall, to the utility of our profeſſion.

In the third volume of the Medical Obſervations, among the remarks on the efficacy of hemlock in relieving ſome anomalous pains, there is one caſe mentioned of a perſon cured by it of a painful diſeaſe affecting the face †. It is a diſeaſe that has occurred to me ſeveral times; it ſeems to be of a ſingular nature, and, ſo far as I know, altogether undeſcribed.

This affection ſeems to be peculiar to perſons advancing in years, and to women more than to men. I never met with it in any one much under forty, but after this period, no age is exempt from it.

The caſe does not occur very frequently. I can recollect but about fourteen inſtances in the courſe of my buſineſs.

* Medical Obſervations and Inquiries, vol. v. page 129. anno 1773.

† See p. 56, & ſeqq. of this volume.

This laſt year I was conſulted for two women, one near eighty, the other about fifty years of age, both of them in other reſpects healthy.

From imperceptible beginnings, a pain attacks ſome part or other of the face, or the ſide of the head: ſometimes about the orbit of the eye, ſometimes the *oſſa malarum*, ſometimes the temporal bones, are the parts complained of. The pain comes ſuddenly, and is excruciating; it laſts but a ſhort time, perhaps a quarter or half a minute, and then goes off; it returns at irregular intervals, ſometimes in half an hour, ſometimes there are two or three repetitions in a few minutes.

The kind of pain is deſcribed differently by different perſons, as may be reaſonably expected; but one ſees enough to excite one's compaſſion, if preſent during the paroxyſm.

It returns full as often in the day as in the night. Eating will bring it on ſome perſons; talking, or the leaſt motion of the muſcles of the face, affects others; the gentleſt touch of a hand or a handkerchief will ſometimes bring on the pain, whilſt a ſtrong preſſure on the part has no effect.

It differs from the tooth-ach eſſentially in many reſpects. It affects ſome who, from age, have few or no teeth remaining. It moſt commonly ſeizes ſome part above the ſockets of the teeth, yet the teeth are ſometimes affected with an exquiſite ſenſibility, upon endeavouring to chew even the ſofteſt ſubſtance. The lower jaw is ſeldom attacked with this diſeaſe.

It differs likewiſe from that diſorder which has obtained the name of an ague or rheumatiſm in the face, a diſorder as painful as it is frequent. This, though it is often connected with ſome decay in the teeth and the nerves that are diſtributed to them, yet for the moſt part its exacerbations are regular in reſpect of time, like the fits of an ague; and at night, as in the rheumatiſm.

The tooth-ach, ariſing from a faulty tooth, does not often indeed afford much remiſſion from pain, till either the inflammation is abated by ſome means, or the nerve is deſtroyed, or rendered leſs ſenſible.

But when to the uſual cauſe of a tooth-ach this rheumatic diſpoſition is conjoined, though the pains are never intirely off, yet the night is the time of their greateſt ſeverity. Beſides, the ſeaſon of the tooth-ach and this ſpecies of rheumatiſm is generally from the end of adoleſcence to the meridian of life, or later.

The diſeaſe which is the ſubject of this eſſay is ſeldom obſerved till between forty and fifty, and through the later ſtages of life. Contrary to what happens in the preceding complaints, the affection I am treating of is moſt commonly ſeverer in the day than in the night; ſometimes, indeed, it is excited to an extreme degree of violence by the lighteſt touch of the bed-clothes, which can ſcarcely be avoided in turning, or any other motion in bed.

Some

Some painful affections of the head, and which ſometimes extend to the face, likewiſe occur in practice, that ariſe from ancient venereal complaints imperfectly cured.

Theſe likewiſe, as the rheumatiſm above mentioned, are always moſt ſevere in the night; they come on inſenſibly about bed-time, they increaſe till morning, then abate, ſo as to allow a few hours ſleep, and are little felt in the day. The pain is deſcribed by the patient to be in the bone itſelf, as if bored with a gimlet, or ſome other inſtrument. From its commencement in the evening till it abates in the morning, it never is entirely off, nor does it ſhift from one part to another of the head and face, as frequently happens in the rheumatiſm; beſides, a little enquiry generally affords one ſufficient grounds to juſtify the treating of it as a venereal complaint.

One of the firſt caſes I met with was in a widow gentlewoman of about ſixty-five years of age, who in general had enjoyed a good ſhare of health, was in eaſy circumſtances, and without any apparent cauſe of anxiety, or other latent cauſes of diſeaſe.

In a moment ſhe would be ſeized with the moſt acute excruciating pain, affecting the inner *canthus* of the eye: it laſted but a few ſeconds, forced out the tears, and gradually went off. In a few minutes the ſame thing happened, and in like manner at unequal diſtances during the day, ſo as to occaſion a life of great miſery.

Its appearance was like that of a ſevere ſpaſm: it had been conſidered as ſuch, and treated with the moſt efficacious antiſpaſmodics, but to little purpoſe; the pain ſtill continued returning in the ſame manner. Opium in conſiderable doſes was the only medicine that procured relief; but the coſtiveneſs it occaſioned, with the thirſt and head-ach, almoſt made her of opinion, that the remedy was not leſs difficult to bear than the diſeaſe. At length, however, it ſeemed to decline by the uſe of extract of hemlock, together with her ſtrength; general ill health enſued, and ſhe continued a ſufferer by it to her death.

As I was often preſent when theſe exacerbations happened, it was not difficult to recollect the diſeaſe when I met with it in other ſubjects; ſeveral of whom I have ſeen, and always with concern, as the methods I had purſued for the moſt part obtained but a temporary relief, till I made uſe of the extract of hemlock in the caſe above mentioned. Since that time I have had recourſe to it whenever the diſeaſe occurred, and for the moſt part with ſucceſs.

One of the laſt caſes I met with, was the moſt obſtinate I had ſeen. A gentlewoman near fifty, of a full habit, rather ſtrong make, accuſtomed to plenty, and uſing much and various exerciſe, had been ſeized with a violent pain affecting one ſide of her head and face, from the upper edge of the temporal muſcle down its whole extent, and reaching to the teeth on that ſide. Before

I had been in the room two minutes, I ſuſpected, from the violent contortions of the face and the whole body, that her complaint was of the kind I have been deſcribing. Not that theſe contortions are ſpaſmodic or involuntary, but ſuch as ſevere pain often occaſions, when we endeavour to abate the ſenſe of pain in one part by a general exertion of force upon ſome other, or over the whole body. Speaking, or chewing, or even ſlightly touching the ſkin or the ſide affected with the ſofteſt handkerchief, would immediately excite the pain, which, after continuing perhaps a quarter or half a minute, gradually went off, till it was again awakened by ſome freſh motion. She had been under the care of ſeveral perſons of eminence in the profeſſion, who had ſcarcely left any rational methods of relieving her unattempted. She had no fever, no other indiſpoſition that pointed out means of relief.

The extract of hemlock was ordered, the quantity gradually increaſed to a full doſe; and this was continued almoſt a month before any conſiderable amendment was obſerved. So much relief, however, was obtained as to encourage us to proceed. Sometimes, indeed, it returned for a few days with as much violence as ever. Still we perſiſted. It was almoſt a year that ſhe perſevered in this method; and, to her entire ſatisfaction, near another year has elapſed without perceiving any intimation of it. She took no other medicine during the uſe of the extract, except ſometimes a gentle laxative when occaſion required; nor was her diet altered, only ſome cautions given to uſe the lighteſt and leaſt ſavoury kinds, with ſome reſtrictions in regard to quantity.

In caſes of ſingular difficulty and obſtinacy, it is natural for us to be inquiſitive into their cauſes and their nature; unſucceſsful experiments ſometimes lead the way to inſtruction; and we ought never to ceaſe inveſtigating the moſt abſtruſe receſſes of nature, nor at the ſame time forget the narrow limits of our capacity, and the danger of preſumption. What therefore I have to offer upon the nature of this diſeaſe, is rather ſubmitted to your conſideration as matter of further enquiry, than as opinions ſufficiently eſtabliſhed.

On reviewing the caſes I have ſeen of this diſorder, I recollected that the ſubjects were moſtly women; that they were for the moſt part, if not all, paſt the time of menſtruation; that they were generally of a firm and ſomewhat robuſt habit, with black hair, and not ſubject to any particular diſeaſes. Moſt of them had borne children; and nothing remarkable had occurred about the ceſſation of the *menſes*; in general, rather of a coſtive habit, and in the middling ſituations of life.

In two of theſe caſes, a ſmall hard tumour in the breaſt had occaſioned ſome ſuſpicion of a ſchirrhus; but had never proceeded to give trouble.

Theſe appearances, however, excited my attention, and induced me to ſuſpect that the cauſe of theſe extreme pains in the face might poſſibly be of a cancerous

cancerous nature; the method of cure and other circumſtances ſeem to corroborate the ſuſpicion.

The ſex, the time of life, two caſes where a tendency to this was obvious, as well as the kind of pain, which was ſudden, frequent, and ſevere, and as ſuddenly remitting, were to me further confirmations.

In tracing the hiſtory of perſons afflicted with cancers not apparently proceeding from external cauſes, we ſhall find for the moſt part they have been afflicted with erratic pains in the limbs, often about the loins, ſometimes in the thighs, and other muſcular parts. Theſe have commonly been conſidered by the patients as merely rheumatic; but if we enquire more particularly, we ſhall find they are very different. They are not always worſe in the night than the day. They are not a dull, heavy, aching pain, and continual; but ſharp, lancinating, and remittent. They are not much affected by the weather, nor by any obvious cauſes; and they frequently diſappear for ſome time; at leaſt, there is a conſiderable abatement in their violence.

Theſe pains do not always ceaſe when the cancer becomes obvious; they are ſometimes ſevere when the diſeaſe is making great progreſs externally: and experienced ſurgeons well know how little benefit the unhappy patients have to expect from removing the breaſt or other diſeaſed part, if they have been long ſubjected to ſuch complaints.

It ſeems not improbable, but that a ſharp, corroſive, cancerous acrimony may long be pervading, like electrical matter, certain ſeries of veſſels, and, when collected in a certain quantity, may create theſe pains; yet without ſeizing upon any part with ſuch violence as to deſtroy its functions. But if a part that favours its operations is once injured, thoſe we call glandular eſpecially, as the breaſts, and the ſubcutaneous glands in the face, and other parts; if theſe become incapable of reſiſting or ſubduing the cancerous matter that may be thrown upon them, the miſchief then becomes evident, and advances in proportion to the combination of thoſe cauſes which favour its progreſs. An original diſpoſition to form ſuch acrimony, bad health, anxiety, external injury, and extreme ſenſibility of pain and danger, ſeem to conſtitute a part of theſe cauſes.

There are few phyſicians, I believe, who may not, on reviewing many caſes which have occurred to them of anomalous pains in different parts of the body, ſo as ſometimes to counterfeit gouty, bilious, and other internal affections of the ſtomach and bowels, perceive ſome analogy between them and the complaints here pointed out.

Perhaps a cancerous acrimony may have been the baſis of ſome of theſe ſtubborn evils, and probably a good deal of miſchief might have been prevented by treating them early as if they were known to be of a cancerous complexion, by opening a drain, by repeated ſmall bleedings, by gentle cooling laxatives,

the hemlock, a light diet, and the other uſual auxiliaries in ſuch complaints. It is with a view to promote ſome attention to this object, that I have troubled you with theſe reflections.

P. S. Since the preceding account was preſented to the Society, I have met with two more caſes of this painful affection; and found upon enquiry, that in both theſe there had been hard, permanent, and painful tumours in the breaſt; that theſe tumours became leſs painful when the face was attacked; and that both the one and the other had yielded to the efficacy of this medicine, the pain and the tumour both abating.

MIMOSA *Japonica.*

Plate V.

MIMOSA *Japonica.*

AN ACCOUNT OF THE TREE PRODUCING THE TERRA JAPONICA,

Communicated by Dr. *FOTHERGILL**.

To the Medical Society in London.

Gentlemen,

YOU will excuſe me, I hope, for introducing to your notice, an exact deſcription of the tree that produces the Extract called *Terra Japonica*. Hitherto it has rather been gueſſed at than known, from whence this ſubſtance derives its origin; the beſt of our writers on the *Materia Medica* have given us very little of certainty concerning it.

The figure here exhibited is copied from a drawing taken on the ſpot, compared with a good ſpecimen tranſmitted with it, of the leaves, flowers, pods, and ſeeds. The ſeveral parts of the flower have been examined by the microſcope, and delineated with great accuracy; and every doubt concerning the origin of this ſubſtance will hereby be removed. It will give you ſome ſatisfaction to know, that ſome of the ſeeds have vegetated; and that perhaps we may be able to propagate the plant, ſo far as to ſend it to our Weſt India iſlands, where it will probably flouriſh, and yield us, by the labour of our own people, an Extract in greater perfection than can be expected from a proceſs attended with ſo little care in the Eaſt Indies. If I have treſpaſſed too much on your plan, by introducing ſo many articles of Natural Hiſtory, I muſt entreat your indulgence for the preſent: it ſeems to be doing ſome benefit to ſcience, to re-

* Medical Obſervations and Inquiries, vol. v. p. 148, anno 1773.

move

move ambiguity, and prevent all poſſible miſtake. Your works, Gentlemen, paſs into the hands of many ingenious medical perſons who traverſe the moſt diſtant parts of the globe. Inſtances like theſe, prompt them to obſerve; and it is from the labour of ſuch, that this part of ſcience, a perfect knowledge of the *Materia Medica*, has hitherto, and muſt ſtill derive its greateſt improvements.

This account was drawn up by an attentive, able naturaliſt, aſſiſtant-ſurgeon to the civil hoſpital at Bengal, and tranſmitted by the learned and worthy Lieutenant-colonel Ironſide to

J. FOTHERGILL.

Extract of a Letter from Mr. James Kerr, to Lieutenant Colonel Ironſide.

Dear Sir,

I Have endeavoured to ſet in a clear light a part of natural hiſtory concerning which the learned have wrote many inconſiſtencies. I wiſh it had been done by an abler hand; for a perſon of my obſcurity will hardly be truſted, when contradicting ſo many great men. The deſcription was taken from the living plant, and I carefully attended the proceſs of the manufacturer, and repeated it myſelf; ſo that however defective the deſcriptive part may be, it will certainly have the merit of being ſtrictly true. I am,

Dear Sir,

Your moſt obedient ſervant,

(Signed) *JAMES KERR.*

A Deſcription of the Plant from which the Terra Japonica is extracted.

THIS plant is called Coira or Caira by the natives of Bahar Province.

It appears to be the ſame as mentioned by Cleyerus, Dale's Pharmacologia, p. 271. and by Herbert De Jagur (ſee Hill's Materia Medica, p. 785.) from which he ſays the natives of Pegu prepare this Extract; they name the tree Kheir or Khadira.

It is a ſpecies of the Mimoſa of Linnæus.

The root is branching and permanent.

The ſtem is generally from three to five feet high, and will grow to about one foot diameter, covered with a thick, ſcabrous, dehiſcent, brown bark, and branching into a denſe, ſpreading top, ſeldom above twelve feet high; the wood

wood is extremely hard and heavy, the interior part varies from a pale brown to a dark red, approaching to black in different plants, but always covered with one or two inches thick of white wood.

The leaves ariſe from the young branches alternately, at one or two inches diſtance, from four to ten inches long, and doubly winged; the partial wings are nearly two inches long, and from fifteen to thirty pairs, having ſmall umbilicated glands on the ſuperior part, placed between the inſertions of the wings, and one larger placed below the firſt pair; each wing has about forty pair of linear lobes three-tenths of an inch long.

At the baſe of each leaf there are two recurved prickles; in young plants they are ſtrong, in the old plants they are often flexile, and ſcarce viſible. Nature thus partially guards the young of ſeveral Mimoſas and other prickly plants: it is a miſtaken opinion that animals will not eat the leaves of the Mimoſa.

From the axilla of the leaf ariſes one, ſometimes two, denſe ſpikes, four or five inches long; the flowers are ſmall, white, ſeſſile, with a ſmall deciduous ſquama under each flower.

The empalement is of one tubulous pubeſcent leaf, divided at top into five acute patent parts.

The petal is of the ſame form as the calyx, but double its length, and whiter.

There are a great number of capillary filaments double the length of the petal, adhering together at the baſe of the germen: the antheræ are ſmall and almoſt globular.

The germen is oval, with a ſhort pedicle, and a filiform ſtile as long as the filaments, with a very ſmall terminating ſtigma.

The legumen is about two inches long, lanceolated, brown, ſmooth, (not jointed) and compreſſed with an undulated thin margin.

The pod contains ſix or eight orbiculated, hard, compreſſed, diſtant ſeeds, producing a nauſeous odour when chewed.

It is one of the moſt common trees to be met with on the uncultivated mountains of Rotas * and Pallamow, and frequent in many other parts of this country, in various ſoils.

The leaves and flowers appear in June; in the day the leaves are expanded, in the night they collapſe; and after the proceſs of fructification is finiſhed, they fall off, and the aculei decay. The pods remain until April following; when a branch is lopped off, the leaves inſtantly collapſe.

From the interior coloured wood is produced the Extract erroneouſly called *Terra Japonica.*

* Diſtricts of Hindoſtan, in the province of Bahar, weſtward of Bengal.

Preparation of the Extract.

After felling the trees, the manufacturer carefully cuts off all the exterior white part of the wood. The interior coloured wood is cut into chips, with which he fills a narrow-mouthed unglazed earthen pot, pouring water upon them until he ſees it among the upper chips; when this is half evaporated by boiling, the decoction, without ſtraining, is poured into a flat earthen pot, and boiled to one-third part; this is ſet in a cool place for one day, and afterwards evaporated by the heat of the ſun, ſtirring it ſeveral times in the day; when it is reduced to a conſiderable thickneſs, it is ſpread upon a mat or cloth which has previouſly been covered with the aſhes of cow-dung; this maſs is divided into ſquare or quadrangular pieces by a ſtring, and completely dried by turning them frequently in the ſun, until they are fit for ſale.

This Extract is called *Cutt* by the natives, by the Engliſh *Cutch*, by authors *Terra Japonica*, *Catechu*, *Cadtchu*, *Caſhow Cachou*, *Caitchu*, *Caſtjoe*, *Cachore*, *Kaath*, *Cate*, &c. In making the Extract the pale brown wood is preferred, as it produces the fine whitiſh Extract: the darker the wood is, the blacker the Extract, and of leſs value. They are very careful in drying their pots upon the fire before they are uſed; but very negligent in cutting their chips upon the ground, and not ſtraining the decoction; by which, and the dirty aſhes they uſe, there muſt be a conſiderable quantity of earth in the Extract, beſides what avarice may prompt them to put into it. This the learned have proved from their laborious chemical decompoſitions. The Extract, thus prepared, is bought from the manufacturer for twelve or fifteen ſhillings the eighty pounds weight. I could never learn that the *Terra Japonica* was produced from the *Areca* or *Betle-nut*; nor is it indeed credible that it ſhould, notwithſtanding that this is the general and received opinion; for the *Betle-nut* is ſcarce ever ſo low in price as the *Terra Japonica*, and was it to be extracted from thence, the price would be twenty times dearer than the preſent ſales. Where the *Areca-nut* is in great plenty, they may perhaps join ſome of the fruit in making the Extract, to anſwer a double purpoſe, for the moſt frequent uſe of both is in chewing them together, as Europeans do tobacco; to theſe two ſubſtances they add a little ſhell lime, and a leaf called *Pauw*.

Here I am obliged to have recourſe to the natives, whom from experience I have found to be very fallacious, therefore I will not anſwer for their veracity.

The Extract is much uſed in dying and painting chintz, and other cloths; combined with vitriolic ſalts, a black colour is produced; mixed with oil, they paint the beams and walls of houſes to preſerve them, and to defend them from the deſtructive white ants; it is ſometimes mixed with their wall plaiſter.

The

The black phyſicians of this country divide the diſeaſes of mankind, as well as their medicines, into hot and cold; to the cold diſeaſe they oppoſe a hot medicine, and to the hot diſeaſe a cooling medicine, among which laſt this Extract is ſuppoſed very powerful. When too profuſely uſed it is ſaid to be a deſtroyer of venereal pleaſures.

It is given at the rate of two ounces per day to tame vicious horſes.

The Furnace uſed in making the Extract.

Dig a hole in the earth five or ſix feet long, two feet deep, and two feet wide; cover this with an arch of clay, leaving one end open to receive fuel, and take out the aſhes; in the arch three or four circular openings are made, adapted to the bottoms of the pots: the ſame ſtructure may be raiſed above ground, made of clay. This furnace is very valuable for its ſimplicity, eaſy conſtruction, and ſmall expence of fuel.

The Extract is a principal ingredient in one of their ointments of great repute, compoſed of blue vitriol four drachms, Japan earth four ounces, alum nine drachms, white reſin four ounces; theſe are reduced to a fine powder, and mixed with the hand, adding olive oil ten ounces, and water ſufficient to bring the maſs to the proper conſiſtence of an ointment. This ointment is uſed in every ſore, from a freſh wound to a venereal ulcer. A gentleman * of great practice told me, he uſed this ointment with ſucceſs beyond expectation; and he remarks, that, whether it is owing to the laxity of the ſolids in this hot climate, or to ſome other cauſe, he is clearly of opinion, that our greaſy ointments have not the deſired effect. Certain it is they avoid that *empyreuma* which our ointments often receive in boiling, which cannot be a promiſing application to a tender ſore. As to the virtues of this Extract in European practice, I muſt be ſilent, as they are already better deſcribed than I can pretend to do.

(Signed) *JAMES KERR.*

* Mr. Robert Hunter, Surgeon of the Patna Factory.

OF THE MANAGEMENT PROPER AT THE CESSATION OF THE MENSES*.

To the Medical Society in London.

Gentlemen,

THERE is a period in the life of Females to which, for the moſt part, they are taught to look with ſome degree of anxiety; as a period on which depends their enjoying a good or bad ſtate of health during the reſidue of their lives.

The various and abſurd opinions relative to the ceaſing of the menſtrual diſcharge, and its conſequences, propagated through ſucceſſive ages, have tended to embitter the hours of many a ſenſible woman. Nor have theſe miſtaken notions been confined to them only; they have occupied the minds of ſuch who ought to have been better informed: ſome practitioners, in other reſpects able and judicious, if they have not favoured theſe erroneous and terrifying notions, ſeem not to have endeavoured to correct them, with the diligence and humanity which an object like this requires.

The deſign of this eſſay is to contribute my mite towards ſo neceſſary a purpoſe; to aſſiſt in removing theſe groundleſs apprehenſions, and to ſubſtitute a reaſonable confidence, that, with very little aid, Nature is ſufficient to provide for her own ſecurity on this occaſion.

You muſt forget for a moment that I am ſubmitting theſe remarks to the judgment of a Society, every member of which, perhaps, is as capable of this work, and ſome much better than myſelf. I am writing to many ſenſible young men in the profeſſion of phyſic, who, though they may have applied themſelves

* Medical Obſervations and Inquiries, vol. v. p. 160. anno 1774.

to

to the general ſtudy and practice of our profeſſion with diligence and ſucceſs, may not yet, perhaps, know where to look for ſuch information on this ſubject as may be ſufficient to ſatisfy themſelves and their patients, what management is proper when the Menſes are about to ceaſe.

To propoſe a regimen that ſhall ſuit all the different caſes that may occur, would require a volume. To give ſome general direction is all I intend, without entering into a minute deſcription of the commencement, progreſs, and termination of the Menſes. I muſt ſuppoſe every thing of this kind is already known, and that the ſingle queſtion is, What conduct, what management is neceſſary to be obſerved, when the Menſes are about to ceaſe, by the patient who conſults her phyſician on the occaſion? We are now ſenſible that the menſtrual diſcharge is not, what it was too long and too generally believed to be by many of the ſex, an evacuation of peccant matter and morbid humour, ſometimes acrimonious and malignant, whoſe retention, from its noxious qualities, never fails to be extremely injurious to the conſtitution. What opinion the ancients entertained concerning it, I need not repeat to you: that its malignancy was ſuch as to affect even inanimate bodies. But theſe fables are wholly diſbelieved, except by ſome of thoſe who ought to be undeceived in a matter that ſo much concerns them.

It is now well known, and the ſex cannot be too generally apprized of it, that the menſtrual diſcharge poſſeſſes no ſuch injurious or malignant properties; that it is ſolely a redundancy of that pure vital blood, which animates the whole frame of a healthy perſon; and that its retention is by no means attended, in general, with effects that are not as eaſily removed as any diſorder to which they are ſubject.

That ſome acrimonious morbid humours may be diſcharged together with the Menſes, when any ſuch exiſt, is not improbable. So it happens likewiſe to men ſubject to the piles, or other preternatural excretions.

Women who have unhappily imbibed that prejudice, are naturally alarmed at the conſequences they apprehend muſt enſue from ſuch a change in their conſtitution; and the more ſtrongly they are prepoſſeſſed with a belief, that by this channel has been regularly diſcharged whatever had a tendency to produce diſeaſes, the more they are terrified with apprehenſions of ſome of the worſt complaints: and, indeed, it is not ſeldom that, by ſuch anxiety, they bring on diſorders that are not eaſily removed, attributing them to the cauſe we are ſpeaking of, whilſt they principally originate from anxiety.

For the moſt part, the menſtrual diſcharge, as has been mentioned, proceeds from a redundancy of good and healthy blood: this redundancy is formed for the moſt neceſſary purpoſes; continues whilſt this neceſſity ſubſiſts; and ceaſes when, according to the conſtitution of the female frame, it is no longer required.

The

The powers communicated to the human ſyſtem, generally expreſſed by the term Nature, are ſuch as ſpontaneouſly bring about this ceſſation. The proviſion for the Menſes ceaſes, an extra quantity of blood is not generated, and the veſſels provided for its regular diſcharge by degrees collapſe; and in general all this proceeds without any the leaſt interruption to the health of the ſubject in which this alteration happens. Here it might not be improper to mention at what time this alteration firſt begins, and the general period of its ceſſation. Theſe circumſtances, however, may be found elſewhere ſo amply treated of, as to render it as unneceſſary as it is foreign to my preſent deſign.

There are great numbers of women in whom the menſtrual diſcharge ceaſes, without their perceiving any alteration in their uſual health. There are ſome who, from being invalids during a part of the ſeaſon which is appropriated to menſtruation, find themſelves by degrees recovering health and vigour, to which they have been ſtrangers during that period, when this diſcharge leaves them entirely. Very tender, delicate, relaxed habits, ſubject to copious diſcharges, are often much benefited by the ceſſation. All, however, are not ſo fortunate. Some alterations frequently ſupervene, that render aſſiſtance neceſſary.

Amongſt theſe alterations, the moſt frequent are ſuch as ariſe from a redundancy of blood and immoderate diſcharges from various cauſes.

About the time when this change is to happen, or not long after, many perſons find the diſorders to which they have heretofore been ſubject, more frequent and more troubleſome. Some are afflicted with the well-known ſymptoms of plethora, heat, fluſhings, reſtleſs nights, troubleſome dreams, and unequal ſpirits; others are attacked with inflammations of the bowels, or other internal parts, ſpaſmodic affections of various parts, ſtiffneſs in the limbs, ſwelled ancles, with pain and inflammation, the piles, and other effects of plenitude. In theſe caſes it ſeems as if the organs, which were inſtituted with a deſign of providing the natural ſurplus, continued to produce this effect, whilſt the ſize of the veſſels deſtined to diſcharge it, was diminiſhed, or they were collapſed entirely.

This caſe is oppoſite to the former; in that the organs of excretion continued to execute their functions, and actually diſcharged a portion of blood from the common maſs, whilſt thoſe organs which are formed to provide a ſurplus in enfeebled habits, were only capable of maintaining the neceſſary ſtock. And on the diſparity in the operations of theſe two different organs, in fact, depend moſt of the complaints incident to the ſex at this particular period. In ſome, the proviſion ceaſes before any change is produced in the excretory veſſels. In others, the excretory veſſels become unfit for their office, whilſt the organs for accumulating blood continue to be efficacious.

From

From this view of the ſubject, it will be leſs difficult for the practitioner to form a judgment of what is fit to be done on various emergencies: it will be eaſy to diſcover how far evacuations are likely to avail; and when other means become neceſſary. Thoſe of full plethoric habits, accuſtomed to copious evacuations, will find great relief by bleeding frequently in moderate quantities, keeping the bowels lax, and moderating their diet. They are, for the moſt part, attacked about the time of menſtruation with ſudden fluſhing heats, ſucceeded by inſtantaneous ſweats, continuing for a few ſeconds, then going off for a ſhort time, and again recurring many times in the day; they are worſt after eating, in a room much heated, in large aſſemblies, in bed attended with reſtleſſneſs and frightful dreams. Theſe gradually abate for a few weeks, and as the period approaches again, come on, and ſo ſucceſſively, for a year or two, or more; terminating ſometimes in large immoderate fluxes, ſometimes in apoplexies, palſies, and other diſeaſes ariſing from plenitude.

If ſuch are adviſed to loſe four, five, or ſix ounces of blood, at the diſtance of two, three, or four months, juſt as the vehemence of the ſymptoms requires, every thing of this may be happily prevented; and as the occaſion for bleeding daily decreaſes, its repetition may be put off to longer intervals.

It happens frequently, that ſome circumſtances attend the patients, which induce practitioners to omit this operation, or at leaſt induce the patients to object to it in ſuch a manner as to get it poſtponed. They allege they are ſubject to nervous complaints; they never could bear bleeding; it always hurt them; and the like. But with a full, hard pulſe, great heat, and the other ſymptoms deſcribed, one need not fear the increaſe of any ſuch complaints; on the contrary, as they proceed ſo evidently from plenitude, they ſeldom fail to give way to moderate and repeated evacuations.

It is not unuſual in ſuch caſes to be informed, that the patient has ſwelled ancles; and that bleeding would inevitably, at that time of life, bring on a dropſy. But if this fulneſs appears to be hard, inflamed, and painful, as is moſt commonly the caſe in ſome degree, the lancet and ſome gentle laxative will ſcarcely fail of removing, inſtead of aggravating, the complaint; and recourſe may be had to the ſame remedies, if the like complaints recur.

There is another circumſtance often happens at this period, ſometimes owing to the neglect of evacuations at a proper time, ſometimes to the uſe of improper medicines, ſometimes to the peculiar conſtitution of the patient; I mean an immoderate flux of the Menſes, which often requires the utmoſt care in its reſtraint and future regulation.

For the moſt part this happens to women of ſanguine habits, living well, accuſtomed to copious evacuations, or to the general effects of plenitude.

If, in ſuch conſtitutions, the evacuations are not very conſiderable, their health is often interrupted, either by frequent inflammations of the tonſils, and

other glandular parts, or they have the rheumatiſm, eryſipelas, or the piles; if in theſe habits the Menſes ceaſe very ſuddenly, they are either expoſed to the complaints above mentioned, more frequently, and to a more violent degree, or to repeated and exceſſive floodings. A little attention to theſe circumſtances, will often point out the means of effectual prevention. But if it does happen, it ſeems much more prudent to reſtrain the flux by gentle laxatives, cooling medicines, reſt, anodynes, a moſt ſparing diet, and this not too liquid, than by very copious bleeding, and aſtringents of any kind.

There is another kind of habit to which ſuch immoderate diſcharges are too familiar;---to perſons of very irritable conſtitutions, and at the ſame time not remarkably plethoric. If in ſuch conſtitutions the Menſes go off very ſuddenly, it happens ſometimes that the impetus of the blood on the uterine ſyſtem produces a violent hemorrhage, that enfeebles extremely at the time, and, as it increaſes the irritability of that part of the ſyſtem in particular, ſubjects the patient to very frequent and expenſive relapſes.

In theſe caſes, bleeding would undoubtedly increaſe the diſeaſe. Medicines that allay irritation, anodynes, quiet, a moderate cordial, as wine, and a light nutritive diet, at once take off the cauſe, and enable the patient to ſupport the expence with the leſs difficulty.

It has happened that a regular intermittent has been attended with a regular and immoderate flux. In ſeaſons when autumnal intermittents are frequent, ſuch circumſtances will now and then happen to patients who have ſuffered conſiderable loſs about the time of ceſſation. In ſuch caſes the bark, given with the ſame freedom as in curing the ague, ſafely cures both the flux and the intermittent.

Sometimes theſe immoderate fluxes proceed from ſome irritating cauſe reſident in the uterus, or the parts contiguous to it. And amongſt theſe none is more common, than that depoſition of acrimony which precedes a cancer of the parts.

In ſuch caſes the moſt appoſite remedies are often ineffectual. The flux is attended with pain and heat darting acroſs the pubes, from hip to hip, and down to the middle of the thigh. Large clots of blood are frequently diſcharged, that give exquiſite pain in paſſing, and at the ſame time the flux is increaſed by the ſtimulus.

It is not uncommon in ſuch caſes to ſee the bark adminiſtered very freely, and I am afraid to no good purpoſe. Indeed it requires the hand of a maſter to give this medicine properly in uterine diſcharges. In caſes of plenitude it is injurious; it ſeems to be ſo likewiſe in this caſe juſt deſcribed. In ſuch as proceed from mere debility and relaxation, it may ſtand a much better chance of being uſeful; but it is to be feared, that incipient ſchirrhous and other obſtructions have been much aggravated, by the injudicious exhibition to reſtrain

a diſcharge, which depended on cauſes not in the power of this great medicine to ſubdue.

To enter into all the particulars that attend this event, will be unneceſſary. Permit me, however, to make ſome remarks upon the kind of purgatives that are much in uſe upon theſe occaſions, and to ſome of which there are very juſt objections.

An opinion generally prevails among the ſex, that purgatives are particularly neceſſary at this juncture; and is aſſented to by the generality of practitioners, who, had they made a proper choice, would have acted more prudently. Various preparations of aloes, the *tinctura ſacra*, *pil. Ruſi*, *elixir proprietatis*, and other compoſitions of this kind, are recommended, from one to another, as proper purgatives to be uſed on the ceſſation of the Menſes.

But if we reflect a little upon the known effects of this drug, in all its preparations, we ſhall find it almoſt uniformly producing the piles, if taken long together, and in conſiderable doſes.

From its effect in ſtimulating the hemorrhoidal veins and contiguous parts, it has long been adopted as the baſis of moſt medicines exhibited with a view to promote the menſtrual diſcharge in young females, where it does not appear at the uſual time, or in a proper quantity, and often with ſucceſs. It can ſcarcely then be rational to give that medicine, which is found to be efficacious, from its power of irritating the hemorrhoidal and contiguous veſſels, and determining the blood with a due degree of force on the uterus, to produce the Menſes, at a time when we are endeavouring to abate this impetus, rather than increaſe it: in ſhort, it ſeems highly abſurd to make uſe of thoſe medicines when the Menſes are about to ceaſe, and ought ſo to do, which are given to provoke and promote this evacuation. Inſtead, therefore, of countenancing a treatment which is not only unreaſonable in theory, but injurious in practice, every convenient opportunity ought to be embraced, to expoſe and correct a popular error, than which perhaps there are few in the circle of medicine that are more miſchievous.

Repeated inſtances have occurred to me, of grievous inconveniences ariſing from theſe heating medicines; the piles, ſtrangury, immoderate diſcharges of the Menſes, racking pains in the loins, repreſenting labour-pains, and other ſimilar complaints.

There are many perſons, it is true, who cannot eaſily bear the more cooling purgatives; very tender delicate habits are moſtly affected by them: but it is not difficult to contrive cathartics, neither heating like the aloes, and other gummy reſinous medicines, nor yet chilling as the ſalts. Rhubarb, ſena, magneſia, ſulphur medicines, ſmall doſes of jalap, and various combinations of them, will ſupply ſufficient variety to the preſcriber and the patient.

It will be of more efficacy in curing of complaints ariſing from the cauſes

we

we are treating of, to contrive ſome eaſy method of preventing coſtiveneſs, than to be dealing often and freely with purgatives of any kind. It happens in ſome conſtitutions, that the menſtrual diſcharge is protracted much beyond the uſual period of its ceſſation in others. Whilſt it proceeds regularly, comes at the proper time, and in due quantity, the patient in the mean time perceiving no inconveniency, no perceptions of declining health, ſuffers it to keep its courſe, without attempting to reſtrain it. Should the health in general ſuffer by it, the ſame means that ſucceed in leſſening immoderate diſcharges, may properly be applied in this caſe.

When the Menſes are about to go off, for the moſt part they appear irregularly, both in time and quantity; once in a fortnight, three, five, or ſix weeks, ſometimes very ſparingly, at other times in immoderate quantities.

Great loſſes of this kind are often prevented by taking away four or five ounces of blood, a few days after the firſt menſtrual ſuppreſſion. This prevents the accumulated blood from ruſhing with force upon the uterine veſſels at the enſuing period, and producing pain or a too copious hemorrhage. By degrees the occaſion for ſuch artificial evacuation diminiſhes, and the patient's health becomes firmly eſtabliſhed.

An opinion in favour of iſſues at this period of life, has occupied the minds of many patients; ſome with the hopes of preventing all future evils capable of proceeding from this cauſe; others with the terror of carrying about with them for life a drain which they think of with extreme diſguſt. Perhaps the uſe of theſe outlets deſerves ſome conſideration. When a patient has in early life been ſubject to cutaneous eruptions, ſore eyes, glandular ſwellings, or other obvious marks of morbid humour ſubſiſting in the conſtitution, and all which may have diſappeared about the time the Menſes became regular, if no invincible oppoſition is made to it, a drain is now certainly adviſeable, and may prevent many inconveniences.

Should any cutaneous foulneſſes, any ulcerations, any fugitive pains of the cancerous or rheumatic kind, hardneſſes in the breaſt, or other parts, be evident, all ſuch complaints would probably be in part relieved by iſſues. But when none of theſe circumſtances appear, or have appeared, it ſeems ſcarcely reaſonable either to propoſe or permit a certain inconveniency, to call it by no harſher a term, in order to cure a diſeaſe that has no exiſtence.

It is neceſſary to enjoin, in many caſes, a moſt ſtrict attention to diet and exerciſe, to the full and plethoric eſpecially. Meat ſuppers ſhould be avoided as much as poſſible, and likewiſe much animal food, by thoſe who are liable to immoderate evacuations. If they could ſubſiſt two or three days in a week on pudding, vegetables, and things prepared from them, ſuch a method would contribute greatly to prevent not only theſe copious diſcharges, but various

accidents that ariſe from plenitude, ſuch as palſies, apoplexies, fevers, and inflammations. Their liquors ſhould be regulated likewiſe by a ſimilar ſcale.

They ſhould avoid all heating exerciſe, frequenting large aſſemblies, or hot cloſe rooms, near the approach of the uſual period. In the intervals, exerciſe will be extremely neceſſary.

It will not be altogether foreign to this ſubject, to mention two caſes which now and then occur in practice, and ſometimes coſt both the patient and phyſician ſome perplexity.

A woman enjoying very good health, ſometimes is ſeized with a total ſuppreſſion of the Menſes, much ſooner than they ought to diſappear, perhaps ſoon after thirty years of age. A fever, ſurprize, anxiety, ſudden and violent cold, eſpecially if it happens at the time, will put a total ſtop to the diſcharge.

For many months, ſometimes a year or two, ſhe feels very little effect upon her health by this ſuppreſſion, perhaps grows plump, and ſeems diſpoſed to corpulency; by degrees, however, ſhe perceives herſelf not to be ſo well as uſual; ſhe is liable to colds, inflammations of the tonſils, eryſipelatous eruptions, rheumatiſms, but moſt commonly ſevere affections of the bowels, either inflammatory, bilious, or ſpaſmodic: one or other of theſe return frequently, and often violently, in ſix weeks, two months, or longer, but at no very regular periods; and in this manner continue to harraſs the conſtitution (if the perſon ſurvives the ſevere attacks of the colic or other diſorders incident to this ſtate) till about the time when the Menſes ſhould ceaſe ſpontaneouſly.

An attention to the cauſe of theſe diſorders, ſupplies us with a natural and efficacious remedy. Subſtitute at convenient diſtances artificial evacuations, inſtead of the natural one that is ſuppreſſed, and, if poſſible, previous to the diſorders to which the ſuppreſſion has given riſe; bleeding in ſmall quantities two or three times a year; moderate purgatives frequently exhibited; and, particularly, attention to their diet, which ought to be moderate and mild. At the firſt ſenſations of ſickneſs, or great heat and reſtleſſneſs, or pains beginning to affect the ſtomach or bowels, or any of thoſe ſymptoms which have uſually been the forerunners of the diſorders above mentioned, then is the ſeaſon for preventing thoſe difficulties which ariſe from this preternatural ſuppreſſion.

Another caſe likewiſe ſometimes occurs in practice, which it may not perhaps be improper to mention.

Women of an apparently healthy, ſanguine conſtitution, diſpoſed to corpulency, uſing little exerciſe, accuſtomed to live plentifully, perceive a ſudden ſuppreſſion of the Menſes, at a time of life when there is reaſon to expect many years continuance; from thirty-five years of age and upwards: in a little time they grow full, the belly ſeems to ſwell, with tenſive pains, pain in the breaſt,

breaſt, ſome enlargement of them likewiſe, ſome little ſickneſs in the mornings, diſlike to particular foods, and other ſymptoms ſimilar to thoſe of pregnancy; and married women are ſo fully ſatisfied of it, as to believe themſelves in this ſituation, and that they actually perceive the motions of the child.

This circumſtance happens moſt commonly to thoſe women who have been married rather late in life, *viz.* between thirty and forty. Their inexperience leads them to take up with the opinions of thoſe about them, and they are ſometimes not undeceived till the time of geſtation is much exceeded.

Women alſo who have been long married and had children, ſeveral years after the Menſes ſtop, ſuddenly grow bigger, ſuſpect pregnancy, and treat themſelves accordingly; abſtaining from exerciſe, they eat what their appetites, often craving and depraved, require, till they have exceeded their reckoning ſo long, as to be ſure they have been miſtaken.

The like complaint happens now and then likewiſe to ſingle women about the age of forty, or near the time when this evacuation ought to ſtop. The belly grows large, they become unwieldy, their legs ſwell, and the apprehenſion of a dropſy brings on a variety of complaints. The hemorrhoids are commonly the attendants of all theſe ſubjects. Sometimes one may trace out ſome probable cauſes from which this preternatural ſtate may probably be derived, but not always clearly. The proper treatment is, however, not difficult to diſcover. The general turgeſcence, though it proceeds primarily from a retention of the Menſes, does not appear to be confined to the uterine veſſels alone; all the venous ſyſtem of the lower belly is affected; the lymphatics alſo, in conſequence of the general oppreſſion. The legs often ſwell, the piles are almoſt always troubleſome, the patients are generally coſtive, the urine in ſmall quantities and often diſcharged, and all the thinner ſecretions diminiſhed. Yet the countenance and appearance of the whole habit denote a general plenitude, but very different from the bloated body of an hydropic. Repeated bleeding in ſmall quantities always gives relief. Sulphur and magneſia, or other eaſy laxatives given conſtantly, prevent the piles, and keep the belly gently open. Regular exerciſe on horſeback, or in a carriage, is quite neceſſary to effect a cure, which is for the moſt part ſlow and tedious, but in general certain. Purgatives approaching to the draſtic kind are often injurious, and ſo are copious evacuations by bleeding, though ſmall ones are eſſentially neceſſary. Their diet ſhould be light, but not too liquid. By means like theſe the general fulneſs gradually ſubſides; they ſeldom have any return of the Menſes, except now and then ſome ſlight intimations.

Permit me to mention another caſe, which, though it does not abſolutely relate to the preſent ſubject, is not quite foreign to it. Nothing, perhaps, is more excruciating to the patients, nor in common more difficult to cure, than painful menſtruation; it impairs their health at preſent, and ſeems to ren-

der them leſs prolific in future: to the ſufferers it is a moſt ſerious evil. By the following ſhort proceſs I have been happy enough to relieve ſeveral. Let the patient have by her a few pills, conſiſting of *extr. theb. gr.* j. each, made ſoft with a little of any kind of conſerve. She is to take one of theſe pills the moment ſhe finds the pain attending this diſcharge coming on. A pill may be taken every hour till the pain goes off: they ſeldom require more than two of theſe pills; one is often ſufficient, if given early; and it ought to be a conſtant rule obſerved in adminiſtering anodynes, to give them, when they are plainly indicated, early. It requires much leſs of an opiate to obviate pain, than to quiet it when acute.

Let the patient keep either in or upon the bed, at leaſt in a recumbent poſture; let her drink moderately of any diluting liquor, and of the herb teas, weak whey, thin broth, or what elſe her conſtitution may particularly require.

When the time is paſt, a courſe of chalybeate bitters, in ſmall doſes, may be continued till within a few days of the return; and the belly ſhould be kept open by ſome proper laxative; two or three grains of *cathart. extract.* with half the quantity of *calx antimonii illota*, taken every night, will often ſucceed perfectly well. The anodyne muſt ſtill be in readineſs to take when the pain comes on, and to be taken to ſuch a quantity as to mitigate the pain, let the doſe be what it may.

This excruciating pain ſeems to be ſpaſmodic, and to proceed from the extreme irritability of the uterine ſyſtem: the blood naturally determined hither, in order to its being diſcharged, by diſtending the very irritable veſſels, occaſions the ſpaſm; this produces a conſtriction of the veſſels; they become impervious, and the niſus to the diſcharge continuing, the pain becomes exquiſite and general, till the patient, worn out with the ſtruggle, is debilitated and ſunk; the fluids are then diſmiſſed, ſome eaſe ſucceeds, but the patient is often ſo reduced as not to recover her uſual ſtrength before ſhe has another conflict to undergo.

The *fluor albus* is frequently the conſequence of this ſtruggle, and it would ſeem as if the *uterus* itſelf was ſo far a ſufferer as to be rendered by degrees leſs fit for fecundation. I think it has been obſerved by other phyſicians, as well as myſelf, that few of thoſe who have ſuffered much in the manner here deſcribed, have borne children.

THE

THE CASE OF A HYDROPHOBIA*.

I SHALL introduce what I have to ſay upon this Caſe, by an account of what happened before I ſaw the patient, as it was drawn up by W. French, his apothecary.

* This paper, which was originally publiſhed in the *Med. Obſ. & Inq.* vol. v. p. 195. an. 1774, was afterwards reprinted in the form of a pamphlet, with the following Introduction, and Additional Obſervations. *Editor.*

" I HAVE been ſolicited to reprint the following Caſe, that it might paſs into many hands " where the work in which it was firſt inſerted may never come. I yielded to this ſolicitation " the more eaſily, when I found that neither the Society to which it was preſented, nor the Book- " ſeller whoſe property it is, had any objection to its being publiſhed in this manner.

" The reader muſt not expect to find in it a cure for the Canine Madneſs. He will find, per- " haps, nothing more of certainty in this reſpect than that ALL the remedies hitherto pro- " poſed, either as preventives or cures, are found by experience to be altogether ineffectual.

" To rely on any popular means of preventing the fatal effects of this poiſon, whether known " and generally divulged, or preſerved as ſecrets, which, as the Tonquin medicine, are found " to be incompetent and ineffectual, is a dangerous deception.

" Were it only to give one incontrovertible fact in evidence againſt ſuch pretenſions, and of " courſe to ſtimulate the faculty to make a farther ſearch after more effectual relief in this diſ- " temper, it would be doing ſome ſervice to ſociety.

" Dr. Vaughan of Leiceſter has lately publiſhed ſome caſes of the Hydrophobia, which in " divers reſpects confirm the intimations given in the cure referred to. And the very rational, " though unſucceſsful, efforts he made to aſſiſt his patients under this calamity, are proofs of " his attention, and of the hitherto untameable nature of this ſingular poiſon.

" Let not, however, theſe difficulties diſcourage us from obſerving every caſe that occurs with " attention, and faithfully noting every incident that ariſes in the progreſs of the diſeaſe: " perhaps the united labours of the faculty, Providence permitting, may, at length, diſcover " ſome effectual remedy.

" To this Caſe are ſubjoined ſome Remarks on the Canine Madneſs and Hydrophobia, with " a view to aſſiſt thoſe who are called in upon theſe occaſions, to perform their duty with ſa- " tisfaction to themſelves, and advantage to their patients."

Mr.

" Mr. CHARLES BELLAMY, of Holborn, aged forty years, on the " 14th of February 1774, was bit by a cat, which was killed the ſame morn- " ing.

" The day after, viz. February 15th, he took the celebrated Ormſkirk medi- " cine, ſold by Hill and Berry, in Hill-ſtreet, Berkley-ſquare, and conformed " to the directions given by the vender in every reſpect.

" A ſervant-maid, who was bit in the leg by the ſame cat, juſt before her " maſter was bitten, took the ſame remedy.

" About the middle of April he complained of a pain in his right knee, " which he ſuppoſed was affected with the rheumatiſm; he had felt the like " pain at times during the laſt two years, and had procured himſelf eaſe by " pumping cold water on the part. On the 7th of June, this complaint in- " creaſing, he deſired me to attempt ſomething for his relief. I accordingly " ſent him a box of pills, two of which were to be taken every night, contain- " ing about one grain of calomel, of camph. ipecac. and *pill. ſapon.* two grains " each, and two tea-ſpoonfuls of Huxham's tincture of the bark in buck- " bean-tea twice a day.

" After having taken theſe medicines about ſix days, he diſcovered an un- " uſual titillation in the *urethra*, a contraction of the *ſcrotum* and *penis* to a de- " gree of pain, and an emiſſion of *ſemen* after making water, to which he had " frequent calls.

" Alarmed at theſe ſymptoms, which he attributed to his medicines, he was " deſired to diſcontinue them, and to live as temperately in every reſpect as " poſſible.

" On Thurſday the 16th of June, he ſent for me in the morning, com- " plained much of having had a reſtleſs night, and told me, though he had eat " ſome bread and butter as uſual for his breakfaſt, yet he found he could not " ſwallow his tea without difficulty; he attempted it before me, and threw a " little into his mouth, but with the utmoſt agitation.

" Recollecting the accident of the bite, and apprehending the moſt ſerious " conſequences, but without diſcovering my apprehenſions to the patient, I " propoſed a phyſician might be ſent for. Dr. Fothergill was mentioned by " the patient. I met the Doctor in a few minutes after, and informed him of " the preceding circumſtances, and attended him to the place.

W. FRENCH."

Theobald's-Road,
June 20, 1774.

I SAW

I SAW the patient above mentioned the 16th in the morning: he was ſitting in his dining-room, without any other appearance of indiſpoſition than a little paleneſs; his countenance chearful; nothing that diſcovered uneaſineſs or anxiety. He recited very diſtinctly the complaints which he called rheumatic, and which had induced him to apply for help; mentioned his opinion, that his diſorder had been increaſed by the pills, &c. but upon being informed, they could have no ſuch effects, he readily gave up the point. "I have had (ſays "he) a very reſtleſs night; my head has been much out of order; I have "ſweated a great deal, was very faint with it, and have had little or no ſleep: "I was extremely thirſty in the night, and intended to have regaled myſelf "this morning with a large draught of baum-tea, which ſtands there ready "made; but you ſhall ſee the difficulty I am under, and which induces me to "aſk your aſſiſtance." He then took up a tea-cupful of common green tea with milk in it, as he drank it commonly for breakfaſt, and brought it within a few inches of his lips with great compoſure: he then threw the liquor into his mouth, and ſwallowed it with uncommon haſte and perturbation. "You ſee "(ſays he) I can force it down: ſhall I do this very frequently, or will you al-"low me to omit it a while?"

It may be proper in this place to mention, that our patient was a perſon of a good underſtanding, active, diligent, and ſenſible, much eſteemed for his probity; and during his illneſs he gave proofs of a capacity and reſolution ſuperior to moſt men in the middle ſtations of life.

I deſired him to forbear the attempt, while it continued to affect him with extreme uneaſineſs, but to endeavour to get down bread moiſtened with any liquor he choſe as often as poſſible. The thought pleaſed him, and he got down bits of bread moiſtened with wine without much difficulty, whilſt I ſtaid, and continued ſo to do frequently during the day; and this was the only kind of nouriſhment he got down.

He had naturally a lively, penetrating eye; but his aſpect varied frequently and remarkably during our converſation. His pulſe was generally about ninety, and rather hard, but changed almoſt every minute, both in frequency and hardneſs. His fleſh felt moderate, his tongue dry; he made very little urine, and complained much of the contraction of the *ſcrotum*; the emiſſions had almoſt ceaſed, and his bowels had been ſufficiently emptied the preceding morning.

He took not the leaſt notice of his having been bit to me, nor did he appear to have recollected it during the courſe of his illneſs.

We forbore, on this account, to inquire after the ſtate of the wounded part, or to ſay any thing that might lead him to ſuſpect his preſent complaints aroſe from that fatal accident.

To gain a little time for reflection on a caſe ſo ſudden and ſo dangerous, and that nothing which ſeemed reaſonable to be done might in the mean time be omitted, I ordered ſix ounces of blood to be taken from the arm; that a ſcruple of native cinnabar, and half a ſcruple of muſk made into a bolus, might be given every four hours; and that as much nouriſhment, fruit, or any thing he choſe, might be got down, as poſſible.

The family were appriſed of the dangerous ſituation he was in, and a conſultation requeſted as early in the evening as might be convenient. Dr. Watſon was pitched upon; we met at five in the evening, the 16th, and received the following account:

He had taken two of the boluſes, had got down ſeveral bits of bread moiſtened with wine, ſome ſtrawberries, a few bits of pudding, but had not attempted to drink any liquor. We requeſted he would then, for our ſatisfaction, endeavour to ſwallow a little liquor: he readily aſſented; it was brought to him; he threw it haſtily into his mouth, and ſwallowed it with difficulty and extreme perturbation; the moment the liquor touched the *gula*, all the muſcles concerned in deglutition appearing to be convulſed.

He repeated to Dr. Watſon, very intelligibly and fully, the account which he had given me in the morning. His countenance was pale, and he ſeemed much agitated and diſtreſſed; complained of extreme thirſt, and of the impoſſibility of ſwallowing any liquid. His tongue was white, but did not appear dry. He was perpetually endeavouring, with great efforts, to bring up and diſcharge the viſcid tenacious phlegm, which lined the *fauces*.

The heat of his fleſh was moderate; but his pulſe was quick, hard, and irregular; ſtrong palpitations of the heart, which he made us feel by preſſing our hands to the part.

He was perfectly ſenſible; and, when his endeavours to diſcharge the viſcid phlegm would allow him to ſpeak, gave us pertinent anſwers. He had made but little urine ſince the morning; the dragging, as he called it, of the *ſcrotum* ſtill continued, and the uneaſy ſenſation and emiſſion.

The blood which was taken away in the morning had ſome ſlight appearance of inflammation, the *craſſamentum* firm, with ſlight traces of ſize, but the *ſerum* remarkably yellow. No evacuation by ſtool to-day. Upon the whole, it was evident, that the diſorder had increaſed ſince morning.

Upon maturely conſidering this very hazardous ſtate of things, we agreed upon the following proceſs:

To procure a ſtool or two by means of a clyſter:

That he ſhould then be carried to the warm bath, and remain in it ſo long, and to ſuch a degree of heat, as was moſt agreeable to himſelf:

That at his return a clyſter ſhould be given of a pint of milk and water, and this to be repeated as often as it could be conveniently adminiſtered;

That

That in the laſt of theſe clyſters a drachm of Dover's powder ſhould be exhibited:

That two drachms of ſtrong mercurial unction ſhould be rubbed by himſelf on his legs and thighs as ſoon as he returned from the bath, and that he ſhould endeavour to get down all the ſuſtenance he could.

We ſaw him early next morning, the 17th, when we received the following account:

The laxative clyſter had produced a proper effect.

The warm bath relieved him greatly whilſt he was in it, ſo that for a time, as he expreſſed it, his ſufferings were ſuſpended. They returned, and with more violence, during the night. The clyſters had been repeated ſeveral times, and the unction applied.

We found he had paſſed a moſt reſtleſs night, totally without ſleep, and in much agitation, not being able to lie ſtill a moment.

His countenance beſpoke much diſtreſs, though accompanied with endeavours to conceal it; ſometimes he was calm, then agitated; talked much, but ſenſibly. He had now a copious flow of ſaliva leſs viſcid; his tongue white and moiſt, but foul. His pulſe was very quick, ſmall, hard, and irregular; his hands rather cold than hot. He had made water in the night with leſs difficulty, and without its uſual conſequences; the dragging pain, or ſpaſmodic affection of the *cremaſter*, was gone off. In general, his ſtrength and faculties ſeemed leſs impaired than might have been expected, where ſo little ſuſtenance had been taken in; and there was conſtant reſtleſſneſs, and no ſleep.

On conſidering theſe circumſtances, and obſerving there was a more copious flow of ſaliva, the tongue more moiſt, the thirſt leſs, the ſpaſm of the *cremaſter* gone, yet that the difficulty in ſwallowing was not leſs, and ſtill no ſleep, though his head was clear:

That his pulſe continued hard and quick; that there were ſome appearances of an inflammatory denſity yeſterday; and that he had found relief from the bath, at leaſt a temporary ſuſpenſion: We agreed,

That he ſhould be blooded ſtanding, according as his ſtrength would bear:

That he ſhould be conveyed to the warm bath, and remain in it as long as he found it agreeable to himſelf:

That a clyſter of milk and water ſhould be thrown up at his return from the bath, with a drachm of Dover's powder; and

That half an ounce of mercurial unction ſhould be rubbed on his legs and thighs as ſoon after as might be done conveniently.

One ſcruple of *thebaic. extr.* was ordered to be made into twenty pills, three of theſe to be given when he came out of the bath, and two every hour, till he ſeemed diſpoſed to ſleep.

At five in the evening we viſited him again, when he received us with the

utmoſt tranſport and joy; and deſcribed in very ſtrong terms the pleaſure and the benefit he received from the warm bath, and the hopes he now conceived of a ſpeedy recovery.

A vaſt quantity of viſcid phlegm was continually flowing into his mouth, which he was as conſtantly employed in diſcharging; for it ſeemed to have the ſame effect upon the organs of deglutition, as if he attempted to ſwallow any other liquor, and gave him extreme uneaſineſs. To get rid of this defluxion, the moment he felt it in the *fauces*, he exerted a ſudden and vehement expiration, as if it was with a deſign to blow away the moiſture ſo offenſive to him, with the utmoſt force and expedition. This occaſioned a ſound, which did not ſeem very remote from the hollow barking of a dog.

When he was not employed in theſe efforts, he was talking conſtantly but coherently. His eyes had a particular keenneſs, and all his motions were quick and vehement. His pulſe was alſo quick, hard, ſometimes trembling and irregular. His hands were rather cold and clammy, but the general heat of his body not intemperate.

He told us he had taken a great deal of nouriſhment during the day. On inquiry, we found it amounted to no more than on the preceding; a few bits of bread moiſtened with wine, a little pudding, two or three pieces of china orange, which pleaſed him much. He had taken none of the pills.

Previous to his going into the bath, he deſired to be ſhaved; it was readily aſſented to, but proved a more troubleſome operation than he was aware of. The moment the lather touched his face, he fell back with ſurprize; but the part being once wetted, he bore the repetition eaſily; every freſh part that was lathered gave him conſiderable emotion; the application of the razor had in a degree a ſimilar effect: in ſhort, every new movement about him gave him ſome freſh alarm, ſome degree of agitation and anxiety. He took notice of this himſelf; "but (ſays he) I am naturally haſty and choleric; and when I am "got better of theſe complaints, I hope you will aſſiſt me in correcting it."

Whilſt he was in the bath, the perſon who attended him, without any particular intention, took up ſome of the warm water in his hand, and poured it on the patient's head and face: this confuſed him much; he deſcribed to us the diſtreſs it gave him at the time very emphatically; and added, with much apparent ſatisfaction, that he had ſo far conquered his averſion to it, that he had poured water on himſelf with his own hand in the ſame manner.

It was in ſpeaking of this affair he mentioned the term *Hydrophobia*; obſerving, that his complaints reſembled it; yet without giving us any reaſon to apprehend he had the leaſt idea of his actually labouring under this fatal diſtemper.

He had not ſlept a moment from the time he was ſeized with the dread of liquids. He repeatedly expreſſed the ſatisfaction he received from the bath, and

and wiſhed to go into it again. We conſented, and deſired that he might be carried thither again, and to ſtay in it as long as he choſe.

Every new operation now became an extreme difficulty to him; dreſſing, undreſſing at the bath, going into the water, which he now did with much intreaty, putting one foot in, and haſtily withdrawing it. He was at length prevailed on to go into it. A recollection of the eaſe he had enjoyed in it before, aided by a manly reſolution that never forſook him, ſubdued his fears, and he remained in it near half an hour. He was brought home about nine o'clock. He refuſed to take the pills, and every other medicine. He grew fretful and reſtleſs, ſoon became delirious, but offered no violence.

After remaining in this condition about two hours, the powers of nature ſunk, he reclined his head gently on the pillow, and expired at half paſt twelve.

Endeavours were uſed to obſerve the condition of the part that was bit, when he was dreſſing after bathing, as far as could be done without alarming him; but ineffectually. After death it was examined with attention, but without perceiving the leaſt morbid appearance.

For this account of his laſt hours, and his behaviour at the bath, I am obliged to my friend, William French, his apothecary, who attended him with the utmoſt conſtancy and humanity.

During our attendance, we learned that this accident happened in the following manner:

The ſervant-maid having occaſion to waſh, roſe earlier than was uſual: upon her entering the waſh-houſe, a cat attacked her, and fixed upon her leg. Her ſcreams brought her maſter to her aſſiſtance; he aimed a blow at the cat, but miſſed it; the cat then ſeized his leg, but he ſoon diſengaged himſelf from her; a chairman paſſing by was called in, who ſoon killed her.

Both the maſter and maid took the Ormſkirk medicine as ſpeedily as poſſible, and obſerved the directions given with it. The maſter's leg ſoon healed, and he ſeems to have thought no more of it. Perhaps fortunately for the girl, her leg did not heal; it grew worſe, and baffled the ſkill of a young ſurgeon to whom ſhe applied. We were told ſhe afterwards got into one of the city hoſpitals on this account, and we have no doubt but ſhe is ſtill living. Our endeavours to find her out, and to know in what ſituation ſhe is, have not yet been ſucceſsful *.

It is here worth obſerving, that two perſons are bit by a mad cat, at the ſame time: the firſt who was bit, and the moſt ſeverely, eſcapes; the ſecond loſes his life. The wounds of one healed preſently; the other became a ſore,

* I have ſince learned that her leg continued long in a ſore ſtate, but that ſhe is now perfectly well, Aug. 29, 1774.

notwithſtanding

notwithſtanding endeavours to the contrary. Both uſed the ſame preventive means.

May not then the happy eſcape of the girl be owing to the ſore which followed from the bite? It ſeems probable; and affords a very forcible argument for enlarging the wounds made by the bite of mad animals, and promoting a diſcharge from them as long as poſſible. Perhaps this is the only ſure preſervative againſt the direful effects of this malignant venom we are yet acquainted with.

It is with ſome repugnance we point out the inefficacy of a medicine, which in this country has eſtabliſhed a reputation of its being an infallible preſervative. Perhaps it has had its uſe in being ſo eſteemed by the generality; for it is undoubtedly true, that many perſons have ſuffered almoſt as much as they could have done from the moſt poiſonous bite, by repreſenting to themſelves the miſeries they were expoſed to. A medicine that could powerfully aſſuage theſe apprehenſions, from a general opinion of its ſalutary effects, has certainly been beneficial to many; and ſo have a multitude of other famed prophylacticks.

But as this medicine, which has ſurvived the reputation of many others, has in this inſtance been found to be ineffectual; it ſeems to be abſolutely neceſſary to apprize the public of the fact, which, as far as one evidence can extend to, is deciſive: The ſame medicine procured by an unexceptionable hand (the apothecary, who urged its being given, from a thorough perſuaſion of its affording perfect ſecurity) from the place authoriſed to ſell it; and given preciſely according to the preſcriber's directions, to two perſons bit by the ſame animal, and at the ſame time; the perſon firſt bitten eſcapes, the ſecond dies of the *Hydrophobia*.

Was it not of the laſt conſequence to thoſe who may become the unhappy objects of ſuch applications, to be informed that even this medicine had failed of ſucceſs, we ſhould not endeavour to bereave them of the comfort which the unfortunate might derive from an opinion that it was infallible; but when there is ſuch evidence to the contrary, it becomes neceſſary, for the public benefit, to endeavour to remove prejudices that may be fatal to the real ſafety of individuals.

To inquire farther into the merits of this, or any other preſervative againſt the poiſonous bite of mad animals, would take up too much room in your collection. This, however, would be no unprofitable employment for a perſon of ſuitable leiſure and abilities; and we are not leſs in doubt about the efficacy of all thoſe remedies which have been urged by the ſeveral propoſers, as extremely beneficial in the cure of this diſtemper, even in its laſt ſtages. We are confident that divers have been mentioned as being cured of the effects of ſuch bites, who never had one genuine ſymptom of the diſeaſe thence ariſing.

At the ſame time that we ſuggeſt opinions which may tend to deſtroy that happy confidence which has prevented much ſuffering to individuals; and whilſt we own our apprehenſions that none of the celebrated medicines hitherto propoſed to the public can ſafely be confided in, either as prophylacticks or as curatives; we would earneſtly recommend one means of preſervation, which not only the preſent inſtance before us, but extenſive experience ſeems to eſtabliſh upon a ſolid foundation; that is, after having waſhed the part, and cleanſed the ſurface as quickly as poſſible from the poiſon, to enlarge the wound immediately by actual cautery, the knife, or any other ſpeedy and effectual method; and to promote the diſcharge as long as is poſſible. This being effectually done, affords the ſureſt ground for a proper confidence and ſecurity againſt future miſchief.

Two circumſtances we take the liberty to ſuggeſt, as deſerving ſome attention.

The firſt is, In caſe of a bite from a mad animal, to recollect what part was bit, and, if through any, through what kind of covering. A bite through thick garments, or leather, as the teeth of the animal would probably be wiped quite clean from the venom, ought to give leſs uneaſineſs than when it happens to the naked ſkin.

Second, Not to kill the animals, if it can be avoided, till it is paſt a doubt they were mad. On both theſe circumſtances may depend conſiderable ſatisfaction to the perſon bit; and it may not be improper to add, that there is abundant reaſon to ſuſpect that very few of thoſe who are bit by mad animals are liable to be affected by the *Hydrophobia*, or other fatal effects of the bite. This, however, is not intended to abate the care that is due on theſe occaſions, but as a proper antidote to that deſpondency which is often the conſequence of this accident.

In reſpect to our conduct in the preſent caſe, it is ſubmitted to your cenſure. We acknowledge we deſpaired of our patient's recovery. If we kept partly in the track our predeceſſors had recommended, as circumſtances admitted, ſo far we were juſtified: but we went further, we purſued ſuch means as we thought moſt likely to have one of theſe deſirable effects; to keep up the forces of life, by conveying into the habit every kind of nouriſhment by the paſſages left open, *viz.* the bowels and the ſkin, and thereby enabling Nature to ſupport the conteſt longer; or elſe, to calm and relax, and render the conflict at laſt leſs terrible to the aſſiſtants, and leſs painful to the ſufferer.

We thought ourſelves juſtified, from conſidering the ſtate of the pulſe, and other circumſtances, to take away ſome blood, and repeatedly. That we might not reduce the ſtrength beyond what appeared neceſſary, we choſe to order it to be taken from the patient ſtanding; becauſe, we were ſatisfied, he could not loſe ſo much blood in that ſituation as would be detrimental without fainting, much ſooner than he would have done in a ſitting or decumbent poſture.

ADDITIONAL

ADDITIONAL DIRECTIONS

FOR THE TREATMENT OF

PERSONS BIT BY MAD ANIMALS.

1ſt, PREVENT the animal ſuppoſed to be mad from being killed, if poſſible, till it is paſt a doubt, that by refuſing ſuſtenance in any form, and other circumſtances uſually accompanying this ſtate, it is evident the creature is mad. Let all poſſible care, however, be taken, in the mean time, that he be confined in ſuch a manner as to injure no other animal. This attention, though it does not contribute to the cure, it may to the comfort of the patient.

2d, Obſerve whether the wound is made through any covering, and of what kind; as much ſatisfaction may be afforded to the patient, if the wound was made through thick clothing or leather.

3d, Remove the ſlavered cloths as ſoon as poſſible, and waſh the wounded or bruiſed parts with water; in which if a little ſalt is diſſolved, it can do no harm.

4th, Conſider in what manner the wounded part may be treated, ſo as to keep it diſcharging as long as poſſible. If in a fleſhy part, and the patient will ſubmit to it, exciſion of the wounded part is the beſt ſecurity from danger.

Where this operation cannot be admitted, the actual cautery, the lunar cauſtic, a veſicatory, may be applied with advantage, according as the part, the age of the patient, and the ſituation may direct. In every caſe let the wound be kept open as long as it can be done conveniently. A ſmall quantity of gunpowder, a little moiſtened, ſpread upon the part, if only ſcratched by the teeth of the animal, or put into the wound if large enough to receive but a little, and then kindled with a lighted paper, will, perhaps, as ſuddenly, as eaſily, yet ſafely nlarge the wound, as can be effected by any other means, and occaſion ſuch a kind of wound as will not inſtantly be cloſed.

The choice of theſe ſeveral methods muſt be left to the operator. Wounds in the hands, feet, or face, will not admit of the injured parts being cut out ſo ſafely, as may be done on the muſcular parts of the arms and legs.

The time, likewiſe, of keeping the wounds open, muſt in ſome reſpect depend on their ſituation. To keep open a running ſore for a long time on the face and hands, would be difficult, and productive of various inconveniences.

Of all the prophylactics yet offered to the public, experience has proved there is not one to be depended on; it may, perhaps, be worth while to conſider in this place the means of prevention principally in vogue.

When a perſon is bit by a mad animal, the firſt thing uſually thought of is, Sea Bathing. The party is ſent to ſome bathing-place, where there are commonly perſons employed in this buſineſs, who, by keeping the patient long under water, and dipping him repeatedly, reduce him almoſt to a ſtate of ſuffocation. Some of the ſalt water gets into the *trachea*, more into the ſtomach, and proves ſometimes a briſk purgative. Here the proceſs ends, and the patient is deemed to be ſecure from any future accidents on account of the bite.

The reader will have obſerved in the preceding caſe, that the whole of this proceſs is founded on miſtake; and it is certain that divers who have undergone the utmoſt ſeverity of this diſcipline, have died of the *Hydrophobia*.

The *Pulvis Antilyſſus* of Dr. Mead has had no better ſucceſs, and is now almoſt wholly forgot.

No medicine, as a preventive, ſeems to have maintained its credit ſo long as that called the Ormſkirk remedy. It is called ſo from the name of a town in Lancaſhire, near which the gentleman lived in whoſe family the ſecret has been long preſerved, and from thence diſtributed with ſuch apparent ſucceſs, as to be generally deemed infallible for preventing the Canine Madneſs. I am ſorry there are more inſtances to the contrary, than that which is related in the preceding account.

The Tonquin medicine, compoſed of Muſk and Cinnabar, has been equally unſucceſsful. All theſe different medicines have been employed by practitioners, and all of them have failed.

Dr. James, who had great credit amongſt ſportſmen, and great opportunities of obſervation, thought Turbith emetics and mercurials certain antidotes; but theſe, likewiſe, have had the ſame fate with others; they have been neglected, not becauſe their promoters were no more, but becauſe they were found to be inſufficient.

His practice, however, and ſome other publications, turned the attention of phyſicians to mercurials, and they have of late been conſidered as the moſt certain antidotes to the Canine Madneſs: we gave them a ſhort, though ineffectual trial. Others have been more bold, but not more ſucceſsful. There

is too much reaſon to diſtruſt their efficacy in preventing or curing the *Hydrophobia*.

Notwithſtanding theſe diſcouragements, there is one thing which ought to afford the ſufferers ſome conſolation; which is, that it appears very evident, that if no means of prevention were uſed, many of thoſe who are bit by mad animals, would never be liable to the fatal conſequences of Canine Madneſs.

On the other hand, it is more than probable, from divers accounts which have been publiſhed, that perſons of timid and anxious diſpoſitions, who have been bit by ſome animal, even without any proof of its being mad, have imagined themſelves affected with every ſymptom of Canine Madneſs they have heard of, deſcribed their complaints as ſuch, were treated accordingly, and cured of a diſeaſe that had no real exiſtence.

It is, therefore, a matter of no ſmall moment to the practitioner, as well as to the patient, to have all theſe circumſtances in contemplation; and whilſt the former is neglecting no means, which either the experience of others, or his own judgment, have induced him to think are conducive to ſecurity, the patient ſhould be confirmed, by every juſt and reaſonable argument, in an opinion of their efficacy.

After taking this ſhort view of the means recommended to us as preſervatives againſt the fatal effects of this poiſonous bite, and having ſeen too much reaſon to conclude them ineffectual, it is with regret I acknowledge myſelf unacquainted with any method of treating the *Hydrophobia* more ſucceſsfully, or even of leſſening the diſtreſs with which it is accompanied farther than has been already propoſed.

The firſt ſymptom of the *Hydrophobia*, which is a dread of all liquids, cuts off in an inſtant a great part of the means of relief by internal remedies. It is with great difficulty that medicines of any kind, or in any form, after a day or two have elapſed, can be got down.

The caſe which Dr. Watſon and myſelf attended, concluded, like all the inſtances of the genuine *Hydrophobia* on record, fatally. Had we the ſame ground to go over again, for my own part, I confeſs I know not of a more reaſonable plan. I would not, however, diſcourage others from purſuing their own ideas: ſome fortunate event may, at length, make us better acquainted with the nature of this poiſon, and point out a ſpecific remedy.

Should another accident of the like nature occur, until we are directed to a more rational and ſucceſsful method, I ſhould ſtill be inclined to purſue a plan ſimilar to that which we laid down in our treatment of the caſe before deſcribed. Its baſis was, to prevent the loſs of ſtrength as much as poſſible, in order to gain time, and afford the beſt chance of relieving the patient. In this diſeaſe we are early precluded from the uſual means of effecting this purpoſe,

poſe, as the patient ſoon finds himſelf incapable of ſwallowing any kind of nutriment in a proper quantity, as hath been already mentioned.

Two methods, however, ſtill remain of aſſiſting the patient, though imperfectly. Firſt, by clyſters. By this means, a large quantity of aliment may be ſupplied. Broth, milk, eggs, in various ſhapes, may be exhibited in ſmall quantities that they may be retained, whilſt larger promote their own rejection.

Secondly, by baths. It is probable that by this method large ſupplies of fluids may be introduced into the habit, by means of the abſorbent veſſels, placed on the ſurface of the body every where.

Whether any uſeful additions can be made to warm water, can be determined only by experience. Perhaps broth moderately ſalted, with the addition of aromatic herbs, might be uſed alternately with warm water; to which may be added a handful or two of that compoſition ſold by the perfumers under the name of *Pot Pourrie*, and a proportion of Bay Salt, ſufficient to make it nearly equal to ſalt water, or about twelve ounces to every four gallons.

Whatever bath is made choice of, the patient ſhould continue in it as long as it is eaſy to him, and in a degree of heat that he bears with pleaſure, perhaps from 80 to 86 degrees of Fahrenheit's thermometer. The patient may be wiped dry, put into a warm bed, a clyſter given of half a pint of broth, with a raw egg beat up in it; and both this and bathing be moſt induſtriouſly repeated.

From the trials made with opium, it does not appear, that this drug has had any beneficial effects. It is difficult to get it down in any quantity at the time we moſt want it, in any ſhape. By clyſters it may be given, had we any reaſon to conclude it would be beneficial. In regard to its external application, I am perſuaded from experiments, that if the ſkin is whole, opium never produces any ſoporific effects.

Applied as a plaſter, or a cataplaſm, it will produce the ſame effect as any ſimilar plaſtic ſemi-reſinous ſubſtance, and no more. In tincture, it will act as ſpirit would act, impregnated with ſuch a kind of ſubſtance, void of all anodyne quality, and in no other way. Half an ounce of opium ſoftened into the form of a poultice, and applied to the belly of a healthy new-born infant, did not produce the leaſt anodyne effect. The like trial has been made with Mithridate, Venice Treacle, and Laudanum, and with the like reſult. In a diſeaſe ſo ſwift in its progreſs, it is of conſequence to know what *will not be efficacious*. It compels us to look around for other auxiliaries.

If mercurials can be of uſe, it would ſeem that the ſteam of cinnabar would be worth a trial. By this means it would be practicable to impregnate the air in which the patient breathes, ſhould he be incapable of admitting the fume

in the uſual mode into the *fauces*, ſo as to produce the effects of mercury on the parts affected the moſt ſpeedily.

When the patient comes out of the warm bath, the mercurial ointment may be applied liberally. I am afraid it will be found as ineffectual as the other means hitherto made uſe of; but in caſes like this, it is better to try a medicine of whoſe efficacy there may be ſome doubt, than none at all.

In reſpect to bleeding, I have only one thing to obſerve. If the patient is bled ſtanding, till he ſhews a diſpoſition to faint, it may be done without hazard; it may abate a little of that inflammatory diſpoſition, which is the conſequence of continued irritation.

It would, perhaps, at length contribute to remove this uncertainty, if thoſe who are applied to on theſe intereſting emergencies, would conſider themſelves as obliged by the honour of their profeſſion, and the ties of humanity, to note with all poſſible preciſion and impartiality every incident in the progreſs of this diſeaſe; and, whether they purſue the hints here ſuggeſted, or take up more rational ones from their own ſtore, would communicate the reſult to the public. By this method the field of conjecture would be contracted, and our ſucceſſors directed to new objects of inveſtigation. The reſult would be not leſs honourable to thoſe who engage in the ſearch, than beneficial to mankind in general.

CASE

CASE OF AN ANGINA PECTORIS,

WITH REMARKS*.

IN the autumn of 1773, I viſited R. M. Eſq; a gentleman aged about fifty-eight, of a ſize above the middling, his complexion rather fair and ſanguine than ſwarthy, plump and full, diſpoſed to corpulency, but not ſo as to render him unfit for any kind of exerciſe.

For the moſt part he had enjoyed very good health during the greateſt part of his life, which was active, regular in common, temperate as to liquors, a good appetite, and accuſtomed to a plain but plentiful table, as I was informed by my friend and neighbour W. Fowle, who attended him as his apothecary, and gave me the following account:

" He was ſeized about the year 1770 with a remarkable giddineſs, which was at times extremely troubleſome to him, and never left him entirely, though the intervals of the ſeverer attacks were frequently pretty long. For this complaint he had at firſt a bliſter on his head, which was kept open ſeveral months; and afterwards had one upon his back, which was alſo kept open a good while. He took at different times valerian, with ſalt of hartſhorn, *lac ammoniacum*, decoction of the bark with valerian; but, excepting the bliſters, nothing appeared to give him any material relief.

" In July 1773 he was attacked with a ſpaſm in the breaſt, which at firſt affected him only when he uſed exerciſe, and chiefly when he walked up hill. I deſired him to apply a ſmall bliſter to his ſtomach, and to take a quarter of a pint of buckbean-tea twice a day. The bliſter gave him great pain, and he was obliged to let it heal very ſoon. The buckbean-tea did him no good. I then gave him the gum-pill and guaiacum, mixed up with *Balſ. Peruv.* He took the pills morning and evening, and waſhed them down with the camphorated julep, to which was added ſome ſimple tincture of valerian. Theſe me-

* Medical Obſervations and Inquiries, vol. v. p. 233. ann. 1774.

dicines,

dicines at firſt appeared to do him ſome good; but the diſeaſe ſhortly after returned with greater violence, when you was conſulted; and he died the 10th of May following."

I ſoon found there was too much reaſon to ſuſpect this diſeaſe was of that kind, which is ſo fully and judiciouſly deſcribed by Dr. Heberden, in the ſecond volume of the Medical Tranſactions; a diſeaſe which I had too often met with as it terminated for the moſt part fatally, and without its being in my power in one ſingle inſtance to learn from diſſection the ſeat of it, or to acquire any ſatisfactory information of its nature, from the moſt attentive recollection of the ſeveral ſymptoms.

It was in the evening when I ſaw the patient; and at that time he was free from any complaint, as he ſat ſtill. His heat was moderate; his pulſe ſufficiently full, but for the moſt part irregular; his appetite good; and the diſcharges as they ought to be, only rather diſpoſed to coſtiveneſs.

He complained that his giddineſs was ſtill troubleſome at times; but that a diſorder, which frequently affected his breaſt, eſpecially on motion, and occaſioned much difficulty in breathing, gave him the greateſt uneaſineſs.

That in walking, if he either went up the ſlighteſt acclivity, or endeavoured to walk faſter than a certain pace; or if the wind was high, and met him as he walked even moderately; he was obliged to ſtop. He deſcribed it as a kind of ſtricture ſurrounding his cheſt, principally in a line with the *mammæ*, in ſuch a manner as to render it impoſſible to take a ſtep further without the hazard of immediate ſuffocation; a ſharp pungent pain moſt particularly affecting the parts under the left breaſt, extending itſelf upwards on that ſide, and down the inner part of the left arm to the elbow. Theſe ſymptoms, on turning from the wind, and ſtanding ſtill a few ſeconds, went off, leaving only the remembrance of their ſeverity, and a caution to proceed more deliberately.

The weather ſeemed to have ſome little effect upon him; a ſharp keen air, or a high wind, or an extreme of any kind, affecting him very ſenſibly.

Going up ſtairs, and getting into bed, were great difficulties to him: nor did the ſtricture always ceaſe upon lying, or rather ſitting down in bed; it would ſometimes continue to harraſs him for an hour or two, and frequently returned about one or two o'clock in the morning, or at day-break.

He had felt occaſionally a ſmart and ſudden fit of pain in one foot, with ſome ſmall ſwelling, apparently of the gouty kind. His age, his manner of living, his general habit, ſeemed to favour an opinion, that his diſorder might partake of this malady. He had found too, that eructations often terminated his pains; and that nothing facilitated theſe diſcharges ſo much as ſimple peppermint-water: it was always by him in the night, and gave him eaſe even when a reaſonable doſe of a paregoric had been given without benefit.

Willing to hope that this caſe might partake conſiderably of a gouty nature,

and conſequently that there was ſome chance of relieving it, I propoſed ſuch a plan, both of diet and medicine, as might tend to enable the conſtitution either to diſcharge the gouty matter through the emunctories, or to throw it upon the extremities: I adviſed him to abſtain from every thing heating, not however to drink much leſs wine than uſual, and to obſerve caution in reſpect to quantity of proper food. Sometimes the diſorder ſeemed to be leſs ſevere; but no laſting advantages were gained: at length recourſe was had to an anodyne at night, which was repeated either in the night, or towards morning, as the conſtrictive exacerbations required. Twenty-five drops of *tinct. theb.* with a like quantity of *vin. antim.* at night, and ten drops of the ſame tincture in a little draught early in the morning, procured for a conſiderable time the appearance of much benefit. This however was not laſting; upon any little exertion of muſcular force, the diſorder ſtill diſcovered itſelf, and with as much violence as at firſt.

With a view to aſſiſt his general health, which ſeemed now to be much affected by the continuance of theſe complaints, he drank the Bath-water at Bath ſeveral weeks. Some more pain was obſerved in one foot whilſt at Bath, and a ſwelling ſufficient to ſhew it was the gout. His health was ſomewhat improved by the journey and the waters; but they did not alleviate the original pain in his breaſt, which ſometimes came ſo ſuddenly and violently, towards the mornings eſpecially, as to alarm thoſe about him with fears of his immediate death, and which at length happened very ſuddenly, in the morning of the 10th of May.

The family condeſcended to have him opened, which was performed by my ingenious friends the Langleys, father and ſon, judicious ſurgeons in the neighbourhood; from whom I received the following account, not being able, through ſome prior engagements, to be preſent at the diſſection.

" On inſpecting the body of R. M. Eſq; the parts were as follows:

In the THORAX.---The *mediaſtinum* much loaded with fat; a quantity of water under the lungs, about a quart on each ſide, thin and tranſparent, nearly reſembling urine. The lungs in good condition, except on the upper part of the right ſide there was an adheſion to the *pleura*, of about an inch, but without inflammation. The *pericardium*, on the outſide, loaded with a large quantity of ſuety fat, but more ſo on the lower ſide, next the diaphragm. The lymph in the inſide about the uſual quantity. The heart of the uſual ſize. The auricles and ventricles with all the veſſels and valves perfect; not the leaſt oſſification or appearance of diſeaſe, except on the outward muſcular part, near the *apex*, a ſmall white ſpot, as big as a ſixpence, reſembling a cicatrix.

In the ABDOMEN.---The *peritoneum* perfect.

The *omentum* much enlarged and thickened, at leaſt ſix times its natural thickneſs. The fat of a yellow appearance, and much firmer than uſual, very heavy, and the lower part adhering to the *peritoneum*.

The

The STOMACH.---In the inner coat a good deal of inflammation, particularly about the valve in the *pylorus.*

The LIVER;---rather more florid without than uſual; on the back convex part of it was an unuſual prominency, near the ſize of an egg; but on opening it, no appearance of diſeaſe.

The GALL-BLADDER;---full, and much diſtended, but no ſtones."

The firſt caſe apparently of this nature that occurred to me, was above twenty years ago; and the perſon is now, or lately was, living, and in good health, not having of late years, ſo far as I have heard, been attacked with this complaint. He was at that time about thirty years of age, and the youngeſt ſubject I have ever ſeen affected with this diſorder, which is ſo ſtrongly marked, as cannot eaſily be miſtaken for any other.

He was rather of a low ſtature than tall, a ſhort neck, ſtrong, temperate, and accuſtomed to regular, but not violent, exerciſe. Without any perceptible cauſe, he found himſelf ſometimes obliged to ſtop ſuddenly, if he was either walking up hill, or a little faſter than ordinary, or if he was riding a very briſk trot. Moderate motion of any kind did not affect him. Finding the diſeaſe increaſing, he applied to me for aſſiſtance. He lodged at a relation's in Cannon-ſtreet; from the end of it in Gracechurch-ſtreet to White Hart Court, where I then lived, is a very gentle aſcent; but in that ſhort ſpace he was obliged to ſtand ſtill ſeveral times, to recover from a kind of ſtricture about his cheſt, as he deſcribed it, that threatened him with death, if he had been forced to go forward. He had juſt dined, and this had added to his difficulty, having himſelf obſerved, that he ſuffered leſs in motion when his ſtomach was empty. From the deſcription of the pain, its courſe, which was acroſs the breaſt, and down both arms to the elbows, I could not forbear ſuſpecting the ſixth pair of nerves and their numerous connections were the ſeat of this diſeaſe; that ſome irritating cauſe, excited by motion, affected them; and that the parts they were principally diſtributed to, ſuffered in conſequence. The lungs did not appear to be affected; no preceding cough or ſymptoms of inflammation, no catarrhal defluxion, no appearance of a dropſy of the thorax, nor any fugitive acrimony, that ſeemed capable of producing ſuch ſenſations, had taken place.

I recommended a ſparing diet, to keep the bowels open, to uſe moderate exerciſe on horſeback; but not to take long or fatiguing walks. He took ſome pills of ſoap, *pil. gummoſ. cinnab. nativ.* and a light chalybeate bitter for ſome months. After this, he went to Bath ſeveral ſucceſſive ſeaſons, and acquired his uſual health.

This is the only inſtance that has occurred to me of a perfect recovery from this obſcure, and too often fatal malady. Some have been much relieved for a conſiderable

a conſiderable time, and I have heard nothing farther concerning them; but for the moſt part, if the diſeaſe attacks them late in life, the prognoſtic is unfavourable.

Perhaps it will be difficult to account for the ſymptoms attending this diſeaſe ſatisfactorily, from the appearances on diſſection. In a caſe not altogether diſſimilar in that diſtinguiſhing character, the conſtriction which the thorax ſuffers upon accelerated motion, and where there was reaſon to ſuppoſe, from the ſymptoms, that moſt of the thoracick and abdominal viſcera were in a morbid ſtate, nothing of this kind appeared on diſſection but a ſmall oſſification in one of the mitral valves of the heart, ſome additional quantity of moiſture in the *pericardium*, ſome in the cavity of the *thorax*, and of the *abdomen*; but the whole ſurface of the body was drenched, as it were in water, a general *anaſarca* covering both the trunk and limbs, with an utter inability to move without feeling a very ſharp ſtricture about the *thorax*.

This circumſtance induced me to requeſt the gentlemen, who opened the body, to attend to the condition of the heart, with all poſſible accuracy; and it appears from the preceding account, that nothing preternatural was therein obſerved, except, on the outward muſcular part near the *apex*, a ſmall white ſpot as big as a ſixpence, reſembling a cicatrix.

Another circumſtance likewiſe induced me to inquire more particularly after the condition of the heart, which is, that I have very ſeldom met with this diſeaſe, but it was attended with an irregular and intermittent pulſe, not only during the exacerbations, but often when the patient was free from pain and at reſt.

No doubt, as there are no two human bodies preciſely alike, ſo there will be a great diverſity of ſymptoms; but there is one in this ſingular diſtemper, that, ſo far as I have ſeen, always marks it diſtinctly, which is, that ſharp conſtrictive pain acroſs the breaſt, which always ſupervenes a certain degree of muſcular motion, or whatever agitates the nervous ſyſtem.

For the moſt part, the patient can walk a certain pace; if he exceeds this, he is ſtopped: if he rides on horſeback, it is the ſame; he can bear the horſe to walk, or trot; but if he quickens this motion beyond a certain point, he is obliged to ſtop. This is a conſtant attendant of all the caſes I have ſeen.

If we conſider the appearances of the preſent caſe on diſſection, we may perceive there are three which are evidently preternatural:

1. The quantity of fluid in the *thorax*;

2. The unuſual quantity of fat on the *mediaſtinum*, the *pericardium*, and *omentum*; and,

3. The ſcar-like appearance on the heart. The inflammatory appearance in the ſtomach, the little protuberance on the liver, do not amount to any thing like cauſes productive of ſuch effects.

The

The conſequences of the increaſed quantity of a watery fluid and fat in the breaſt, would doubtleſs be a more laborious breathing, from the lungs being confined within narrower bounds; but as theſe are permanent cauſes, the effects would be uniform.

It is very probable likewiſe, that a heavy pendulous *omentum*, ſo much increaſed by fat, would affect the action of the diaphragm very conſiderably, eſpecially in an upright and decumbent poſture, and would ſometimes impede, ſometimes accelerate the motion of the blood through the heart and lungs conſiderably.

This preternatural fulneſs of the *thorax* and appendage to the diaphragm, though they aſſiſt us in part to account for the diſeaſe, yet ſeem not to be the only cauſes of this diſtemper. Time and future opportunities muſt inform us of the reſt.

However, the facts diſcovered on the diſſection of this body, evidently ſuggeſt to us a nearer approach to reaſonable indications of cure. On reviewing ſeveral of theſe caſes which have fallen under my obſervation, I think they have generally attended perſons who were diſpoſed to be corpulent; it is therefore not unreaſonable to ſuppoſe, that a part of their diſorder has ariſen from a depoſition of fatty matter in ſome parts of the *thorax*, which, by hindering the expanſion of the lungs, interrupting the natural free action of the heart, and perhaps by preſſing too much on ſome branches of nerves, diſtributed to theſe parts for the moſt neceſſary purpoſes of life, if they are not the principal, yet are they among the cauſes of this diſeaſe. The collection of water in the *thorax*, contributes to the ſame end; and it is not improbable, but that in future diſſections theſe three preternatural appearances will be found: the ſubſtance of the heart itſelf affected; water in the *thorax*; and an increaſe of fat both in the *thorax* and *abdomen*.

In attempting to cure this diſeaſe, therefore, it would ſeem not an unreaſonable plan, to endeavour to increaſe the thinner ſecretions, by the ſeveral means employed for this purpoſe, of the urine eſpecially:

And to prevent the accumulation of fat. This laſt may be a difficult taſk, and requires great circumſpection, conſidering the time of life to which this diſeaſe is moſt peculiar.

The caſe which I firſt ſaw, was in a perſon of that time of life, which would have admitted of ſuch a regimen as moſt commonly reduces the very corpulent to a competent ſize. Paſt the meridian of life, to conquer this tendency, might be both difficult and hazardous. An exact temperance in diet and in liquors, ſeems abſolutely neceſſary towards the cure of this diſeaſe, not ſo far as to weaken, but ſo as to cut off all ſuperfluity of nouriſhment, as the redundancy would moſt probably increaſe the diſtemper.

A ſtrict

A ſtrict vegetable diet reduces exuberant fat more certainly than any other means I know. A caſe or two of this kind may not perhaps be wholly foreign to our ſubject.

A country tradeſman, aged about thirty, of a ſhort ſtature, and naturally of a freſh ſanguine complexion, and very fat, applied to me for aſſiſtance. He complained of perpetual drowſineſs and inactivity. His countenance was almoſt livid; and ſuch a degree of ſomnolency attended him, that he could ſcarce keep awake whilſt he deſcribed his ſituation. In other reſpects he was well.

I adviſed him immediately to quit all animal food, to live ſolely on vegetables, and every thing prepared from them; and allowed him a glaſs of wine or a little beer occaſionally, but chiefly to confine himſelf to water. He purſued the plan very ſcrupulouſly, loſt his redundant fat, and grew active as uſual in about ſix months. I recommended a perſeverance for a few months longer; then to allow himſelf light animal food once or twice a week, and gradually to fall into his uſual way of living. He grew well, and continued ſo.

A young unmarried woman, about twenty-three years of age, of a low ſtature, and very fat, applied to me for aſſiſtance in a great difficulty of breathing, ſomnolency, and incapacity for any exerciſe. It was a hardſhip to be obliged to go up ſtairs, and at laſt to croſs the floor of her apartment.

It ſeemed to me that mere obeſity was her principal malady: indeed ſhe had no other complaint but ſuch as apparently might be accounted for from this ſuppoſition. She was ordered to purſue a vegetable diet, and in the ſummer to drink the waters at Scarborough. She conformed to theſe directions, became more agile, leſs ſleepy, leſs averſe to exerciſe. She walked up the ſteps at Scarborough from the ſpaw, a taſk of no little difficulty to people much leſs encumbered. I urged a continuance of the ſame diet: ſhe was diſſuaded from it by her friends, and died of fat in the twenty-ſeventh year of her age. She left permiſſion with her ſiſter, to be opened, if it was deſired; the caſe was too ſingular to be neglected: all the *viſcera* were perfectly ſound, but larded with fat beyond apprehenſion. In dividing the external teguments, we cut through $2\frac{1}{2}$ inches of fat. She died ſuddenly.

Some inſtances of a ſimilar nature, in which a vegetable diet has ſafely contributed to reduce immoderate corpulency, induces me to think that a prudent trial in the caſe I am treating of would be adviſeable. Perhaps a reaſonable uſe of wine, not a generous one, ſhould here be allowed, leſt the ſtrength ſhould be diminiſhed too much in proportion; and if the power of abſorption ſhould by this means fail, we may probably loſe more ground, by the increaſe of the *ſeroſa colluvies* in the cavity of the *thorax*, than what we gain by ſubtracting the fat.

All the means of increaſing the thinner ſecretions, are evidently pointed out as neceſſary, from this diſſection; and if to theſe we join ſmall doſes of chalybeates, or other medicines, and an abſtinence from animal food, ſo far as the patient's health, ſituation, and manner of life will admit of it, we are perhaps rendering all the reaſonable aſſiſtance we can, till future diſcoveries make us better acquainted with the real cauſes of this ſingular diſtemper.

FURTHER

FURTHER ACCOUNT OF THE ANGINA PECTORIS*.

SINCE my former paper on this ſubject was delivered to the Society, I have had another opportunity of being informed by diſſection of ſome circumſtances relative to this diſeaſe, which are here ſubmitted to your conſideration.

H. R. Eſq. aged 63, a gentleman rather inclined to corpulency, but active, and of a very irritable habit, middling ſtature, and freſh complexion, employed in affairs that often required attention and confinement, writing eſpecially, complained to me three or four years before his death, that he often found a difficulty, or rather an incapacity to walk up a moderate aſcent, eſpecially if he attempted to do it haſtily. I ſoon perceived that this obſcure diſeaſe, which had hitherto for the moſt part baffled all my endeavours to remove it, was taking place. I adviſed great temperance and moderation in diet, in drinking, and application; to ride frequently, paſs his ſummers in the country, to ſhun every thing that would agitate his ſpirits, or depreſs them: a gentle laxative medicine, and ſtomach bitter, to be continued for a fortnight, and occaſionally to be repeated, promoted his general health; and his own care contributed greatly to prevent the increaſe of this malady. In the ſummer of 1774, he ſpent a few weeks at Buxton, where he bathed and drank the water, and returned to town in better health than he had enjoyed ſome years before. Being much diſpoſed to flatulency, he now and then took a warm cardiac draught, which he found relieved him, and pretty often ſome aloetic pills, to prevent coſtiveneſs; but purſued no other plan of medicine, contenting himſelf with obſerving, and with ſome degree of attention, the general regulations I had preſcribed to him; and though it did not appear that much ground was hereby

* From the Medical Obſervations and Inquiries, vol. v. p. 252. an. 1774.

gained,

gained, the ſame conſtriction returning if he attempted any exerciſe beyond a certain point, which his own experience had taught him, yet he perceived no increaſe of the diſeaſe. He occaſionally conſulted me, but rather with a view to be confirmed in the plan propoſed to him, than with a hope of obtaining effectual relief, as he was very apprehenſive that he laboured under the diſeaſe which Dr. Heberden had ſo fully deſcribed.

On the 13th of March 1775, in the evening, in a ſudden and violent tranſport of anger, he fell down and expired immediately. His family were prevailed upon to allow the body to be opened, which was done the next day, by that very ſkilful and accurate anatomiſt, John Hunter, F. R. S. whoſe account is as follows:

The Appearances upon opening the Body of H. R. *Eſquire.*

" The blood had ſettled very generally on the ſkin, appearing in dark purple ſpots.

In opening the cheſt, I found the cartilages of the ribs very much oſſified.

In the cavity of the cheſt I found a full quart of bloody ſerum.

The lungs were to all appearance ſound.

The heart to external appearance was alſo ſound; but, upon examination, I found that its ſubſtance was paler than common, more of a ligamentous conſiſtence, and in many parts of the left ventricle it was become almoſt white and hard, having juſt the appearance of a beginning oſſification.

The *valvulæ mitrales* had a vaſt number of ſuch appearances in them, and were leſs pliant than in a natural ſtate; but did not appear to be unfit for uſe.

The ſemilunar valves of the aorta were thicker than common, but very readily filled the area of the artery.

The aorta had ſeveral ſmall oſſifications on it, and ſeveral white parts, which are generally the beginnings of oſſifications, and which were ſimilar to thoſe found in the heart and *valves*.

The two coronary arteries, from their origin to many of their ramifications upon the heart, were become one piece of bone.

The abdominal *viſcera* appeared ſound, excepting a few ſmall ſtones in the gall-bladder.

On opening the ſkull, I found it very thick in many parts. Upon the forepart of the falciform ligament was a conſiderable oſſification, which lay between the anterior parts of the two hemiſpheres of the brain.

The ſubſtance of the brain appeared to be very ſound.

There was rather more water in the ventricles than is common at that age; and in general, there was more water about the brain than is uſually found.

The plexus-choroides had ſeveral pretty large hydatids in them, ſome as large as a pea.

The internal carotid and baſilary artery were beginning to oſſify.

There was rather more blood about the brain than uſual; but perhaps not more than what is common to thoſe who may be ſaid to die in health.

The blood had not in the leaſt coagulated in any part of the body, nor did it coagulate upon being expoſed, which is another cauſe for the appearance of more blood than uſual, and alſo perhaps for its ſettling ſo much on the ſkin."

This very accurate diſſection throws much light on the nature of the diſeaſe; and though perhaps it may not aſſiſt us in curing it, yet will enable phyſicians to give ſuch aſſiſtance and advice, as may contribute much to the cure of ſuch as are afflicted with this malady, and promote the continuance of their exiſtence.

The ſtate of the parts about the heart fully ſhews, that under ſuch circumſtances it is impoſſible to bear with impunity the effects of ſudden and violent agitations, whether they ariſe from guſts of paſſion, or ſuddenly accelerated muſcular motion.

To propoſe ſuch a kind of diet as may be the moſt likely to prevent ſuch irritability; to recommend likewiſe attention to quantity; to be particularly abſtemious in reſpect to every thing heating, ſpices, ſpirits, wines, and all fermented liquors; to guard moſt ſcrupulouſly againſt paſſion, or any vehement emotions; and to make uſe of all the uſual means of eſtabliſhing and preſerving general health; to mitigate exceſſes of irritability, by anodynes; or pains, if they quicken the circulation; to diſperſe flatulencies when they diſtend the ſtomach, by moderate doſes of carminatives, amongſt which, perhaps, ſimple peppermint-water may be one of the ſafeſt; will perhaps be the means of continuing many a valuable life to his family.

And it is not improbable, but that on the firſt appearance of this ſtricture, eſpecially in an age not too far advanced, the plan propoſed might greatly retard the progreſs of this diſorder, by aſſiſting to reſtrain exceſſes of paſſion and anxiety, which perhaps contribute more to the increaſe of this diſeaſe, than a combination of all the other cauſes.

OBSERVATIONS

OBSERVATIONS ON DISORDERS

TO WHICH

PAINTERS in WATER-COLOURS are expoſed*.

To the Medical Society.

Gentlemen,

I Have met with divers inſtances of perſons employed in painting with water-colours, who have been violently afflicted with that diſeaſe, which is ſo generally known by the name of *colica Pictonum*, or the dry belly-ach; and who have been ſeized with that train of ſymptoms which uſually attends this diſeaſe, and even with that ſpecies of *paralyſis* which is often the companion of the moſt violent and advanced ſtages of it.

As ſome of the firſt caſes that occurred to me happened in autumn, I attributed them to the uſual effects of the ſeaſon; a diſpoſition to bilious diſorders in every degree.

Reflecting on theſe caſes, I found that ſeveral of the inſtances I had met with, who were ſo affected, both men and women, employed themſelves in painting with water-colours; and were likewiſe ſtudious, and eminent in the reſpective branches of their profeſſion.

This led me to conſider their occupation more attentively, in order to diſcover, if poſſible, the cauſe of theſe complaints, and the means of preventing or curing them with more certainty and expedition.

The pigments they make uſe of are, for the moſt part, prepared from minerals, and many of them of a poiſonous nature: white lead, red lead, vermilion, verdigriſe, orpiment, calcined ſmelts, and other ſubſtances of a deleterious kind, form the baſis of moſt of their colours.

It is not an unuſual thing, nay, it is too frequently the practice of many of

* Medical Obſervations and Inquiries, vol. v. p. 394. an. 1775.

 theſe

theſe artiſts, whilſt they are ſtudying their ſubject, to have the point of the pencil between their lips, and whilſt they are faſhioning it to their purpoſe, are inſenſibly ſwallowing, though in a ſlow unheeded manner, the noxious particles of mineral poiſons, whoſe effects will be proportioned to the quantity thus inſenſibly taken in, and the delicacy of the conſtitution. It is ſeldom that the robuſt apply themſelves to this ſedentary occupation.

A young ingenious female artiſt, about 19 years of age, had frequent attacks of this diſeaſe. She ſtudied much, uſed very little exerciſe, and by theſe means became more diſpoſed to ſuffer by this unheeded poiſon.

At length ſhe had a violent putrid fever, attended with the moſt ſingular appearances I ever met with; one of which was, a kind of *deſipientia* that continued for weeks after the fever left her, with total loſs of ſpeech; inſomuch that when ſhe had recovered her faculties ſo far as to know her wants, ſhe was long unable to expreſs them but by writing. To this was added a moſt exquiſite pain in the ſoles of her feet, for many weeks, which prevented all exerciſe, and thereby retarded her recovery.

At length ſhe grew better, ſat down to her favourite employment, and was frequently ſeized with a violent bilious colic, with its uſual conſequences. Emetics, purgatives, and the common proceſs in theſe caſes, removed theſe complaints; but her hands grew feeble;---ſhe became irregular, leucophlegmatic, and unable to purſue the employment ſhe was devoted to. At length, however, ſhe recovered a moderate ſhare of health, and being made ſenſible of the probable cauſe of her indiſpoſition, ſhe ſcrupulouſly avoids the practice that brought on theſe complaints, and enjoys better health.

This and ſome other inſtances that happened about the ſame time, to perſons in the ſame occupation, induced me to think theſe diſorders were principally owing to their ſwallowing, without thinking of the conſequence, ſo much of the deleterious colours, as thoſe unavoidably muſt do who accuſtom themſelves to faſhion the point of the pencil between their lips.

In conſequence of theſe reflections, I have deſired ſuch artiſts as I have been acquainted with, to find ſome other means of performing this operation; as the colours, being many of them of a poiſonous quality, would, ſooner or later, ſubject them to very grievous ſufferings, and perhaps, in time, to the total loſs of the uſe of their hands.

I do not preſume to propoſe any better method of curing this diſeaſe, than that which has been propoſed by the writers on the *colica Pictonum*. But when the vomitings are abated, copious diſcharges by ſtool procured, and the functions of all the bowels, in degree, reſtored to their uſual ſtate, I know of nothing that ſo effectually contributes to reſtore the uſe of the limbs, when impaired by theſe cauſes, as the liberal and conſtant uſe of the *tinctura guaicina volatilis*. It may be given to ſuch a quantity as may be ſufficient to keep the

belly gently open, mixed with a little common ſugar or honey, and then diluted with any weaker mucilaginous liquor, as thin gruel, or barley-water, or marſh-mallow-tea.

Being fully convinced that many perſons have ſuffered, and are ſtill liable to ſuffer, from this unſuſpected cauſe, I need not ſuggeſt to you, that could theſe ingenious artiſts be, by any means, apprized of the danger they are expoſed to by ſuch practices, it might ſave them much trouble and expence, and continue them longer in a condition to ſerve themſelves, their families, and the public.

I mentioned that the patient, whoſe caſe I briefly deſcribed, ſuffered greatly from a ſevere and unremitting pain in the ſoles of her feet, after the fever had left her. I thought myſelf happy that I had directed no applications to be made to the feet, neither bliſters, warm plaſters, nor cataplaſms, though the nature of her complaints often induced me to conſider how far they might afford a proſpect of relief. I ſhould perhaps have attributed her ſufferings to theſe applications.

I almoſt ſuſpect they were the effects of ſome poiſonous quality of the paint, and eſpecially of the arſenical kind, from the following circumſtance:

When that celebrated medicine called *Plunket*'s was in uſe, about 15 or 20 years ago, for the extirpation of cancers, I met with the like pains in the feet, where that medicine had been plentifully and repeatedly applied for the extirpation of cancerous tumours; and it was generally apprehended that white arſenic was a principal ingredient in this compoſition. It is certain, however, that many of the pigments are of an arſenical origin, that others are preparations of lead and copper, all of them noxious in a high degree, and never fail to produce the worſt of conſequences, when they are received into the human body for a long time together, even in the minuteſt quantities.

There is indeed a pain in the ſoles of the feet, which I do not recollect ever to have ſeen remarked by any writer. It is almoſt the conſtant companion of dram-drinking, and in women eſpecially. Having met with it in too many inſtances of this kind, it affords me but too juſt apprehenſions of the nature of the malady, when a conſtant burning heat in the ſoles of the feet makes a part of the patient's complaints.

It is not improbable but that many diſeaſes affecting very young children, may be aſcribed to a cauſe which I am obliged to Dr. Heberden for ſuggeſting to me. Many of their play-things are coated with paint, a great part whereof is white lead, covered with a ſlight varniſh. Children are ſeldom content with holding theſe painted poiſonous toys in their hands; they often thruſt them into their mouths, and the varniſh being eaſily worn off, moſt probably ſo much of the paint is ſwallowed as to become the ſource of complaints, which prove the more obſtinate, as the cauſe is, in general, ſo little ſuſpected.

Accidentally mentioning this ſubject to Baron Dimſdale, he informed me of

a caſe that had fallen under his own notice, and of which, at my requeſt, he drew up the following deſcription:

"In November laſt I was called to a boy of about eight years old, ſmall of his age, but naturally lively and healthy. The account I received was, that he had for ſome time paſt been evidently declining in his health, complaining of pains in his belly and ſtomach. His apothecary had treated it as a worm caſe, and had given him a variety of evacuating medicines, particularly of the mercurial kind, without gaining any ground; on the contrary, the boy grew indolent and feeble, and had an obſtinate coſtiveneſs: on being deſired to uſe exerciſe, he complained of weakneſs and pain in his knees and ancles; his appetite, which uſed to be very keen, was almoſt gone; and his whole appearance was languid and declining; his belly was rather large and tenſe, but not to a very remarkable degree.

"Particular inquiry was made reſpecting his diet; but nothing appeared, in this reſpect, improper or unuſual.

"Conſidering it, therefore, as an obſtinate obſtruction in the bowels, a variety of medicines were tried, to keep the body moderately lax and open; but no ground was gained by theſe means; on the contrary, he declined viſibly, though ſlowly.

"Whilſt he was in this ſtate of danger and uncertainty, a relation of the family aſked me, whether he might not be injured by ſucking the pencils with which he painted. I inſtantly took the alarm, and, on enquiry, found that he had been extremely fond of colouring little pictures, and, for that purpoſe, was furniſhed with ſhells of paint, and pencils, with which he amuſed himſelf frequently; and his friends deeming it an inoffenſive amuſement, had not mentioned it to me. On examining further, I found alſo that he had got a trick of being almoſt continually wetting his pencils in his mouth, while there was paint on them.

"On this diſcovery, all the pernicious implements were taken from him, and by giving occaſionally a purging medicine, taking care that he had ſtools regularly, and perſiſting in a proper diet, he ſoon began to mend, and in a ſhort ſpace of time recovered his uſual health and vivacity."

If your own obſervations correſpond with theſe remarks, by giving them a place in your collection, the knowledge of them will ſoon be extenſively diffuſed, and thoſe who are liable to ſuffer by theſe accidents will be apprized of their danger.

Perhaps the following account, which I received from a perſon of good underſtanding, juſt obſervation, and veracity, now living in Cornwall, may not be altogether without its uſe, and ſeems not wholly foreign to this ſubject:

A few years ago, two perſons in the ſame neighbourhood purchaſed between them a hogſhead of cyder, for the uſe of the people they employed in harveſt.

Thoſe

Thoſe in the ſervice of my friend had no complaints, and enjoyed their health as uſual.

His neighbour's work-people had, moſt of them, ſome degree of the *colica Pictonum*, and divers of them ſeverely.

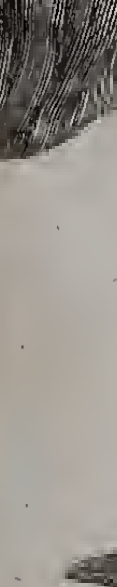
The cyder was the ſame, and given in like quantities; the people worked in the ſame neighbourhood, and at the ſame ſeaſon.

On inquiring into the cauſe of this ſingular difference, it was found that my acquaintance had always ſent his cyder to the field in a ſmall barrel; and that his neighbour had as conſtantly made uſe of a glazed earthen pitcher for this purpoſe. The cyder was thin and ſharp; the glazing was almoſt diſſolved, and moſt probably was the cauſe of the complaints. This inſtance may ſerve as a very uſeful leſſon to many people under the like circumſtances; and to corroborate the evidence reſpecting the noxious effects of lead, already ſubmitted to the Public by Drs. Baker, Percival, and other ſenſible writers.

EXTRACTS

COFFEA *Arabica*

A

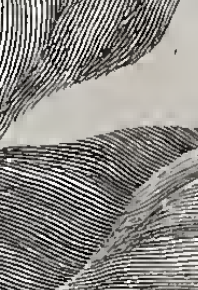


B

C

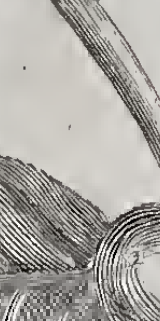
D

F



G

H



E

S. Taylor Pinxt.

J. Miller Sc.

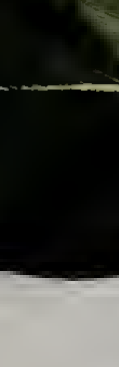
s

offee, &c.

s. &c.

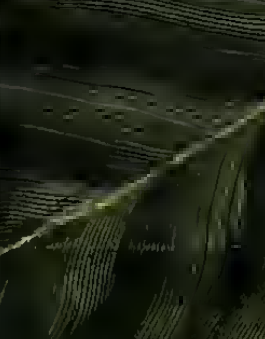
COFFEA *Arabica*

A



B

C



D

F

G

H

E

S. Taylor Pinx.t

I. Miller Sc.

EXTRACTS

FROM

An Hiſtorical Account of Coffee, &c.

By JOHN ELLIS, F. R. S. &c.

I Cannot give a better explanation of the origin of the following hiſtorical account of Coffee, than in the words of Dr. Fothergill himſelf, which I ſhall extract from a letter he wrote to me *. "*Laſt Summer, before I went out of town, J. Ellis* "*deſired me to put down ſome remarks on Coffee in writing, which he had repeatedly* "*heard from me in converſation. I threw out upon paper whilſt in Cheſhire what* "*occurred to me on the ſubject, in a letter to himſelf. His daughter draws very pret-*
"*tily, and from a performance of hers the annexed plate was engraved. Dr. So-*
"*lander has corrected the botanical part of the deſcription: the author propoſes to* "*preface all this with an account of the introduction of this liquor into Turkey and* "*Europe. A paper put into my hands by Governor Melville, points out the time* "*of the plant's introduction into the Weſt Indies. The point in view is, to engage* "*the Legiſlature to lower the duties, and encourage the produce and conſumption of* "*Coffee, for the mutual benefit of this nation and her colonies.*"

From a work, in the compilation of which Dr. Fothergill had ſo conſiderable a ſhare, I thought it not improper to preſerve, with his letter, ſuch extracts as might explain the general hiſtory of this dietetic and elegant vegetable, which flouriſhes luxuriantly in the hot-houſes about London. The largeſt tree which was in the Doctor's poſſeſſion, is about fifteen feet high, which is the full ſize of this exotic, as I have obſerved it in its natural ſoil: this tree is now in my Garden at Grove-hill, in full berry. Editor.

* Dated Harpur-Street, Feb. 1, 1774.

A BOTANICAL

A

BOTANICAL DESCRIPTION

OF THE

FLOWER and FRUIT of the COFFEE-TREE.

THE characters of that genus of plants called COFFEA by Linnæus, who places it in the firſt order of his fifth claſs, that is, among the *Pentandria Monogynia*, or plants that have five male organs and one female organ, are as follow:

CALIX. *Perianthium* quadridentatum, minimum, germini inſidens.

The *Flower Cup*, whoſe brim has four very ſmall indentations, and is placed upon the germen or embryo ſeed veſſel.

COROLLA. *Petalum* infundibuliforme. *Tubus* cylindraceus, tenuis, calyce multoties longior. *Limbus* planus, quinque partitus, tubo longior; *laciniis* lanceolatis, lateribus revolutis.

The *Flower* conſiſts of one funnel-ſhaped petal, with a ſlender tube nearly cylindrical, much longer than the flower cup. Its brim is expanded and divided into five ſegments. Theſe are longer than the tube, are ſharp-pointed, and reflexed on the ſides.

STAMINA. *Filamenta* quinque, ſubulata, tubo corollæ impoſita *Antheræ* lineares, incumbentes, longitudine filamentorum.

The *Chives* conſiſt of five awl-ſhaped filaments fixed on the tube of the flower. On theſe are placed the linear-ſhaped ſummits, containing the male duſt. Theſe are of the ſame length with the filaments.

PISTILLUM. *Germen* ſubrotundum. *Stylus* ſimplex, longitudine corollæ. *Stigmata* duo, reflexa, ſubulata craſſiuſcula.

The *Piſtil* conſiſts of a roundiſh germen, or embryo ſeed veſſel. The ſtyle is ſtraight and even, of the length of the flower, and ends in two ſlender, reflexed, ſpungy tops.

PERICARPIUM. *Bacca* ſubrotunda, puncto umbilicata.

The *Fruit* is a roundiſh berry, marked at the top with a puncture like a navel.

SEMINA. Bina, elliptico-hemiſphærica, hinc gibba, inde plana, arillo involuta.

It has two ſeeds, of an oblong hemiſpherical form, convex on the one ſide, and flat on the other; each of which is encloſed in a membrane, commonly called the parchment.

*** Linnæus has omitted taking notice of the ſeptum or membrane that divides the ſeeds into two cells or loculaments; and alſo the little furrow on the flat ſide of each ſeed.—It frequently happens, that in the Mocha Coffee only one ſeed is to be found, the other being defective.

A ſhort Deſcription of the COFFEE-TREE,
Taken from Linnæus's Amœnitat. Academ. Vol. VI. p. 169.

Arbor ſimplex, erecta, minus alta; *Ramis* longis, ſimplicibus, laxis & fere nutantibus, veſtitis *Foliis* oppoſitis, laurinis, ſempervirentibus, ornata *Floribus* albis ſeſſilibus, fere Jaſmini corolla, quibus *Baccæ* ceraſorum facie rubicundæ ſuccedunt, pulpâ pallidâ, ſubmucilaginoſâ, fatuâ intus gerentes ſemina duo, dura, hinc convexa, inde plana, arillo cartilagineo veſtita.

The *Tree* grows erect, with a ſingle ſtem, is but low [*from eight to twelve feet high,*] has long undivided, ſlender branches, bending downwards. Theſe are furniſhed with evergreen oppoſite leaves, not unlike thoſe of the bay-tree, and adorned with white Jaſmine flowers ſitting on ſhort foot-ſtalks, which are ſucceeded by red berries like thoſe of the cherry, having a pale, inſipid, glutinous pulp, containing two hard ſeeds, convex on the one ſide, and flat on the other, which are covered with a cartilaginous membrane or parchment.

This Tree is a native of Arabia Felix, and of Æthiopia.

The

The SYNONYMS, *or* NAMES *given to this Tree by different Authors.*

Coffea [*Arabica,*] floribus quinquefidis diſpermis. Linn. Spec. plant. Ed. II. p. 245.

Jaſminum *Arabicum,* lauri folio, cujus ſemen apud nos Coffé dicitur. Juſſ. act. Gall. 1713, p. 388, t. 7.

Jaſminum *Arabicum,* caſtaneæ folio, flore albo odoratiſſimo. Till. Priſ. 87. t. 32.

Euonymo ſimilis Ægyptica, fructu baccis lauri ſimili. Bauh. Pin. 498. Pluk. Phyt. 272. f. 1.

Bon. Alp. Ægypt. 36. t. 36.

EXPLANATION *of the* LETTERS *in the Plate, which have a Reference to the Diſſection of the Flower and Fruit.*

A. The flower, cut open to ſhew the ſituation of the five filaments, with their ſummits lying upon them.

B. Repreſents the flower cup, with its four ſmall indentations, incloſing the germen, or embryo ſeed veſſel; from the middle of which ariſes the ſtyle, terminated by the two reflexed ſpungy tops.

C. The fruit intire; marked at the top with a puncture, like a navel.

D. The fruit open, to ſhew that it conſiſts of two ſeeds, which are ſurrounded by the pulp.

E. The fruit cut horizontally, to ſhew the ſeeds as they are placed erect, with their flat ſides together.

F. One of the ſeeds taken out, with the membrane or parchment upon it.

G. The ſame, with the parchment torn open, to give a view of the ſeed.

H. The ſeed without the parchment.

THE HISTORY OF COFFEE.

THE earlieſt account we have of Coffee is taken from an Arabian manuſcript in the King of France's library, N° 944, and is as follows:

Schehabeddin Ben, an Arabian author of the ninth century of the Hegira, or fifteenth of the Chriſtians, attributes to Gemaleddin, Mufti of Aden, a city of Arabia Felix, who was nearly his cotemporary, the firſt introduction into that country of drinking Coffee. He tells us, that Gemaleddin, having occaſion to travel into Perſia, during his abode there ſaw ſome of his countrymen drinking Coffee, which at that time he did not much attend to; but, on his return to Aden, finding himſelf indiſpoſed, and remembering that he had ſeen his countrymen drinking Coffee in Perſia, in hopes of receiving ſome benefit from it, he determined to try it on himſelf; and, after making the experiment, not only recovered his health, but perceived other uſeful qualities in that liquor; ſuch as relieving the head-ach, enlivening the ſpirits, and, without prejudice to the conſtitution, preventing drowſineſs. This laſt quality he reſolved to turn to the advantage of his profeſſion: he took it himſelf, and recommended it to the Derviſes, or religious Mahometans, to enable them to paſs the night in prayer, and other exerciſes of their religion, with greater zeal and attention. The example and authority of the Mufti gave reputation to Coffee. Soon men of letters, and perſons belonging to the law, adopted the uſe of it. Theſe were followed by the tradeſmen, and artiſans that were under a neceſſity of working in the night, and ſuch as were obliged to travel late after ſun-ſet. At length the cuſtom became general in Aden; and it was not only drank in the night by thoſe who were deſirous of being kept awake, but in the day for the ſake of its other agreeable qualities.

The

The Arabian author adds, that they found themſelves ſo well by drinking Coffee, that they entirely left off the uſe of an infuſion of an herb, called in their language *Cat*, which poſſibly might be Tea, though the Arabian author gives us no particular reaſon to think ſo.

Before this time Coffee was ſcarce known in Perſia, and very little uſed in Arabia, where the tree grew; but, according to Schehabeddin, it had been drank in Æthiopia from time immemorial.

Coffee being thus received at Aden, where it has continued in uſe ever ſince without interruption, paſſed by degrees to many neighbouring towns; and not long after reached Mecca, where it was introduced, as at Aden, by the Derviſes, and for the ſame purpoſes of religion.

The inhabitants of Mecca were at laſt ſo fond of this liquor, that, without regarding the intention of the religious, and other ſtudious perſons, they at length drank it publicly in coffee-houſes, where they aſſembled in crowds to paſs the time agreeably, making that the pretence: here they played at cheſs, and ſuch other kind of games, and that even for money. In theſe houſes they amuſed themſelves likewiſe with ſinging, dancing, and muſic, contrary to the manners of the rigid Mahometans, which afterwards was the occaſion of ſome diſturbances. From hence the cuſtom extended itſelf to many other towns of Arabia, and particularly to Medina, and then to Grand Cairo in Egypt; where the Derviſes of the province of Yemen, who lived in a diſtrict by themſelves, drank Coffee the nights they intended to ſpend in devotion. They kept it in a large red earthen veſſel, and received it reſpectfully from the hand of their ſuperior, who poured it out into cups for them himſelf. He was ſoon imitated by many devout people of Cairo, and their example followed by the ſtudious; and afterwards by ſo many people, that Coffee became as common a drink in that great city, as at Aden, Mecca, and Medina, and other cities of Arabia.

But at length the rigid Mahometans began to diſapprove the uſe of Coffee, as occaſioning frequent diſorders, and too nearly reſembling wine in its effects; the drinking of which is contrary to the tenets of their religion. Government was therefore obliged to interfere, and at times reſtrain the uſe of it. However, it had become ſo univerſally liked, that it was found afterwards neceſſary to take off all reſtraint for the future.

Coffee continued its progreſs through Syria, and was received at Damaſcus and Aleppo without oppoſition: and in the year 1554, under the reign of the great Soliman, one hundred years after its introduction by the Mufti of Aden, it became known to the inhabitants of Conſtantinople; when two private perſons, whoſe names were Schems and Hekin, the one coming from Damaſcus, and the other from Aleppo, each opened a Coffee-houſe in Conſtantinople,

and

and ſold Coffee publicly, in rooms fitted up in an elegant manner; which were preſently frequented by men of learning, and particularly poets and other perſons, who came to amuſe themſelves with a game of cheſs or draughts, or to make acquaintance, and paſs their time agreeably at a ſmall expence.

Theſe houſes and aſſemblies inſenſibly became ſo much in vogue, that they were frequented by people of all profeſſions, and even by the officers of the ſeraglio, the pachas, and perſons of the firſt rank about the court. However, when they ſeemed to be the moſt firmly eſtabliſhed, the imans, or officers of the moſques, complained loudly of their being deſerted, while the Coffee-houſes were full of company. The derviſes and the religious orders murmured, and the preachers declaimed againſt them, aſſerting that it was a leſs ſin to go to a Tavern than to a Coffee-houſe.

After much wrangling, the devotees united their intereſts to obtain an authentic condemnation of Coffee, and determined to preſent to the mufti a petition for that purpoſe; in which they advanced, that roaſted Coffee was a kind of coal, and that what had any relation to coal was forbid by law. They deſired him to determine on this matter according to the duty of his office.

The chief of the law, without entering much into the queſtion, gave ſuch a deciſion as they wiſhed for, and pronounced that the drinking of Coffee was contrary to the law of Mahomet.

So reſpectable is the authority of the mufti, that nobody dared to find fault with his ſentence. Immediately all the Coffee-houſes were ſhut, and the officers of the police were commanded to prevent any one from drinking Coffee. However, the habit was become ſo ſtrong, and the uſe of it ſo generally agreeable, that the people continued, notwithſtanding all prohibitions, to drink it in their own houſes. The officers of the police, ſeeing they could not ſuppreſs the uſe of it, allowed of the ſelling it on paying a tax, and of the drinking it, provided it was not done openly; ſo that it was drunk in particular places with the doors ſhut, or in the back room of ſome of the ſhopkeepers houſes.

Under colour of this, Coffee-houſes by little and little were re-eſtabliſhed; and a new mufti, leſs ſcrupulous and more enlightened than his predeceſſor, having declared publicly, that Coffee had no relation to coal, and that the infuſion of it was not contrary to the law of Mahomet, the number of Coffee-houſes became greater than before. After this declaration, the religious orders, the preachers, the lawyers, and even the mufti himſelf, drank Coffee; and their example was followed univerſally by the court and city.

The grand viziers, having poſſeſſed themſelves of a ſpecial authority over the houſes in which it was permitted to be drunk publicly, took advantage of this opportunity of raiſing a conſiderable tax on the licences they granted for that purpoſe,

purpoſe, obliging each maſter of a Coffee-houſe to pay a ſequin per day, limiting however the price at an aſper a diſh*.

THUS far the Arabian manuſcript in the King of France's library, as tranſlated by Mr. Galand; who proceeds to inform us of the occaſion of a total ſuppreſſion of public Coffee-houſes during the war in Candia, when the Ottoman affairs were in a critical ſituation.

The liberty which the politicians who frequented theſe houſes took, in ſpeaking too freely of public affairs, was carried to that length, that the Grand Vizier Kupruli, father of the two famous brothers of the ſame name, who afterwards ſucceeded him, ſuppreſſed them all, during the minority of Mahomet the Fourth, with a diſintereſtedneſs hereditary in his family, without regarding the loſs of ſo conſiderable a revenue, of which he reaped the advantage himſelf. Before he came to that determination, he viſited, incognito, the ſeveral Coffee-houſes, where he obſerved ſenſible grave perſons diſcourſing ſeriouſly of the affairs of the empire, blaming adminiſtration, and deciding with confidence on the moſt important concerns. He had before been in the taverns, where he only met with gay young fellows, moſtly ſoldiers, who were diverting themſelves with ſinging, or talking of nothing but gallantry and feats of war. Theſe he took no further notice of.

After the ſhutting up of the Coffee-houſes, no leſs Coffee was drunk, for it was carried about in large copper veſſels, with fire under them, through the great ſtreets and markets. This was only done at Conſtantinople; for in all other towns of the empire, and even in the ſmalleſt villages, the Coffee-houſes continued open as before.

Notwithſtanding this precaution of ſuppreſſing the public meetings at Coffee-houſes, the conſumption of Coffee increaſed; for there was no houſe or family, rich or poor, Turk or Jew, Greek or Armenian, who are very numerous in that city, where it was not drank at leaſt twice a day, and many people drank it oftener, for it became a cuſtom in every houſe to offer it to all viſitors; and it was reckoned an incivility to refuſe it; ſo that many people drank twenty diſhes a day, and that without any inconvenience, which is ſuppoſed by this author an extraordinary advantage: and another great uſe of Coffee, according to him, is its uniting men in ſociety in ſtricter ties of amity than any other liquor; and he obſerves, that ſuch proteſtations of friendſhip as are made at ſuch times, are far

* The Turkiſh ſequin (according to Chambers) is of the value of about nine ſhillings ſterling; and the aſper is a very ſmall ſilver coin, of the value of ſomething more than an Engliſh halfpenny. The preſent value is nearly ſeven ſhillings; that is, two ſhillings and three-pence three-farthings for a dollar, or eighty aſpers; conſequently three aſpers are worth ſomething more than a penny ſterling, but they are generally reckoned at an halfpenny each. Two hundred and forty-three aſpers go to a ſequin.

more to be depended upon than when the mind is intoxicated with inebriating liquors. He computes, that as much is ſpent in private families in the article of Coffee at Conſtantinople, as in wine at Paris; and relates, that it is cuſtomary there to aſk for money to drink Coffee, as in Europe for money to drink your health in wine or beer.

Another curious particular we find mentioned here, is, that the refuſing to ſupply a wife with Coffee is reckoned among the legal cauſes of a divorce.

The Turks drink their Coffee very hot and ſtrong, and without ſugar. Now and then they put in, when it is boiling, a clove or two bruiſed, according to the quantity; or a little of the *ſemen badian*, called ſtarry anniſeed, or ſome of the leſſer cardamums, or a drop of eſſence of amber.

It is not eaſy to determine at what time, or upon what occaſion, the uſe of Coffee paſſed from Conſtantinople to the weſtern parts of Europe. It is however likely that the Venetians, upon account of the proximity of their dominions, and their great trade to the Levant, were the firſt acquainted with it; which appears from part of a letter wrote by Peter della Valle, a Venetian, in 1615, from Conſtantinople; in which he tells his friend, that, upon his return he ſhould bring with him ſome Coffee, which he believed was a thing unknown in his country.

Mr. Galand tells us he was informed by Mr. de la Croix, the king's interpreter, that Mr. Thevenot, who had travelled through the Eaſt, at his return in 1657, brought with him to Paris ſome Coffee for his own uſe, and often treated his friends with it, amongſt which number Monſieur de la Croix was one; and that from that time he had continued to drink it, being ſupplied by ſome Armenians who ſettled at Paris, and by degrees brought it into reputation in that city.

It was known ſome years ſooner at Marſeilles; for in 1644 ſome gentlemen, who accompanied Monſieur de la Haye to Conſtantinople, brought back with them on their return, not only ſome Coffee, but the proper veſſels and apparatus for making and drinking it, which were particularly magnificent, and very different from what are now uſed amongſt us. However, until the year 1660 Coffee was drank only by ſuch as had been accuſtomed to it in the Levant, and their friends: but that year ſome bales were imported from Egypt, which gave a great number of perſons an opportunity of trying it, and contributed very much to bringing it into general uſe; and in 1671 certain private perſons at Marſeilles determined for the firſt time to open a Coffee-houſe in the neighbourhood of the Exchange, which ſucceeded extremely well; people met there to ſmoke, talk of buſineſs, and divert themſelves with play; it was ſoon crouded, particularly by the Turky merchants and traders to the Levant. Theſe places were found very convenient for diſcourſing on and ſettling matters relating to commerce; and ſhortly after the number of Coffee-houſes increaſed amazingly: notwithſtanding,

notwithſtanding which there was not leſs drank in private houſes, but a much greater quantity; ſo that it became univerſally in uſe at Marſeilles, and the neighbouring cities.

Before the year 1669 Coffee had not been ſeen at Paris, except at Mr. Thevenot's, and ſome of his friends; nor ſcarce heard of but from the account of travellers. That year was diſtinguiſhed by the arrival of Soliman Aga, ambaſſador from Sultan Mahomet the Fourth. This muſt be looked upon as the true period of the introduction of Coffee into Paris; for that miniſter and his retinue brought a conſiderable quantity with them, which they preſented to ſo many perſons of the court and city, that many became accuſtomed to drink it, with the addition of a little ſugar; and ſome, who had found benefit by it, did not chuſe to be without it. The ambaſſador ſtaid at Paris from July 1669 to May 1670, which was a ſufficient time to eſtabliſh the cuſtom he had introduced.

Two years afterwards, an Armenian, of the name of Paſcal, ſet up a Coffee-houſe, but meeting with little encouragement, left Paris, and came to London: he was ſucceeded by other Armenians and Perſians, but not with much ſucceſs, for want of addreſs and proper places to diſpoſe of it, genteel people not caring to be ſeen in thoſe places where it was ſold. However, not long after, when ſome Frenchmen had fitted up for the purpoſe ſpacious apartments in an elegant manner, ornamented with tapeſtry, large looking-glaſſes, pictures, and magnificent luſtres, and began to ſell Coffee, with tea, chocolate, and other refreſhments, they ſoon became frequented by people of faſhion and men of letters, ſo that in a ſhort time the number in Paris increaſed to three hundred.

For this account of the introduction of the uſe of Coffee into Paris, we are indebted to La Roque's Voyage into Arabia Felix. We now come to trace its firſt appearance in London.

It appears from Anderſon's Chronological Hiſtory of Commerce, that the uſe of Coffee was introduced into London ſome years earlier than into Paris; for in 1652 one Mr. Edwards, a Turky merchant, brought home with him a Greek ſervant, whoſe name was Paſqua, who underſtood the roaſting and making of Coffee, till then unknown in England. This ſervant was the firſt who ſold Coffee, and kept a houſe for that purpoſe in George-yard, Lombard-ſtreet.

The firſt mention of Coffee in our ſtatute books, is anno 1660 (12 Car. II. cap. 24.) when a duty of four-pence was laid upon every gallon of Coffee made and ſold, to be paid by the maker.

The ſtatute of the 15 Car. II. cap. xi. § 15. ann. 1663, directs that all Coffee-houſes ſhould be licenſed at the general quarter ſeſſions of the peace for the county within which they are to be kept.

In 1675 King Charles iſſued a proclamation to ſhut up the Coffee-houſes, but

in a few days ſuſpended that proclamation by a ſecond. They were charged with being ſeminaries of ſedition *.

The firſt European author who has made any mention of Coffee is Rauwolfus, who was in the Levant in 1573; but the firſt who has particularly deſcribed it is Proſper Alpinus, in his Hiſtory of the Egyptian Plants, publiſhed at Venice in 1591, whoſe deſcription we have in Parkinſon's Theatre of Plants, p. 1622, chap. 79. as follows:

Arbor Bon, cum fructu ſuo buna, the Turk's berry drink. Alpinus, in his book of Egyptian plants, gives us the deſcription of this tree, which he ſays he ſaw in the garden of a captain of the janiſſaries, which was brought out of Arabia Felix, and there planted, as a rarity never ſeen growing in thoſe places before. The tree, ſaith Alpinus, is ſomewhat like the Euonymus, or Spindle tree, but the leaves of it were thicker, harder, and greener, and always abiding on the tree. The fruit is called *Buna*, and is ſomewhat bigger than a hazel nut, and longer; round alſo, and pointed at one end; furrowed likewiſe on both ſides, yet on one ſide more conſpicuous than the other, that it might be parted into two; in each ſide whereof lieth a ſmall oblong white kernel, flat on that ſide they join together, covered with a yellowiſh ſkin, of an acid taſte, and ſomewhat bitter, and contained in a thin ſhell † of a darkiſh aſh colour. With theſe berries, in Arabia and Egypt, and other parts of the Turkiſh dominions, they generally make a decoction or drink, which is in the ſtead of wine to them, and commonly ſold in their tap-houſes or taverns, called by the name of *Caova*.

* This proclamation was iſſued about a month after the king had dined with the corporation of London, at Guildhall, on their Lord Mayor's Day, Oct. 29, 1675. At this feaſt the king afforded the citizens abundant matter for animadverſion, in which they indulged themſelves ſo much to his diſſatisfaction, and that of his CABAL miniſtry, that a proclamation was iſſued Dec. 20, for ſhutting up and ſuppreſſing all Coffee-houſes, "becauſe in ſuch houſes, and by "occaſion of the meeting of diſaffected perſons in them, divers falſe, malicious, and ſcandalous "reports were deviſed and read abroad, to the defamation of his majeſty's government, and to "the diſturbance of the quiet and peace of the realm." The opinions of the judges were taken on this great point of ſtopping people's tongues; when they ſagely reſolved, "That retailing of "Coffee and Tea might be an innocent trade; but as it was uſed to nouriſh ſedition, ſpread "lies, and ſcandalize great men, it might alſo be a common nuiſance." On a petition of the merchants and retailers of Coffee and Tea, permiſſion was granted to keep open the Coffee-houſes until the 24th of June following, under an admonition, that the maſters of them ſhould prevent all ſcandalous papers, books, and libels, from being read in them, and hinder every perſon from declaring, uttering, or divulging all manner of falſe and ſcandalous reports againſt government, or the miniſters thereof. Thus by a refinement of policy, adds Noorthouck in his Hiſtory of London, the ſimple manufacturer of a diſh of Coffee or Tea was conſtituted licenſer of books, corrector of manners, and arbiter of the truth or falſehood of political intelligence, over every company he entertained! And here the matter ended. *Editor.*

† This deſcription is evidently taken from a dried berry, and not from the ripe fruit.

Paludamus.

Paludamus ſays *Choava*, and Rauwolfus *Chauke*. This drink has many good phyſical properties: it ſtrengthens a weak ſtomach, helping digeſtion, and the tumours and obſtructions of the liver and ſpleen, being drank faſting for ſome time together. It is held in great eſtimation among the Egyptian and Arabian women, in common feminine caſes, in which they find it does them eminent ſervice.

Lord Chancellor Bacon likewiſe makes mention of it in 1624: he ſays, that the Turks have a drink called Coffee, made with boiling water, of a berry reduced into powder, which makes the water as black as ſoot, and is of a pungent and aromatic ſmell, and is drank warm.

The celebrated John Ray, in his Hiſtory of Plants, publiſhed in 1690, ſpeaking of it as a drink very much in uſe, ſays, that this tree grows only within the tropics, and ſuppoſes that the Arabs deſtroy the vegetable quality of the ſeeds, in order to confine among themſelves the great ſhare of wealth, which is brought thither from the whole world for this commodity; from whence he obſerves, that this part of Arabia might be truly ſtyled the moſt happy, and that it was almoſt incredible how many millions of buſhels were exported from thence into Turky, Barbary, and Europe. He ſays, he was aſtoniſhed that one particular nation ſhould poſſeſs ſo great a treaſure, and that within the narrow limits of one province; and that he wondered the neighbouring nations did not contrive to bring away ſome of the ſound ſeeds or living plants, in order to ſhare in the advantages of ſo lucrative a trade.

We now come to ſhew by what means this valuable tree was firſt introduced into Europe, and from thence into America.

The firſt account of this tree being brought into Europe we have from Boerhaave, in his Index of the Leyden Garden, part II. page 217, which is as follows: Nicholas Witſen, burgomaſter of Amſterdam, and governor of the Eaſt India Company, by his letters often adviſed and deſired Van Hoorn, governor of Batavia, to procure from Mocha, in Arabia Felix, ſome berries of the Coffee-tree, to be ſown at Batavia; which he having accordingly done, and by that means, about the year 1690, raiſed many plants from ſeeds, he ſent one over to Governor Witſen, who immediately preſented it to the garden at Amſterdam, of which he was the founder and ſupporter: it there bore fruit, which in a ſhort time produced many young plants from the ſeeds. Boerhaave then concludes, that the merit of introducing this rare tree into Europe, is due to the care and liberality of Witſen alone.

In the year 1714 the magiſtrates of Amſterdam, in order to pay a particular compliment to Lewis XIV. king of France, preſented to him an elegant plant of this rare tree, carefully and judiciouſly packed up to go by water, and defended from the weather by a curious machine covered with glaſs. The plant was about five feet high, and an inch in diameter in the ſtem, and was in full

foliage, with both green and ripe fruit. It was viewed in the river, with great attention and curioſity, by ſeveral members of the academy of ſciences, and was afterwards conducted to the royal garden at Marly, under the care of Monſieur de Juſſieu, the king's profeſſor of botany, who had the year before written a Memoir, printed in the Hiſtory of the Academy of Sciences of Paris in the year 1713, deſcribing the characters of this genus, together with an elegant figure of it, taken from a ſmaller plant, which he had received that year from Monſieur Pancras, burgomaſter of Amſterdam, and director of the botanical garden there.

In 1718 the Dutch colony at Surinam began firſt to plant Coffee; and in 1722 Monſieur de la Motte Aigron, governor of Cayenne, having buſineſs at Surinam, contrived, by an artifice, to bring away a plant from thence, which, in the year 1725, had produced many thouſands.

In 1727 the French, perceiving that this acquiſition might be of great advantage in their other colonies, conveyed to Martinico ſome of the plants; from whence it moſt probably ſpread to the neighbouring iſlands; for in the year 1732 it was cultivated in Jamaica, and an act paſſed to encourage its growth in that iſland.—Thus was laid the foundation of a moſt extenſive and beneficial trade to the European ſettlements in the Weſt Indies.

An

An ACCOUNT of the Culture of the COFFEE-TREE in Arabia Felix, extracted from La Roque's Voyage.

HE relates, that the Coffee-tree is there raiſed from ſeed, which they ſow in nurſeries, and plant them out as they have occaſion. They chuſe for their plantations a moiſt, ſhady ſituation, on ſome eminence, or at the foot of the mountains, and take great care to conduct from the mountains little rills of water, in ſmall gutters or channels, to the roots of the trees; for it is abſolutely neceſſary they ſhould be conſtantly watered, in order to produce and ripen the fruit. For that purpoſe, when they remove or tranſplant the tree, they make a trench three feet wide, and five feet deep, which they line or cover with ſtones, that the water may the more readily ſink deep into the earth with which the trench is filled, in order to preſerve the moiſture from evaporating. When they obſerve that there is a good deal of fruit upon the tree, and that it is nearly ripe, they turn off the water from the roots, to leſſen that ſucculency in the fruit which too much moiſture would occaſion.

In places much expoſed to the ſouth they plant their Coffee-trees in regular lines, ſheltered by a kind of Poplar-tree, which extends its branches on every ſide to a great diſtance, and affords a very thick ſhade. Without ſuch precaution, they ſuppoſe the exceſſive heat of the ſun would parch and dry the bloſſoms ſo, that they would not be ſucceeded by any fruit.

In ſituations not ſo much expoſed to the ſun, this defence is not neceſſary. When they perceive the fruit come to maturity, they ſpread cloths under the trees, which they ſhake, and the ripe fruit drops readily*; they afterwards ſpread the berries upon mats, and expoſe them to the ſun until they are perfectly dry; after which they break the huſk with large heavy rollers, made either of wood or ſtone. When the Coffee is thus cleared of its huſk, it is again dried in the ſun; for, unleſs it is thoroughly dried, there is danger of its heating on board the ſhip. It is then winnowed with a large fan; for if it is not well cleaned and dried, it ſells for a much lower price.

* This circumſtance deſerves the particular attention of the Weſt India planter, who, I am told, is accuſtomed to gather his Coffee as ſoon as it turns red, before it changes to a dark red colour, and begins to ſhrivel; whereas the Arabians wait for thoſe tokens, which ſhew the full maturity of the fruit. Mr. Miller in his Dictionary mentions, that in ſome ſtoves in England Coffee is raiſed of a better quality than the beſt Mocha Coffee that can be procured in this country; which may likewiſe be owing to gathering the fruit only when it is thoroughly ripe.

The Manner of preparing and drinking Coffee among the Arabians, From the ſame Author.

The Arabians, when they take their Coffee off the fire, immediately wrap the veſſel in a wet cloth, which fines the liquor inſtantly, makes it cream at top, and occaſions a more pungent ſteam, which they take great pleaſure in ſnuffing up as the Coffee is pouring into the cups. They, like all other nations of the Eaſt, drink their Coffee without ſugar.

People of the firſt faſhion uſe nothing but Sultana Coffee, which is prepared in the following manner:—They bruiſe the outward huſk, or dried pulp, and put it into an iron or earthen pan, which is placed upon a charcoal fire; they then keep ſtirring it to and fro until it becomes a little brown, but not of ſo deep a colour as common Coffee; they then throw it into boiling water, adding at leaſt the fourth part of the inward huſks, which is then boiled all together in the manner of other Coffee: the colour of this liquor has ſome reſemblance to the beſt Engliſh beer. The huſks muſt be kept in a very dry place, and packed up very cloſe; for the leaſt humidity ſpoils the flavour. They eſteem the liquor prepared in this manner preferable to any other. The French, when they were at the court of the King of Yemen, ſaw no other Coffee drank, and they found the flavour of it very delicate and agreeable; there was no occaſion to uſe ſugar, as it had no bitter taſte to correct. In all probability this Sultana Coffee can only be made where the tree grows; for, as the huſks have little ſubſtance, if they are too much dried, in order to ſend them to other countries, the agreeable flavour they had when freſh is greatly impaired.

It may perhaps be worth while for our Weſt India planters to make a trial of drying the outward and inner huſk of Coffee ſeparately, in the manner the Chineſe do their tea, upon a broad ſhallow iron pan, turned upwards at the brim, placed upon a ſtove. They ſhould be kept continually turning, to prevent burning; and when they are become too hot to be handled, they ſhould be taken off with a kind of ſhovel, and laid upon a mat, on a low table, and ſhifted about until they cool, fanning them at the ſame time, to diſperſe the moiſture. The pan muſt be frequently wiped, and kept clean from any clammy matter ſticking to it, and the proceſs repeated while any moiſture is perceived. They muſt afterwards be packed cloſe in dry jars, canniſters, or cheſts lined with lead, ſuch as the tea is ſent over in. It will be proper to turn out theſe huſks, after they have lain ſome days, to examine whether they are thoroughly dry; and if the leaſt damp is felt, it will be neceſſary to dry them ſtill more, otherwiſe they will become mouldy and loſe their flavour: for it appears from the Arabian account, that they are not acquainted with a proper method of dry-

ing

ing theſe huſks, and packing them ſo as to be conveyed to any conſiderable diſtance, without prejudicing this agreeable flavour.

The Chineſe are very careful not to leave their tea-leaves in heaps before they are dried, which would occaſion them to heat and ſpoil: they likewiſe gather no more at a time than they can dry in leſs than twenty-four hours, as they find, when they have been kept longer, they turn black. Theſe obſervations may poſſibly be of ſome uſe to thoſe who may be induced to attempt drying the pulp of the berry, for the purpoſe of making Sultana Coffee.

Extract of a Letter from Dr. Fothergill to J. Ellis, Eſquire, F. R. S. Agent for Dominica. Containing ſome Remarks on the Culture and Uſe of Coffee.

Sept. 2, 1773.

IT is doing a very uſeful piece of ſervice, and I believe an acceptable one to the public, to make them a little better acquainted with Coffee, which now conſtitutes ſo conſiderable a part of their entertainment, if not ſuſtenance. I am pleaſed with the engraving of this very elegant plant*; it is executed in the beſt manner of this able artiſt †, and exactly after the finiſhed drawing he received.

I have not time to collect, or relate with ſufficient accuracy, the hiſtory of this berry, ſo far as it might be traced in the Aſiatic hiſtories: it has been uſed for ages. By the account which is ſubjoined to the reflections I am going to make on this ſubſtance, it will appear, that it was introduced by the French into Martinico in the Weſt Indies no longer ago than the year 1727; that it has been ſince that time propagated in almoſt all the Weſt India iſlands, Engliſh, French, and Dutch; though it has not been cultivated by us with the attention it deſerves.

The greateſt part of the Coffee now made uſe of in Europe is, I believe, the produce of the Weſt Indies; at leaſt, the conſumption of Mocha Coffee amongſt us ſeems to be greatly reduced. Several years ago two ſhips were ſent out annually by the Eaſt India Company; they now only ſend one every two years for this article, if I am rightly informed; though at the ſame time it may be preſumed a much larger quantity is conſumed than at any time heretofore.

The French, and other nations, who have poſſeſſions in the Weſt Indies, ſupply us clandeſtinely with large quantities. It is true, we import a great deal of raw Coffee from our own iſlands; but the beſt is of foreign growth. The French in particular cultivate it with great attention; much likewiſe is brought from their Eaſt India ſettlements. Thoſe who are accuſtomed to drink Coffee frequently, are ſenſible of a very manifeſt difference between the Aſiatic, the French, and American Coffee. The refreſhing odour of the firſt, and its grateful taſte, much ſurpaſs the beſt Weſt India Coffee I have ever ſeen imported. There is ſomething in the ſmell, a rankneſs in the taſte, and diſguſting return,

* As Dr. Fothergill ſpeaks ſo favourably of this engraving, I have on that account procured the original plate alluded to; it exhibits the only impreſſion that has not been purpoſely executed for this edition of the Doctor's Works. *Editor.*

† J. S. Miller.

eſpecially of that from the Engliſh iſlands, which makes it very unpleaſant to thoſe who have been accuſtomed to the beſt Mocha Coffee.

The tree that was firſt carried to Martinico, was a deſcendant of one from Batavia. The Dutch moſt probably brought the plants to their colony from Mocha, and there ſeems no doubt but it is the true Arabian Coffee which is now cultivated in the Weſt Indies: but if we reflect upon the courſe it has taken, we may perhaps ſee cauſe to apprehend that it may have degenerated conſiderably.

That part of Arabia from whence the Aſiatic Coffee is brought, is for the moſt part extremely ſandy, dry, and hot.

At Batavia the ſoil is in general rich and deep; and though, like other eaſtern climates, there is a dry ſeaſon, yet in the rainy periods the quantity of wet that falls is exceſſive. The rich luxuriant ſtate of vegetation in the iſland of Java, on which Batavia is ſituated, is a proof of this aſſertion; and one may ſafely infer, that a plant brought from a dry, ſterile, ſandy ſoil, will aſſume not only a very different appearance, but its fruit will have a very different quality, from that which is the produce of a fertile, moiſt ſoil, ſubjected to equal heat. It is not therefore improbable, but from this circumſtance the plant brought from Batavia to the royal garden in France, and its iſſue tranſported to a climate much more abounding with moiſture than that of which it was a native, may ſo far have aſſumed another nature, as not eaſily to be brought back to its original excellence.

I wiſh this circumſtance, however, only to be conſidered as a ſuggeſtion, which, though not without the appearance of probability, may not be ſufficiently warranted by experience: but ſhould it prove true, it may lead us to one practicable method of meliorating Coffee. Let the Coffee be planted in a ſoil as ſimilar to its natural one as poſſible. Indeed the ſhort account which is annexed to this letter confirms my apprehenſions. The drier the ſoil on which the Coffee grows, the ſmaller is its fruit, and its quality more excellent. There are ſome kinds of trees, perhaps the greateſt part, whoſe fruit, while the trees are young, is either more inſipid, or the taſte of it leſs refined, than at a more advanced age. The fruit of young walnut-trees is large, but it is watery and inſipid; as the tree grows older the nuts decreaſe in ſize, but their taſte is more agreeable. A ſimilar progreſs may be obſerved in many other ſpecies; and it is not improbable but the Coffee-tree may be another inſtance of the like properties. It is certain, that in old Coffee-trees the fruit is ſmaller; perhaps an accurate taſte would diſcover that its flavour is improved in proportion. The experiment may be recommended to thoſe who cultivate the Coffee-tree in our iſlands. But I have not time to trace all the circumſtances that have a probable tendency to leſſen the value of our own plantation Coffee.

I haſten to another point, which would ſoon put our planters upon over-

coming every difficulty, and would oblige them to ſtudy the culture of the plant, the curing of the fruit, and ſending it to us in the higheſt perfection poſſible. By what means can we make it the Weſt India planters intereſt to cultivate Coffee in ſuch a manner, as to approach in taſte and flavour as near to the Aſiatic as poſſible? Perhaps the ſhorteſt anſwer to this would be, Make it their intereſt; that is, to encourage its importation.

I am well informed, by a perſon intelligent in theſe matters, that the duties and exciſe on Coffee from the plantations are as follow:

	£.	s.	d.
The duty on Coffee of the growth of the Britiſh plantations, for home conſumption, is 1l. 13s. 6 $\frac{3}{20}$d. per hundred weight; which is per lb. about — — — —	0	0	4
Exciſe on Ditto is, per lb. — — —	0	1	6
Total per lb. is	0	1	10

When ſuch an exceſſive load of expences, and ſo many difficulties ariſe to the grower, importer, and of conſequence to the conſumer of Weſt India Coffee, it is no wonder that the planters give themſelves very little concern about its cultivation. At preſent there is very little difference in the produce, and conſequently in the price; the high duties are a bar to its uſe amongſt us, the Coffee is in general bad, and the price in proportion.

This diſcouragement renders them leſs ſolicitous about it: bad as it may be produced, it finds conſumers abroad, and to vend it with certainty anſwers their purpoſe better than a more attentive cultivation of a commodity clogged with ſuch duties.

Thoſe who know the taſte of Mocha Coffee, and are deſirous of uſing our Weſt Indian, ſoon quit it with diſguſt. Better Coffee than our own, the produce of the French iſles, finds its way into ſome of the out-ports clandeſtinely, is much uſed, and thought to be equal to the Turky. Taſte is perhaps more the effect of habit than is generally admitted; of this, tobacco is the ſtrongeſt and firſt inſtance that occurs to me: to a perſon unaccuſtomed to it, the fineſt is ſcarcely tolerable.

If the duties and exciſe upon Coffee were leſſened, the conſumption would be increaſed: taſte would grow more refined, the beſt would be ſought for, and the price would be in proportion. The preſent duties are almoſt prohibitory. It may be worth one's while to view the effects of theſe high duties in a political light—I mean in reſpect to this article.

For a century to come, it is perhaps more than probable, that the people of this country will, for one meal at leaſt, make uſe of either Tea, Coffee, or Chocolate;

colate; I ſpeak of the generality. Tea at preſent takes the lead; whence it comes, its hiſtory, properties, and uſes, have been ſo fully explained, that I ſhall ſay nothing here upon the ſubject *.

It is a queſtion often propoſed to phyſicians, Which is beſt, Tea or Coffee? The ſolution of this point would perhaps be a difficult one. We neither find the Chineſe or Turks ſubjected to any ſuch diſcriminating effects, as enable the faculty to ſay, with preciſion, that one is more injurious than the other. For my own part, I leave it to the experience of individuals. To ſome people Coffee is diſagreeable; they charge it with producing nervous complaints. Tea is not without ſimilar accuſations. It ſeems as if the human frame was, however, ſo happily conſtructed, that it is leſs in the power of ſuch things to affect it than might at firſt ſight be imagined. The animal powers are apparently ſuch, as can convert almoſt oppoſite principles to its benefit, if uſed in any degree of moderation: ſome drink Coffee almoſt to exceſs, and condemn Tea as injurious; and ſo Coffee is treated in its turn. Theſe are proofs, however, how few people are capable of making proper inferences from experiment.

I think neither Coffee nor Tea afford any very material ſupport; that is, contain very little nutriment: they are rather the vehicles of nouriſhment than nutritious of themſelves: the moſt that can be expected from them in general is, that they are grateful, and very little injurious. Cuſtom has adopted them both, and it becomes us to make them as uſeful to ourſelves, and as ſubſervient to public good, as may be in our power. China, that ſupplies us with Tea, is remote; the navigation long and dangerous; the climate not always favourable to our ſeamen; indeed, all long voyages are injurious, and the hotter the climate the worſe. As a nation, a commercial nation, whoſe accommodations depend on this uſeful race of people, we cannot, as friends to humanity, wiſh to promote the conſumption of thoſe articles, which are introduced at ſo great an expence of uſeful lives. Coffee from our own plantations is in this reſpect much preferable to Tea; the voyage is ſhorter, the riſque is leſs. Suppoſing then, that Tea and Coffee are alike in reſpect to real uſefulneſs; that one is not inferior to the other in reſpect to the health of the conſumers: ſuppoſe, likewiſe, that the diſadvantage with reſpect to the lives of the ſeamen were equal, which however is not the caſe, there is one material difference that ought to turn the ſcale in favour of the more general uſe of Coffee—it is raiſed by our fellow-ſubjects, and paid for with our manufactures. Tea, on the contrary, is paid for principally with money. The quantities of Britiſh goods which the Chineſe take from us is inconſiderable, when compared with the quantities we pay for in bullion.

The Chineſe take from us every article which they can turn to national be-

* See Dr. Lettſom on the Tea Plant.

nefit, and whatever enables them to improve their manufactures. Beſides raw ſilk, and a few other articles of ſome little uſe in our own manufactures, moſt other things imported from thence we can do without, eſpecially if the conſumption of our Coffee was encouraged. Were the duties and exciſe upon Coffee, for inſtance, reduced to a quarter part, more than double the quantity would be conſumed; was the conſumption greater, the planters would find it their intereſt to cultivate the trees with more attention: increaſed demand would increaſe the price; and as more came to market, the beſt would ſell dearer than an inferior kind. Theſe muſt be the certain effects of increaſed demand.

There is another conſideration of ſome moment likewiſe; which is, that the cultivation of Coffee might be carried on in ſuch manner, as the leſſer planters might ſubſiſt by it, and a few ſimilar articles, cotton particularly, with little ſtock, and without much expence for negroes. No little planter can make ſugar to advantage; the expence of negroes, cattle, mills, and other requiſites of a ſugar plantation, are beyond his reach: if he has any landed property, by one means or another, he is often obliged to ſell it to his richer neighbour, and to remove to ſome other country, leſs unfavourable to contracted circumſtances. Thus the iſlands are gradually thinned of the white inhabitants; they become leſs able to quell the inſurrections of their negroes, or to oppoſe any hoſtile invaſion.

The annexed account of Coffee anticipates ſome remarks I meaned to have ſpoke to more fully, which had often occurred to me. The writer of that ſhort account has not, however, wholly exhauſted the ſubject: he very juſtly deſcribes many circumſtances which tend to make Weſt India Coffee of leſs value than the European; he is very right in his obſervations on the difference of quantity produced in different ſoils and ſituations; he moſt pertinently cenſures the Engliſh for want of care in ſhipping it home; the French exceed us vaſtly in this reſpect; and the greater price it fetches, is owing in a great degree to ſuperior care and management. One would hardly ſuſpect the merchants and planters could be capable of ſo much inattention as to ſhip Coffee in veſſels loaded with rum and coarſe ſugars; articles capable of communicating a taſte ſcarce to be driven off by fire; ſo penetrating are the ſteams ariſing from rum and ſugars confined in a ſhip's hold. So much Coffee ought to be collected together at one place as to load a veſſel. It is objected likewiſe, that the Coffee in the Weſt India iſlands cannot eaſily be dried in a proper manner, from the great moiſture of the air: but there are in all the iſlands high grounds, to which the Coffee might be brought and dried ſufficiently.

Another point ought not to be omitted, which is, that our plantation Coffee is made uſe of too ſoon. Perhaps one part of the excellence of Mocha Coffee ariſes from this circumſtance—The Eaſt India company ſend a ſhip once in two years:

years: it is moſt probable a part of the loading has been kept in that hot dry country above a year; it is ſix months before it arrives in England; and it may be ſix or twelve months more before it comes into the conſumer's hands. Thus, between two and three years muſt inevitably intervene between its growth and conſumption.

Much of that mucilage, which moſt probably in roaſting is the baſis of its flavour, is changed by this delay; and indeed experience confirms it.

Beſides many inſtances that might be given from credible witneſſes (and eſpecially from Governor Scott's account of this ſubject hereunto annexed) the following paſſed under my own obſervation, and, as far as it reaches, may be concluſive:

I had a preſent made of ſeveral kinds of raw Coffee from the Weſt India iſlands; it being known that I wiſhed to encourage the culture of this plant, for the reaſons I have alleged. Some of this Coffee, which a year ago was ſo ill taſted as to be unfit for uſe, was laid in a very dry cloſet: this year it was again tried, and found to be greatly amended; in another it will probably be little inferior to the Aſiatic, if it amends in proportion. It is of much conſequence whether the Coffee is imported with other goods, or alone; whether it is kept in moiſt, damp warehouſes, or in dry, airy places; whether it is uſed immediately, or not till after it has been kept a conſiderable time. It would be well worth the planter's labour and expence, to keep his Coffee in the iſland from year to year, till he has got ſuch a quantity, either of his own, or bought from his neighbours, ſufficient to load a ſmall veſſel; marking the different ages. But the whole of this depends entirely on government. Leſſening the duty would increaſe the conſumption, prevent ſmuggling, enable many whites to gain a comfortable ſupport, and to pay for our manufactures. As it is raiſed by our own people, imported with leſs riſque of ſeamen's health and lives, in a political light it muſt certainly deſerve the deliberate attention of the legiſlature.

Coffee made in the following manner is pleaſing to moſt people, and is much preferable to Tea, or to Coffee made in the uſual manner, for breakfaſt:—Let Coffee be made in the uſual manner, only a third part ſtronger; let as much boiling milk be added to the Coffee, before it is taken from the fire, as there is water; let it ſettle; drink it with cream, or without, as may be moſt agreeable. And were the poor and middling people enabled to procure this, it would be much more nouriſhing and beneficial than the wretched beverage they indulge themſelves with of the moſt ordinary Teas. Very little ſugar ought to be uſed with Coffee; on weak ſtomachs it is too apt to become acid, if made ſweet: and this is one reaſon why many people forbear drinking Coffee. I do not preſume to ſettle this important queſtion, Which is preferable, Tea or Coffee?

Coffee? This muſt be left to the experience of individuals. So far as concerns myſelf, I may be permitted to become evidence.

Though I like Tea, I found it not quite favourable to my health, from ſome circumſtances: I tried Coffee, made in the manner above mentioned, and have drank it almoſt conſtantly many years, without receiving any inconvenience from it.

It may require a good deal of phyſical ſagacity to determine, how far the French cuſtom of drinking Coffee immediately after dinner, is right; but I think it can admit of no diſpute, whether a diſh of Coffee, or a bottle of wine, may then be leſs prejudicial to health.

I think, however, it is leſs injurious to drink Coffee immediately after dinner, than later in the evening; and at leaſt for one very obvious reaſon:

Coffee moſt certainly promotes watchfulneſs; or, in other words, it ſuſpends the inclination to ſleep. To thoſe therefore who wiſh not to be too ſubject to this inclination, Coffee is undoubtedly preferable to wine, or perhaps to any other liquor we know.

The inſtances of perſons to whom Coffee has this antiſoporific effect, are very numerous; and the inſtances are almoſt as numerous of ſuch to whom wine has the oppoſite effect.

To attribute the livelineſs of the French, after their repaſts, to this beverage, would be highly hypothetical: but I think it muſt be acknowledged, that after a full meal, perhaps of groſs animal food, even a mere diluent is much preferable to wine; which, whilſt it gives a temporary flow of animal ſpirits, rather oppoſes that neceſſary aſſimilation which nature aims at in the offices of digeſtion.

Was Coffee ſubſtituted inſtead of the bottle immediately after dinner, it ſeems more than probable that many advantages would flow from it, both to the health of individuals, and general œconomy; and it ſeems not improbable, but by deferring Coffee or Tea ſo late as is uſually practiſed, we interrupt digeſtion, and add a new load of matter to that already in the ſtomach, which, after a full meal, is not a matter of indifference.

On the contrary, ever ſince I was capable of forming an opinion on ſubjects of this nature, I could not forbear thinking, that the uſe of Tea in an afternoon, at the time and in the manner it has generally been practiſed, is exceedingly prejudicial to many perſons; and if many have eſcaped without feeling any prejudicial effects, they may juſtly aſcribe it to the firmneſs of their conſtitution; I was almoſt tempted to ſay, to their good fortune. This matter, I own, is capable of much diſpute; and the more ſo, as minute diſtinctions muſt be called to the aid of both parties.

I cannot however conclude theſe remarks, without repeating the ſubſtance of what

what I could wiſh to inculcate; that in reſpect to real uſe, and as a part of our food, I have no evidence to induce me to think that Coffee is inferior to Tea.

That in reſpect to national œconomy, the benefit of our colonies, and the lives of the ſeamen, every circumſtance concurs to give Coffee the preference. It is raiſed by our fellow ſubjects, paid for by our manufactures, and the produce ultimately brought to Great Britain.

That the great obſtacle to a more general uſe of Coffee, is the very high duty and exciſe.

That leſſening the duty would not leſſen the revenue; ſmuggling would be diſcouraged, and an increaſed conſumption would make up the deficiency to the treaſury.

That the planters would be induced to cultivate Coffee with more care, was there a better market for it.

That, as little planters might be enabled to ſubſiſt by raiſing Coffee, &c. their numbers would increaſe, and add to the ſtrength of the ſeveral iſlands; as Europeans might endure the labour requiſite for the cultivation of Coffee.

I have ſubjoined the tranſlation of a paper communicated to me by Governor Melville, whoſe unwearied endeavours to promote the intereſt of Great Britain and her colonies deſerves every grateful acknowledgment; and likewiſe the copy of a letter I received long ſince from the late Governor Scott of Dominica: I perſuade myſelf, that evidences like theſe will have ſome weight with the public.

Should any part of theſe remarks afford my friend reaſon to think they may contribute to the benefit of the community, he is at liberty to make uſe of them in what manner he pleaſes.

J. Fothergill.

Obſervations

Observations on COFFEE, *by a learned and experienced Planter at the Grenades, communicated to Doctor Fothergill by Governor Melville.*

TRANSLATED FROM THE FRENCH.

SEVERAL perſons in Europe imagine, that a much better kind of Coffee might be gathered in our iſlands than that which is uſually brought from thence. There is no doubt of this, and our inhabitants are very ſenſible of it; but the ever-powerful motive of intereſt prevents them from endeavouring to improve the produce of this plant.

They learn from experience, that a light ſoil, dry and elevated ſlopes, produce Coffee of a ſmaller berry and more delicate flavour; and that all the Coffee which grows in a low, fertile, and moiſt ſoil, is bad, the berry large and flat, and almoſt inſipid.

Experience alſo teaches them, that trees planted in theſe ſoils yield commonly from twelve to ſixteen ounces of Coffee per plant; in the other ſoils they ſcarcely furniſh more than from ſix to eight ounces; this makes an immediate difference of one half in the weight. Now in France, England, and all the European markets, the only ſtated difference in the price of the ſmall well-prepared Coffee, and that which is larger and of the worſt kind, is from fifteen to twenty per cent. The inhabitants therefore would neceſſarily find it their advantage to plant their Coffee-trees in the richeſt ſoil; and thoſe perſons only will have the ſmall and fine Coffee, who have no other than bad grounds, and have not a ſufficient number of Negroes to manure and improve them.

The calculation is eaſily made: with an equal number of plants double the weight is produced; and by the difference of price no more is loſt than from fifteen to twenty per cent. Intereſt hath therefore prevented our inhabitants from applying themſelves to the culture of that kind of Coffee which is moſt valued in Europe. To excite a proper emulation among them, the difference of price between the various ſorts of Coffee ſhould be as conſiderable as it is between the ſeveral kinds of ſugar.

To theſe conſiderations we may add, that the trees laſt a much longer time in the fertile grounds, and that they need not be tranſplanted ſo frequently.

Some ſkilful perſons have adviſed to follow the method of the Arabs, with reſpect to the preparation of Coffee, in two particulars; firſt, never to gather it till it is perfectly ripe; ſecondly, to dry it in the ſhade, when ſeparated from the pulp.

The laſt of theſe is ſcarce poſſible; becauſe, although the air is very hot in theſe climates, it is always ſo damp, that we know from experience the Coffee could never be dried in the ſhade ſufficiently for exportation into Europe.

The

The firſt would be very uſeful, and even poſſible, if other perſons were employed in the buſineſs than Negroes, who, being lazy, ignorant, and generally ill-diſpoſed, either cannot or will not attend properly to this particular, and have no other wiſh but to finiſh their work as faſt as poſſible, either to get rid of the taſk impoſed upon them, or to avoid puniſhment: beſides, the ſeaſon for gathering the Coffee being near the winter, the rains, which are then very frequent, often make the berries fall before they are perfectly ripe.

As to the hiſtory of our Coffee, it certainly comes originally from Babel Mandel. The firſt tree that was brought to Martinico in 1727, or 1728, by Mr. Delieu, came from the gardens of his Moſt Chriſtian Majeſty, and was of the ſame ſpecies as that which is at Batavia. This tree was planted near to Port Royal, in a fertile moiſt ſoil, and almoſt level with the ſea, ſo that the ſpecies muſt neceſſarily have degenerated.

All the lower claſs of people in Martinico before this time cultivated the Cocoa; but by a contagion, as difficult to account for as the effect of it was general, all the Cocoa-trees periſhed in 1727. The inhabitants, half ruined, after having tried ſeveral ſchemes, reſolved at laſt to plant Coffee; and the French Eaſt India Company having lowered the duties, this cultivation was much encouraged.

The French are in general more cautious in the exportation of their Coffee than the Engliſh; they put it into caſks that are very dry: in the Windward Iſlands, where the beſt Coffee is made, the veſſel is neither laden with raw ſugars, nor with rum; clayed ſugars only are exported with it, which are of little detriment to this berry: the captains take care alſo to place it between decks, or in ſome other very dry part of the ſhip. The Engliſh, on the contrary, ſtow raw ſugars and rum in almoſt every part of the veſſel: theſe do a conſiderable injury to the Coffee that lies near them.

There is another more diſtant cauſe, that few people have noticed, but which contributes greatly to the badneſs of the Coffee exported into England:

Moſt of the Engliſh ſhips are hired for the freight; the captains ſtow the goods as they receive them, and the owners are ſatisfied if the veſſel is but well filled: it is a matter of little concern to them, whether the ſeveral kinds of goods have been properly diſpoſed, or whether they have received any detriment by lying near each other. The French ſhips are generally laden for the proprietors own uſe; the captains buy the goods themſelves; and, that they may be able to give a proper account of their management, and to ſhew that they have acted with prudence and caution, they are obliged to pay great attention to the ſtowage of their veſſel, and to the preſervation of their cargoes. Hence it follows, that the Coffee which is carried to France, is better than that which is brought to England.

Extract of a Letter from George Scott, Eſq; late Lieutenant Governor of Dominica, to Dr. Fothergill.

Government Houſe, Iſland Dominica,
November 21, 1765.

SIR,

MR. I———, a conſiderable planter of Grenada, touched at this iſland on his way thither; and, in the courſe of his intelligence, having made me acquainted with your patriotic efforts for encouraging the growth and produce of the infant colonies lately ceded to us by France; and being very deſirous of throwing in my mite towards forwarding your very laudable labours, I have therefore taken the liberty of putting on board the ſhip Neptune, Edmund Stevenſon maſter, under the care of Mr. Beats, of London, in a box directed for yourſelf, three ſmall bags of Coffee, which you will do me the favour to accept, trifling as they are, though I have not the honour of your acquaintance, as they are only intended for whatever experiments you may think proper to make of them.

The little bag, marked N° 1, was gathered in the year 1760; that marked N° 2, in 1763; and N° 3, laſt year: all the growth of this iſland, which is looked upon to make the beſt Coffee in the Weſt Indies, excepting that of the iſland of Mary Gallant; and on the weſt ſide of the iſland of Martinique, on the mountains oppoſite the Diamond Rock; which Coffee the French always gave the preference to, though the inhabitants of this iſland prefer their own, which they always make uſe of for their breakfaſt, taking equal quantities of it and boiled milk (or, more properly ſpeaking, milk that is ſcalded) and after their dinner they commonly drink a cup of Coffee without milk; and they have in general excellent health, and a fine flow of ſpirits, for this part of the world: whereas the Engliſh ſubjects, whom it is difficult to wean from prejudices, ſtill perſiſt in the uſe of Tea; and, though they enjoy a good ſtate of health, do not appear to have half the vivacity or livelineſs with the French in the ſame iſland with us.

I am told, that in England they ſtamp a value upon Coffee in proportion to the ſmallneſs and greenneſs of the grain; here they regard neither the ſize nor colour of it for their own uſe, but eſteem it in proportion to the time it has been gathered, and for having been kept in a dry warm place, and expoſed to the air three or four times a year; and the greater number of years it is kept in this manner, the better it is, they ſay. They alſo aſcribe a great deal of its excellence to the method of preparing it for uſe: if it is over roaſted, it has a flat, bitter,

bitter, and burnt taſte; and if it is not roaſted enough, though the Coffee ſhould be five or ſix years old, it will taſte as if it had been gathered this year: but if it is old and well roaſted, and immediately covered up ſmoaking hot in a bowl or cup, to prevent the fine volatile particles and flavour from going off; if then, when cold, it is ground, and made properly with boiling good water, it is looked upon to be in its higheſt perfection. The better ſort of French, in all the iſlands, make a practice of taking a cup of equal parts, Coffee and ſcalded milk, with a cruſt of bread, almoſt as ſoon as they get out of bed in a morning; and the reaſons they give for this cuſtom are, that it clears the brain, enlivens the ſenſes, cleanſes the ſtomach, throws off any rheum or fortuitous matter that may be lodged about the head, ſtomach, or lungs, from foul air or putrid vapours: and they likewiſe ſay, that it prevents, and even cures, the gravel. The Turks alſo ſet the higheſt value upon good Coffee, on account of its exhilarating qualities, and brightening the animal ſpirits. Surely then it muſt be preferable to Tea, which has quite contrary effects in moſt ſhapes whatever; and it muſt, in my humble opinion, be one of the beſt breakfaſts in the world for the honeſt brave people of the foggy iſland of Great Britain, where ſuch a multitude of melancholy accidents happen from a lowneſs of ſpirits. But what effects Coffee or Tea have upon the body or mind, you, Sir, muſt be the beſt judge, as it is your principal ſtudy and profeſſion to know the œconomy of the human frame; mine having been ever that of arms, and at preſent to preſide over this iſland; from whence I will with pleaſure ſend you annually as much Coffee, of whatever ſort you like, as you may want for your own uſe, while I remain here; being very much (though unknown)

Sir,

Your moſt obedient

humble ſervant,

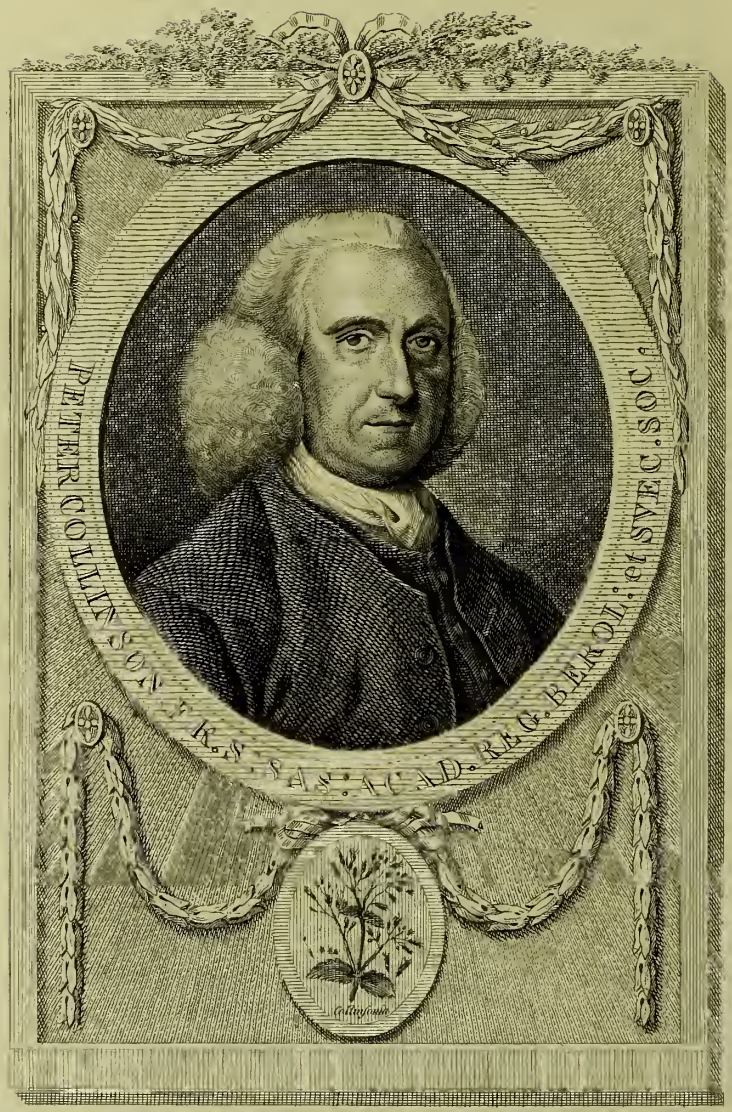
GEORGE SCOTT.

P. S. The method of curing Coffee through the Weſt Indies is, by paſſing it through a mill after it is ripe and gathered; and after this operation it is put into ciſterns, and covered with water for ten or twelve hours, until the pulp becomes looſe, when it is waſhed, and the Coffee, being in its huſks, is thrown in heaps to ſweat, and that the water may drain off, for two or three days more, when it is ſpread abroad and dried in the ſun; and when dry, is put into troughs, and pounded with rammers, until all the huſks (or parchment, as they call it) are beat off, when it is winnowed in the air, and expoſed in the ſun until it is perfectly dry, and then carried to market. The Coffee I ſend you, in the little bag marked N° 3, is ſome of a ſmall quantity I got one of the planters to make for me after the method of Mocha; which, as I am informed, is by ſweating and drying it in the ſhade after it is paſſed through the mill, and

muſt, in my opinion, be infinitely preferable to ſoaking it in water, and drying it in the ſun, which certainly muſt extract abundance of its virtues; particularly that fine flavour good Coffee has, which is ſo grateful to the ſmell when it is firſt poured out. This little bag, I believe, you will find very good, though it has not been cured above ten months; and if there was enough of it to keep for three or four years, I imagine it would be perfectly excellent; for this method muſt certainly be the beſt, and I have endeavoured to perſuade many of the planters to come into it; but the great expence they muſt be at to erect buildings to cover it from the ſun and rain while it would be curing, the great labour and time it takes to cure it after the manner of Arabia, and the ſmall price it bears at preſent, will not as yet permit them to come into it; though I am fully perſuaded that the Coffee of this iſland is full as good, when pulled off the tree, as any in Arabia, was it but cured after the ſame method; which I doubt not the planters will adopt, ſhould the price of Coffee riſe, ſo as to encourage them in the undertaking.

G. S.

SOME



Engravd by Trotter

SOME ACCOUNT

OF THE LATE

PETER COLLINSON,

FELLOW OF THE ROYAL SOCIETY, AND OF THE SOCIETY OF ANTIQUARIES, IN LONDON,

AND

OF THE ROYAL SOCIETIES OF BERLIN AND UPSAL.

In a LETTER to a FRIEND *.

* Printed in the Year 1769.

WHETHER those who have acquired knowledge by much labour, and the exertion of great talents, are apt to set too high a value on their own discoveries; or that studious men, by mixing less with the community at large, are less habituated to unreserved conversation; it has often been lamented, that they rarely descend to familiar communications with such as are but entering upon the same arduous pursuit. The late Peter Collinson, however, afforded a pleasing exception to this remark: his disposition was naturally social and chearful; and his instructions were conveyed in that familiar and affable manner, as both suited the capacity, and excited the ardour, of the student.

It was one happiness of my life, that I was early acquainted with this eminent naturalist: he was then retiring from business; but as his presence was essential to the interests of his successor, with whom I resided, he had apartments in the same house, which afforded me frequent access to him and to his museum; and to him I am indebted for information on various departments of natural history, which I feel a pleasure in acknowledging here.

Editor.

To * * * *.

I KNOW not, my dear friend, that I ever wiſhed for leiſure, and the talent of biography, more than at preſent: I could employ both theſe in a manner that would be pleaſing to myſelf, and perhaps at the ſame time uſeful to the public, in placing before it an example worthy of being recorded, becauſe highly worthy of imitation. The ſatisfaction ariſing from the view of a life continually employed in commendable purſuits, and in acts of laſting and extenſive utility, is not a ſmall one; we participate afreſh in every ſocial action of the friend whom we loved whilſt living, and pay that tribute to his name which love and friendſhip demand—a grateful and honourable remembrance.

The juſt eſteem which my honoured friend Peter Collinſon had acquired, not only among the chief promoters of natural hiſtory in moſt parts of the world where theſe ſtudies are cultivated, but amongſt men of underſtanding in general in every part of uſeful ſcience, will, I perſuade myſelf, render any apology unneceſſary for attempting to exhibit ſome account of the life of this very eminent perſon.

Our acquaintance commenced about the year 1740; he was then conſidered amongſt the number of thoſe who were beſt acquainted with botany and natural hiſtory in England; his collection in moſt branches of natural hiſtory was very large, and the ſpecimens well choſen; his botanic garden contained many curious plants, not at that time to be met with in any other; and the number of ſuch kept increaſing to the laſt period of his life.

I owe much of my intimacy with the ſeveral branches of natural hiſtory, to my deceaſed friend: ſcarcely any thing gave him more pleaſure than to promote an inclination for ſuch ſtudies, ſo far as was conſiſtent with his acquaintances ſituation; for being in buſineſs himſelf, he knew the value of time too well, to endeavour to excite a taſte for ſuch reſearches, where probably it muſt have been gratified at the expence of diſcretion, and of thoſe hours which ought to have been devoted to more neceſſary employment.

The

The family of the Collinſons is of ancient ſtanding in the North: Peter and James were the great-grandſons of Peter Collinſon, who lived on his paternal eſtate called Hugal Hall, or Height of Hugal, near Windermere Lake, in the pariſh of Stavely, about ten miles from Kendal, in Weſtmoreland. My friend, whilſt a youth, diſcovered his attachment to natural hiſtory: inſects, and their ſeveral metamorphoſes, employed many of thoſe hours, which at his time of life are moſtly ſpent by others in very different purſuits. Plants likewiſe engaged his attention; he began early to make a collection of dried ſpecimens, and had acceſs to the beſt gardens at that time in the neighbourhood of London.

It was a favourable circumſtance to himſelf, that he was in partnerſhip with his brother James Collinſon, in a buſineſs that did not always require their preſence together. They lived in great harmony, and reciprocally afforded to each other opportunities for their reſpective purſuits. Both, however, had a ſtrong reliſh for horticulture and planting, and both had acquired a juſt conception of rural elegance.

He became early acquainted with the firſt-rate naturaliſts of that age; the Drs. Derham, Woodward, Dale, Lloyd, and, to name all in one, the great Sir Hans Sloane, were amongſt his friends. I firſt ſaw that amazing collection, now conſtituting the Britiſh Muſeum, with my deceaſed friend, in company with the late Sir Charles Wager, who had been a moſt generous and fortunate contributor to that vaſt treaſure of natural curioſities; omitting nothing, in the courſe of his many voyages, that could add to its magnificence, and encouraging the commanders under him, who were ſtationed in different parts of the globe, to procure whatever was rare and valuable in every branch of natural hiſtory. To this he was ſtrongly excited by Peter Collinſon; for whom and his family Sir Charles had a very ſingular eſteem, and continued it to the laſt moments of his life.

Among the great variety of articles which form that ſuperb collection, ſmall was the number of thoſe with whoſe hiſtory my friend was not well acquainted; he being one of thoſe few who viſited Sir Hans at all times familiarly, and continued ſo to do to the lateſt period: their inclinations and purſuits in reſpect to natural hiſtory being the ſame, a firm friendſhip had early been eſtabliſhed between them.

Peter Collinſon was elected a Fellow of the Royal Society on the 12th of December 1728; and perhaps was one of the moſt diligent and uſeful members of that reſpectable body, not only in ſupplying them with many curious obſervations himſelf, but in promoting and preſerving a moſt extenſive correſpondence with learned and ingenious foreigners, in all countries, and on every uſeful ſubject; ſo that he not only furniſhed many inſtructive hints from his own fund of obſervations, but excited others to contribute largely to the inſtruction and entertainment of the Society.

Beſides his attention to natural hiſtory, he ſuffered nothing uſeful in either art or ſcience to eſcape him; he minuted every ſtriking hint that occurred either in reading or converſation; and from this ſource he derived much information, as there were very few men of learning and ingenuity, of all profeſſions, who were not of his acquaintance at home, and moſt foreigners of eminence in natural hiſtory, or in arts and ſciences, were recommended to his notice and friendſhip.

His diligence and œconomy of time were ſuch, that though he never appeared to be in a hurry, he maintained an extenſive correſpondence with great punctuality; acquainting the learned and ingenious in diſtant parts of the globe with the diſcoveries and improvements in natural hiſtory in this country, and receiving the like information from the moſt eminent perſons in almoſt every other. Amongſt a variety of circumſtances of this kind that might be mentioned, his correſpondences with the ingenious Cadwallader Colden, Eſq; of New York, and the juſtly celebrated Dr. Franklin, of Philadelphia, furniſh inſtances of the benefit reſulting from his attention to all improvements. From the former of theſe gentlemen many valuable obſervations were received; and the latter communicated his firſt eſſays on electricity to my friend, in a ſeries of letters, which were then publiſhed, and have been reprinted in a late edition of the Doctor's ingenious diſcoveries and improvements. Their minds in this reſpect were congenial, ever intent upon promoting public good: the letter ſubjoined is a proof of it *.

Perhaps,

* To MICHAEL COLLINSON, Eſq.

DEAR SIR, Craven-ſtreet, Feb. 8, 1770.

UNDERSTANDING that an account of our dear departed friend Mr. Peter Collinſon is intended to be given to the public, I cannot omit expreſſing my approbation of the deſign, as the characters of good men are exemplary, and often ſtimulate the well-diſpoſed to an imitation, beneficial to mankind, and honourable to themſelves. And as you may be unacquainted with the following inſtances of his zeal and uſefulneſs in promoting knowledge, which fell within my obſervation, I take the liberty of informing you, that in 1730 a Subſcription Library being ſet on foot at Philadelphia, he encouraged the deſign by making ſeveral very valuable preſents to it, and procuring others from his friends: and as the Library Company had a conſiderable ſum ariſing annually, to be laid out in books, and needed a judicious friend in London to tranſact the buſineſs for them, he voluntarily and chearfully undertook that ſervice, and executed it for more than thirty years ſucceſſively; aſſiſting in the choice of books, and taking the whole care of collecting and ſhipping them, without ever charging or accepting any conſideration for his trouble. The ſucceſs of this library (greatly owing to his kind countenance and good advice) encouraged the erecting others in different places on the ſame plan; and it is ſuppoſed there are now upwards of thirty ſubſiſting in the ſeveral colonies, which have contributed greatly to the ſpreading of uſeful knowledge in that part of the world; the books he recommended being all of that kind, and the catalogue of this firſt library being much reſpected and followed by thoſe libraries that ſucceeded.

During the ſame time he tranſmitted to the directors of the library the earlieſt accounts of every new European improvement in agriculture and the arts, and every philoſophical diſcovery: among

 which,

Perhaps, in ſome future period, the account he procured of the management of ſheep in Spain, in reſpect to their migrations from the mountains to the plains, and their ſtated returns, publiſhed in the Gentleman's Magazine for May and June 1764, may not be conſidered among the leaſt of the benefits accruing from his extenſive and inquiſitive correſpondence. When America is better peopled, the mountainous parts more habitable, the plains unloaded of their vaſt foreſts, and cultivated, the fineſt ſheep in the world may poſſibly cover the plains of Carolina, Georgia, and the Floridas, in the winter months, and retreat to the mountains as the ſummer heats increaſe, and dry up the herbage. We are utter ſtrangers to this kind of œconomy. Probably it might be practiſed even in this iſland to advantage, with this difference, that the higheſt ground ſhould be choſen for the winter reſidence of theſe animals, proper ſhelter being made for them, and the wetter low lands left for ſummer.

Views of public benefit to this country, to others, to mankind in general, always ſuggeſted to him uſeful enquiries; and the public are in poſſeſſion of many valuable hints, which from time to time he communicated through the channel of the Gentleman's Magazine * and daily papers, ſometimes with his name, or

which, in 1745, he ſent over an account of the new German experiments in electricity, together with a glaſs tube, and ſome directions for uſing it, ſo as to repeat thoſe experiments. This was the firſt notice I had of that curious ſubject, which I afterwards proſecuted with ſome diligence, being encouraged by the friendly reception he gave to the letters I wrote to him upon it. Pleaſe to accept this ſmall teſtimony of mine to his memory, for which I ſhall ever have the utmoſt reſpect; and believe me, with ſincere eſteem,

Dear Sir,

Your moſt obedient

humble ſervant,

B. FRANKLIN.

* The following is ſaid to be a complete Liſt of P. Collinſon's papers inſerted in the Gentleman's Magazine, viz.

1. A liſt of American ſeeds imported in 1751; with ſome inſtructions for their cultivation. Gent. Mag. for Dec. 1751.
2. Some obſervations on the white pine, commonly called the Weymouth pine. Ibid. Nov. 1755.
3. Further obſervations on the Weymouth and other American pines. Ibid. Dec. 1755.
4. Obſervations on the fir-tree. Ibid. Jan. 1756.
5. Remarks on the cultivation of ſome ſpecies of North American ever-green trees. Ibid. March 1756.
6. A plan for a laſting peace with the Indians. Ibid. Sept. 1763.
7. Some anecdotes of the life of the late Dr. Stephen Hales. Ibid. 1764.
8. An account of the ſycamore or Eaſtern plane-tree. Ibid. April 1765.
9. Account of the life of the late Dr. William Stukeley. Ibid. May 1765.
10. An account of the introduction of the tea-tree of China, and of the elegantly ſpotted mennil-deer of Bengal, into England. Gent. Mag. Supplement for 1765.
11. Account of the introduction of rice and tar into our American colonies. Ibid. for June 1766.
12. Deſcription of the ancient cheſnut-tree at Tortſworth, in Glouceſterſhire. Ibid. July 1766.
13. Some obſervations on the emigration of ſwallows, &c.

initials,

initials, but oftener without any ſignature; being more ſolicitous to do good, than to be ſeen in doing it.

His converſation was chearful, and uſefully entertaining, becauſe it was generally turned to ſome intereſting diſquiſition, or imparting ſome beneficial information. This rendered his acquaintance much deſired by thoſe who had a reliſh for natural hiſtory, or were ſtudious in cultivating rural improvements; and ſecured him the intimate friendſhip of ſome of the moſt eminent perſonages in this kingdom, as diſtinguiſhed by their taſte in planting and horticulture, as by their rank and dignity. With ſome of theſe he frequently ſpent a few days at their ſeats in the neighbourhood of London, imparting many advantageous hints with regard to the improvements they were deſigning: and indeed many of them were ſenſible that very few were either ſo able to adviſe in theſe reſpects, or ſo impartial. Frequent opportunities had furniſhed extenſive obſervation and experience of the effects of different methods of cultivation; what ſoil, what aſpect, beſt ſuited different plants and trees; how beſt to cover incurable defects, how to improve beauties; and from this general knowledge, derived from repeated remarks, he often prevented young planters from committing capital miſtakes, rectified others into which they had been miſled by the ignorant and deſigning; and by ſuch means he prevailed upon many of his friends not only to embark in this rational amuſement, but to perſevere in it, greatly to their own emolument, and the laſting advantage of their country.

A very frequent obſervation of my friend's was, that he thought it a matter of the utmoſt importance to young people of fortune, that they ſhould be as early as poſſible initiated into ſome rational purſuit, and eſpecially into a taſte for all kinds of rural improvement. The human mind, he would remark, muſt have ſome object in view; ſome amuſements are neceſſary; and if virtue and propriety do not engage it, vice and folly will. Let us then turn them to an employ, which at once contributes to their health, their pleaſure, and their profit, and ſecures them from falling into idleneſs or diſſipation, merely for want of better engagements; let us find them ſomething to do, and they cannot be unhappy, like a multitude of young perſons, who are diſſipated and corrupt, becauſe, perhaps, thoſe who have been early about them, or were concerned in their education, had not the inclination or addreſs to lead them into ſome innocent, pleaſurable, and uſeful purſuit.

Planting, he uſed to ſay, and gardening, ſupply a fund of entertainment, the moſt laſting and reaſonable of any occupation in this life; pleaſures not to be purchaſed. The trees which we ourſelves have planted, the fruits we have raiſed, the plants we have cultivated, ſeem to be like our children, a kind of new creation; their ſhade, their taſte, their fragrance, and their beauties, affect us with a richer repaſt than any others. What a pleaſing ſcene, would he obſerve,

lies open to a young man of fortune, devoted to ſuch amuſements! Each ſucceeding year produces new ſhades, other fruits, freſh beauties, and brings beſides moſt certain profit. To behold the riſing groves, barrenneſs made fertile, our country improved, ourſelves made uſeful and happy, and poſterity enriched! When on this favourite ſubject, a very natural reflection often eſcaped him, that he ſeldom knew a man poſſeſſed of a taſte for ſuch pleaſures, who was not at the ſame time temperate and virtuous. And indeed he had a right to make the obſervation; for he had the ſatisfaction of reckoning among his moſt intimate friends, men of the moſt amiable and unblemiſhed characters in all ſtations, parties, and diſtinctions.

Nor was he employed only in promoting this taſte amongſt his friends, in enlarging their views, correcting and refining their judgment, but alſo in furniſhing them with the means of increaſing their plantations: and it is but doing juſtice to his memory, to mention, that he was the firſt who introduced the great variety of ſeeds and ſhrubs, which are now the principal ornaments of every garden; and that it was owing to his indefatigable induſtry, that ſo many perſons of the firſt diſtinction are now enabled to behold groves tranſplanted from the weſtern continent, flouriſhing ſo luxuriantly in their ſeveral domains, as if they were already become indigenous to Britain.

His buſineſs in the mercantile way was chiefly to North America, and the Weſt Indies; the former particularly. He had peruſed every performance that was wrote reſpecting the natural hiſtory and produce of all our own ſettlements, and indeed of all the European colonies in the New World. This enabled him to make enquiries after every thing that was curious and uſeful, and brought him acquainted with the moſt intelligent people who came over from America; his enquiries raiſed ſome curioſity in thoſe countries, and excited a taſte for natural hiſtory and botanical reſearches. It perhaps may ſafely be ſaid, that every thing of this ſort that has appeared in thoſe parts of the world, was chiefly owing to his encouragement. That eminent naturaliſt, John Bartram, may almoſt be ſaid to have been created ſuch by my friend's aſſiſtance; he firſt recommended the collecting of ſeeds, and afterwards aſſiſted in diſpoſing of them in this country, and conſtantly excited him to perſevere in inveſtigating the plants of America, which he has executed with indefatigable labour through a long courſe of years, and with amazing ſucceſs.

The quantities of new ſeeds he received from America, not only ſupplied his own garden with every thing that was curious, but furniſhed him with the means of procuring others, in exchange, from other parts of the globe. He had ſome correſpondents in almoſt every nation in Europe; ſome in Aſia, and even at Pekin; who all tranſmitted to him the moſt valuable ſeeds they could collect, in return for the treaſures of America. In this exchange of good offices, there

is abundant cauſe to believe no man ever exceeded him in reſpect to punctuality, care, or generoſity; few had ever more intelligent correſpondents, or ſucceeded better in enriching this country with the vegetable produce of every other, that could either add to its advantage or ornament. And were I to aſſert, that he was the means of introducing more new and beautiful plants into Britain than any man of his time, and was inferior to none in his acquaintance with the hiſtory of their introduction, I ſhould run little hazard of tranſgreſſing the bounds of veracity.

Many anecdotes of this kind he had learned from the ancient botaniſts, who flouriſhed at his entrance into theſe ſtudies; and many obſervations he had likewiſe made in the courſe of above half a century. Were ſuch of the former of theſe, as he noted in moſt of the books of natural hiſtory which he left behind him, collected, and the many curious remarks he made on a variety of improving and entertaining ſubjects, digeſted and laid before the public, a richer treaſure of valuable knowledge can ſcarcely be offered to it, eſpecially if judicious extracts were added from the letters of his correſpondents.

The great Linnæus, at the time of his reſidence in England, contracted an intimate friendſhip with Peter Collinſon; which was reciprocally increaſed by a multitude of good offices, and continued to the laſt without any diminution.

It was not, however, to Britain only that his benevolent views were confined: as he took much pains to excite a taſte in the Americans for natural hiſtory, ſo he likewiſe often prompted them to purſue improvements, alike beneficial to themſelves and to their mother country. How often have I heard him urge to ſuch of them as viſited him, the benefit, nay neceſſity, of cultivating flax, hemp, wine, ſilk, and other products! He would preſs the Virginians to bethink themſelves in time of a more permanent ſtaple than a plant whoſe conſumption only depends on cuſtom and caprice, and this cuſtom daily declining. Vines, ſaid he, will thrive well in your country; but imitate nature in their cultivation; do not keep them cloſe to the ground, as we are forced to do in this and other northern European climates, for the ſake of a little more ſun and heat to ripen the grape: your ſummer heats exceed, as much as ours fall ſhort; allow them, therefore, longer ſtems; let them be trained to, and ſupported by trees, and hide their fruit among the foliage, as in the warmer parts of Europe.

We frequently lamented the ſupineneſs and inattention of the coloniſts to their intereſt in this, as well as many other articles. In moſt of the northern and ſouthern colonies there are a variety of native grapes, growing wild in the woods, and twining among the trees and buſhes for their ſupport; theſe yield fruit in plenty, of different kinds, and many of them capable of producing a rich good wine; how eaſy would it be in autumn to collect a ſufficient quantity of the fruit to make trial of the wine! It has been done by a very few, and with ſucceſs; the fault ſeems not ſo much in the fruit, as want of ſkill or care in making

making the wine. I have taſted ſome very good wine from the wild uncultivated grape, made without much ſkill, and ſent over to England; what would not the ſame fruit, with proper ſkill and management, have produced? It is certainly high time for the Americans to apply themſelves with a little more diligence to cultivate their native produce. No perſon, perhaps, was more intently ſolicitous than my friend to promote theſe uſeful eſſays, as no perſon was better acquainted with the natural produce of America; none ſaw the benefits that might reſult from them more clearly, nor could ſuggeſt more compendious and unexpenſive means of procuring them.

Beſides his attachment to natural hiſtory, he was very converſant in the antiquities of his own country; many curious remarks, as well as ſome ancient Britiſh curioſities, are in the poſſeſſion of his ſon. Few perſons were better acquainted with the progreſs of arts, ſciences, and manufactures, or improvements of any kind, amongſt us, than himſelf. The ancient ſtate, and its gradual advances to the preſent, was a frequent topic of his enquiry and converſation.

He was a member of the Society of Antiquarians from its firſt inſtitution, and ſupplied them often with many curious articles of intelligence and obſervation, reſpecting both our own and other countries; for wherever he was, or however ſeemingly engaged, nothing at any time eſcaped his notice, if it appeared likely to be uſeful or inſtructive. Why he was not elected one of the Curators of the Britiſh Muſeum, was matter of wonder to many of his acquaintance. He was one of the founder's moſt ancient and intimate friends, a contributor to this collection, acquainted with the ſubjects, and had done more towards promoting reſearches into natural hiſtory than perhaps moſt of his cotemporaries: but he had no greater ambition than to collect what knowledge he could, and to render this knowledge ſubſervient as much as poſſible to the good of mankind.

He lived many years in great domeſtic happineſs; his family took the ſame bias, and aided his purſuits. Like his own, it was alſo their amuſement; and being accuſtomed to the converſation of men acquainted with ſuch ſubjects, they acquired both knowledge and an attachment to the ſtudy of nature.

His perſon was rather ſhort than tall; he had a pleaſing and ſocial aſpect; of a temper open and communicative, capable of feeling for diſtreſs, and ready to relieve and ſympathize. He roſe very early, and whilſt in the country his time was almoſt continually employed in his garden, obſerving and aſſiſting the operations of nature, or in the ſtudy of other parts of phyſical knowledge; which contributed to his health and his pleaſure.

He was fond of fruit to an extreme, and of flowers a perpetual admirer; he was ſeldom without them in his houſe, from the early Snowdrop to the autumn Cyclamen. He would often relate with pleaſure the aſtoniſhing advancement made in his time in horticulture; gave inſtances of many plants, which at their

firſt

firſt introduction would not bear our winters without ſhelter, and now endured almoſt our hardeſt froſts; ſo that foreigners ſtood amazed at the power of vegetation in this country, and the happy temperature we enjoy, notwithſtanding the unmerited murmurs of the unthinking and injudicious againſt a climate the moſt favourable of all others to the real happineſs of mankind.

Excepting ſome attacks of the gout, in general he enjoyed perfect health and great equality of ſpirits; bearing thoſe trials which are incident to man with fortitude and reſignation.

In ſuch a courſe he arrived at his 75th year; when being on a viſit to Lord Petre in Eſſex, for whom he had a ſingular regard, he was ſeized with a total ſuppreſſion of urine, which baffling every attempt to relieve it, proved fatal on the 11th of Auguſt 1768, and deprived his family, his friends, and country, of a man devoted to their intereſt and advantage. Incloſed in his will was found a paper, importing, "that he hoped he ſhould leave behind him a Good Name, "which he valued more than riches; that he had endeavoured not to live uſe-"leſsly; and that, all his days, he conſtantly aimed to be a Friend to Man-"kind." Such indeed he was, to the utmoſt of his ability; and he may juſtly be conſidered as a latent ſpring to many important improvements, as well as one of the principal promoters of natural hiſtory in general, and of horticulture in particular, in the age in which he lived.

He has left behind him, beſides many curious anecdotes relative to the ſtate of botany, planting, and horticulture in this country, a vaſt treaſure of dried ſpecimens of plants; and in ſpite of repeated and moſt cruel depredations made upon his garden, whereby he loſt a multitude of valuable and curious plants and ſhrubs, and had beſides very many others deſtroyed by the villains in the act of plunder, he nevertheleſs left a ſmall treaſure of rare plants in greater perfection perhaps than can be ſeen in any other ſpot.

That which I am now, though feebly, attempting to do for him, he often executed for his friends, reſcued their names from oblivion, and propoſed their virtues to be copied by ſucceeding generations. The late Dr. Stukeley was one; and many others might be mentioned, who have received from his friendly hand the tribute due to their memories.

His friendſhips were not ſuperficial; he could not ſee a worthy character drop unheeded into the grave, without a wiſh, nay, an endeavour, to perpetuate its remembrance. For my own part, I yet feel that in him I have loſt a friend who valued my happineſs little leſs than his own, and ſincerely wiſh it was in my power to do juſtice to his memory. Till, however, ſome perſon of greater ability and more leiſure undertakes the taſk, I believe his friends will not be diſſatisfied with peruſing this account of his conduct and converſation.

Painted by Dance *Engraved by Trotter*

Engravd from the original Picture in the poſſeſſion of Mr. Mawhood.

AN

ESSAY

ON THE

CHARACTER

OF THE LATE

ALEXANDER RUSSELL, M.D. F.R.S.

Read before the SOCIETY of PHYSICIANS,
the 2d of OCTOBER 1769.

THE following Eſſay on the Character of Dr. Ruſſell, was printed without any engraving of that diſtinguiſhed phyſician. In making the preſent collection, I did not doubt but many of his contemporaries would be highly gratified with a ſtriking likeneſs, as this is, of their late admired friend; and I can add, that no one enjoys this pleaſure more ſenſibly than myſelf, as it renews in ſome meaſure my acquaintance with a man from whom I gained much information during my medical ſtudies at St. Thomas's hoſpital, of which he then was one of the phyſicians: his behaviour and attention to the pupils endeared him to all, whilſt his liberal manner of explaining the cauſes of diſeaſes, and the effects of remedies, acquired him their reſpect. When I add, that Dr. Fothergill entertained the moſt favourable opinion of his moral rectitude and medical ſkill, a further panegyric cannot be wanted: that he loved Dr. Ruſſell with ſingular friendſhip, the following Eſſay fully demonſtrates. I was at the College of Edinburgh when this elegant eulogiſt loſt his friend; and knowing how much I was intereſted in the general loſs on which he tenderly expatiates, he concludes by informing me, "that he was ſeized with a putrid fever, which, notwithſtanding the utmoſt endeavours of Dr. Pitcairn and myſelf, to preſerve the life of a friend we loved, carried him off on the ninth day, univerſally regretted."*

I have quoted this paſſage, as it gives ſome account of Dr. Ruſſell's death, which is not introduced into the ſucceeding pages.

In a letter to his amiable and learned friend Dr. Cuming, (who was a contemporary collegian with Dr. Ruſſell) the eulogiſt, whoſe merit in turn, but with unequal powers, I wiſh to commemorate, gives his motives for paying this tribute to the character of his departed friend, and ſays, that "the cordial firm regard for the friend, the companion, and the phyſician, did what it could to record his worth. Let us," he adds, "preſerve the memory of the deſerving: perhaps it may prompt others likewiſe to deſerve. The human mind requires every excitement to prompt it to look up to its original; to think it is not made for this world only: its exiſtence is immortal; and its deſtiny in immortality, depends on its acting right or wrong. Great is the prize, and worth contending for; worth exciting our friends to contend for it†."

I cannot conclude without acknowledging my obligation to Dr. Ruſſell's family for permitting the annexed engraving to be taken from the original painting in poſſeſſion of his brother-in-law, —— Mawhood, Eſq; of Knightſbridge. I am ſenſible that the thanks of the public will unite with mine, for this obliging inſtance of contributing to their pleaſure.

Editor.

* Letter to the Editor, dated Dec. 2, 1768.

† Letter to Dr. Cuming, of Dorcheſter, dated Dec. 8, 1769.

ADVERTISEMENT.

A FEW years ago it was reported, that the College of Phyſicians in London had it under conſideration to admit perſons deſirous of practiſing phyſic as Licentiates, upon an examination in Engliſh.

This was done, as it was ſuppoſed, to introduce, into this rank, men of little or no education, in order to depreciate the characters of many who were in ſome eſteem with the public.

An attempt of this nature could not but alarm thoſe who were immediately to be affected by it, and who felt the deſigned indignity.

Several of theſe met together, compared the accounts they had received, and found there was too much truth in the reports, to ſuffer them any longer to remain inattentive to deſigns ſo prejudicial.

It was reſolved to call the Licentiates in general together, to acquaint them with their ſituation, and to act in concert for their general ſafety.

But this was not all; thoſe who embarked in this affair, had at heart not only the honour of their profeſſion, but its public utility; not only to emancipate themſelves from an authority, which appeared to them in the light of uſurpation, but to eſtabliſh the faculty upon a ſolid and liberal foundation.

How far their endeavours may ſucceed, is uncertain; but of one thing they are ſure—they promote harmony amongſt themſelves; excite to an honourable emulation; and, whatever may be their fate, will give proofs by the rectitude of their conduct, and an exertion of their abilities, that they are not unworthy of the higheſt honours in their profeſſion.

Philanthropy is inſeparable from good minds: this led them very early to reſolve, that honourable mention ſhould be made of their colleagues after their deceaſe. It has fallen to my lot, by appointment of the Society, to perform this office. If my abilities had been equal to my friendſhip for the deceaſed, or to his deſert, the reader would have received much ſatisfaction in peruſing the following pages.

Gentlemen,

Gentlemen,

WHEN it was firſt propoſed in this aſſembly, to preſerve the memory of ſuch of our aſſociates as had deſerved well of the public, and thereby done honour to the community of which we are members, I little expected it would have fallen to my lot, ſo ſoon to have performed this mournful office for one, who in reſpect of vigour of conſtitution, temperance, and juſt management of his health, was inferior to none, ſuperior to moſt among us.

Accuſtomed as we are to ſee the ravages of that Hand, which removes the generations of men, ſtrong and weak, rich and poor, the ignorant and the wiſe, like the herbage that falls promiſcuouſly before the ſcythe, not one could refrain the unaffected ſigh, ſcarcely the tear, when it was known that our Ruſſell was no more! The tender remembrance of friendſhip yet lives in every breaſt; we mourn without form; we ſee and feel the void his fall has left, and which only time can mitigate, and a reſignation to the diſpenſations of that Power which orders all things with unerring wiſdom and goodneſs, beyond our comprehenſion.

Unpractiſed in the language of eulogy, and unequal to the charge you have committed to me, allow me to beſpeak your utmoſt candour and condeſcenſion, and think him not unworthy of your indulgence, who, in obedience to your commands, attempts to place before you, though in an imperfect manner, the idea of the companion you deplore.

We wiſh to know the moſt minute particulars in the lives of thoſe, when they are removed, who have become dear to us, either from a ſimilitude of manners, ſimilar ſtudies, a long and mutual intercourſe of friendſhip, or any other of thoſe ſtrong connections that tend to cement individuals together in ſociety. In infancy, almoſt in the period of youth and adoleſcence, many traits are often obſervable, that ſtrongly mark the future character of the man. The relation of incidents, of no conſequence in themſelves, viewed in this light, affords us ſatisfaction, when we recollect them as the early preſages of future worth: my acquaintance with our colleague having commenced at a later period, prevents any narrative of this kind. I have learned, however, that modeſty, diligence, and propriety of conduct, accompanied him from early infancy; beloved by his intimates, eſteemed by his friends, ſeldom making an enemy, never loſing a friend, by his own miſconduct.

He

He was early devoted to medicine by his father*; a perſon of great eminence as a lawyer in the city of Edinburgh, and ſingularly happy in having ſeven of his ſons that lived to be men; not one of whom, by miſbehaving, ever gave him cauſe of a moment's diſquietude; but, on the contrary, by the juſt reputation they acquired, made all good men rejoice that he had ſuch a family, and ſo eminently diſtinguiſhed by ſo many good qualities.

Our colleague, after having gone through his grammatical ſtudies with reputation in the high ſchool at Edinburgh, and ſpent two years after this in the univerſity, was placed with his uncle, who was then one of the moſt eminent practitioners in the city, in order to acquire the knowledge of the firſt rudiments of medicine. In the years 1732, 3, and 4, he continued his medical ſtudies under the profeſſors, who at that time ſo ably filled the ſeveral chairs of phyſic in the Univerſity of Edinburgh, and laid the foundation of that character which ranks it in the public eſteem ſuperior to moſt others in Europe.

Though there had long been profeſſorſhips for medicine in that place, and ſeveral attempts had been made to introduce a general courſe of medical inſtruction, it was not till about the year 1720 that this univerſity diſtinguiſhed itſelf. Several gentlemen, who had ſtudied under Boerhaave, with a view to revive the ſtudy of medicine in their native country, where it had formerly flouriſhed, qualified themſelves for the purpoſe of giving courſes of public lectures on every branch of their profeſſion. The celebrated Monro taught anatomy, after having ſtudied it for ſeveral years under the ableſt maſters then in Europe†. The *theory* of phyſic was aſſigned to the amiable, the humane Dr. Sinclair; Drs. Rutherford and Innes choſe the *practice*; *chemiſtry* was allotted to Dr. Plummer; and the teaching the *materia medica*, together with *botany*, (of which laſt he was appointed king's profeſſor) devolved upon the learned and indefatigable Alſton. The city of Edinburgh favoured the generous deſign, added to the ſalaries allotted from the crown, and provided as ſuitable conveniencies as the place would at that time afford.

* The conciſeneſs of the author reſpecting the character of the Doctor's father, in all probability aroſe from an apprehenſion of endangering his own credit, or at leaſt of ſubjecting himſelf to the imputation of credulity, had he further enlarged upon it.

For how few would believe, that a moſt fond indulgent father could, in his own houſe, manage a very numerous family of children, all boys, and bring up ſeven of them to man's eſtate, without ever giving a blow, or even uſing a harſh expreſſion; and yet preſerved a more perfect obedience in them, than can be produced by any bodily pain? Such education is liberal, in the trueſt ſenſe of the word.

This worthy man, though he lived to the age of 86, was to the laſt attended, whenever he pleaſed (which was almoſt all day long) with chearful company of both ſexes, and of all ages; retained his faculties and amiable temper, was never angry, and preſerved his chearfulneſs and ſpirits to the laſt.

† Dr. Douglaſs, of London; Albinus, the elder, of Leyden; and Winſlow, at Paris.

They

They had no ſooner opened their reſpective profeſſorſhips, than many ſtudents of their own nation, ſome from England, from Ireland, and not long after from the Plantations likewiſe, flocked thither. This ſtimulated the profeſſors to exert their great talents with the utmoſt energy; profeſſor Monro's claſs ſoon became numerous; and the anatomy of the bones, of the nerves, and his other pieces, will long remain as teſtimonies of his great abilities, when the grateful regard of the multitude of thoſe who ſtudied under him, and were witneſſes of his ſingular attention to inſtruct and encourage his pupils, as well as to act the part of a parent to every ſtranger, fails of expreſſion. With what grace and elegance, with what minuteneſs and preciſion, would the humane, the inimitable Sinclair explain the inſtitutes of the maſter, whoſe nervous ſimplicity he ſtudied to exemplify, though not with ſervile imitation! Where he differed in opinion from that great man, with what diffidence would he offer his own! Ever the ſtudent's friend, and their example, in a noble ſimplicity of manners, and a conduct becoming the gentleman and the phyſician.

Doctor Rutherford ſtill enjoys his country's praiſe, and the laſting eſteem of all his pupils. Plummer is no more! He knew chemiſtry well. Laborious, attentive, and exact, had not a native diffidence veiled his talents as a prælector, he would have been among the foremoſt in the pupils eſteem: ſuch was the gentleneſs of his nature, ſuch his univerſal knowledge, that in any diſputed point of ſcience, the great Maclaurin always appealed to him, as to a living library; and yet ſo great his modeſty, that he ſpoke to young audiences, upon a ſubject he was perfectly maſter of, not without heſitation.

Alſton, the laborious Alſton, will live for ages. What benefit his pupils had the means of reaping, will be beſt known when his Lectures, now in the preſs, are publiſhed *. What care to ſeparate truth from falſehood! how cautious in advancing ſpeculation! how laborious in experiment, and chaſte in forming his concluſions! The numerous manuſcript copies of his lectures, that were taken by his pupils, are ſufficient proofs of their opinion of his abilities.

But while I am thus attempting to pay my tribute of gratitude to the memories of thoſe eminent profeſſors, who laid the foundation of that ſeminary of phyſic, whoſe reputation has ſince drawn ſtudents from every nation in Europe, let me not forget the learned, the able, the laborious Innes. Though I was not ſo happy as to be of the number of his pupils, yet I can well remember the deep regret expreſſed by many of the ſtudents, my contemporaries, for his early and untimely fate. Often have I heard them tell, with what dignity, with what clearneſs and preciſion, in what a nervous maſculine ſtyle, he uſed to explain the Aphoriſms of his great maſter. His colleagues, too, moſt deeply lamented the loſs which they and the public ſuſtained by the death of ſo able a coadjutor;

* Theſe Lectures are ſince publiſhed.

they regretted the Man whom they loved, the Phyſician and Profeſſor whom they eſteemed.

Under ſuch maſters, and at a time when they were daily riſing into reputation, Dr. Ruſſell ſtudied, embracing every means of qualifying himſelf for the duties of his ſtation.

Several ſtudents at that time, the foremoſt in application and in knowledge, fired by the example of their maſters, who had nothing more at heart than the improvement of thoſe who committed themſelves to their tuition, formed a ſociety for their mutual inſtruction and advancement in their ſtudies. Every ſtudent of a certain ſtanding, who diſtinguiſhed himſelf by his diligence, capacity, and conduct, was initiated into this little aſſembly. Here the opinions of the ancients, of their contemporaries, nay the doctrines of their maſters, were frequently diſcuſſed; and two of the members were always charged with the taſk of providing inſtruction and entertainment for the next meeting of the Society. Queſtions, no doubt, were here diſputed and decided, which long experience would have declined: but it exerciſed their faculties, gave them both ſides of arguments, taught them to doubt, and habituated them to obſervation.

Our colleague was one of the firſt members of this aſſociation, inſtituted in the autumn of the year 1734, together with the eminent Dr. Cuming of Dorcheſter, the ſagacious Cleghorn, lecturer in anatomy at Dublin, with a few others, who, though now removed, did honour in their ſtations to this inſtitution, which not only ſubſiſts, but has yearly increaſed in vigour, and is honoured with the immediate patronage of the profeſſors. In a Theſis, not long ſince dedicated to this ſociety by a very ingenious member *, as well as

* Dr. Morgan, of Philadelphia, dedicates his Theſis, publiſhed when he took his degree in the year 1763, "Societati Medicinæ Studioſorum in Academia Edinburgena dudum inſtitutæ:"

In which he beſtows, among others, the following panegyric: "Quippe qui recolam quanto "cum judicio, ordine et decore res veſtræ gerantur; quanta ſint in veſtris ratiociniis et ſententiis, "tum libertas et candor, tum etiam nam expertus refero, æquus et humanus favor, ita ut ſaluber- "rimo hoc veſtro inſtituto, quo non niſi utiliſſimæ quæſtiones diſcutiuntur, omnia conſpirant ad "ſcientiæ medicæ ſtudium cum fructu et emolumento promovendum," &c.

In Dr. Garland's Inaugural Diſſertation, "De Medicamentis adſtringentibus," publiſhed alſo in 1763, is the following account of it:

"Nec juvenum coetûs qui medicinæ ratione excolendæ cauſâ, ſeptimo quoque die, inter ſe in "noſocomio regio conveniunt, ac quorum ego in numero per triennii ſpatium fui, deceſſurus, non "mentionem non facere potui.—Celeberrimis academiæ ſcholis, hæc quaſi alia ſuccedit.—Is "certe locus eſt, ubi audita a doctoribus, e libris petita, undecunque accepta ad medicinam perti- "nens diſciplina, in medium prolata, ac ultro, citroque in contrarias partes diſputando agitata, "altius in omnium animos influit: ubi juventutis ſtudia gloria incenduntur, exercitatione acuun- "tur, animique ad multiplicis ac ſpinoſæ ſcientiæ quærendæ laborem perferendum, propoſitis ex "ſuorum

as from the teſtimony of another gentleman, who had been admitted into it, the ſingular advantages that reſult from this aſſociation are deſcribed in a manner that delineates the character of the ſtudents in that univerſity, and does honour to the founders of the inſtitution.

Having finiſhed his ſtudies in the univerſity, though without applying for a degree at that time, he came to this city in the year 1735, and ſoon after went to Turky, and ſettled about the year 1740 at Aleppo, in the practice of phyſic.

The Engliſh factory at that place, has frequently been conſtituted of men of property and extenſive knowledge; they were ſuch, when Dr. Ruſſell fixed there at the unanimous requeſt of the gentlemen of the factory. We have no account of any of his predeceſſors being remarkably eminent in the practice of phyſic; to take care of the factory, ſeems to have been the extent of their views.

Dr. Ruſſell applied himſelf aſſiduouſly to gain a knowledge of the language of the country, and to become acquainted with the ableſt of the numerous practitioners in the place, who were employed among the inhabitants. He ſucceeded in both: he ſoon diſcovered the incapacity of theſe; a few traditional receipts compoſed the whole furniture of moſt of them; he found a few, however, capable of information, and aſſiſted them to the utmoſt of his power.

He was ſoon applied to by the inhabitants of Aleppo, of all ranks and profeſſions; Franks, Greeks, Armenians, Maronites, Jews, &c. and even by the Turks themſelves: in this inſtance they forgot that he was an unbeliever, remitted of their uſual contempt for ſtrangers, and not only beheld him with reſpect, but courted his friendſhip, and placed unlimited confidence in his opinion. The paſcha himſelf became acquainted with the merit of our deceaſed colleague, conſulted him, called him his friend, found him upright, ſenſible, and ſincere; as a man, polite without flattery, decent, but not ſervile; as a chriſtian, true to his principles; diſintereſted and generous as a Briton; and in point of ſkill as a phyſician, ſuperior to every one. A natural, even, cool and conſiſtent temper; a freedom of behaviour as remote from confidence as conſtraint, improved by reading and converſation; a mind imbued with juſt reverence of God, and impreſſed with a ſenſe of the duty we owe him; an underſtanding fraught with the principles of the profeſſion to which he had been early devoted (the practice of phyſic) happily blended with great benevolence; was a

" ſuorum numero exemplis pulcherrimis, perpelluntur, poſtremo, ubi omnes inter ſe mutuæ " amicitiæ firmiſſimum nectit vinculum. Floruit triginta prope annos his juvenilis circulus, et ut " æternum floreat precor!"

Soon after its firſt inſtitution, the writer of this Memorial was likewiſe a member, and knows from experience the benefits reſulting from it.

character ſeldom to be met with in the Aſiatic regions: this, however, was the character of our colleague; and I appeal to you, my aſſociates, for the juſtice of the portrait.

The factory thought themſelves happy in ſuch a phyſician, ſuch a companion, ſuch a countryman. His cloſe and intimate connection with the paſcha enabled him to render to the factory the moſt important ſervices; and indeed all the European nations, trading at that place, were repeatedly obliged to his interpoſition, on a multitude of occaſions.

Seldom would the paſcha determine any intricate affair, reſpecting not only commerce, but even the interior police of his government, without firſt conſulting his phyſician and his friend; and as ſeldom deviated from the opinion he propoſed: and ſuch was the paſcha's reſpect for ſo rare a character, and ſuch his friendſhip and determined reſolution to do him honour, that he even choſe to oblige the people in the Doctor's preſence, and ſeldom puniſhed any criminal but in the Doctor's abſence; that the people might learn to think it was owing to the Doctor's interpoſition, that examples of ſeverity were not more frequently inflicted *.

Many princely preſents were the conſequence of this eſteem: the paſcha did not even forget the Doctor's father, *to whom*, ſaid he, *I am obliged for your aſſiſtance*. He ordered preſents to be ſent to the worthy old man: what joy muſt this excite in an aged parent's heart, to have ſuch authentic proofs of the merit of his ſon from ſo diſtant a clime, and where the merit muſt be great to gain ſuch a teſtimony!—I leave the Hiſtory of Aleppo to ſpeak its author's abilities.

* With regard to criminals, this behaviour of the paſcha was very remarkable and polite; for, when mitigating circumſtances occurred in favour of criminals, to induce the paſcha to ſpare them, he often diſmiſſed them, with a caution to behave better in time to come; for they were ſo bad, that none of their own countrymen durſt ſpeak to them; but that they owed their lives to the Engliſh Doctor: though he ſometimes before had retired, to make way for the neceſſary ſeverities of juſtice, and knew nothing of the matter till the poor unhappy wretches came to his houſe, to fling themſelves at his feet, and with true gratitude thank him for their lives: and indeed ſometimes the paſcha went ſo far as to tell the criminals, that, in his opinion, they certainly deſerved Death, but that he durſt not order it, for the Engliſh Doctor inſiſted on Mercy. It is rare to find any ruler making ſo great a ſacrifice of his popularity to a ſtranger, or in ſo polite a manner to transfer it to any body.—Beſides this paſcha, who ruled a long time, the others that came after him had the greateſt confidence in the Doctor, and intimacy with him; particularly one paſcha of this place, an old man, who had ruled the empire as grand vizier, and died at Aleppo, intruſted him with the whole ſecrets of his family, and depended on his advice.

The Doctor's fame was perhaps more general over the Turkiſh empire, than any phyſician's is in Europe; well known at court, and in every province, he eſcaped more than once the diſagreeable circumſtance of being ſent for to the Grand Seignior in time of the plague. His brother was, in moſt of the trading towns in Turky, found out, by bearing the ſame name, and offered great civilities; and once at Conſtantinople, when a ſlight plague happened there, was oppreſſed with invitations to viſit ſeveral great men, which with difficulty he avoided. W. R.

—It has been already tranſlated into other languages; and it will be juſtly eſteemed one of the moſt important productions in medicine, ſhould ever that fatal ſcourge, the plague, be permitted to come amongſt us.

You, gentlemen, are not ignorant of its worth; and to ſay more on this ſubject, would be detracting as much from your underſtandings, as from your friendſhip.

Suffer me, however, to recount one circumſtance, which may not perhaps be of ſuch general notoriety:

From his thorough knowledge of the peſtilence, and the means ſucceſsfully made uſe of to prevent infection, in the countries moſt expoſed to this fatal diſeaſe, he formed a deſign of exciting the greateſt commercial nation in the world to provide ſome more effectual means than hitherto it had done, in order to prevent it from again becoming the dreadful theatre of peſtilential contagion.—With this view, in his return from Turky, he viſited the moſt famous lazarettos, to which he could have acceſs, inquired into their ſtructure, the government they were under, and took an account of all the precautions they uſed for preſervation.

At Naples, Leghorn, and other places, he had all the opportunities of obſervation he could wiſh for; and profited by them to ſuch a degree, as to be better acquainted with the conduct of the wiſeſt ſtates, in reſpect to the means of prevention, than perhaps any other perſon: indeed, his acquaintance with this ſubject, and his experience, induced him to make himſelf maſter of every thing appertaining to preſervation from one of the greateſt of all human calamities.

And ſo generally was his great knowledge of this diſtemper eſtabliſhed, that in the latter end of the year 1757, when our miniſtry was alarmed with the report of its being broke out at Liſbon, and earneſtly ſolicitous to take every precaution to prevent its being imported into this kingdom, they thought no perſon ſo fit to be conſulted on the means proper to be purſued, as our worthy colleague. Doctor Ruſſell received his orders to attend the Privy Council; he came, and gave ſuch pertinent and ſatisfactory anſwers to the queſtions propoſed, that he was deſired to communicate his information, and the method he propoſed to prevent the ſpreading of that calamity, in writing. This he accordingly did; and ſhould it pleaſe the Almighty hereafter to threaten this nation with that dreadful ſcourge, the proſecution of the plans then ſuggeſted may perhaps greatly contribute to avert from us the moſt terrible of all diſeaſes.

From the time he left England, to his return in February 1755, we had maintained a regular correſpondence. I could not forbear mentioning to him repeatedly, how acceptable a more accurate account of Aleppo would be to this nation, and to all Europe; that no perſon would probably ever ſtand a chance of ſucceeding in it ſo happily as himſelf; that his long reſidence there, his knowledge of the language, the manners, cuſtoms, diſeaſes of the place,

the great credit he had acquired amongſt all ranks, by an able, diligent, and diſintereſted exertion of his faculties amongſt them, his influence over the paſcha, and the reſpect paid him by the Turks themſelves, would facilitate every enquiry. He viewed the propoſal in the ſame light, collected materials, made ſuitable enquiries, and has erected a laſting and honourable monument to his memory.

With no ſmall trouble he ſucceeded in procuring us the ſeeds of the *true ſcammony*. They were raiſed by my two botanical friends, the late Peter Collinſon, and the indefatigable James Gordon. Seeds were likewiſe ſent over to the ſouthern colonies of America, in hopes that in a ſimilar ſoil and latitude, in ſome future time, we might from thence have this valuable drug unadulterated *.

To him, likewiſe, we are indebted for a plant, that will hereafter be one of the greateſt ornaments of our gardens †; as well as for many uſeful intimations, both in reſpect to his own profeſſion, as to commerce in general.

He choſe this city for his reſidence at his return to England, and ſoon had a conſiderable ſhare of employment. A vacancy happening in St. Thomas's hoſpital, about the beginning of the year 1759, he was choſen phyſician, and continued in this ſtation to the time of his death, an example of diligence and humanity to the ſick, of great medical abilities as a phyſician, and as a gentleman irreproachable. The Royal Society, of which he was many years a worthy member, the Medical Society ‡, likewiſe, who early admitted him amongſt

* The late Conſul Sherrard, who reſided long at Aleppo, and was one of the moſt eminent botaniſts of his time, endeavoured long and fruitleſsly to obtain the ſeeds of this and ſome other curious plants. The Arabs, who are the people chiefly employed in theſe affairs, not ſo much through ignorance as knaviſhneſs, will bring every kind of ſeed but the right, and aſſert that it is the ſeed required. Dr. Ruſſell aſſured me, that he had near twenty different ſeeds brought to him for the ſeeds of the true Scammony, by different perſons employed to procure it him, with promiſes of a ſuitable reward. Amongſt theſe found, there were two parcels of ſeeds alike, which correſponding to the general character, he judged were the right; and theſe he ſent over to England. Many plants were raiſed from them, and ſome are yet in the gardens of a few botaniſts in the neighbourhood of London. We have not received an account of their propagation in America; but if the plant is kept alive in this country, it will probably be ſent thither under ſome perſon more attentive to the public benefit than his predeceſſors.

Dr. Ruſſell publiſhed an exact deſcription of the Scammony, and the method of collecting its juice, in the firſt volume of the Medical Obſervations.

† The *Andrachne*, nearly approaching to the *Arbutus*, which it ſurpaſſes in elegance. An exact deſcription of this plant was given in the Tranſactions, by that great botaniſt and excellent painter, the late G. D. Ehret.

‡ *Medical Society*. About the year 1752, ſeveral phyſicians in London, chiefly of thoſe called Licentiates, agreed to form themſelves into a ſociety, for collecting and publiſhing all ſuch obſervations and enquiries in medicine, that ſeemed to deſerve the public notice. This ſociety has ſubſiſted ever ſince, has publiſhed ſeveral volumes, which have been well received, and will be followed by others.

them,

them, are obliged to Dr. Ruſſell, and the public through them, for many valuable communications: his extenſive practice at Aleppo, his early introduction into buſineſs here after his arrival, the multitude of objects under his care in the hoſpital, ſupplied a fund of medical experience, which might have yielded much benefit to ſociety, had his life been protracted.

Need I recite how much this ſociety is indebted to his vigilance and activity? Perhaps it is in a great meaſure owing to him that it exiſts.

Conſcious of an uniform endeavour to promote the happineſs of all to the utmoſt of his abilities in every ſtation of life; accuſtomed to be treated with a degree of reſpect, which talents like his, ſo uniformly exerted in the promotion of every thing praiſe-worthy, had a right to expect; he could not eaſily brook the ſuperciliouſneſs of men, who were weak enough to ſuppoſe, that neither ſenſe nor learning, ſkill nor experience, were the produce of any other clime than that within the narrow limits of which they themſelves had been confined.

Impatient of indignities he had not deſerved, and ſatisfied that yet greater were intended to others in a like ſituation with himſelf, with a view to erect a reputation upon other men's foundations, he communicated his ſentiments to others, who had the like apprehenſions; and common danger has happily been the means of cementing a permanent reciprocal regard, and forming a regular ſociety of men, ſcarce known to each other but by name, but whoſe views are alike, ſelf-preſervation; and whoſe talents for promoting the honour of the art they profeſs, and the benefit of their fellow-citizens, have acquired ſignal marks of royal and public approbation.

If then to him, with very few coadjutors, is owing the exiſtence of this ſociety; if the eſtabliſhment of it has contributed to ſecure no ſmall part of the faculty of phyſic in this city from injury and oppreſſion; if it ſhould be the means of eſtabliſhing the whole on a juſt and liberal foundation; if by it harmony and good intelligence have been promoted among individuals, whoſe duty and intereſt, now their inclination likewiſe, leads them to be united; our grateful acknowledgments are moſt certainly due to that man, who laboured moſt aſſiduouſly to promote theſe advantages; and to his memory let us pay a grateful tribute for his unwearied endeavours to ſerve the community, and the important ſervices he rendered it to the lateſt period of his life.

For my own part, when I recollect what I have loſt in him, the ſenſible, firm, and upright friend, the able, honeſt, and experienced phyſician, the pleaſing inſtructive companion of a ſocial hour, expreſſion fails me.

Should this Account ever paſs beyond the circle of Dr. Ruſſell's perſonal acquaintance, perhaps it would be to them ſome gratification to know, that he was in reſpect of ſtature rather tall than middling, well made, of a freſh ſanguine complexion, grave in his deportment, chearful in converſation, active in the buſineſs of his profeſſion, and ſagacious; an attentive and diligent obſer-

ver,

ver, clear in his intentions, manly in his preſcriptions, and in his conduct to the ſick, benevolent and diſcreet.

Animated by his example, let us purſue the arduous track of public virtue; and having, like him, ſupported the dignity of our profeſſion, by dealing, with a liberal hand to all, the bleſſings of health, to the utmoſt of our abilities, and done honour to our ſpecies, by the conſtant exerciſe of uprightneſs, candour, and benignity, we may cloſe the ſcene, in full poſſeſſion of all that deſerves the name of human felicity.

THAT Dr. FOTHERGILL *had formed a decided opinion upon political matters, is well known; and thoſe opinions he has occaſionally exhibited in print, under various ſignatures, but never ſubſcribed with his own name: he was more anxious to correct the judgment of others, than to diſplay the ſuperiority of his own. Happy would it have been for this country, had the influence of his writings been equal to their importance and ſagacity: few men were better acquainted with the American Colonies, and the diſpoſition of their inhabitants; and, foreſeeing what might probably reſult from the proſecution of certain meaſures, which to him appeared ill-timed and impolitic, he publiſhed the following Conſiderations, ſo early as the year* 1765, *long before the ſword was imbrued in blood; which to this day might have remained without a ſtain, had the knowledge and penetration of thoſe in power been equal to his own.* Editor.

CONSIDERATIONS

CONSIDERATIONS

RELATIVE TO THE

NORTH AMERICAN COLONIES*.

THE affairs of North America are of ſo much importance to this kingdom, that I make no apology for offering a few thoughts on this ſubject to the conſideration of the public.

For whether we look at the well-being and content of near two million of Engliſh ſubjects, on that Continent, deſcended from and inſeparably connected with ourſelves; or weigh the effects, which their diſcontent and unhappineſs muſt unavoidably produce on this country; ſcarce a more important object can preſent itſelf to an Engliſhman.

The intereſts and affairs of the neighbouring kingdoms and ſtates in Europe, affect us in a very remote degree, however we may have been accuſtomed to conſider them, when compared with thoſe of our own Colonies, and the effects that naturally, inevitably ariſe from the loyalty and affection, or the diſguſt and ill-will of ſo large a part of our fellow-ſubjects: men, indeed, who are bound to us by *duty*, but whoſe diſtance from us would render it difficult for this kingdom to keep them always under the reſtraints of *duty*, ſhould they ever find it their *intereſt* to attempt in earneſt a diſſolution of that ſacred bond; and either concert the means of ſhaking off their dependance on us, by their own force, or court the protection of ſome other power, till they were able to unfetter themſelves from the temporary aid they had choſen to rely on, and ſtand upon their own foundation.

That this may be the caſe in ſome future period, ſhould they think them-

* Printed in the Year 1765. *Editor.*

ſelves hardly dealt by, may not be improbable. It therefore becomes us to foreſee, and by the moſt prudent and equitable means to prevent, the conſequences of ſuch an event; conſequences the moſt ſerious in their nature, deſtructive in their tendency to Great Britain and her Colonies, who ought to tremble even at the moſt diſtant apprehenſion of ſuch a fatal revolution.

If we enquire into the conduct of the wiſeſt ſtates to their diſtant colonies, we ſhall find it always to have been to treat them with kindneſs and indulgence, to engage them to look back to the mother country with duty and affection, and to recompenſe the protection they have enjoyed by the produce of their labours, their commerce, and, when needed, their aſſiſtance.

We meet not with many inſtances, comparatively, even of diſtant conquered countries revolting, till cauſes of ſtrong diſguſt had ſown the ſeeds of diſcontent, and ſucceeding acts of oppreſſion and injuſtice had ripened them into rebellion.

Colonies ſprung from Britain, will bear much; but it is to be remembered, that they are the ſons of freedom, and what they have been early taught to look upon as virtue in their anceſtors, will not ſoon be forgot by them. Nay, they will the ſooner be apt to vindicate their wrongs, and perhaps in an improper manner, the more ſtrongly theſe principles have been inſtilled, and the more diſtant they are from the ſource of power, and proper information.

North America, for the moſt part, ſince the time of its being diſcovered by Europeans, has received its inhabitants from Great Britain and Ireland: great numbers, indeed, have flocked from Germany, and ſome other parts of Europe, from tyranny and oppreſſion, to our Colonies, as a land of eaſe and freedom. Theſe eſteem themſelves Britiſh ſubjects, equally with the offspring of Britain: they all look upon this as their mother country, intereſt themſelves in its ſafety and happineſs, and eſteem themſelves under every obligation that ſociety admits of, to contribute to the proſperity of Britain; for in this they contribute to their own.

The late conqueſts from France, are not included in this account. The inhabitants derived their origin from France, as the inhabitants of our own Colonies ſprung from hence. Yet of theſe, a great number are acquiring, and by a juſt and equal government will further acquire, the like ſocial regard for the intereſt of this country, as they have done for another. Time and good treatment ſtrangely metamorphoſe enemies into friends.

If then the reigning diſpoſition in our own Colonies, has always been to conſider this as their mother country; the country wherein their hopes of protection center; to which they look with gratitude and affection, and to which they chearfully bring all the produce of their labour and commerce they can ſpare, to exchange for its manufactures, an exchange which gives bread to thouſands, riches to many individuals, and vaſt ſtrength to the ſtate; if we

conſider

conſider them in this point of view, and in ſuch a point they have ever been conſidered by all who knew any thing of America, till the preſent unhappy period; it admits not of a doubt, what kind of regard is due to the Americans, or what manner of treatment it is the intereſt of Britain to exerciſe towards them.

And here it may be proper to explain what was meant by aſſerting, that the affairs of our neighbours in Europe, affect us in a remote degree, compared with our Colonies. The Colonies not only bring an increaſe of revenue by their traffick, conſume vaſt quantities of our manufactures, produce, and will ſtill increaſe in producing many raw materials; but they are ſo ſituated, their numbers ſo increaſed, their martial abilities ſo well known, as to give vaſt addition to the conſequence of Great Britain.

The maritime powers well know this; they ſee, they feel our growing influence; and that if we encourage and protect our Colonies, as we have done, the enemies of Britain have every thing to dread, its friends every thing to hope from the wiſe management of the power we poſſeſs: how eaſily are fleets or armies recruited for an American or Weſt Indian expedition, from two millions of people juſt upon the ſpot! With what expedition and ſecrecy can an armament be fitted out, of great ſtrength, from an American port, to annoy the Weſt India ſettlements of thoſe who may ever think it their intereſt to quarrel with us! But this power may be deemed to be yet in its infancy: its growth indeed is rapid, and wiſdom is requiſite to guide its efficacy to proper ends: this power is, however, Britiſh, and will chooſe to be ſubſervient to the intereſt of the parent, if the connexion is maintained as it ought to be.

But ſhould this happy connexion be ever ſhaken, or weakened by any means; ſhould the luſt of dominion at home, or ſhould avarice baniſh the remembrance, that the Americans are ſons, and conceive a deſign to enſlave and fetter a free people, all theſe glorious proſpects vaniſh as a dream. If they prove refractory, and ſubmit unwillingly to reſtraints, which they think ſubverſive of their liberties; and ſhould we aim, by force, to bring them to our terms; is not the houſe indeed divided againſt itſelf, the kingdom ſplit? and inſtead of poſſeſſing a force capable of ſupporting ourſelves and confederates, againſt all human oppoſition, and of awing into good behaviour, thoſe who envy our happineſs and good fortune, we leſſen our influence in proportion to the exertion of our ſtrength, and waſte our force in cutting the veins that ſupply vitality and vigour, and tearing off thoſe ſinews on which depend the exertions of our power.

How much better for the whole would it be, if any diſtinction is to be made, to treat thoſe diſtant ſubjects with particular indulgence; and indeed they deſerve it. For whatever the motives of their migration may have been, the effects of this migration have undoubtedly been ſignally beneficial to this coun-

try; and ſome degree of gratitude ſeems due even to thoſe who have done us a kindneſs, though without deſigning it.

When the firſt Engliſh adventurers arrived in America, the lands were of no uſe, no advantage to us. What little was added to the common ſtock, was produced by barter with the natives, and this was but an inconſiderable acquiſition. When the Engliſh began to ſettle, to clear and cultivate, then began the real acquiſition of wealth to the common national ſtock. Every acre was an addition of ſubſtantial value, as the produce, or the greateſt part of it, was deſtined for the mother country, in return for her produce and manufactures. From ſingle plantations, they have increaſed to colonies and provinces; governments reſpectable in themſelves, and which have done credit to their mother country in abundance of inſtances, by the wiſdom of their inſtitutions, and the virtue of their adminiſtrations. How oft have they already ſupplied their parent with important and effectual aids, both in peace and war!

Under Providence, it ſolely depends upon ourſelves, whether this power ſhall increaſe or diminiſh; whether it ſhall be for us, or againſt us. Wiſe and gentle methods will ever ſtrengthen this union, will encourage population, cultivation, commerce, whilſt the produce of all centers in Britain. Harſh and ungracious means will as neceſſarily weaken the union, will make them deſirous of forgetting that they are of Engliſh deſcent, will leſſen their duty and allegiance, and teach them to think hardly of a country, to which they indeed owe their original, but which they find diſpoſed to diſinherit them, and to deny them the privileges of their birthright. Such means will infallibly kindle jealouſies, ſpread diſcontent and diſaffection, and put a ſtop to induſtry, and to every virtuous aim or emulation.

People under ſuch circumſtances, impatiently look forward to that independency, which their ſituation favours; and this the more eagerly, in proportion to the prejudices they have early imbibed againſt a government they think oppreſſive: they grudge to contribute to the ſupport of a ſtate that threatens to abridge their liberties; and diſcontent prompts them to enquire by what means they can moſt ſafely give vent to their revenge. They make a virtue of their neceſſities, grow frugal, either make a ſhift without, or ſupply by their own induſtry, many articles of commerce, the product of the mother country: trade then begins to languiſh at home; the merchants will firſt feel the effects of this decay, the manufacturers ſuffer next, but without knowing the cauſe. The landed intereſt then finds itſelf embarraſſed; yet how few are able to trace up the cauſe of this general diſtreſs! The remoteſt parts of this kingdom already feel, and will yet feel more dreadfully, the fatal effects of ſuch an unhappy conduct.

Far from charging the authors of theſe unhappy effects, with a deſign of *oppreſſing* the Americans, I am only recounting the effects enſuing from their conduct.

duct. That the Americans think themſelves *oppreſſed*, or deſigned to be oppreſſed, is moſt certain: witneſs the univerſal oppoſition to the late intended regulations on that continent.

Let us view what muſt happen amongſt them on this occaſion: children and youth are diſpoſed early to imbibe the language and ſentiments of their parents; they remember, during their lives, and are often ruled by, the paſſionate dictates of their forefathers. What a proſpect this for Britain! One ill-adviſed, unneceſſary act, has imbittered the minds of almoſt all the inhabitants of America. The youth will receive the tincture, and it is needleſs to expatiate on the effects. An age will not expunge the unhappy impreſſions:

——*Servabit odorem*
Teſta diu.

He, who by wrong meaſures, and imprudent counſels, alienates the affections of the people from their ſovereign, is the greateſt enemy to the happineſs of the king, and the proſperity of his ſubjects: and the more univerſal the diſaffection, and the more remote the ſubject from better information, the greater is the detriment. It is laying a ſure foundation for independency in the colonies, and involving both them and the parent in diſcontent and ruin.

Thouſands of manufacturers are already turned out of employ; multitudes ſoon muſt follow. The landed intereſt muſt then ſupport them, or they muſt periſh. Thus, in hopes to ſave a few pence in the pound, at the expence of America, have we ſaddled ourſelves with an additional poor's rate of ten times the amount, and ruined our commerce, till wiſer meaſures bring it back to its former channel.

Should any ambitious neighbouring power embrace the preſent juncture to revenge their paſt diſgraces, can we be ſure that the Americans will immediately forget their animoſities againſt us, and join with their former zeal in our aſſiſtance? To act againſt us they never will, till oppreſſion, grievous oppreſſion, convinces them, that they are no longer deemed the offſpring of Britain, and have no longer to expect the inheritance of their anceſtors, Britiſh freedom, and a Britiſh king for their ſovereign.

The adminiſtration of government in America has hitherto, for the moſt part, been eaſy to the ſubject. Such of the governors ſent amongſt them, who were acquainted with men and things, held the reins with eaſe and gentleneſs; they ſaw that, for the moſt part, the early coloniſts were ſuch as inclined to republican ſentiments; they ſaw that their remote, independent, unconnected ſtate, favoured thoſe ſentiments, and that they ſubmitted to reſtraint with impatience. Indeed, if ſoils, climates, ſituations, diſpoſe mankind to peculiar habits, the genius of America ſeems to favour freedom. The aboriginal natives of the northern part of this hemiſphere, are, perhaps, the moſt free and unreſtrained

of

of any in the known world. To unveil at once the moſt unfavourable parts of monarchy to ſuch a people, was certainly the moſt unlikely means of gaining the good opinion of ſubjects almoſt bordering on republican madneſs. To reſtrict their foreign commerce, by which they ſubſiſted; to impoſe domeſtic taxes, without their concurrence, whilſt they were overloaded with provincial debts, contracted to ſupport the Britiſh cauſe; to annihilate, inſtead of rectifying, their medium of commerce; to ſink them at once, in their own opinion, from the full fruition of liberty, to the loweſt ſtate of conquered countries, was too hardy a ſtep in a reaſonable adminiſtration; and thoſe who have the conduct of the helm at preſent, muſt feel the weight, the baneful influence of ſuch fatal regulations.

A Britiſh parliament has certainly *power* to do many things, which they have no *right* to do. They have *power* to enact what laws they think fit, reſpecting any part of the Britiſh ſubjects; but ſtill it is to be remembered, that reaſon is the ſupreme law, and any thing inconſiſtent with it, is void in itſelf. The diſtance of America renders it impoſſible for its inhabitants to be properly repreſented in a parliament of Great Britain. The very title of the parliament ſhews, that the Americans are yet no part of it; and conſequently to ſubject them to laws, in the making of which they have no voice, and can have none, is ſtriking at the root of our own conſtitution.

Let us look back to the diſcovery of America by Engliſh ſubjects; view their riſe, progreſs, eſtabliſhments, and connections with their mother country; and we ſhall ſoon obſerve, that thoſe who adviſed meaſures of the kind hinted at, have robbed the crown of one of its moſt eſſential privileges, and ſeem to be guilty of little leſs than high treaſon.

An adventurer diſcovers an unknown country, unpoſſeſſed by any potentate, with whom either law or cuſtom has eſtabliſhed any formal connections; he treats with the native inhabitants, purchaſes a tract of country from them, returns home, and applies to his ſovereign for leave to ſettle, and propoſes terms of cultivation.

A charter granting poſſeſſion, agreeable to the terms of poſſeſſing Engliſh property, and certain privileges to encourage the adventurer to ſettle in ſo remote a place, are agreed upon, and confirmed. His family, relatives, and friends, tranſport themſelves to the diſtant ſettlement; confiding in the right of his ſovereign to grant him the property, and the privileges of his birthright—laws for the good government of the ſettlers, conſonant to the laws of their native country. This confidence acquires by time the full influence of a fundamental principle, and occupies the minds of thoſe to whom it is granted, with a degree of force not eaſily to be obliterated.

They think that if the charter conſtituting theſe regulations is defective, it may ſoon become a doctrine, that their property is alſo precarious; and that

every attempt to deprive the Americans of any degree of that freedom, which was at firſt granted them, unleſs ſome obvious tendency to malverſation appears, may ſoon be followed, by taking from them the property and poſſeſſion they enjoy by virtue of the ſame charter.

The Americans never ſeem to have diſputed the right of the Britiſh parliament, to regulate their trade and affairs, ſo as to prevent them from interfering with the advantage of the mother country. They conſider themſelves as a part of that great *whole*, over which the Britiſh parliament preſides, and in every reaſonable inſtance yield to its authority. They pay duties, impoſts, taxes laid upon their commerce agreeable to the laws of navigation. They trade to ſome places, omit trading to others; they export goods to one part of the world, and not to another, juſt as the laws eſtabliſhed for the good of the *whole* direct; and this is but their reaſonable duty.

The parliament of Great Britain has, moſt undoubtedly, a right to direct all this; and every tranſgreſſor againſt regulations, calculated for the good of the whole, and to reſtrain one part of the community from availing themſelves of any circumſtances in their ſituation that might tend to the detriment of another, is juſtly puniſhable.

But if we ſtep further, May not that right at leaſt be doubted? I am an Engliſhman, a Britiſh ſubject; the parliament has power to deprive me of any part of my property they think fit, and to ſubject me to every poſſible degree of miſery and wretchedneſs; but if I have done nothing to deſerve it, *power only* gives them no *right* to do it.

If I miſtake not, when contributions are to be raiſed in a conquered country, the vanquiſhed have always liberty to raiſe the ſum demanded, in what manner they think convenient. And ought our colonies to be placed in a worſe ſituation, than countries ſubdued by the force of arms? deprived of the privilege of raiſing money expected from them, for the aid of government, in the manner moſt eaſy to the individuals who muſt pay it? Nothing can afford ſtronger proofs, both of the reaſonableneſs and neceſſity of leaving this power with the colonies, wherever the right may be lodged, than the acts that have occaſioned a diſcontent through the colonies, next to madneſs, a univerſal ſtagnation of commerce, and the ruin of a multitude of induſtrious Britiſh manufacturers. A trifling inſtance will ſuffice to demonſtrate this aſſertion; to enter into a full detail of all would exceed my leiſure and abilities.

The ſtamp act directs the like duties to be paid for the public news-papers, and the advertiſements contained in them, as in England. Heretofore, as no duty was paid, an American could advertiſe the loſs of a cow, a horſe, or a hog, and ſometimes things of leſs value, at a little expence. The news-papers being cheap, came into many hands, and ſtrays, in their wilderneſs country, were often by this means recovered. But all this is now at an end. The

news-

news-papers will be dropped in many places; in others, the price of circulating intelligence will become too expenſive; and thus the poor American, who needs it moſt, has it leaſt in his power to recover his ſubſtance, through this eaſy and effectual means. Were theſe duties only framed to reſtrain the liberty of the preſs in America, the operation of this law will do it effectually, and the precedent may in future times be pleaded nearer home.

It may ſeem to many, that charters for American governments were granted without much conſideration, without regard to any thing but the petitioner's requeſt. But this is a great miſtake. It was expreſsly covenanted, that the adventurers ſhould perform certain conditions on their ſide; in conſideration of which, they were to enjoy certain benefits. With what right then can any man, or any body of men, interfere in ſuch ſolemn compacts, unleſs ſufficient cauſe is adminiſtered? What diſcouragement would hence ariſe to future ſettlements! what diminution of regal authority! an authority wiſely ſuppoſed ever to ſubſiſt in the crown, for public benefit.

This way of reaſoning ſeems juſt to the writer, as well as to the Americans in general who live under theſe grants, and who little ſuſpect that the tenure of their property, the enjoyment of their liberties, the poſſeſſion of every thing they eſteem valuable, is entirely at the mercy of men totally ignorant of their condition and abilities; nay, many of whom may juſtly be ſuppoſed, from what has happened, to be altogether ignorant that they are the deſcendants of Engliſhmen, claim the like privileges, and look up to the ſame royal ſovereign for protection.

Canada, and its dependencies, a vaſt country, ſuperior in extent, equal in number of inhabitants to ſome ancient empires, that make no contemptible figure in hiſtory, is a conquered country; it belonged to the French, was a thorn in our ſides, and was at length wreſted from them, by great military virtue, and the permiſſion of Providence. Conditions of ſurrender were ſtipulated, and theſe ſtipulations are to be the baſis of all regulations in that country. If no expreſs agreement was made, that they ſhould enjoy the Britiſh privilege of having no monies raiſed upon them, but by the conſent of their repreſentatives, the Britiſh parliament have a *right*, as well as *power*, to make what aſſeſſments upon it they think fit. But it is apprehended, that the caſe of our colonies ſprung from ourſelves, and living under charters expreſsly granting them particular exemptions, is very different. Otherwiſe there would be no advantage to have been born the ſubjects of Great Britain, ſince they muſt yield to the ſame harſh terms which men ſubjected by the ſword, have been ſubjected to; be governed by laws, and their property diſpoſed of by regulations, in the making of which they have no voice, can give no diſſent.

The public prints inform us ſufficiently of the diſquietude which theſe imprudent meaſures have produced: the adminiſtration, doubtleſs, have yet more perplexing

perplexing accounts; riots, tumults, and every ſpecies of anarchy, that people, mad with the proſpect of oppreſſion, can exemplify.

What can be done under ſuch circumſtances? To reverſe theſe fatal acts and regulations, may ſeem to encourage a licentious rabble to oppoſe every act of power, however conducive to the public good, if it ſquared not with popular opinion. To perſevere in a reſolution to ſubject ſuch untractable ſpirits, even by force, if it was neceſſary, would be next to diſtraction. Our wiſe neighbours already ſee this, and riſe in their demands, increaſe in their obſtinate refuſal to our claims, in proportion to the proſpect of this diſunion. A dangerous precedent on one hand, as ſome may think, to reverſe without trial an act of the ſupreme legiſlature: on the other, a ruinous civil diſcord. Theſe are among the unfortunate legacies to the preſent adminiſtration.

It may perhaps be replied, that the Americans ought to be reduced to reaſon by any means, rather than the ſupreme authority of a Britiſh legiſlature ſhould be treated with oppoſition or contempt: that they ought to have remonſtrated againſt grievances when felt, and not to revolt againſt government for imaginary evils. All this is granted. But let us for a moment place ourſelves in their ſituation.

Many of theſe people fled from tyranny and oppreſſion, and took all the care they could, in the charters they obtained, to have as much freedom, as the genius of our conſtitution could allow.

Their ſons have been taught to eſteem theſe privileges as the moſt ſacred depoſit, and in defence of which they ought to riſque every thing.

When the reſolutions of parliament were ſent over to America, and the inhabitants found the privileges which they deemed moſt ſacred, were to be aboliſhed for ever; what could be expected from perſons bred up almoſt in independency, and full of republican ſentiments? They were ſtruck with the deepeſt aſtoniſhment; they attempted to remonſtrate—ſome with as much temper as could be expected from people in this ſituation; others, with ſuch evident tokens of reſentment, as plainly indicated that reaſon had for the time forſook them.

But when they were informed by their agents, that their remonſtrances could not be heard; that the meaſure was finally reſolved on, without their being allowed to explain themſelves in any manner; and that they had no part left, but to ſubmit; the rage of the populace broke all bounds, and they have proceeded to ſuch lengths, as their warmeſt advocates can by no means juſtify.

Let it likewiſe be remembered, that when the ſtamp duty was laid upon this nation, it was only one quarter part of the preſent. It has riſen by degrees to what it is, as the riches of the country could bear it.

America was by no means ſo rich as England, when this duty commenced; yet the people are taxed not only as high as the Engliſh, but as much higher,

as a ſhilling is more valuable in America than in England, which in ſome provinces, I apprehend, is a third, if not one half more; that is, a ſhilling ſterling in England is equal to 1s. 6d. or 2s. in the colonies. So that at one ſtep, not only a tax is laid upon them without their conſent; but, conſidering their poverty compared with England, and the difference of exchange, the load is heavier than this country would ever ſubmit to. A convincing proof, how neceſſary it is that all internal taxes ſhould every where be raiſed, only by the repreſentatives of thoſe who pay them!

It has been alleged, and moſt weakly alleged, that the Americans are repreſented, as much as copyholders, as many large towns and populous communities in this kingdom. It is amazing how ſuch an opinion could poſſeſs the mind of any man of reflection. There is not a man in this kingdom, be his condition ever ſo low in life, who may not be ſaid to have an influence in the choice of our repreſentatives, though not worth a ſingle ſhilling. He can at leaſt make part of the mob, and huzza for the man he likes. But if he has property, his influence riſes in proportion. There are people in this capital, who are neither freemen, nor freeholders, yet have it in their power greatly to affect the choice of repreſentatives in this city, as well as in many parts of the nation. Can an American do this? How vain was the ſophiſtry! how flimſy the deception! What an affront to the underſtandings of ſenſible people!

It has been propoſed by ſome, that the colonies ought to be repreſented in the Britiſh ſenate, by members choſe by the Americans. This indeed proves, that they are not yet repreſented there, in the opinion of thoſe who make the propoſition, and this is ſome palliation to the preſent extravagancies: but the writer thinks they never ſhould be; and that it is the mutual intereſt of the colonies, and Great Britain, that no deputies from North America ſhould ever have a ſeat in the Britiſh ſenate.

Can they ſend any deputies, who will at no time give up their own, or the Britiſh liberties, for a place or a penſion? The more diſtant they are from their conſtituents, the more they are expoſed to temptation. The leſs property theſe deputies have, the leſs will be the purchaſe of their votes. Will Americans, who are able to ſerve their country, and of independent fortunes, be at all times willing to riſque their lives acroſs the ocean in this ſervice? Will the diſtance admit them to conſult their conſtituents, during the ſeſſions? Muſt we have an auxiliary army of American penſioners, in conjunction with ſome other diſtant members, not leſs purchaſeable, to bear down the ſons of freedom and independence in the Britiſh ſenate, when perhaps the whole fortune of liberty is at ſtake? No. We ſee enough of the effects of venal poverty at home, without adding to its influence from our colonies.

In forming our opinions of the degree of ſubjection to be expected from the Americans, we ſhould place ourſelves in their ſituation, and conſult reaſon, the laws

laws of nature and nations. To form our ideas of this point, from precedents to be found in Engliſh hiſtory, is vain. England never had a like precedent. When Magna Charta was firſt eſtabliſhed, where were her colonies? When the people uſed to meet themſelves, to tranſact their own buſineſs, but found it neceſſary to chuſe repreſentatives in parliament, what was America? The wiſdom of thoſe who firſt granted charters of colonization, ſaw the impoſſibility of the colonies being repreſented in the Britiſh legiſlature, by any other than the king's perſon, who, as a part of the legiſlature, was liable to have his adviſers called to account, if the Britiſh ſubjects whom he therein repreſented, were not governed as they ought to be.

A governor, the king's repreſentative, reſides in every province. No laws can be paſſed without his conſent; nor are theſe laws valid till they have received the royal approbation at home. Thus the allegiance of the Americans is at once ſecured to the mother country, and care is taken that no act ſhall be paſſed in any one government, that ſhall be detrimental to another, to the whole, or to Great Britain, by forming any legal confederacy amongſt themſelves to her diſadvantage.

It is well known, that the powers of the king's repreſentatives are ſuch, that if any colony proves refractory to the juſt deſires of the crown, there are many legal expedients by which a governor can awake the people to reaſon.

Suppoſe the king's miniſters had adviſed him to inſtruct the American governors, that a ſtamp act would be uſeful to the reſpective governments, and to apply to their ſeveral houſes of repreſentatives on this occaſion, laying before each the general plan upon which they were to proceed. Would this have been refuſed? Moſt probably not. They would have ſeen their own ſecurity, and the good of the ſtate, united in a ſtamp act, conducted by perſons acquainted with the ſtate of the country, and ability of its inhabitants; which, permit me to ſay, are not ſo generally, ſo fully underſtood in this country, as is neceſſary for our own ſake, as well as theirs: this I aſſert not at random, or mere conjecture, but from daily obſervation and experience. Should America in proceſs of time become the greater country, and the reſidence of a monarch of its own; ſhould a parliament there be formed of repreſentatives wholly Americans; ſhould this legiſlature take upon them to tax Great Britain, and have the power in their hands to compel its ſubmiſſion, or to reduce it to extreme diſtreſs, how would this country like ſuch treatment? They would pay obedience no longer than they could help it; would think of the Americans, preciſely as they think of us; that we at ſuch a diſtance muſt be wholly unacquainted with their real ſtate; that the acts made concerning them gave evident proofs of it; and that it would become them either to ſtand by themſelves, or look out for leſs rigorous maſters.

I am not ignorant that endeavours are uſed, to prompt thoſe who are to de-

cide on theſe important affairs, to exert what they call *authority*, and to *enforce* the acts that have given ſuch univerſal diſcontent through America, and opened a proſpect of ruin to thouſands in this country, who deſerve a better fate.

Let us trace the effects of this counſel. The Americans, they ſay, will ſoon ſubmit to this, and every other act the Britiſh parliament think fit to preſcribe. But are they ſure this will be the reſult? Admit however that theſe gentlemen are in the right, that the Americans quietly ſubmit to parliamentary authority; yet they muſt likewiſe admit, that the Americans in general are diſguſted with a law, that deprives them of what they plainly tell us they think their birthright. Whether they think right or wrong, is nothing to the argument; it is enough that this perſuaſion is general: force may prevail upon them to act againſt their perſuaſion; but will it follow that force will change their opinion? By no means: *rigour*, and *enforcing*, may poſſibly oblige them to ſubmit, till it is in their power to emancipate themſelves, not from internal taxes only, but from all foreign juriſdiction; and this event will undoubtedly approach the faſter, as the means employed to force them to obedience are more diſguſtful and compulſory.

How much more advantageous would it be to this nation, could the legiſlature unite in this ſingle conſideration: By what means Great Britain can moſt effectually render it the intereſt and inclination of her colonies, to continue not only dependent upon, but inviolably attached to her.

It is hard to gain a diſpaſſionate hearing, againſt prejudices that flatter at once our vanity and our avarice. If the ſtamp act is repealed, we encourage the Americans to ſhake off all dependence: this is the general language, I own, and am ſorry for our own ſakes that it is ſo, becauſe it betrays our vanity and ſelfiſhneſs. The moſt ſanguine abettors of *enforcing*, cannot vindicate the act itſelf, nor urge one plea for its neceſſity; at leaſt I have neither ſeen nor heard any reaſonable arguments on this head. If then an act has been paſſed by the Britiſh legiſlature, that carries evident tokens of impropriety, would it not be more prudent to reſcind ſuch an act, and to convince the Americans, that they will ever meet with juſtice in the Britiſh ſenate, ſhould they at any time be in danger of oppreſſion by imprudent conduct; rather than perſiſt in a miſtake, becauſe it has once been adopted, and hold out to them an example of injudicious adherence to errors once committed? What ſhould we think of ſuch a conduct in private life? Yet juſtice, equity, moderation, and good ſenſe, are the ſame, whether they relate to the concerns of private men, or of ſtates and empires.

In reflecting on this ſubject, one cannot but regret, that the geography and hiſtory of our colonies is ſo little attended to. It is not among the vulgar only, that we meet with perſons who are totally unacquainted with the ſituation, produce, inhabitants, their condition, manner of life, their traffic and connections.

And

And this is the more inexcuſable, as there are not wanting many uſeful Treatiſes upon theſe ſubjects; and were the public, or that part of the public which ought to be inquiſitive after proper information, (as liable to become a part of the Britiſh ſenate, and empowered by the Britiſh people, the grand ſource of power, to decide on queſtions of the utmoſt importance to America;) I ſay, was this part of the public ſolicitous after information, in reſpect to theſe important objects, numerous occaſions of it would daily preſent themſelves.

How many people are there, and thoſe too of no ſmall figure, who know no difference between the inhabitants of North America, and thoſe of the Weſt India iſlands! They form their ideas of all, by the manner and appearance of a few, who have no reſemblance to them in manners, way of life, or fortune. The Britiſh inhabitants of North America are of two ſorts; thoſe who live in the northern part of the continent, and thoſe who inhabit the ſouthern. Nova Scotia, New England and its dependencies, New York, the Jerſeys and Penſylvania, belong to the former diviſion: Maryland may be divided between both; Virginia, the Carolinas and Georgia, are the other part. Of the late ſouthern or northern acquiſitions I ſay nothing, as they are yet very light in the ſcale of power. The inhabitants of the northern part live like our lower Engliſh farmers; they plough, ſow, reap, and vend different kinds of grain, as the land they occupy and the climate permit—maize, wheat, barley, oats, peaſe, and the like rural produce. They raiſe cattle, hogs, and other domeſtic animals, for uſe and ſale; alſo hemp, flax, naval ſtores, but yet in ſmall quantities. Their ſummers are hot, their winters ſevere, and their lives are paſſed with the like labour and toil, and with the ſame impoſſibilities of acquiring more than is ſufficient to maintain their families juſt above want, as the little farmers in England.

This they have in their favour: as land is for the moſt part cheap (a moſt certain ſign of poverty) the young people can marry without much riſque of maintaining themſelves and their offspring. The parents can give a few cows, ſwine, and perhaps a few moveables, and help them to build a log houſe. Here the young couple ſit down contented—they labour as their parents have done, are content with hard fare and mean cloathing. If they get enough to ſupport them, they are ſatisfied; and if they can afford to have an Engliſh utenſil, or Engliſh cloathing, they are rich. Here and there one applies to commerce, and ſettles in the next town, as in England. Fortune, aided by capacity and induſtry, raiſes him above the level, and he acquires the reputation of a conſiderable merchant, on a capital that would not furniſh a chandler's ſhop in London. He is, however, a moſt uſeful member of ſociety; he imports all the Britiſh manufactures he can, and vends them amongſt his compatriots. The grower of the product, ſuppoſe it wool; the manufacturers, for there are many; the Engliſh merchant, the navigators, the American merchant;

chant; all are gainers by a poor wilderneſs American, the conſumer. What a pleaſing proſpect for Britain, who will every day more ſenſibly feel the advantages of this commerce, unleſs by —— ſhall I call it their Evil Genius?— they are goaded on, to accelerate their own undoing, by oppreſſing the Americans!

Such is the way of life of the North Americans of the northern diſtrict. The inhabitants of the ſouthern approach nearer to the Weſt Indians. The land is capable of producing riches of another nature; tobacco, which has been the pleaſing intoxication of many nations, is produced in Maryland and Virginia, chiefly by the labour of negroes. Rice is the product of the Carolinas—a happy ſuccedaneum for bread; the proper, the moſt ſuitable ſupport of hot countries: this likewiſe is raiſed, cultivated, dreſſed by the labour of negroes.

The wiſdom of Providence is every where conſpicuous to the attentive obſerver; and perhaps in nothing more, than in the different degrees of fertility of the different parts of the globe, moſt wiſely adjuſted to the neceſſities of the reſpective inhabitants. In the colder regions, the earth produces its ſtores with difficulty; ſtrength and labour here are requiſite to unlock the little treaſure that the earth contains: but the bracing cold, the whetted appetite, the ſtrong powers of digeſtion, derived from cold and penury, render labour eaſy, and the conſequences pleaſureable. Thus the dreary waſtes of Siberia, the mountainous Alps, the bleak Highlands, the Cumbrian hills, the Yorkſhire woulds, and Welch mountains, breed as hardy, as contented, and as uſeful a ſet of mortals, as the univerſe produces.

A few acres in Barbadoes, or others of the Weſt India iſlands, properly cultivated, yield a crop, in value ſuperior, perhaps, to one hundred times the extent, either in North America or in England; and it is juſt that they ſhould do ſo. In theſe hot climates, if the Author of Nature had not diſpenſed the means of ſubſiſtence with a more liberal hand than in the northern regions, who could have ſubſiſted there?

Were the poſſeſſors of lands in theſe hot countries obliged to labour for themſelves, we ſhould not ſee the many inſtances we do of idleneſs and extravagance: but the ſlave trade enables the inhabitants of theſe warmer regions, to procure, not only the neceſſaries and conveniencies of life, but vaſt wealth, at the expence of people, who, born under a hotter ſun, are found able to bear labour equal almoſt to a native of the north, in his own country, and compelled to work by ſore and grievous ſtripes; men in all things like ourſelves, colour and ſome circumſtances of form excepted, torn from the tendereſt ties of nature by violence and fraud, to drudge in ſervitude during the reſidue of their days, without hope of redemption!

The wealth accruing from the ſweat of theſe poor wretches, who ſooner or later may be permitted to become the dreadful executioners of ſlow-paced vengeance,

vengeance, has unhappily fixed in the minds of many here, an idea that the Weſt Indians, and North Americans, are in the like ſituation, in reſpect to the means of acquiring riches, and poſſeſſing them; a miſtake which an attentive conſideration of the premiſes may perhaps contribute to remove.

For as the northern people of America truſt to their own induſtry, ſo the ſouthern inhabitants are rich in proportion to the number of ſlaves they poſſeſs. In the former, all are low and middling people, the ſure ſupport of any country; none are great or rich. In the latter, there are few middling people; a very few are conſiderable; the reſt are below the middle claſs in general.

The conduct of theſe people, I mean the inhabitants of the ſouthern diſtrict, when they arrive in England, approaches nearer to ſhew and extravagance, than the northern inhabitants; and has added to the general miſtake in this country, that the Americans are rich. The conduct of the Weſt Indians has perfected this idea. Bred for the moſt part at the breaſt of a negro ſlave, ſurrounded in their infancy with a numerous retinue of dark attendants, they are habituated, by precept and example, to ſenſuality, ſelfiſhneſs, and deſpotiſm. Of thoſe ſent over to this country for their education, few totally emerge from their firſt habitudes: view them as ſons, huſbands, fathers; as friends, citizens, and men; what examples! Splendor, dreſs, ſhew, equipage, every thing that can create an opinion of their importance, is exerted to the utmoſt of their credit. They are thought rich; and they are ſo indeed, at the expence of the poor negroes who cultivate their lands, could they be contented with mediocrity.

If people of quality and condition would ſtudy the geography and ſtate of our colonies; would they give themſelves the trouble of diſtinguiſhing their different ſituations; it would prevent them from confounding together circumſtances extremely oppoſite; from inferring, that becauſe an opulent Weſt Indian vies in glare with a nobleman of the firſt diſtinction, therefore a poor American farmer is able to bear the ſame heavy load of taxes, or ought to be placed in the ſame ſcale of ability.

In a word, the inhabitants of the Weſt India iſlands are in general the reverſe of the northern North Americans: whilſt theſe are poor, laborious, contented with a little, examples of diligence and frugality, the beſt riches of a ſtate—the Weſt Indians are too often the reverſe. Much indeed is to be allowed for the different climates. Heat enervates, it creates ſenſuality, and urges to contrive every means of gratification.

Another circumſtance has likewiſe contributed not a little to eſtabliſh an idea of the riches of North America; which is, the known hoſpitality of theſe people in general to all Britiſh ſtrangers. Vying with each other who ſhall afford their gueſt the moſt hoſpitable entertainment, they have unfortunately rivetted an opinion in travellers, that they are rich, only becauſe they are generous to exceſs.

But

But leaving this ample field to others, who have more leiſure, and greater abilities, I ſhall here remark, that there are too few, who have hearts ſufficiently dilated to conceive, that a conduct founded on noble, generous, upright principles, is the glory of man, and invariably procures him every bleſſing compatible with his ſituation. A fact of ſufficient authenticity will perhaps illuſtrate this aſſertion, and at the ſame time point out the mark we ſhould aim at in the preſent intereſting ſituation of our affairs:

When the Roman army was ſhut up in the Caudine forks, the wiſe Samnite, with a thorough ſenſe of this principle, adviſed his ſon to permit the Romans, without injury, to retreat from the danger in which they ſaw themſelves irretrievably involved.

This diſpleaſed the haughty general and his army; the wiſe old man then adviſed the total deſtruction of the Roman army.

Neither of theſe alternatives were purſued: ſelfiſhneſs and pride preſented a middle way, that ended in the deſtruction of the nation. The Samnite leader, fluſhed with the ſucceſs of his machinations, determined to enjoy the pleaſure of a triumph. He gave the Romans their lives, at the expence of their honour. The inſult was too great for the Roman people to forgive; they vowed revenge, and hoped, though vainly, to blot out the remembrance of their diſgrace and perfidy, by the extirpation of the Samnite people; which, contrary to juſtice and humanity, they effected.

Let us profit by this leſſon; the caſes, I own, are not parallel, but yet the moral may be of uſe to us. Three ways are propoſed to extricate ourſelves from the preſent perplexities. The firſt, to enforce the ſtamp act; the ſecond to ſuſpend, and the third to repeal it.

The firſt ſeems like the Samnites opinion, to deſtroy the Roman army totally then in their power. The Americans, moſt probably, will not give up their claims without bloodſhed; and whoever ſuffers, the king by that loſes a ſubject, and the affections likewiſe of many more.

To ſuſpend the act, ſeems to be holding a yoke of diſgrace over them, which, though they may bear at preſent without marks of impatience, will only prompt them to make the quicker ſtrides to abſolute independency.

A repeal of the ſtamp act, will convince the Americans ſo fully of our equity and moderation, that they will no longer ſuſpect us of deſigns againſt their freedom, their privileges, or their intereſts. They will be ſure of redreſs, if grievances ariſe; and will bear them patiently, till they can be heard.

Remember, my countrymen, that the Americans are not a conquered, but a free people, deſcended from freeborn Engliſhmen for the moſt part; and thoſe who are of another progeny, have acquired the like ſentiments, by proximity and acquaintance. They are people of the like paſſions with ourſelves, and look upon oppreſſive power with the ſame ſpirit of intolerance; while their generoſity

neroſity and affection to thoſe who treat them kindly, is, like the region they inhabit, vaſt, and whoſe limits are hitherto unknown.

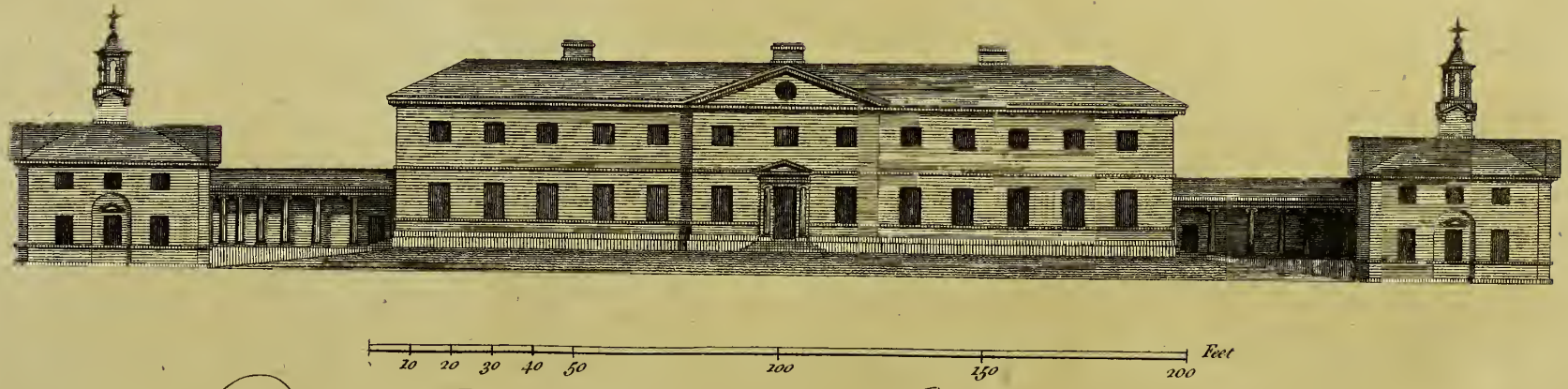
The wiſdom of parliament may nevertheleſs, in time, diſcover ſuch means of perfect and ſtable connection with the colonies, as may ſecure a juſt authority over them, and at the ſame time preſerve inviolable the privileges and immunities, purchaſed by our brethren in America, at the expence of cultivating a wilderneſs for our advantage.

And indeed, by the prudent policy of thoſe who planned or granted the ſeveral charters, the taſk of ſecuring the dependence of the colonies, is rendered much leſs difficult to government, than it might have been, had the charters been uniform. But by granting diſtinct privileges and eſtabliſhments to the ſeveral provinces, each has acquired an opinion, that its own is the moſt perfect, and would not willingly exchange its condition, or communicate its *peculiar*, with any other colony. Thus they are, and muſt long remain, not only *unconnected*, but in ſome caſes *oppoſites*, till the proſpect of ſome common danger appears, and forces them to unite in their common defence, and build up a potent and formidable confederacy.

If we permit the Americans to trade as they have done; if we permit them to raiſe every kind of raw materials, of which we have need, either for uſe or commerce; if we render it their intereſt, by ſuch means, to be dependent upon us, they will be ſo continually.

If we promote ſcholarſhips for Americans in our univerſities; give poſts and benefits in America, to ſuch Americans who have ſtudied here, preferably to others; if the government permits ſuch youth as come to Europe, on account of their ſtudies, to come over in the king's ſhips *gratis*, we ſhall ſtill unite them more firmly. The Americans, by mixing with our own youth at the univerſity, will diffuſe a ſpirit of enquiry after America, and its affairs; they will cement friendſhips on both ſides, which will be of more laſting benefit to both countries, than all the armies that Britain can ſend thither.

If ſuch be the conduct of this nation towards her colonies, ſhe will ever poſſeſs their affections; the product of their labours will center here; their power will be ſubſervient to our command; and a force will be generated, Providence permitting, ſuperior to what any country now poſſeſſes.



ELEVATION of the House at ACKWORTH.

J. Lodge Sculp

A

LETTER

TO A

FRIEND IN THE COUNTRY,

RELATIVE TO THE

INTENDED SCHOOL, at *Ackworth*, in *Yorkshire*.

IF Dr. FOTHERGILL's *life had not been diſtinguiſhed by a ſucceſſion of great and good actions, the eſtabliſhment of Ackworth ſchool is of itſelf ſufficient to endear his memory to diſtant poſterity, and enroll it with the illuſtrious benefactors of mankind. Capacious minds, habituated to the ſurvey of great objects, are ſometimes negligent of little ones; whilſt thoſe which have been confined to minutiæ, are not diſpoſed to expand and amplify: they diſcover partial defects, without tracing the great outlines of the whole; and, being timid without judgment, and doubtful of what is not exemplified, they are the more apt to cenſure new, grand, and important deſigns. To enlarge the views of theſe microſcopical obſervers; to remove prejudice, wherever it ſhould exiſt, againſt the execution of this great eſtabliſhment; to explain its utility, and to promote its ſucceſsful and permanent ſupport throughout the religious ſociety of which he was a member; appear to have been the laudable motives that prompted him to write the following Letter.*

Editor.

A LETTER

A LETTER TO A FRIEND IN THE COUNTRY.

Dear Friend,

THY inquiries reſpecting the Intended School at Ackworth, are ſo ſimilar to many which I have received from various quarters, that I find myſelf diſpoſed to draw up ſuch an account of the riſe and preſent ſtate of this affair, as I hope may enable thee to explain, to every ſenſible inquirer, the intentions of Friends in this eſtabliſhment.

And I think myſelf the more obliged to take this taſk upon me, though ſufficiently occupied in other matters, as I am ſo far the author of this undertaking, as to have propoſed it to the conſideration of the Society.

I do not mention this circumſtance, as deſigning to derive from it any importance to myſelf, but as I wiſh it to be conſidered as proceeding from a ſingle, upright view, if I do not greatly deceive myſelf, to promote the benefit of that part of our body, which is juſtly entitled to our aſſiſtance, viz. thoſe below the middling, in point of circumſtances. Many of theſe are not the leaſt valuable part of our profeſſion, becauſe amongſt them are often to be found ſuch as are truly religious, and therefore worthy of our regard and attention. Excellent is the wiſe man's prayer: "Give me neither poverty nor riches; feed me with food convenient for me, leſt I be full and deny thee, and ſay, Who is the Lord? or leſt I be poor and ſteal, and take the name of my God in vain."

I need not here recapitulate the abundant care, and the many endeavours that have been uſed for the education of Friends children. We have many

ſchools

ſchools for the education of youth amongſt us, and many very deſerving ſchool-maſters, in various parts of this nation, where the children of thoſe who are in affluent circumſtances receive a competent ſhare of learning: and that thoſe who are of leſs ability may partake of the like benefit, is the object of the preſent inſtitution.

It is well known to many, that the laborious occupation of ſchool-maſters is ſeldom conſidered as it ought to be, nor are they, ſo generally as might be wiſhed, recompenſed according to their deſerts. In promoting the preſent deſign, I believe it is very generally the mind of Friends, to prevent them from ſuffering by this eſtabliſhment; and I hope it will be practicable to draw ſuch a line between thoſe who are the proper objects of this eſtabliſhment, and ſuch whoſe circumſtances allow them to ſend their children to the preſent ſchools, as will give no juſt cauſe of complaint.

The children of Friends not in affluent circumſtances, are the objects of Ackworth School; the children of ſuch perſons, as muſt either provide for their offspring a very cheap education, or none at all. And there is great reaſon to believe, that the inability of many Friends to make ſuch proviſion, or to find any means of obtaining a ſafe education, has been the occaſion of keeping their children at home, where it was impracticable to keep them at all times from corrupt company.

Fully apprized of theſe circumſtances, and many others relative to this ſubject, which it is unneceſſary to mention in this place; having likewiſe, in concert with other Friends appointed by the Meeting for Sufferings, taken much pains in endeavouring to form ſome proper plan to remedy the defects; and the recommendation of the Yearly Meeting of 1777, not only to the Meeting for Sufferings, but to the Society at large, to unite in forming ſome practicable plan for the education of our youth, being often in my mind, I frequently conſidered this ſubject, with a warm deſire to contribute as much as in me lay to promote ſo neceſſary a purpoſe.

Whilſt I was in Yorkſhire the ſame year, mention was caſually made of Ackworth hoſpital; that it was on ſale, and would probably be ſold at a very moderate price, compared with the ſum that it had coſt. Though I had not ſeen the building, I had ſeen and conſidered a plan of the houſe, and learned from that, and from the report of many who had been on the ſpot, that the building, the ſituation, the healthfulneſs of the country, the plenty of proviſions, and the vicinity of many valuable Friends, were ſuch, that if it could be purchaſed, and properly endowed, it might, in many reſpects, anſwer the intention of Friends, and lay the ground-work of an uſeful and permanent eſtabliſhment.

For the information of divers, who may not be acquainted with the nature of theſe premiſes, it may be neceſſary to obſerve, that after the ſetting on foot the

hoſpital

hoſpital for foundling children in London, the public had great expectations of its utility; large ſums were ſubſcribed, and money likewiſe was granted by parliament, for erecting proper buildings for the reception of great numbers of children. A large hoſpital was built in London, another near Shrewſbury in Shropſhire, and this at Ackworth, as appendages to that in London, and under the ſame direction.

The Friends whom I conſulted, on my return to London, thought it a matter of ſuch moment, as to deſerve attention; and in purſuance of their opinion, inquiry was made concerning the price. I was given to underſtand that it was fixed at £.7,000; and, in a ſhort time after, was informed, that £.6,800 was offered for it by ſome other perſon. The Meeting for Sufferings was then conſulted, and the ſtate of the affair ſubmitted to their conſideration. They wiſhed to have had the matter kept open for the deliberation of the Yearly Meeting, but this was precluded by the unexpected offer of another purchaſer.

A number of Friends, in their private capacity, generouſly ſtepped forward, with an offer to bear the Meeting for Sufferings harmleſs, ſhould the enſuing Yearly Meeting decline the purchaſe. This being accepted, a contract was made, and the matter reſerved in this ſtate, for the deliberation of the Yearly Meeting in 1778.

A Committee, conſiſting of one Friend out of every county, together with the Committee of the Meeting for Sufferings, with any others who choſe to attend, was early appointed by the Yearly Meeting, to take this matter into conſideration. To this Committee, which was full, and attended by many not appointed, according to leave given, the whole buſineſs, from its beginning to that time, was fully explained, and the inquiries and doubts propoſed, anſwered, as it appeared, to general ſatisfaction.

After various Meetings of the Committee, a report was agreed to, recommending the purchaſe, and propoſing that a ſubſcription ſhould be ſet on foot, during the ſitting of the Meeting, for this purpoſe, by donations, by annuities on two lives at five per cent. per ann. and by bills of admiſſion at eight guineas each. After deliberate conſideration, the report was received by the Yearly Meeting, and the ſubſcription propoſed was begun, and ſtrongly recommended to the counties.

The great unanimity that prevailed in the ſeveral ſittings of the Committee, apparently proceeding from a juſt ſenſe of the want of ſome ſuch eſtabliſhment; the cordial, though not haſty concurrence of the Yearly Meeting with the report of the Committee; and the generous exertions of many Friends, in conſequence of this concurrence (upwards of £.4,000 having been ſubſcribed in the ſpace of three or four days) I own afforded me ſuch an indication of the propriety of this propoſal, that it diſpelled the doubts I had entertained about it:

having been, on the one hand, ſolicitous not to be inſtrumental in engaging Friends in an expenſive and fruitleſs undertaking; and, on the other, afraid of loſing an opportunity, not likely to be again recovered, of promoting the intentions of the Yearly Meeting, and the benefit of thoſe who were the immediate objects of their attention, in ſo ſatisfactory a matter.

From this time, I confeſs, I have felt very little diſcouragement, notwithſtanding the labour and care that muſt attend the ſettling of this extenſive concern. Is there any thing of great value, in this life, that doth not require proportionable care and labour to obtain it? I perſuade myſelf, we are making proviſion, not merely for the *ſubſiſtence* of great numbers of children of both ſexes, in a ſafe and healthy retreat, but are likewiſe providing for their *orderly* and *chriſtian education*. Too few are the parents who can honeſtly ſay, that "they train up their children in a godly converſation; in plainneſs of ſpeech, "behaviour, and apparel; and in frequent reading the Holy Scriptures." Here, we truſt, due care will be taken, both of their principles and conduct.

From what I can learn, it does not ſeem that much backwardneſs, in reſpect to this affair, has appeared in any place. If it has not proceeded every where with equal alacrity, it ſeems to have been owing more to the want of due information, than any other cauſe. In various parts, Friends are zealouſly diſpoſed to aſſiſt according to their abilities. The Committee appointed on this affair, by the Meeting for Sufferings, have received accounts, from various quarters, that Friends are proceeding with their ſubſcriptions, conformably to the recommendations of the Yearly Meeting. Several ſums have been received; ſubſcriptions are carrying on in other places, and ſome Friends have offered themſelves for ſeveral ſervices. The Committee is preparing the neceſſary directions for the admiſſion of children, and doing all that time and opportunity admit, to have every thing in readineſs for opening the School at a convenient time.

It is agreed, that as the School is intended for the education, maintenance, and cloathing of children whoſe parents are not in affluence, that they ſhall be inſtructed in reading, writing, and accompts, as fully as the time allowed them will permit. Some uſeful employment may be provided for the boys, according as their age, ſtrength, talents, or condition may require. Learning and labour, properly intermixed, greatly aſſiſt the ends of both, a ſound mind in a healthy body.

The girls will alſo be inſtructed in knitting, ſpinning, uſeful needle-work, and in ſuch domeſtic occupations as are ſuitable to their ſex and ſtations.

I believe it is the wiſh of all concerned in this important affair, that by gentleneſs, kind and affectionate treatment, holding out encouragement and approbation to the deſerving, exerting the influence of the fear of ſhame, and prompting the children to every act of kindneſs and beneficence one towards another, to bring forward into the Society and its ſervice, a number of youth

who

who may have been made acquainted, under ſuch tuition, in degree, with the diſcipline of wiſdom.

Many children amongſt us ſuſtain a grievous loſs, by not being early and properly made acquainted with the principles we profeſs. For want of this inſtruction, they become too eaſy a prey to the cuſtoms of the world; and thoſe habitudes, which would be as a kind of hedge about them, and protect from many temptations, are thrown down, and all the allurements of vice and folly ſuffered to ſeduce their affections, to their ruin. When they ceaſe to be diſtinguiſhed from others, by their garb and deportment, they too often ceaſe to be diſtinguiſhed from the world by their morals, and the rectitude of their conduct.

The hiſtory of the riſe and progreſs of Friends, their principles, their ſufferings, and the indulgences granted them by the legiſlature, will probably make a part of this inſtruction, to the children of both ſexes, as well as the general doctrines of religion and morality.

But above all, it is hoped that every opportunity will be embraced, of cheriſhing in their tender minds obedience to that principle of light and truth which is given us to profit withal. And, however neceſſary it is for all to be bred up in the fear of offending this pure inward ſpirit of truth, which naturally leavens the mind into a teachable ſubmiſſive frame; yet, to thoſe whoſe condition in life makes a juſt ſubordination a duty, a temper of this kind muſt be an invaluable bleſſing. Perhaps there is nothing in the common courſe of public education in the world, that ſo unfits men for that humble attention to the divine monitor within, that renders them ſuch perfect ſtrangers to the ſpirit of Chriſtianity, and all its happy effects, as the cultivation of a bold unfeeling diſpoſition, under a notion of promoting manlineſs and courage: it too often ſets aſide that great defence and ornament of youth, a modeſt ingenuous temper; accuſtoms them to throw off all the reſtraints of duty and affection, and at length to bid defiance to entreaty, admonition, and reproof.

In this place it is hoped that endeavours will be uſed to form in the children a temper widely different; equally remote from a culpable fear and ſervility, and an audaciouſneſs that knows no reſpect for order or authority.

There is a circumſtance in the bringing-up of Friends children, which has been, and yet is, of greater importance to them than perhaps is generally apprehended; and I mention it, as in the propoſed inſtitution it will doubtleſs be particularly regarded. To habituate children, from their early infancy, to ſilence and attention, is of the greateſt advantage to them, not only as a preparative to their advancement in a religious life, but as the ground-work of a well-cultivated underſtanding. We are almoſt the only profeſſors of Chriſtianity, who acknowledge the uſe of this abſolutely neceſſary introduction to Chriſtian knowledge and Chriſtian practice. To have the active minds of chil-

dren early put under a kind of reſtraint, to be accuſtomed to turn their attention from external objects, and habituated to a degree of abſtracted quiet, is a matter of great conſequence and laſting benefit to them. To this they are inured in our aſſemblies, and to ſit in ſilence with decency and compoſure. Though it cannot be ſuppoſed their young and active minds are always engaged as they ought to be; yet to be accuſtomed thus to quietneſs, and initiated to curb and reſtrain the ſallies of their youthful diſpoſitions, is no ſmall point gained towards fixing a habit of patience and recollection, and a regard to decorum, which ſeldom forſakes thoſe, who have been properly inſtructed in this entrance to the ſchool of wiſdom, during the reſidue of their days.

Did the ſubject of this letter admit of it, it would not be difficult to ſhew, from abundant authority, and reaſon itſelf, the vaſt aid afforded to the improvement of the human mind, by early habits of ſilent attention. The moſt ancient ſchools of philoſophy taught and practiſed it; and the ſcriptures are ſo full of precepts on this head, as ought to remove every objection to this neceſſary duty.

As it muſt happen that, in many places, the children of thoſe who are objects of my preſent conſideration are deſtitute of ſuch opportunities, by the remoteneſs of their parents ſituation from meetings; it is another call to the Society, to prevent, as much as poſſible, the loſs ariſing from ſuch circumſtances. How many farmers, manufacturers, and others, are often under the neceſſity of ſitting down in places at a great diſtance from a meeting? in which caſe, if they have numerous families, the moſt they can do may be to take with them the eldeſt, when the younger are left at home untutored in this moſt wholeſome diſcipline, till the practice becomes a burthen to them.

To this conſideration, it will not be improper to add another, which is connected with it; and that is, the want of opportunities of ſending their children to Friends ſchools. By which means, if they have any learning at all afforded them, it is under the tuition of ſuch as are moſtly ſtrangers to our principles, and the practices derived from them, plainneſs of ſpeech, ſimplicity of manners, and that beginning of wiſdom which is inſpired by the fear of the Lord. On the contrary, they are liable to aſſociate with ſuch children as are unacquainted with all theſe things; taught to deride thoſe who practiſe them, and live at large to appetite and cuſtom. And how often does it happen, that the children of Friends in ſuch ſituations, bred up with unprincipled licentious youths, form connections with them, to their own great hurt, the diſtreſs of their parents, and the loſs of many a valuable member to ſociety.

Ackworth, the place propoſed for the reception of ſuch children, is diſtant from Pontefract, the next Meeting of Friends, about three meaſured miles; too far for little children to walk, or to be conveyed thither if numerous. For this reaſon it is propoſed to have a meeting kept in the houſe, both firſt days and

week days; and for which purpoſe a large commodious room will be allotted: and as a great number of valuable Friends reſide in the neighbourhood, it is not to be doubted but this little ſociety will be favoured ſometimes with their company.

After having thus explained the intentions of Friends in this undertaking, (which may, I hope, be of uſe to future generations, if properly ſupported, and conducted with that prudence and œconomy which have hitherto accompanied the management of our affairs) I will add a few remarks on ſuch objections to this deſign, as I recollect to have heard mentioned or ſuggeſted.

The magnitude of the concern, at firſt view, ſeemed to be an objection of great moment with many: it deſerves conſideration. To make ſo large a purchaſe, endow it, govern the numerous family it is capable of admitting, with advantage to that family, and reputation to the Society, are indeed objects of great magnitude and importance.

In reſpect to the firſt part, the purchaſe, it is in a great meaſure already provided for, by the ſpeedy and generous ſubſcriptions already received.

Nor is the future endowment altogether unprovided for. I have authority to ſay, that, beſides the means already employed for raiſing the neceſſary ſupplies, there is one Friend who has appropriated £. 100 per annum for five years certain, and £. 50 per annum in perpetuity, if the undertaking meets with the ſupport he thinks it deſerves; and I doubt not but there are others who are alike diſpoſed, by legacies and bequeſts, to give it ſtability and duration. I am ſatisfied that many Friends, now deceaſed, could they have foreſeen it, would gladly have promoted ſuch an inſtitution in their wills; and as little can I doubt, but others will rejoice in an opportunity that promiſes ſo many advantages to ſucceeding generations.

The good government of a large family is indeed an object worthy of the moſt ſerious attention, and fills every conſiderate mind with anxious concern for its ſucceſs: but I truſt there will always be found among us, ſuch as are both able and willing to undertake the charge. We ſee many numerous ſchools that are managed without great difficulty. If a proper choice is made of perſons to have the charge of this affair, (and I doubt not but thoſe who are appointed to have the immediate care of it will pay all proper attention to this matter) ſuch as they make choice of may improve by experience, and their abilities enlarge with the demands for their exertion.

It would doubtleſs contribute much to produce all the good effects intended, if ſome Friend of ability, experience, and reputation, prompted by an honeſt zeal to promote the benefit of this eſtabliſhment, would take up his reſidence in the houſe (in which accommodations may eaſily be provided) as Treaſurer, and take upon him the ſuperintendence of the whole, in concert with the Committee who may have the immediate charge of this affair; and there is little

reaſon to doubt, but under the inſpection of ſuch a Friend every thing would be conducted to its reputation. The conſciouſneſs of ſerving the Society, and the riſing youth, in ſo intereſting a ſituation, would be a ſufficient recompence to a generous mind, for the care and fatigue attending ſo uſeful and honourable a ſtation.

We meet with perſons in other religious profeſſions, who, from motives of benevolence, give up their whole time and attention, without fee or reward, on ſimilar occaſions. Such are the treaſurers of many of the public hoſpitals, and other inſtitutions; and we hope the like diſpoſition to promote the general good, our numbers conſidered, is not leſs prevalent amongſt us, than amongſt other ſocieties.

The extenſiveneſs of the premiſſes at Ackworth has been an objection with ſome Friends, as it creates an apprehenſion, that to fill the place with ſo numerous a family as it is capable of containing, would be impracticable; or, if it was effected, would be not leſs difficult to govern prudently, than to ſupport effectually.

To this objection ſome reply has been already made; and if thoſe who are uneaſy on theſe accounts will be pleaſed to caſt their eye on the annexed plan, they will obſerve that the building conſiſts of three diſtinct parts; the centre, and the two wings. Should one part be found ſufficient for the purpoſe, the others may be converted to other uſes; or, ſhould this ſtep be found expedient, the materials may be diſpoſed of. But the firmneſs of the building, and the durability of its materials, will allow the whole to remain in its preſent ſtate without injury, till experience may have directed what ſhall be deemed moſt prudent in theſe reſpects. Many indeed are already of opinion, that the whole will be uſeful.

It has been alleged, that it might have been much more advantageous to the Society, could three or more ſchools on the like foundation have been ſettled in different parts of the nation: this at firſt ſight may appear to be a reaſonable allegation. It may be thought that ſmall ſchools are more eaſily managed than larger; that much would be ſaved in ſending children backwards and forwards; that many parents would conſent to ſending their children fifty miles, who would object to three or four times that diſtance; and, in ſhort, that each ſchool being under the guidance of Friends in the particular diſtrict, whoſe convenience it is to ſerve, its management would be inſpected with more attention and ſucceſs, than might be ſuppoſed to be the caſe with ſuch an affair as the preſent.

But let us look at the probability, that ſuch ſchools would be erected. Have we not ſeen the endeavours of the Yearly Meeting to obtain a much leſs encouragement, than would ſuffice for erecting and ſupporting a ſchool capable of admitting forty or fifty children, rendered wholly abortive? For my own part,

part, I am convinced by experience, that it may be poſſible to draw the attention of Friends to one conſiderable object, and intereſt them in its ſupport, whilſt leſſer ones will be apt in a ſhort time to diſappear, unleſs we ſhould diſcover a more lively zeal to promote ſuch undertakings, than ſome late endeavours have made apparent. It may be objected, that there is one recent inſtance, which militates againſt this poſition, the ſchool lately opened for the children of Friends in low circumſtances, at Gilderſome, near Leeds, in Yorkſhire; which, by the generoſity of the Monthly Meeting of Brighouſe, who ſet it on foot, and the activity of the Friends who have the immediate care of it, has proved beneficial to many children, and even brought divers from great diſtances.

I readily allow the exception; and had there been much reaſon to expect any ſimilar exertions, very probably the object of this letter would not have been thought of.

Notwithſtanding the ſchool at Gilderſome has received a very generous ſupport from Friends in that neighbourhood, and is thought to be conducted with great frugality, yet the managers of it have been obliged to raiſe the price from eight guineas to ten pounds; and though it is ſtill very moderate, compared with other ſchools, yet it is found to be rather more expenſive than is ſuitable to the circumſtances of many.

If, by the liberality of Friends through the nation, the intended School can be rendered ſtill leſs expenſive than is at firſt propoſed, the Friends who have ſet on foot the ſchool at Gilderſome, will have the ſatisfaction of ſeeing their own generous deſign carried more extenſively into execution, and will ſee the children of thoſe not in affluent circumſtances admitted to greater privileges than their funds could afford, with ſatisfaction. I foreſee that the erection and ſupport of this ſchool, muſt for a time prevent that at Ackworth from receiving thoſe aids from the friends of that inſtitution, which otherwiſe I am certain they would have been diſpoſed to ſupply. Gilderſome ſchool has however given one convincing proof, that little regard will be paid to diſtance, when proportionate advantages may be expected.

There is another houſe for the education of poor Friends children, which may alſo be mentioned in this place, as it may ſeem to be an objection to my poſition; the difficulty of erecting a number of ſchools for this purpoſe. The houſe I mean is Friends ſchool and workhouſe at Clerkenwell, founded and ſupported almoſt ſolely by Friends of the Quarterly Meeting of London. As it is almoſt the only inſtitution of this kind in the Society, it may not be improper to mention a few circumſtances concerning it. Many well-diſpoſed Friends, on conſidering the ſtate of the poor in London, apprehended that many of the aged, as well as the children of divers, might be better ſupported, and more ſuitably educated, were they to be collected together in one

one place, where every thing neceſſary for their well-being might be provided for them, more to their comfort than at their own habitations.

Accordingly, about the year 1700, this buſineſs was undertaken, and pretty generally and liberally proceeded in. It was ſo wiſely conducted, that it drew many perſons of note of other perſuaſions to viſit it; and was at once the means of deriving credit to the Society, by the propriety with which it was conducted, and of prompting others to exerciſe a degree of the like attention.

Perhaps there is not an inſtitution exiſting, upon which more labour, and diſintereſted endeavours, that every thing might be managed with order, œconomy, reputation, and general benefit, have been employed, than in this houſe: a Committee of eighteen Friends, choſen from the ſeveral Monthly Meetings, moſt part of them duly attending, meet once a month to tranſact the buſineſs of the houſe, beſides the weekly viſitors, who inſpect the conduct of the family at uncertain ſeaſons.

Under ſuch management, it cannot be wondered at that this eſtabliſhment ſhould become conſiderable. The fund is, I believe, about £. 20,000, or near it, ariſing from the generoſity and bequeſts of individuals in this metropolis, a very few inſtances excepted; in which ſum is included a legacy of £. 3000, left by our deceaſed Friend, Devereux Bowley, of London.

In the progreſs of this undertaking experience has proved, that the benefits derived from it have not been, in every reſpect, adequate to the hopes and expectations of thoſe who have been engaged in its ſupport; too few of the youth herein educated, the number conſidered, having turned out uſeful or reputable members of ſociety.

Two cauſes are aſſigned for this diſappointment, which indeed appear to be very probable. The one is, that the boys have been permitted, on one account or other, to be oftener in the ſtreets of this city than was to their advantage; ſuch as being allowed, at certain ſeaſons, to go to their friends and relations, not always the moſt exemplary in their conduct; by which means they learned ill manners, and worſe practices, and returned to the houſe in every reſpect worſe than when they left it: this however is now put a ſtop to. Another cauſe is, that a conſiderable number of ancient poor are maintained under the ſame roof; ſome of whom may have been brought thither, by deviating from the principles of our profeſſion, and conſequently not the moſt likely perſons to ſet the children a commendable example. We need not any proofs of the difficulty of educating our youth in great cities, where evil communication ever abounds, and where the corruption of manners is almoſt unavoidable. The following inſtance, in a very populous city, is known to many:

To ſerve the riſing generation, and promote its benefit, the ſum of £. 3000 was generouſly ſubſcribed by Friends, a houſe built, and an able, well-qualified maſter was procured. It was intended to be a day-ſchool; but ſuch was the

ill

ill effect of the children mixing with others in going to and from the ſchool, ſo much were they hurt by bad examples and bad company, that thoſe who had engaged in the generous deſign, found it neceſſary to abandon it, merely, as it appeared, from this circumſtance. Such is the neceſſity of preſerving youth from the influence of bad example, if we hope to preſerve them in innocence and ſimplicity.

The proſpect of avoiding both theſe cauſes of diſappointment, ſeems only obtainable in ſuch an inſtitution as the preſent; where, in the firſt place, every reaſonable endeavour will be uſed, that none make a part of the family, whoſe conduct is not exemplary; and in the next, no opportunities will be afforded the children educated there, of mixing with others to their harm.

Another circumſtance, that now ſtrongly pleads for ſuch an inſtitution as the preſent, is, that the ſchool at Clerkenwell, which has hitherto taken in Friends children from the country on eaſy terms, is now ſhut up to them.

This ſchool was ſet on foot, and is ſupported, by Friends of the Quarterly Meeting of London; and as there are ſeveral ſums of money lately bequeathed to this houſe, for the purpoſe of increaſing apprentice-fees, and farther encouragement to ſuch children of both ſexes as may deſerve it after a certain period, the whole of theſe emoluments will be ſuch, as to keep the houſe conſtantly filled with the children of Friends in London: and Friends in the country muſt now be obliged to ſeek for ſome other place of education, for the children who need the aſſiſtance of their friends.

The diſtance of Ackworth from many parts of the kingdom, where Friends are more numerous than in others, is objected to on account of the unavoidable expence of conveying them from and to the places of their abode; but this expence will be greatly reduced, if the children are allowed to remain there ſuch a length of time, as may enable them to receive competent inſtruction; the longer they are permitted to remain, the leſs burthenſome their conveyance.

The Committee I know have this matter very cloſely under their conſideration, and I have reaſon to believe that every method will be adopted that can make this article as eaſy to all parties as the nature of the caſe will admit.

It will perhaps be urged, that many Friends may be unwilling to ſend their children to ſo diſtant a part of the nation. It muſt ever be a difficulty to affectionate parents, to loſe ſight of theſe objects of regard and attachment. But is it not daily ſeen, that parents in the moſt affluent circumſtances, both amongſt us and others, part with their offspring to the greateſt diſtances, when the benefit in proſpect for their children claims ſuch a ſacrifice? The ſchools of Friends in the North, and in the Weſt of England, chiefly conſiſt of children from the greateſt diſtances; and they often remain at them, unſeen by their parents, a longer time than perhaps may be the caſe at this School.

Beſides,

Beſides, have we not ſeen this objection totally removed, by what has happened at Gilderſome, a place as remote from London, and the Eaſtern and Southern parts of the kingdom, as Ackworth?

Beſides, the ſeparation of children from their connections, is oftentimes of much conſequence to themſelves and their families, by preventing improper aſſociations, or diſſolving ſuch as may have already been formed, greatly to the unhappineſs of many an affectionate careful parent.

There is one objection of much weight, that naturally preſents itſelf to the view of every conſiderate perſon, which is the ſituation of the times. This is moſt certainly a diſcouragement to every public undertaking, and to this in particular: but with the difficulties of the times, the neceſſity of ſome ſuch proviſion keeps equal pace. Many may be obliged to accept of that help, which they once could afford to others; and one of the ſureſt means, perhaps, of averting ſuch neceſſity, will be to conſider ourſelves as ſtewards of the bleſſings we enjoy, and that by communicating to the wants of others, we are laying up proviſion againſt want ourſelves.

Large contributions are not expected, where but little can be ſpared; and thoſe who have abundance, we truſt will not withhold their aſſiſtance. By the means of the bills of admiſſion, many will have it in their power to leſſen the difficulties of a diſtreſſed and numerous family, by contributing half, where the purchaſe of a whole one would be oppreſſive, and ſo in proportion. To deſcend into all the objections that could be framed, would be tedious to my friend. I believe we ſhall both be of opinion, that thoſe who do not chuſe to part with any thing, however commendable and neceſſary the occaſion, will be found the moſt fertile in raiſing objections.

Hitherto there has been no reaſon to complain. When the matter was opened at the Yearly Meeting, and properly explained, Friends ſeemed to vie with one another in their generous efforts. This has likewiſe been the caſe, wherever the nature of the affair has been rightly underſtood.

If any doubts or difficulties occur to thee in this matter, I ſhall be ready to give any farther information that I can: and, on the other hand, if any hints occur to thee, that may tend to the more effectual completion of this deſign, I ſhall be very glad to receive them, and lay them before the Committee, who, I am ſatisfied, have nothing more at heart, than to fulfil the intentions of the Yearly Meeting.

I would again obſerve, that as we are now in poſſeſſion of a houſe, built for the expreſs purpoſe of accommodating large numbers of children, and with every conveniency for this purpoſe; where there is room for a variety of employments ſuitable to their ages and conditions, and where learning and good behaviour will be duly attended to; in a healthy country, plentifully

tifully ſupplied with fuel and proviſions; and, to crown all, under the inſpection of many judicious valuable Friends, there is every reaſon to hope for ſucceſs.

Application has hitherto chiefly been made for aſſiſtance in this undertaking, to ſuch who are deemed to be in affluent circumſtances. Thoſe of the middle rank are always ready to give their proportion, on every ſuitable occaſion; and I doubt not, but many ſuch are diſpoſed to favour this undertaking, according to their ability.

Of one thing Friends in general may, I believe, be fully ſatisfied; which is, that thoſe who have ſtepped forward in this affair, have had nothing more at heart, than that by embracing an opportunity which might never again offer, they might contribute, as much as in them lay, to render the labour and care of the Society, during the courſe of many years, effectual for the ſafety and preſervation of the riſing and ſucceeding generations.

I am
Thy friend,

JOHN FOTHERGILL.

London, 24th 1ſt month, 1779.

A N

Engliſh Freeholder's Addreſs

TO HIS

COUNTRYMEN*.

" With but half of our natural ſtrength, we are at war againſt confederate powers, who " have ſingly threatened us with ruin. Whilſt we are left naked on one ſide, our other " flank is uncovered by any alliance. We are accumulating debt to the amount of at leaſt " fourteen millions in the year."

BURKE.

---

* Publiſhed anno 1780.

I Had proceeded thus far in the preſent Collection, when I met with the following pamphlet; had I been previouſly informed of its authenticity, it ſhould have ſucceeded the Conſiderations relative to the North American Colonies, *as being connected with the ſame political ſubject: however, as they refer to very different periods of the ſame unnatural conteſt, their ſucceſſive connexion in this publication is leſs requiſite.*

I have already mentioned the intimate correſpondence which had ſubſiſted between Henry Zouch of Sandal and Dr. Fothergill, and this pamphlet is the ſubſtance of various letters from the latter to the former, immediately prior to the General Aſſembly of the county of York, held December 30th, 1779.

The late Marquis of Rockingham having fully conveyed to H. Zouch his ſentiments relative to the proceedings of the Yorkſhire Aſſociation; this reſpectable magiſtrate made the Doctor acquainted therewith, which produced the following letter:

"*London,*
"*the 25th of the 4th month,* 1780.

"*IT was very kind to communicate to me Lord Rockingham's letters, which*
"*I now return, with many thanks for the peruſal of them. They confirm the*
"*high eſteem in which I had long held him, for his engaging manners, the ſound-*
"*neſs of his judgment, and the integrity of his heart. Tho' a friend to liberty*
"*and the juſt rights of mankind, it is wiſe in him not to commit himſelf upon*
"*doubtful propoſitions, or which,* yet *at leaſt, are crude and unaſcertained.*

"*The paragraph relative to Lord S. is worthy of the writer. — Accept of*
"*my beſt wiſhes, &c.* *J. Fothergill.*"

N. B. The following is the paragraph in queſtion; it is taken from a letter ſent by Lord Rockingham to H. Zouch, dated March 23, 1780, *and hath reference to the duel in which Lord S. had been juſt then engaged:*

"*I had the ſatisfaction of ſeeing Lord Shelburne this morning. He has no*
"*fever, or any ſymptom to cauſe alarm.*

"*A few old letters in his waiſtcoat pocket, impeded the force of the ball.—I*
"*need not ſay, that his conduct* in the buſineſs *was highly honourable. Men,*
"*in theſe times, muſt ſtand prepared for ſtrange events. How neceſſary*
"general union *is become*!*"

* *No perſon who is anxious for the welfare of this country, can read the foregoing account without emotion. — The ſingular preſervation of a man to whom this nation is indebted for an honourable peace, at a period when ſhe was no longer able to oppoſe, with any proſpect of ſucceſs, the four greateſt powers in the world, may be gratefully revered as providential. The impartial page of future hiſtory may unite in equal eulogy a* Chatham, *who raiſed the empire by a ſucceſsful war; and a* Shelburne, *who ſaved it by a well-timed peace.* Editor.

A N

Engliſh Freeholder's Addreſs, &c.

My Friends and Countrymen,

THO' I almoſt deſpair of rendering you much ſervice, yet what little I can do, is due to the public welfare.

We all ſee and deplore the diſtreſſes of our country, and have ſtill greater in proſpect. I need not recount to you the ſeveral articles that make up the difference of what we *have* been, and of what we *are*.

To apprehend clearly the cauſes of this difference, and to endeavour to remove them, when found, is of much greater conſequence to us.

The origin of our misfortunes hath been hitherto attributed to various cauſes; but we now ſeem in general to be clearly convinced, that they proceed from the *American War*.

To inquire into the juſtice or injuſtice of this fatal conteſt, is not my preſent purpoſe. Very ſenſible, and very upright perſons, ſtill differ much in their opinions concerning this matter. But, however weighty and important the conſideration of it was at the firſt commencement, *now* there ſeems only to be one conſideration left to us; how to get out of it, with the leaſt poſſible loſs and diſgrace.

Having been intimately acquainted for upwards of forty years, not with the concerns of this or that province ſingly, but with them all, I ſoon perceived when the confuſion began, that thoſe who took the part of AMERICA againſt Adminiſtration, and thoſe who ſupported the meaſures of Government againſt that Country, were almoſt total ſtrangers to AMERICA, to the Country, and to its Inhabitants: many, to ſuch a degree, as to be ignorant whence the people ſprung; what language they ſpoke; what religion they profeſſed; nay, of what complexion they were. This ignorance was almoſt univerſal; and the little of truth concerning them that was advanced, was mixed with ſo much falſehood and abſurdity, and theſe became ſo rivetted in the minds of each party, that all reaſoning was loſt upon them.

I can

I can ſafely aver, that many of the officers who early went over on this unfortunate buſineſs, have come back as utterly uninformed, in reſpect to the moſt practical points, almoſt, as thoſe who remained here.

The knowledge of AMERICA was confined to the Merchants and Traders chiefly. It was a country talked of; but no people, ſave thoſe immediately intereſted in its produce, knew any thing about it. From the debates upon the STAMP-ACT, ſome little information aroſe, but this was forgotten in a few years.

The ISLAND *of Virginia* has been ſpoken of in a Court of Judicature, by a *learned* pleader; and ſimilar inſtances of a general ignorance, a criminal one, of this vaſt region, pervaded the Country, the Univerſities, the Courts of Law, the Legiſlature in too general a manner, and even Adminiſtration itſelf.

I have dwelt on this topic perhaps longer than may ſeem neceſſary, but I think it is impoſſible to account for the madneſs and folly of our conduct, on any other principle, than either conſummate ignorance of the ſubject of contention, or judicial infatuation.

I do not lay this to the charge of one party more than the other; the generality on both ſides have taken up their notions precipitately; means of information were not immediately at hand; and they contented themſelves with ſuch crude opinions as accident ſupplied them with. In ſuch a general outline there were exceptions; but as theſe differed from the common fabric of the day, they were neglected and deſpiſed.

If we examine the ſpeeches made by thoſe whom we ought to conſider as the beſt informed at this time, a perſon acquainted with AMERICA, the People, their Temper, their Reſources, who views what they *have* done, what they *are* effecting, and what extent of country they inhabit; will ſee ſufficient reaſon to believe, that the generality in this country are in a great meaſure ignorant of what moſt eſſentially concerns them to be fully and largely acquainted with.

It is with regret, that I am obliged to obſerve, that Adminiſtration is not ſo well informed, as they ought to be: not ſo much for the want of *means* of information, as to a habit of receiving *none*, but from ſuch as they chooſe; moſt unfortunately for the public, I am afraid, that no information is palatable to thoſe who ought to be rightly informed, but ſuch as favours their inclinations. Three ſorts of people have diſcovered their inclinations, and from the deſtruction of the *Tea*, nay, from the time of the *Stamp-Act*, have uniformly, and efficaciouſly ſupplied that very ſpecies of information, in abundance, which they found to be moſt acceptable.

Firſt, The *Engliſh* Commiſſaries of the *Stamp* duties, forced from their employments with diſgrace, made a merit of deſcribing the *Americans*, as one man,

man, averſe to Kingly Government. Their reports were heard with avidity; and in ſpite of that compromiſe, which took place on repealing the *Stamp-Act*, that nothing of the kind ſhould be attempted, yet it was reſolved to obtain a pepper-corn, which if refuſed, puniſhment ſhould follow: it was unanimouſly aſſerted, that the infliction of it was no leſs neceſſary, than practicable.

When this pepper-corn was demanded in the *Tea* duty, to pay it, or not to pay it, became the queſtion in AMERICA. Different ſides were taken, and thoſe who inſiſted on complying, were forced to leave their country; many of them, perſons of note, of property, and known at home, I mean in *England*, which an *American* always was accuſtomed to call *his home*. Theſe exiles were received with ſatisfaction; their accounts of the people fully believed; the hopes they offered became ſubſtantial; they were rewarded and provided for as well as the times would permit.

Unfortunately for this kingdom, I apprehend, we pay not leſs than 60,000 l. per annum for ſuch kind of intelligence, all tending to demonſtrate with one voice, that AMERICA is eaſily to be ſubdued; that more than half of the people wiſh to be under the dominion of *Great-Britain*; that the Congreſs is divided; and that a majority is ſoon to be expected on the ſide of *Great-Britain*. How often have we been aſſured, that *Waſhington*'s troops were uncloathed, unarmed, undiſciplined, and ſtarving? Yet, has he not baffled a ſucceſſion of the ableſt officers, and the beſt troops this country had to ſend, well appointed with every thing? What have they done? ſtayed till the officers were diſgraced, the army reduced; their ranks partly filled up with *American* recruits, and new regiments formed of them; the nation loaded with taxes, and a ſeries of evils that I will not recount. Such is the effect of miſinformation!

To theſe deluded, vindictive, neceſſitous people, are joined another *Phalanx*; all thoſe who profit by the War. Who are they? I anſwer, LEGION!

Partly perceiving the inclinations of their ſuperiors, but ſtrongly attached to their own intereſts, they join in the cry, and picking up the idle partial tales of the *Refugees*, retail them to the public as oracles, and give full ſanction to the profitable opinions of their ſuperiors.

Muſt we except the *Scotch* from aſſiſting in this pleaſing reverie? I wiſh not to perpetuate diſtinctions, nor to hold up to the public the part they have taken in forwarding this horrid buſineſs.

If they could regard an *Engliſhman* with the ſame partiality as they do their own countrymen in equal ſituations, they ſhould have my applauſe: they always have my diſintereſted regard; many of them are worthy of it.

What

What can withſtand the ſuggeſtions of all theſe? The *Refugees*, the *Contractors*, the *Military* when united, in ſaying things which it is wiſhed might be believed? Take theſe matters into conſideration, my countrymen, and then reflect on your condition!*

From my thorough knowledge of AMERICA, I ſcruple not to ſay, and I moſt firmly believe it from this knowledge, that if *France* and *Spain* were leagued with you *againſt* AMERICA, you never would be able to ſubdue it. You might drive them into the interior parts of the country, the determined part of them; poſſeſs yourſelves of their Towns and Sea-ports; but a nation would exiſt in ſpite of all your united efforts, and make it a moot-point, when you had effected this, whether the poſſeſſion of theſe places would be worth the expence of maintaining them: in my opinion they would not; and I think, I can give reaſons not eaſy to be refuted.

Should this opinion be tolerably well founded, What ſucceſs are we likely to expect when *France* and *Spain* take part with AMERICA againſt us? He muſt be an idiot of a very ſingular caſt, who is not able to ſee the conſequences! *Waſhington* alone with his forces, ſuch as they are, has prevented us from obtaining a ſingle province. *The Maſſachuſetts*, *Penniſylvania*, *Maryland*, and *Virginia*, (unleſs ſome frivolous, irritating, unavailing expedition up the *Cheſapeak*, ſhould make this province an exception) enjoy all the ſweets of peace, except maintaining troops at a diſtance for their defence. To leſſen theſe difficulties, the principal part of the pay of the *Britiſh* troops finds its way for neceſſaries into theſe provinces.

When the confederates of AMERICA act in conjunction with their new friends, vigorouſly, as there is every reaſon to ſuppoſe they will, becauſe it is their obvious and moſt important intereſt to render *Great-Britain* and AMERICA ſeparate Empires, then will *France* have her day of triumph over us. All *Europe* ſaw, that the two Empires united, were growing too mighty.

To think that *France* means to keep poſſeſſion of any part of AMERICA, claimed by the Congreſs, argues a childiſh ignorance: They mean only to *divide* you. It would be as expenſive, and as little advantageous to the *French*, or *Spaniards*, to keep poſſeſſion of any of the Congreſs territories, as

* *Dean Tucker* ſomewhere ſaith, that there are ſeven ſorts of people who clamour for war, and ſound the alarm for battle. 1. The Mock Patriot, whoſe breaſt beats high with the love of his country. 2. The hungry Pamphleteer, the Jackall of the Patriot lion. 3. That Monſter of Modern Times, the Broker and Gambler at *'Change-Alley*. 4. News-writers, Political Fire-brands—this country is now as much news-ridden, as it was prieſt-ridden in the days of our forefathers. 5. Contractors, Commiſſaries, Paymaſters, &c. &c. who croak for war, to fatten on human blood. 6. Dealers in exports and imports, and Colony traders, languiſh for war. 7. Land and Sea-officers are the invariable advocates for war.

it would be to you. Bickerings, contentions, and wars, would deſtroy all the fruit of ſuch poſſeſſions.

No wiſe *American* will ſubmit to it: nor will they ſoon prefer a *Frenchman* to an *Engliſhman*. Their preſent union, is an union of ſound policy; national friendſhip hath little ſhare in it: by mutual good offices it may become ſuch: and this will be effected the ſooner, in proportion to your inveteracy againſt them.

But what is your opinion, my Countrymen, of the confederacy formed around us, commonly ſtyled an *armed neutrality?* Of this I cannot ſpeak with ſo much confidence, as I can of the affairs of AMERICA, becauſe theſe I know; the other I can only gueſs at. But I will tell you my opinion: embrace it if it ſquares with your own. The *Engliſh* have long claimed the dominion of the ſea; and not only claimed, but exerciſed it; and in war, to a degree of inſufferable tyranny. No nation, however mortified, however affronted, durſt oppoſe our pretenſions: We obliged them to ſtrike to us, ſearched, ſeized, and condemned their ſhips, by laws of our own conſtruction. No nation durſt ſeek redreſs by any other means, than by quietly ſubmitting to our maritime code of laws.

When the powers of *Europe* ſaw us embroiled in the manner we are, our Colonies unſubdued by all our efforts, and joined by a powerful confederacy, they judged it a ſeaſonable time to aſſert their rights, and to frame a code of maritime laws on the principles of free navigation: That the ſea is a common highway for all nations bordering on it, and that no *one people* has a right to preſcribe or inſtitute a juriſdiction over another equally free, though not equally powerful with another. It would be a hard thing indeed, if every traveller of great force was allowed to compel another of leſs power to attend him at the next inn, to examine into the nature of his buſineſs.

Wearied with many grievous inſults and indignities, and perceiving our embarraſſed ſituation, the powers of *Europe* ſeem determined to frame a ſet of laws by which they will uniformly abide, in peace and in war: if we refuſe to comply, they mean to employ this *armed neutrality* againſt us. Should this be the caſe, what muſt be the event? *That we muſt receive laws at ſea in future, from thoſe to whom we have hitherto given them.* It may be very juſt, but it is certainly very humiliating to a brave and high-ſpirited people, that hath been long in poſſeſſion of ſuch a ſovereignty. If we refuſe to comply with the regulations preſented to us, this *armed neutrality*, in conjunction with *France* and *Spain*, will in my opinion unite in compelling us.

To our *American War*, to which we ſeem at beſt to be barely equal, is likely to be added the *armed force* of all the maritime powers in *Europe*. If we can but barely ſupport ourſelves in the former, is there the leaſt chance for us to oppoſe the latter with ſucceſs?

There ſeems however to be another matter in contemplation with theſe *neutral powers.*

They know how much our power hath increaſed by our Commerce in general, with AMERICA in particular. Tobacco is a conſiderable article of traffic, and of revenue in moſt of the *European* ſtates: they wiſh to partake in this buſineſs, as well as in other articles of *American* trade: at a proper ſeaſon I imagine they will ſend the like meſſage to us, as *France* has done.

AMERICA, ſay they, has declared herſelf independent; *France* and *Spain* have acknowledged her independence; they enjoy the benefit of it; and the ſubjects of theſe other ſtates petition for the ſame privileges; they grant theſe privileges, declare AMERICA independent, and tell you, if you moleſt them they will reſiſt. Are you able to contend with all the world?

Say that theſe are conjectures:—be it ſo; but they are conjectures worth attending to, and which only can be rendered ineffectual, by *a peace with America.*

Without a *peace* you are undone at home, and controlled by your neighbours. I omit the catalogue of diſtreſſes which have grown, and are ſtill increaſing from the *American War*, becauſe they are known, and felt by every ſenſible feeling perſon.

Where is the remedy? There is a ſhort one, tho' bitter to a few; *make peace with America*, before your ſucceſſes are balanced by misfortunes, and before general vengeance ſuperſedes the friendſhip yet ſubſiſting between nations of the ſame origin, language, religion, habits, and complexion: now is the time. But how is peace to be made? on what conditions? Grant *that* which you cannot keep; or if loſt, is, by all your force, irrecoverable,—*Independence*: ſooner or later this muſt be done; let the *Refugees* and others intereſted in deceiving you, proclaim the contrary never ſo loudly. I have converſed with many of them, as well as with others; there are many who are honeſt enough to acknowledge the truth—*that America is invincible.*

France will never allow the *Americans* to make peace with us, on any but the moſt humiliating terms, ſay the advocates for war. Thoſe who aſſert this, know very little of either *France* or *America.* Their league is, and is only, that neither *France* nor *America* ſhall make peace with *Great Britain*, till AMERICA is declared *independent.* This being effected, a peace is negotiable.

Till then every attempt to a reconciliation is fruitleſs. It is the intereſt of *France*, of *Spain*, of all *Europe*, that this ſhould take effect; that *Great Britain* and *America* ſhould be divided: and the war will be continued till this is effected.

Shall we then plunge ourſelves into greater, obvious, unavoidable embarraſſments, truſting ſolely to the chapter of accidents, and ſee ourſelves reduced

to ſuch a ſtate of weakneſs as to receive laws, from powers that dreaded our frowns? or ſhall we, laying pride and vengeance aſide, like wiſe men, endeavour to make the beſt of a bad bargain, and try to extricate ourſelves from laſting diſgrace and poverty? Theſe are mortifying reflections, but the event will juſtify them. I ſpeak not from a ſpirit of prophecy, but from clear deductions from cauſe to effect. It may be aſked, what can *France* gain by all this expence, if ſhe ſeeks not for territorial poſſeſſions in AMERICA? Why, uncontrolled ſuperiority in *Europe*. Where is the power, when AMERICA is divided from us, that can withſtand her?

Whilſt we had AMERICA, *France* knew, and all *Europe* felt, that every diſtant poſſeſſion they had, were ſo many obligations for their peaceable behaviour. They ſaw AMERICA growing ſo populous, and ſo powerful, her commerce increaſing, and enlarging the power of *Great-Britain*, that nothing was ſecure from us. By the people of *New England* only, *New Spain* would have been added to the *Britiſh Empire* in a few years of war, with the ſuccour of a *Britiſh* fleet; and *France* knew that their *Weſt-India Iſlands* were held by them, at our courteſy, ſhould a war break out. In the laſt war the *New Englanders*, by ſuch aſſiſtance, gave us the *Havannah*, — and ſince that time they have been increaſing in numbers, and as it ſeems likewiſe in military talents. What greater acquiſition can a nation obtain, than ſecurity from foreign force, and a power of retaliating injuries? All this every nation in *Europe* will obtain by our humiliation.

I own that it might ſeem a ſufficient inſtigation for us to continue the war, were there a fair probability of ſucceſs; of maintaining our authority over the revolted colonies, according to the maxims of our ſuperiors. But it is madneſs to attempt that, which we can have no foundation to hope, either from reaſon or experience, is in our power to effect; and if we attempt it, and fail, we are undone.

If then, my Countrymen, we are perſuaded that our calamities originate from the *American War*, and if greater are ſtill in proſpect; If it is certain, that the ſucceſſes we have hitherto gained, are not of equal conſequence; If the forces of our enemies increaſe, and our powers diminiſh; If we have not a friend to ſupport us, but all *Europe* looks upon us with coolneſs and amazement, ſtanding on the verge of declared hoſtilities; ſhould we not join, as one man, in petitioning the throne for *peace*, before we are compelled to do it on ſtill harſher terms?

I truſt that I am not ſpeaking the language of faction, nor that I am actuated by a ſpirit of party. I love and honour my ſovereign, and my country. I wiſh we could have retained the *dependence* of AMERICA: But it is *gone!* Let us however recover her *friendſhip*; we ſhall recover our commerce with her,

and her ſupport. Let us not loſe ſo precious a treaſure, and ſacrifice the remaining power of this nation, to folly, pride, and vengeance.

It would be groſs preſumption to expect, that you ſhould adopt opinions like theſe, from a nameleſs author, and unknown authority; I do not wiſh for it: thoſe who can believe one ſide without proof, will change their opinions, on a like uncertain, unknown authority. Be therefore upon your guard; compare what is here offered, with what you have heard, what you ſtill hear from both ſides; compare that with what you ſee, and feel; and if *this* repreſentation then merits your notice, act accordingly.

It has been ſaid that the *American War* is a *popular* war!—it was at its firſt commencement, and why? Becauſe the people were taught to believe two things, which as they favoured their purſes, and their pride, were moſt readily admitted.

They were taught that every ſhilling we could obtain from AMERICA, was a ſhilling gained to them; they were taught that the *Americans* were under every kind of obligation to this country, and had ungratefully refuſed to pay them this ſhilling.—— *John Bull* needed no more to prompt him to declare war, not only againſt AMERICA, but if neceſſity ſo required, that is, if any other nation refuſed to comply with *John Bull*'s demands, he was ready to declare war againſt all and ſingular ſuch repugnant nations. We all know with what facility, with what fatal facility, the people of this country may be worked up to eſpouſe any cauſe that favours their arrogance, and their intereſt.

I imagine that the people in general are now fully convinced, that the *American War* had better never have been begun; — and that it is now ſo far from being a *popular* one, that in ſpite of that ſecret pride which hinders us from owning our miſtakes, and in ſpite of that vengeance we could wiſh to execute on thoſe who oppoſe our wiſhes, yet taught by dear experience, they wiſh to have an end put to the difficulties and loſſes that the *American War* produces.

They have been taught likewiſe to ſee, that they have been groſsly impoſed upon; that the *Americans* are men as well as themſelves, capable of feeling oppreſſion, and reſiſting wrongs; and that there ſeems no favourable iſſue to the preſent contention.

To all theſe misfortunes, What is the remedy? *Peace with America.* Is this become the popular cry? I believe it is: and could this be proved, I cannot imagine, that the Court, or the Senate, would purſue a meaſure become unpopular, unavailing to the end propoſed, involving us in the greateſt dangers, and entailing ruin on our poſterity.

Was I to preſume for a moment to look up above my humble ſphere, and figure to myſelf a ſovereign, powerful and revered, ſtanding on a precipice, and urged to its verge by miſtaken councils, and miſinformation; ought I not

to

to be deemed a Traitor, if I withheld information of his danger, and ceaſed to prompt him to conſider his ſafety, by telling him, That if he either receives wrong information, or miſuſes his judgement, it would be the moſt terrible of all earthly misfortunes to himſelf, his family, and his people?

Should a perſon ſtrongly prejudiced in favour of the *American War*, [allow me here to lament the ignorance of a *Miniſter*, who not long ſince publicly declared, that *half* of the people in AMERICA wiſhed to become ſubjects of *Great-Britain*; as a greater and more palpable miſtake, cannot eaſily be uttered] I ſay, ſhould a perſon ſo prejudiced deny the poſitions I have laid down, what muſt be done to convict him of his miſtake? Produce the ſtrongeſt evidence of their truth the caſe admits of, a ſingle perſon can make but little progreſs in a work like this: it is a *national concern*; and the public mind cannot be better occupied than in ſuch an enquiry.

I am told, and I have ſome reaſon to believe it, that very few of thoſe officers, or others who have been in AMERICA, are cloſeted, till it is known whether the language they intend to ſpeak, favours more of war or peace: if they repreſent the war as ruinous and ineffectual to the end propoſed, *ſubjugation*, no further notice is taken of them from that moment.

But this is not all: pains are taken without doors to diſcredit their reports; that intereſt, diſappointment, imprudent conduct, influence all they ſay, and therefore they are diſbelieved. Falſehood gains the firmer footing, and a devoted people is deprived of all proper evidence.

Aſſociations, in many places, have been entered into; *petitions* preferred; and other legal and pacific means uſed, with a view of reſcuing us from impending ruin; but what hath been the conſequence? A general defeat.

It is urged, that we *aſked* for too much, and therefore obtained nothing. Be this as it may; no good citizen will ever be diſcouraged from making further movements towards obtaining a temperate and conſtitutional reform.

To ſet on foot a diſpaſſionate, general enquiry, *County by County*, into the effects which this war has had upon them ſeverally, whether for the better or the worſe; would ſeem to be neither an impracticable, offenſive, nor an uſeleſs ſcheme. It would collect into one point, the *feelings* of the people; it would be no difficult matter, then, to gueſs at their *opinions*—And the knowledge of the public mind, thus concentered, would undoubtedly produce juſt and cogent reaſons, for continuing or diſcontinuing the *American War*; and it ought not to be ſuppoſed, that our ſuperiors, when they ſee the ſentiments of the people at large, will have any other mind, than a right one.

Would it therefore be an improper meaſure to prevail upon the preſent *Aſſociations*, and others to be appointed in Counties where there are none, to obtain the beſt account they can of the preſent ſtate of affairs amongſt them,

in

in reſpect to the value of lands; the ſtate of manufactures, where there are any; the progreſs in public works for profit, or pleaſure; the ſtate of the poor's rate; and ſuch other indubitable evidence of the preſent condition of this country, as it may be in their power to collect? I confeſs that this may be a difficult undertaking; yet, if accompliſhed, could not fail of carrying with it conviction to the moſt determined breaſt.

For it cannot be ſuppoſed that any man, or any ſet of men in power, ſhall from mere obſtinacy and caprice, perſevere in effecting the ruin of a country over which they preſide.

It would make a neceſſary part of theſe enquiries, to obtain likewiſe, as far as poſſible, not partial fragments of the preſent ſtate of *North America*, the ſtate of our armies in it, the power of their opponents, the expence we are at, and the comparative of theirs. Hitherto the *Americans* have had very great difficulties in ſupporting public credit, and obtaining a value for their currency. I am informed that both are put upon a better footing now, than they have been. The pay we ſend over for the ſupport of our troops, in a great degree finds its way into the hands of the *Americans*. They are induced at great riſks to ſupply us with freſh proviſions, and other neceſſary articles, and receive in return exorbitant profits. Two ſhillings ſterling has often been paid, I am informed, at *New York* for a Cabbage. The *Americans* will be in no haſte to terminate a War, which affords ſuch gains to their country. It is ſuppoſed there are near *Three Millions ſterling*, now in the Continental ſervice.

The great depreciation of their currency is amended in one opulent province, by a ſubſcription of a great number of perſons of known property, to receive the paper currency at its full value; and if this is followed by the other ſtates, this currency will be as valuable as our bank notes. Had not a number of Gentlemen united in the year 1745, to give theſe notes a ſanction, we might then have felt all the depreciating conſequences of unſtable credit, that has hindered the *Americans* from doing any thing effectually.

Proper enquiries will bring many things of this nature to light, and enable us to determine, with preciſion, the chance we have of ſubduing them.

Two enquiries ſeem therefore worth attending to, in order to carry unequivocal and intereſting information to our ſuperiors: 1ſt. The ſtate of things at home; 2d. The ſtate of affairs abroad; in which may be included, notices of the ſtates about us.

It is not impoſſible to obtain accounts that may be relied on, by private perſons, of their views and intentions. In a word, to get juſt intelligence, and to convey this intelligence with proper vouchers, to thoſe whom it concerns, ſeem to be the moſt likely means of bringing us all into one mind, which is, the abſolute neceſſity of *making peace with America*.

There

There has lately ariſen a new and very cogent reaſon, exceedingly weighty with every humane every chriſtian mind, to effect, if poſſible, this important purpoſe. Hitherto the war in AMERICA has in general been carried on with a degree of temper and moderation, ſeldom known in civil wars, of which this is a certain, but ſingular ſpecies.

Both the parties, engaged in the execution of the orders of the States they ſerved, did their duty with reluctance; they *felt* as Brethren, though they were commanded to have no ſuch feelings.

Still however the generality hoped that a time *might* come, when they might once more ſhake hands as friends, if not as brethren.—Sudden provocations beget as ſudden, and as violent retaliations.—Conſidering the length of the war, and other circumſtances, theſe inſtances have been comparatively few. The troops on both ſides performed their duty coolly, and with the feelings of humanity.

The late executions, firſt at *Charles-Town* by Lord *Cornwallis*, the retaliations by Congreſs, and the late one in the *American* Camp, have enraged the *Americans* on one ſide, the *Britiſh* army on the other; and victory, by fair and honourable means, will be no longer the object, but all the horrors of Revenge! Nothing will eſcape the fury of the ſword on either ſide! right and wrong will ceaſe to be the views of either; nothing but fiery indignation!

Can the people of *England*, famed for humanity, look calmly on ſuch a ſcene? If they can, Where is their boaſted humanity? Where is their pretence to a reformed Religion? Alas for my country, if ſuch is their inſenſibility, barbariſm, and impiety!

That thoſe who have led us into this unnatural and inhuman conteſt, ſhould have no concern, no compunction, I do not wonder. Had they ſeen, or felt the calamities of war, they would aſſuredly have prevented them. From them we can expect no mitigation of human miſeries!

It is the piety, the compaſſion of the public, that muſt interfere to prevent theſe dreadful calamities, and ſtop the further effuſion of blood. For your own ſakes therefore, and for theirs, uſe every effort to open the eyes of thoſe who direct this dreadful ſtorm, that they may ſee its conſequences.

As I am perſuaded, that the want of proper and juſt information is one great cauſe of our preſent fatal controverſy with AMERICA—want of information, what AMERICA is, and is *capable* of; want of information, to what *extent* we ſuffer on this account—procure it for them: force the evidence of truth upon them: not by clamour and acrimonious invectives, (provocations which neither ſide would bear in ſimilar ſituations) but with calm, diſpaſſionate, irrefragable proof.

If you think that the *Americans* only will ſuffer in this revengeful conflict,

you

you are certainly miſtaken; numbers of them may fall, but your ſons, brothers, relations, muſt likewiſe become victims to rage and fury in ſome proportion!

To deſcend to a view of our ſituation in the different parts of the globe, would lead me from the point; I wiſh to keep always in view, the abſolute neceſſity of *peace with America, on any terms*. We are yet an unbroken Empire in every part of the globe, but AMERICA; therefore when peace becomes the object with the contending ſtates, the *uti poſſidetis* is in a narrow compaſs.

Hitherto we have taken nothing from *Spain*, nor they from us, I mean of territory, except in a point of *Florida*. The *French* have got from us two Iſlands which we can ſpare.

But ſuppoſe the *Spaniards* ſhould make themſelves maſters of *Gibraltar*, (and if they are ſuperior at ſea, which is far from impoſſible, this may happen) what is to become of our influence in the *Mediterranean?*

While the ſtates of *Barbary* ſee us in poſſeſſion of this fortreſs, in ſpite of the utmoſt efforts of *Spain*, they acknowledge us ſuperior to *Spain*, and are afraid of our power. They treat the *Britiſh* ſubjects with ſome degree of reſpect; and I believe, there are few, if any, now in ſlavery.

But was this the caſe before we were in poſſeſſion of *Gibraltar?* By no means. I have documents before me of large ſums annually employed in redeeming *Engliſhmen* from the horrid cruelties of *Turkiſh* ſlavery. When they ſaw us in poſſeſſion of this fortreſs, and able to maintain it, they juſtly concluded that a nation, which could do ſo *much*, could do *more*; and therefore treated us with reſpect: with them we ſtand the foremoſt of all maritime powers. The moment we loſe the poſſeſſion of *Gibraltar*, that nation which obtains it, becomes the object of their fear, and the others ceaſe in proportion to have any weight with them.

It is of the utmoſt conſequence to *Spain*, that ſhe ſhould obtain this important fortreſs; and it is a convincing proof of her aſſurance, that the preſent war muſt inevitably ſecure her in the poſſeſſion of this, and many other advantages, if ſhe could forego the offers of peace, if ſuch a bribe was propoſed to her.

I own that I am ſollicitous for peace, and I hope not leſs ſo, for the honour of my Country: to the beſt of my knowledge, I have endeavoured to perform my part towards conveying all the juſt, and impartial information, that came within my reach; being firmly perſuaded that a diligent and prudent enquiry into theſe ſubjects, abſolutely neceſſary at this time, will confirm the ideas here thrown before you. That they may contribute to inſpire your minds with a reſolution to act the part of *Engliſhmen*, and *Chriſtians*, is the warmeſt wiſh of my heart.

I am, my Countrymen,
Your faithful Friend,
An *Engliſh Freeholder.*

ON THE

EMPLOYMENT OF CONVICTS.

Gazetteer, Sept. 30, 1776.

IT requires a very extenſive acquaintance with many circumſtances, to provide employment for thoſe people who have hitherto been condemned for tranſportation. It will not therefore, I am perſuaded, be taken amiſs by thoſe who have planned the late Act, if I ſuggeſt a few conſiderations on the ſubject; how pertinent they may be, the public will determine.

It is not merely to puniſh, but likewiſe to deter others by example from committing crimes worthy of puniſhment, that is the object of the Legiſlature. Was no other circumſtance to forbid it, one would therefore wiſh, that the mode adopted might be as much open to the inſpection of ſuch as are likely to offend as poſſible. That the preſent method has not every advantage of this kind, is moſt certain: few perhaps will pay them a viſit on the river, at leaſt of thoſe perſons who ought to profit by their example. I do not mean, however, that they ſhould be ſuffered to go at large, though in chains and with keepers; they ſhould be kept as much as poſſible from all converſe with the public, and yet be ſeen by them.

Amongſt other employments, that of ſawing ſtone has repeatedly been propoſed to the public. Let us ſtate ſome of the advantages, and by conſidering them, we may poſſibly ſee more of the difficulty of providing a proper ſituation for theſe people:—To employ them,

1. In a buſineſs that requires very little previous inſtruction.

2. Wherein one perſon can look after and inſtruct ſeveral.

3. In which the labour may be proportioned to the ſtrength, and a ſuitable taſk enjoined.

4. In which they cannot embezzle the materials.

5. In which they do not interfere with any buſineſs to which an apprenticeſhip is ſerved; as it may be preſumed, the moment felons are employed in it, honeſt men would chooſe to leave it.

6. An employment which has the appearance of hard labour, yet is not oppreſſive.

7. Where they can be ſeen at work, without a poſſibility of much communication.

8. In which they can earn enough to maintain themſelves; having ſomething reſerved, to compenſate in part the wrongs they have done, and a part reſerved for their maintenance in old age, or for their families.

9. In which a conſiderable number may be kept in a narrow compaſs, and eaſily ſecured at night from doing miſchief, or eſcaping.

10. And where they may receive Chriſtian inſtruction; as well as wholeſome diſcipline and correction, if they deſerve it.

It is obvious, that all theſe particulars ought to make a part of this new inſtitution. I will not compare the practicability or advantage of this or that ſcheme; it would ſeem invidious.—I rejoice that any mode is thought of and adopted for the puniſhment of offenders, by ſubjecting them to labour in their own country; and I hope it will be extended to all criminals, except murderers, incendiaries, and robbers who commit actions of cruelty, whether in houſes or on the road; and there let retaliation take place, as well as confinement to labour for life.

Sawing ſtone, either marble, Portland, or any other kind of ſtone, that is uſually cut in this manner for the purpoſe of building, is an employment that has theſe advantages:

1. It is performed by the maſons labourers in general, who are ſoon taught to perform it. No one, I believe, ever ſerves an apprenticeſhip to it. And was the price of this labour reduced, more houſes would be built with ſtone, ſtairs eſpecially, by which fires and many other accidents would often be prevented.

2. In this employment, a very few perſons could ſuperintend many; for if they were diſpoſed to be refractory, it would be eaſy to confine each perſon to his place, yet without hindering his work, or in any reſpect diſabling him.

3. To proportion each perſon's labour to his ſtrength, would in this employment be an eaſy matter. A large block of ſtone, and a long ſaw, requires more ſtrength than a leſſer one; and as it would ſoon be known how much a perſon could ſaw in a certain given time, to ſet a taſk, rather with a reward annexed, than a puniſhment, would by no means be difficult; and by this means ſave the trouble of much chaſtiſement.

4. One ſhould for ever guard againſt the malignant and miſchievous. Were they employed in any thing in which they could clandeſtinely do miſchief, they would do it. In this occupation they can do none, but it immediately becomes its own puniſhment. The line is marked upon the ſtone, and by inclining the ſaw, they could injure the block and the ſlab; but by this inclina-

tion the work would become ſo much the more laborious, that they would ſoon give up miſchief that would be to their own puniſhment.

5. It has been ſaid, that nobody ſerves an apprenticeſhip to this buſineſs, therefore no honeſt man is caſhiered from his employment. It would ſeem, that there are about 300 perſons, perhaps more, who occaſionally do this buſineſs, when their maſters, the maſons, have no other employment for them, in and about the city of London. They earn from ten or twelve to thirty ſhillings a week, in proportion to their diligence and dexterity; the only expence is the price of the ſaws; it would not therefore be difficult, by keeping them diligently to *work*, to oblige them to maintain themſelves, to ſhare a part of the produce of their labours, to make reſtitution, at leaſt ſome little compenſation; and to prevent their families, if they have any, from being burthenſome to their pariſhes; and a reſerve may be kept for their ſuſtenance in old age.

6. However hard the labour may ſeem, it need not be made oppreſſive; it has the appearance of hardſhip, but it is not ſo in reality, if thoſe who have the care of them do their duty with any degree of humanity. Theſe ought to be paid by the public, or from the general earnings of the confined, but ought to have no immediate benefit from their labour. Care, as much as poſſible, ſhould be taken, that the intention of the law ſhould be put in practice.

7. It has been obſerved, that they may earn ſufficient to maintain themſelves, and make ſome reſtitution.

8. Let a piece of ground be allotted for this purpoſe on the river ſide, in three different parts of London and Weſtminſter; one near Old Palace or Scotland Yard, one near the Savoy, and one near the Tower.

Theſe three places are propoſed for two reaſons: firſt, That it will be neceſſary to have them on the water-ſide, for the more eaſy conveyance of the blocks of ſtone; and, 2dly, to be near places where guards are always at hand to quell any uproar, or ſudden attempt to eſcape, that might be attempted to be put in execution; and for this purpoſe a certain ſignal might be agreed upon between the governor and the commanding officers, ſhould their aſſiſtance be immediately wanted.

To the river may be a range of buildings, for the governor and his aſſiſtants: on two ſides let ſtrong ſtone cells be built, capable of being made warm in winter by flues in the walls, where each perſon may have his ſeparate dormitory. To the land-ſide let the place be open to inſpection, only ſecured by a double range of high iron palliſadoes; in the interval between, the ſtone may be laid as it is ſawn, either for the purchaſer or the order.

Through theſe palliſadoes the men might be ſeen at work by all paſſengers, or others whoſe curioſity might lead them to ſee ſuch an example; yet without the poſſibility of having the means conveyed to the priſoners to facilitate their

eſcape. And if all their cloaths were to be party-coloured, coats, waiſtcoats, and breeches, half black half blue, or of any other two colours, it would ſcarcely be poſſible for them to be long concealed, ſhould they ever eſcape.

Let thoſe who have diſtinguiſhed themſelves by their diligence and obedience, be gradually employed in carrying the ſtone from the ſawyers to this receptacle, and other neceſſary employments about the place: but the particular regulations muſt ariſe from experience.

I do not obſerve that any proviſion is made for any kind of religious worſhip for the perſons now condemned to labour on the Thames. This is a great defect. Perhaps the crimes of ſome may have proceeded from a total neglect of every religious duty. The ſpirit of Chriſtianity breathes a different temper. A proper place might be ſet apart for their conſtruction, in a place where numbers are confined on ſhore: in floating priſons this is leſs likely to happen. We cannot forget this Chriſtian care, and be innocent of their blood if they periſh for want of our endeavours.

If theſe ſuggeſtions are compared with the preſent employment on the Thames, where it is very probable theſe weak debilitated wretches muſt be ſet to do the work of the moſt athletic habits, it may poſſibly appear, that the plan here ſuggeſted may have its advantages; but it is not to gain credit, but to do good, to conſult for the public weal, that I have offered theſe conſiderations to whom it concerns.

It may be ſaid, there is not, cannot be, work enough in this way for all the criminals in England. At all ſea-port towns they may be employed in this manner, and on many parts of the navigable canals now carrying on in different places, and to whoſe works the labour of theſe people would be a conſiderable advantage.

It would not be difficult to point out ſome other advantages; but I have treſpaſſed perhaps too much already on the reader's patience, and the room allowed by the printer.

One thing, however, may poſſibly haſten an amendment, whether this or any other plan is adopted for the puniſhment of offenders. There may be leſs temptation, if public calamities ſhould compel us to be leſs profligate and abandoned.

Philanthropos.

HORTUS

BOXES *for conveying* PLANTS *by Sea.*

Fig. 1.

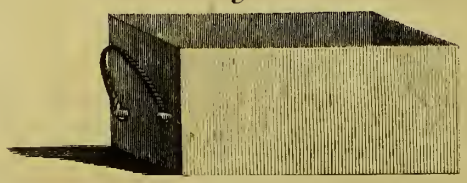


Fig. 2.

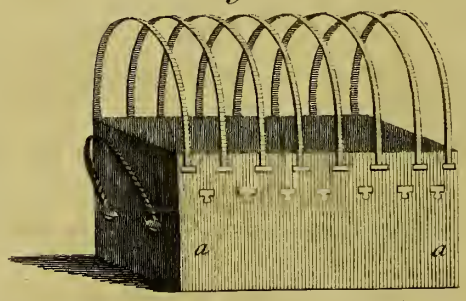
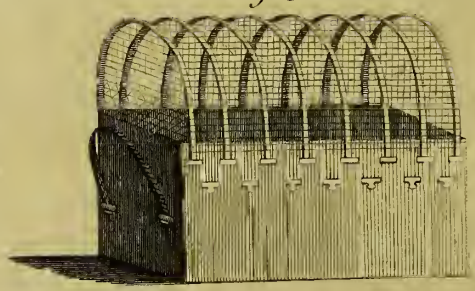


Fig. 3.



F. 1. Form of the Box.
2. The same with hoops and loops.
a.a. for securing the Canvas.
3. The same netted.

J. Lodge sc.

HORTUS UPTONENSIS;

OR,

A CATALOGUE

OF

STOVE AND GREEN-HOUSE PLANTS,

In Dr. FOTHERGILL's Garden at UPTON,

At the Time of his Deceaſe.

THOUGH I have endeavoured to render the following catalogue as complete as poſſible, I am aware of the poſſibility of many inaccuracies and defects; but at the ſame time I am conſcious that I ſpared no labour to prevent them.

I have choſen an alphabetical arrangement of the plants, as conſtituting an Index moſt familiar to the generality of readers, and more convenient for thoſe who may be fond of horticulture, and yet, from the urgency of other avocations, may not be converſant with the ſexual ſyſtem of Linnæus: at the ſame time, I have not totally neglected botanical arrangement; having introduced the claſs, order, genus, and Engliſh name of each ſpecies of plant. I have alſo, in the central column, ſpecified the ſituation each requires, by the letters S *and* G; *the former ſignifying the ſtove or hot-houſe, and the latter the green-houſe; and occaſionally added ſuch notes as the ſubject appeared to require. Many rare and curious plants, it is well known, are natives of the Eaſt Indies; and throughout the Indian Archipelago, as well as upon the Coaſt of Coromandel, the Malay language is either ſpoken or underſtood; this has induced me, where I was capable of doing it, to add the names of certain plants in this language, as a likely method of enabling the inquiſitive traveller to diſcover more readily and certainly the object of his enquiries; and, to avoid repetition, Malay is denoted by the letter* M *added to ſuch notes.*

I formerly drew up, I may add with Dr. Fothergill's approbation at leaſt, ſome Directions for bringing over ſeeds and plants from diſtant countries, which I think not altogether inapplicable in this place; and, to render theſe directions more intelligible and uſeful, I have annexed an engraving of boxes adapted to the purpoſe of conveying plants and receiving ſeeds in vegetation.

The gardens of the curious have already been enriched with many valuable acquiſitions from diſtant countries; but many attempts alſo to introduce ſeveral other plants equally rare, have been unſucceſsfully made, owing to the bad ſtate of the ſeeds or plants when firſt procured, or the method of diſpoſing of them during long voyages, and ſuch accidents as the utmoſt precaution cannot prevent.

For the purpoſe of tranſportation, ripe ſeeds ſhould be choſen, which have been collected in dry weather, and kept dry without expoſing them to ſunſhine; and internally they ſhould be plump, white, and moiſt.

(a) *They may be preſerved by rolling each in a coat of yellow bees-wax, about half an inch thick; and afterwards a number of theſe, thus prepared, may be put into a chip-box, which is to be filled with melted bees-wax, not made too hot: the outſide of the box may then be waſhed with a ſolution of ſublimate mercury* *,

* *Sublimate mercury is the moſt effectually diſſolved in the acid of ſea ſalt; one drop of which will diſſolve one grain of mercury, which will afterwards mix with water. One drachm of ſublimate will be ſufficient for half a pint of water.—— Corroſive ſublimate may likewiſe be diſſolved in a ſaturated ſolution of ſal ammoniac in water, one ounce of which will diſſolve twenty ſcruples of ſublimate.*

and

and kept during the paſſage in a cool airy place. In this manner tea ſeeds, the ſtones of mangoes, and all hard nuts and leguminous ſeeds in general, may be prepared.

(b) *Inſtead of putting ſmall ſeeds in bees-wax, they may be incloſed in paper or cotton which has been firſt ſteeped in melted bees-wax, and then placed in layers in a chip box, ſome of which may be filled as before with melted bees-wax. Pulpy ſeeds, as thoſe of ſtrawberries, mulberries, arbutuſes, &c. may be ſqueezed together and dried, and then put into the cerate paper or cotton above-mentioned. I lately received ſeeds of the Mimoſa Japonica, and Æſchinomine Movens, from the Eaſt Indies, incloſed in linen that had been ſteeped in bees-wax, and theſe ſeeds appeared as freſh as when firſt collected.*

(c) *The ſmall ſeeds, when dried, may be mixed with a little dry ſand, put into the cerate paper or cotton, and packed in glaſs bottles, which are to be well corked, and covered with a bladder or leather *. Theſe bottles may be put into a keg, box, or any other veſſel, filled with four parts of common ſalt, two of ſaltpetre, and one part of ſal ammoniac, in order to keep the ſeeds cool, and preſerve their vegetative power.*

The following methods, which are attended with leſs trouble, have been alſo found ſucceſsful: (d) *ſeeds and nuts, in their pods, may be incloſed in linen or writing-paper, and put into caniſters, earthen jars, ſnuff-boxes, or glaſs bottles; the interſtices between the parcels of ſeeds ſhould be filled with whole rice, millet, panic, wheat-bran, or ground Indian corn well dried. To prevent any injury from inſects, a little camphor, ſulphur, or tobacco, ſhould be put into the top of each caniſter or veſſel, and their covers well ſecured, to exclude the admiſſion of the external air.*

(e) *The ſeeds, well dried, may be put into a box, not made too cloſe, upon alternate layers of moſs, in ſuch a manner as to admit the ſeeds to vegetate, or ſhoot their ſmall tendrils into the moſs. In the voyage the box may be hung up at the roof of the cabin; and when the ſhip is at the place of her deſtination, the ſeeds ſhould be put into pots of mould, or boxes, with a little of the moſs alſo about them, on which they had lain.*

Seeds preſerved after the manner (e), *as well as that of* (d), *and likewiſe, for further ſecurity, ſome of the preceding* (a), (b), (c), *which have been procured in the Eaſt Indies, may be examined when the ſhip arrives at St. Helena; and ſome of them, which appear in a ſtate of vegetation, ſhould be ſown in the annexed boxes of*

* *This may be compared with what Dr. Hawkeſworth obſerves in his collection of Voyages, vol.* ii. *p.* 123. "*On the* 10*th I put ſome ſeeds of melons, and other plants, into a ſpot of ground which had been turned up for the purpoſe: they had all been ſealed up, by the perſon of whom they were bought, in ſmall bottles, with roſin, but none of them came up except muſtard; even the cucumbers and melons failed, and Mr. Banks is of opinion that they were ſpoiled by the* total excluſion of freſh air." *Some ſeeds which I received from North America, incloſed in corked bottles, have ſince been ſown, and have germinated.*

earth,

earth, between the growing plants, as many ſorts as poſſible; ſome of which may ſucceed in caſe of failure of the plants.

More of the ſame ſeeds may be alſo ſown after the ſhip has paſſed the Tropic of Cancer, near the latitude of thirty degrees north. And if very ſmall bits of broken glaſs are mixed with the earth, or thrown plentifully over its ſurface in the boxes, it may prevent mice or rats from burrowing in it, and deſtroying the tender roots of the plants and growing ſeeds.

In whatever method our ſeeds have been preſerved, it ſhould be a conſtant precaution to ſow them as ſoon as they have been expoſed to the external air, otherwiſe they probably will never vegetate.

In order to take up plants or ſhrubs advantageouſly, that are to be tranſported, a mattock and a ſpade ſhould be provided; with the mattock a ſmall trench ſhould be opened round the plant intended to be taken up; the ſpade ſhould then be put under the root, which muſt be lifted up with a very large ball of earth ſurrounding it; the ball may afterward be pared carefully with a knife, and reduced as ſmall as can be done without wounding any of the larger roots.

Of each kind the youngeſt plants of ſhrubs and trees, that can be found, ſhould be taken; none of them ſhould be above a foot high; as young plants are found by experience to bear removing much better than old ones.

The moſt convenient kind of boxes for the conveyance of plants in long voyages, are made about four feet long, two broad, and two deep; theſe, when half filled with earth, can be conveniently carried by two men holding the rope handles fixed to their ends. P. 1, 2, 3.

Theſe ſhould be filled about half full of mould, with a few rotten ſticks or leaves at the bottom, and the plants intended to be ſent, planted in it, as ſoon after the ſhip's arrival as poſſible. When the ſhip is about to ſail, and they are ſent on board, hoops are to be nailed to the ſides of the box, in ſuch a manner, that, arching over it, they may cover the higheſt of the plants; ſmall ropes are to be twiſted between theſe, in the form of a net, to prevent the dogs or cats from getting at them, and ſcratching them up, on account of the freſh mould.

For each box ſo hooped and netted, provide a canvas cover, which may, when put on, entirely protect it; and, to prevent this cover from being loſt or miſlaid, nail it to one ſide, and fix loops or hooks to the other, by which it may occaſionally be faſtened down.

The Captain who takes charge of them, muſt be particularly informed, that the chief danger plants are liable to in ſea-voyages, is occaſioned by the minute particles of ſalt water with which the air is charged, whenever the waves have white frothy curls upon them; theſe particles fall upon the plants, and, quickly evaporating, leave the ſalt behind, which, choaking up the pores, prevents perſpiration, and effectually kills the plant; he therefore ſhould never let the covers be off,

except on days when the wind is not sufficiently high to beat the water up into what the seamen call white caps. He must not keep them always shut up during the voyage; for if he does, they will mould and perish by the stagnation of the air under the covers; and if at any time, by accident or necessity, they should have been exposed to the wind when the waves have white caps, he must be desired to water them well with fresh water, sprinkling all the leaves with it, to wash off the salt drops which cover them. In this manner plants may be brought from almost any distance; many come from China every year in a flourishing state.

If it is convenient to the Captain to give up a small part of the great cabin to the plants, this is certainly by far the best station for them; nor are they much in the way, as the place which suits them best is close to the stern windows: in this case they need not be furnished with their canvas covers; and they may frequently have air, by opening the windows when the weather is quite moderate.

When the naturalist is in search of vegetable productions, different soils and situations should be examined; as the sea, and its shores, deep running waters, dikes, marshes, moors, mountains, cultivated and barren fields, woods, rocks, &c. afford each their peculiar plants; and wherever any are collected, the particular soil and situation should be remarked. Sometimes it may prove inconvenient to convey the plants which may be discovered, when it would not be so to send them dried, in the form of a hortus-siccus. To do this in the best manner, and to make their stalks, leaves, &c. lie flat and smooth, "the plants should be gathered in a dry day, "after the sun hath exhaled the dew; taking particular care to collect them in that "state wherein the generic and specific characters are most conspicuous; the specimens "should be suffered to lie on a table until they become limber, and then they should "be laid upon a pasteboard, as much as possible in their natural form, but at the "same time with a particular view to their generic and specific characters: for "this purpose, it will be advisable to separate one of the flowers, and to display "the generic character; and if the specific character depends upon the flower, or upon "the root, a particular display of that will be likewise necessary. When the plant "is thus disposed upon the pasteboard, cover it with eight or ten layers of spongy "paper, and put it into the press. Exert only a small degree of pressure for the*

* "*The press may be prepared by the following directions. Take two planks of a wood not liable "to warp, two inches thick, eighteen inches long, and twelve inches broad. Get four male and four "female screws, such as are commonly used for securing sash windows. Let the four female screws be let "into the four corners of one of the planks, and corresponding holes made through the four corners "of the other plank, for the male screws to pass through, so as to allow the two planks to be screwed "tightly together. It will not be amiss to face the bearing of the male screws upon the wood with "iron plates; and if the iron plates went across from corner to corner of the wood, it would be a "good security against the warping.*"

This note I have copied from the ingenious Dr. Withering's Botanical arrangement, and likewise the account of drying plants, as his directions are more full and complete than those I formerly introduced into my Naturalist's Companion, An. 1772. *Where the convenience of this press is not at hand, a suitable pressure may be made by weights, or any heavy body.*

"*first*

" *firſt two or three days; then examine it, unfold any unnatural plaits, rectify any* " *miſtakes, and after putting freſh paper over it, ſcrew the preſs harder. In about* " *three days more, ſeparate the plant from the paſteboard, if it is ſufficiently* " *firm to allow of a change of place; put it upon a freſh paſteboard, and, covering* " *it with freſh bloſſom-paper, let it remain in the preſs a few days longer. The* " *preſs ſhould ſtand in the ſunſhine, or within the influence of a fire.*

" *When it is perfectly dry, the uſual method is to faſten it down with paſte* " *or gum-water*, on the right-hand inner page of a ſheet of large ſtrong writing-* " *paper. It requires ſome dexterity to glue the plant neatly down, ſo that none of* " *the gum or paſte may appear to defile the paper. When it is quite dry, write* " *upon the left-hand inner page of the paper, the name of the plant; the ſpecific* " *character; the place where, and the time when, it was found; and any other* " *remarks that may be thought proper. Upon the back of the ſame page, near the* " *fold of the paper, write the name of the plant, and it will then be complete for* " *the cabinet.*"

" *Some people put the dried plants into ſheets of writing paper, without faſtening* " *them down at all; and others only faſten them by means of ſmall ſlips of paper,* " *paſted acroſs the ſtem or branches.*

" *Another more expeditious method is, to take the plants out of the preſs, after* " *the firſt or ſecond day; let them remain upon the paſteboard; cover them with five* " *or ſix leaves of blotting-paper, and iron them with a hot ſmoothing iron, until* " *they are perfectly dry: if the iron is too hot it will change the colours; but* " *ſome people, taught by long practice, will ſucceed very happily. This is quite the* " *beſt method to treat the Orchis, and other ſlimy mucilaginous plants.*

" *Another method is, to take the plants when freſh gathered, and, inſtead of* " *putting them into the preſs, immediately to faſten them down to the paper, with* " *ſtrong gum-water; then dip a camel-hair pencil into ſpirit varniſh†, and varniſh* " *the whole ſurface of the plant two or three times over. This method ſucceeds very* " *well with plants that are readily laid flat; and it preſerves their colours better* " *than any other.*"

The impreſſions of plants well taken off upon paper, look very little inferior to the beſt drawings, and may be done with very little trouble. For this purpoſe, ſome printer's ink‡, and a pair of printer's boſſes, ſuch as are uſed for laying the ink on

* " *A ſmall quantity of finely-powdered arſenic or corroſive ſublimate is uſually mixed with the paſte* " *or gum-water, to prevent the devaſtations of inſects; but the ſeeds of ſtaves-acre, finely powdered,* " *will anſwer the ſame purpoſe, without being liable to corrode, or to change the colour of the more* " *delicate plants.*"

† *The ſpirit varniſh may be made of a quart of highly-rectified ſpirit of wine; five ounces of gum ſandarach; two ounces of maſtich in drops; one ounce of pale gum elemy, and one ounce of oil of ſpike lavender: theſe are to ſtand in a warm place, and be ſhook frequently, to expedite the ſolution of the gum.*

‡ *Where this cannot be procured, ivory, or lamp-black, ground with boiled linſeed-oil, may be ſubſtituted.*

types, are neceſſary. After rubbing theſe boſſes with a little of the ink, lay the plant betwixt them, and preſs it ſo as to give it ſufficient colour; then take the plant and lay it carefully on a ſheet of paper, and preſs it with the hand, to give the impreſſion of the plant to the paper, which may be afterwards coloured according to nature; a piece of blotting-paper may be placed betwixt the plant and the hand, to prevent the latter from being dirtied by the ink.

But the moſt effectual method of ſending a branch of any plant, with the flowers and parts of fructification entire and perfect, is to put them in bottles of brandy, rum, or arrack.

Corals, corallines, ſponges, &c. inhabitants of the ſea, are found in conſiderable variety near the coaſts of iſlands and continents, particularly in hot climates. Some of theſe are very tender and brittle when dry, and ſhould therefore be carefully packed up in ſand, in order to keep them ſteady, or placed betwixt papers in the manner of an hortus ſiccus.

In hot climates, the inſects are very rapacious; and I have ſeen the fineſt fan-corals, and others of a ſoft texture when firſt taken out of the ſea, almoſt devoured by ants, before they became dry and hard. To prevent injuries of this kind, a little powdered corroſive ſublimate, arſenic, or ſtaves-acre, may be ſprinkled upon theſe productions. Some of the ſmall, and branches of the large ones, might alſo be put into ſpirits, and the parts of them thereby preſerved much more diſtinct; which would ſerve greatly to illuſtrate their natural hiſtory.

JOHN COAKLEY LETTSOM.

HORTUS UPTONENSIS;

OR,

A CATALOGUE

OF

STOVE AND GREEN-HOUSE PLANTS,

In Dr. FOTHERGILL's Garden at UPTON, at the Time of his Deceaſe.

GENUS.	SPECIES, CLASS, AND ORDER.		ENGLISH NAMES.
ABRUS.	*Diadelph. Decand.*		
	precatoria.	S. *Jamaica wild*	Liquorice.
ACER.	*Polygamia Monœcia.*	Gen. 1155. Sp. 1495.	
	canadenſe.	G. *Canada*	Maple.
	indicum.	S. *Indian*	Maple.
	monſpeſſulanum.	G. *Montpelier*	Maple.
ACHILLEA.	*Syngeneſia Polyg. ſuperf.*	Gen. 971. Sp. 1264.	
	Clavennæ.	G. *Silver-leaved*	Milfoil.
	ægyptiaca.	G. *Egyptian*	Milfoil.
ACHRAS.	*Hexandria Monogynia.*	Gen. 438. Sp. 469.	
	mammoſa.	S. *American*	Marmelade.
	Sapota.	S. *American*	Mammee.
ACHYRANTHES.[a]	*Pentand. Monog.*	Gen. 288. Sp. 294.	
	aſpera.	S. *Rough*	Achyranthes.
	lappacea.	S. *Burry*	Achyranthes.
ADANSONIA.			
	digitata.	S. *Æthiopian*	Sour-gourd.
ADELIA.	*Diœcia Monadelphia.*	Gen. 1137. Sp. 1473.	
	Acidoton.	G. *Prickly*	Adelia.
ADIANTHUM.[b]	*Cryptog. Filices.*	Gen. 1180. Sp. 1556.	
	Capillis veneris.	G. *True*	Maiden-hair.
ÆSCHYNOMENE.	*Diadelph. Decand.*	Gen. 888. Sp. 1556.	
	grandiflora.	S. *Great flowering*	Æſchynomene, or Senſitive Plant.
	movens.	S. *Walking*	Æſchynomene, or Senſitive Plant.

[a] *Cendor*, M.

[b] *Sajor-lacupa*, M.

GENUS.	SPECIES, &c.		ENGLISH NAMES.	
ADONIS.	*Polyand. Polygyn.*		Gen. 698. Sp. 771.	
	rigida.	G.	*Rigid*	Adonis.
AGAVE.	*Hexandria Monogyn.*		Gen. 431. Sp. 461.	
	americana.	G.	*Large American*	Aloe.
	var. fol. varieg.	G.	*Striped-leaved*	
	vivipara.	G.	*Silk-graſs*, or *Childing*	
	virginica.	G.	*Virginia*	
	fœtida.	G.	*Fœtid*	
	Karatta.	G.	*Aloe with deep green leaves*	
	Vera Cruz.	G.	*Broad-leaved Vera Cruz*	
	carolinenſis.	G.	*Carolina*	
ALBUCA.	*Hexandr. Monog.*		Gen. 416. Sp. 438.	
	major.	S.	*Great Baſtard*	Star of Bethlehem.
	minor.	S.	*Leſſer*	
	canaliculata.	S.	*Channell'd*	
	erecta.	S.	*Straight*	
	pubeſcens.	S.	*Downy*	
ALCEA.	*Monadelph. Polyand.*		Gen. 840. Sp. 966.	
	ſinenſis.	S.	*Chineſe*	Hollyhock.
ALETRIS.				
	capenſis.	S.	*Cape*	Aletris, *vulgarly* Aloe.
	fragrans.	S.	*Sweet*	
	Uvaria.	G.	*Iris Uvaria*	
	Hyacinthoides.	S.	*Hyacinth-flowered*	
ALLIUM.	*Hexand. Monog.*		Gen. 409. Sp. 423. 1680.	
	inodorum.	G.	*Inodorous*	Garlick.
	ſubhirſutum.	G.	*Hairy*	
ALOE.	*Hexand. Monog.*		Gen. 304. Sp. 457.	
	viſcoſa.	S.	*Viſcous triangular*	Aloe.
	arachnoidea.	S.	*Cobweb*	
	ferox.	S.	*Greater prickly*	
	balearica.	S.	*Minorca*—new ſpecies	
	glauca.	G.	*Dwarf glaucous*	
	maculata.	G.	*Spotted-leaved*	
	mitriformis.	G.	*Mitre-ſhaped*	
	ſuccotrina.[a]	G.	*True Succotrine*	
	perfoliata.	G.	*Sword-ſhaped*	
	humilis.	G.	*Dwarf hedge-hog*	
	variegata latifolia.	G.	*Broad-leaved partridge-breaſt*	
	anguſtifol.	G.	*Narrow-leaved variegated*	
	diſticha.	G.	*Soap*	
	linguiformis.	G.	*Tongue*	
	verrucoſa.	G.	*Pearl-tongue*	

[a] The beſt is produced in the Iſland of Zocotra, in the Straits of Babel. It is conjectured that we have not the right ſpecies in the Weſt Indies. The country name is *Ceban*. In the Malay dialect, Aloes is called *Lida-Coaja*, id. eſt, *Lingua Crocodili*.

plicata.

GENUS.	SPECIES, &c.		ENGLISH NAMES.	
ALOE.	plicata.	G.	*Fan*	Aloe.
	carinata.	G.	*Triangular Keel-ſhaped*	
	ſpiralis.	G.	*Spiral*	
	retuſa.	G.	*Cuſhion*	
	pumila.	G.	*Dwarf*	
	herbacea.	G.	*Shrubby*	
	margaritifera.	G.	*Large Pearl*	
	var. minor.	G.	*Leſſer Pearl*	
ALSTROEMERIA.	*Hexand. Monog.*		Gen. 432. Sp. 461.	
	pelegrina.	S.	*Purple-ſpotted flowering*	Alſtrœmeria.
	ligta.	S.	*Striped*	
AMARYLLIS.	*Hexand. Monog.*		Gen. 400. Sp. 420. 1680.	
	Atamaſco.	S.	*Atamaſco*	Lily Daffodil.
	formoſiſſima.	S.	*Jacobæan*	
	regina.	S.	*Mexican*	
	criſpa.	S.	*Curled*	
	aurea.	S.	*Golden*	
	radiata.	S.	*Radiated*	
	falcata.	S.	*Hooked*	
	anguſtifolia.	S.	*Narrow-leaved*	
	obliqua.	S.	*Oblique*	
	lutea.	S.	*Yellow*	
	Belladonna.	S.	*Belladonna*	
	farnienſis.	S.	*Guernſey*	
	longifolia.	S.	*Dwarf long-leaved*	
	guttata.	S.	*Spotted African*	
	orientalis.	S.	*Brunſwegian*	
	undulata.	S.	*Purple Cape*	
AMBROSIA.			Gen. 1054. Sp. 1401.	
	mexicana.	G.	*Mexican*	Ambroſia.
AMELLUS.	*Syngeneſia Polyg. ſuperf.*		Gen. 978. Sp. 1276.	
	Lychnitis.	G.	*Ever-flowering Cape*	After.
AMOMUM.	*Monandria Monogynia.*		Gen. 2. Sp. 1.	
	Zingiber.	S.	*True*	Ginger.
	Zerumbet.	S.	*Baſtard*	
ANAGYRIS.[a]	*Decand. Monogyn.*		Gen. 509. Sp. 534.	
	fœtida.	G.	*Stinking*	Bean-treſoil.
ANDROMEDA.	*Decand. Monogyn.*		Gen. 549. Sp. 563.	
	acuminata.	G.	*Pointed*	Andromeda.
	axillaris.	G.	*Axillary*	
	Daboecii.	G.	*Iriſh*	
	occidentalis. N.S.	G.	*Weſtern*	
ANDROSACE.	*Pentandria Monogynia.*		Gen. 196. Sp. 203. 1668.	
	villoſa.	G.	*Villous*	Androſace.

[a] *Pete*, M.

ANDRYALA.

GENUS.	SPECIES, &c.		ENGLISH NAMES.	
ANDRYALA.	*Syngen. Polyg. Æqualis.*		Gen. 915. Sp. 1136.	
	lanceolata.	G.	*Spear-leaved*	Andryala.
	revoluta.	G.	*Revolute*	
	raguſina.	G.	*Mouſe-ear*	
	ſinuata.	G.	*Sinuated*	
ANEMONE.	*Polyand. Polygyn.*		Gen. 694. Sp. 758.	
	Thalictroides.	S.	*Meadow-Rue leaved*	Anemone.
ANNONA.	*Polyand. Polygyn.*		Gen. 693. Sp. 756.	
	aſiatica.	S.	*Aſiatic*	Cuſtard Apple.
	muricata.	S.	*Sour*	
	ſquamoſa.	S.	*Sweet*	
ANTHERICUM.	*Hexand. Monogyn.*		Gen. 422. Sp. 444. 1679. 1680.	
	fruteſcens.	G.	*Shrubby*	Spiderwort.
	Aſphodeloides.	G.	*Aſphodel-leaved*	
	alooides.	G.	*Aloe-leaved*	
	elatum.	G.	*Tall*	
	fiſtuloſum.	G.	*Fiſtulous*	
ANTHOLYZA.	*Triand. Monogyn.*		Gen. 58. Sp. 54.	
	Meriana.	S.	*Greater*	Watſonia, or Antholyza.
	Merianella.	S.	*Leſſer*	
	Cunonia.	S.	*Perſian*	
	ringens.	S.	*Scarlet*, or *grinning*	
ANTHYLLIS.	*Diadelph. Decand.*		Gen. 864. Sp. 1011.	
	Barba Jovis.	G.	*Silver Buſh*	Kidney Vetch.
	Cytiſſoides.	G.	*Spaniſh*	
ANTIRRHINUM.	*Didynam. Angioſperm.*		Gen. 750. Sp. 851.	
	triſte.	G.	*Dwarf black*	Snap-dragon.
	molle.	G.	*Soft-leaved*	
	majus variegatum.	G.	*Striped-leaved*	
APOCYNUM.	*Pentand. Digyn.*		Gen. 305. Sp. 311.	
	fruteſcens.	S.	*Shrubby*	Dogs-bane.
	cannabinum.	S.	*Canadian*	
ARALIA.	*Pentand. Pentag.*		Gen. 386. Sp. 392.	
	ſpinoſa.	G.	*Spinous*	Aralia.
ARBUTUS.	*Decand. Monogyn.*		Gen. 552. Sp. 566.	
	Uva-urſi.	G.	*Bear-berry*	Strawberry Tree.
	Andrachne.	G.	*Oriental*	
ARCTOTIS.	*Syngen. Polyg. neceſſaria.*		Gen. 991. Sp. 1305.	
	multiflora.	G.	*Many-flowered*	Arctotis.
	plantaginea.	G.	*Plantain-leaved*	
	Abrotanifolia.	G.	*Southernwood-leaved*	
	paleacea.	G.	*Chaffy*	
	diffuſa.	G.	*Spreading*	
ARDUINA.				
	biſpinoſa.	G.	*Cape*	Buckthorn.

GENUS.	SPECIES, &c.		ENGLISH NAMES.
ARECA.[a]	*Monœcia Enneand.*		Gen. 1225. Sp. 1959.
	oleracea.	S.	*Eatable Indian* Nut.
ARISTOLOCHIA.[b]	*Gynand. Hexand.*		Gen. 1022. Sp. 1361.
	indica.	S.	*Indian*
	lobata.	S.	*Lobed* } Birthwort.
	rotunda.	S.	*Round-rooted*
	Piſtolochia.	G.	*Piſtolochia*
	ſempervirens.	G.	*Ever-green*
	Serpentaria.	G.	*Virginian*
ARTEMESIA.[c]	*Syngen. Polyg. Æqualis.*		Gen. 945. Sp. 1184.
	arboreſcens.	G.	*Tree* } Mugwort.
	crithmifolia.	G.	*Samphire-leaved*
ARUM.[d]	*Gynand. Polyand.*		Gen. 1028. Sp. 1367.
	Colocaſia.	S.	*Greater*
	ſeguinum.	S.	*Dumb Cane*
	eſculentum.	S.	*Eatable*
	auriculatum.	S.	*Eared* } Wake Robin.
	pictum.	S.	*Painted*
	crinitum.	S.	*Hairy*
	pedatum.	S.	*Foot-ſhaped*
ARUNDO.[e]	*Triandr. Digyn.*		Gen. 93. Sp. 120. 1677.
	Bambos.	S.	*Bamboo* Cane.
ASCLEPIAS.[f]	*Pentand. Digyn.*		Gen. 306. Sp. 312.
	fruticoſa.	G.	*Shrubby*
	gigantea.	S.	*Auricula-tree*
	parviflora.	S.	*Small-flowered* } Swallow Wort.
	curaſſavica.	S.	*Orange-flowered*
	Teneriffenſis.	S.	*Teneriffe*
	tuberoſa.	S.	*Tuberoſe*
ASPALATHUS.	*Diadelph. Decand.*		Gen. 860. Sp. 1000.
	cretica.	G.	*Cretan African* Broom.
ASPARAGUS.	*Hexand. Monogyn.*		Gen. 424. Sp. 448.
	retrofractus.	G.	*Larch-leaved*
	albus.	G.	*White* } Sparrow Graſs.
	acutifolius.	G.	*Sharp-leaved*
	declinatus.	G.	*Briſtly-leaved*
ASPHODELUS.	*Hexand. Monogyn.*		Gen. 421. Sp. 443.
	fiſtuloſus.	G.	*Leſſer* King's Spear.
ASTER.	*Syngen. Polyg. ſuperf.*		Gen. 954. Sp. 1224.
	fruticuloſus.	G.	*Shrubby* Starwort.
ASTRAGALUS.	*Diadelph. Decand.*		Gen. 892. Sp. 1064.
	monſpeſſulanus.	G.	*Montpelier* Milk Vetch.

[a] *Pinang*, M.
[b] *Tali-goreta*, M.
[c] *Baro-Tjina*, M.
[d] *Caladi-aijer*, M.
[e] The French have introduced this uſeful plant into Grenada; and it now thrives in ſome of the other Weſt India iſlands: It flouriſhes likewiſe in South Carolina.
[f] *Pinger-outau*, M.

GENUS.	SPECIES, &c.		ENGLISH NAMES.
ATHANASIA.	*Syngen. Polygam. Æqualis.*		Gen. 943. Sp. 1180.
	crithmifolia.	G.	*Samphire-leaved* } Goldy-locks.
	incana.	G.	*Hoary*
ATRAPHAXIS.	*Hexand. Digyn.*		Gen. 449. Sp. 495.
	Undulata.	G.	*Curled alternate-leaved* Atraphaxis.
ATROPA.	*Pentand. Monog.*		Gen. 249. Sp. 259.
	fruteſcens.	G.	*Shrubby* Atropa.
BACCHARIS.[a]	*Syngen. Polygam. ſuperf.*		Gen. 949. Sp. 1204.
	ivæfolia.	G.	*Ploughman's* } Spikenard.
	putrida.	G.	*Fetid*
	neriifolia.	G.	*Oleander-leaved*
BALTIMORA.			
	erecta.	G.	*Upright* Baltimora.
BANISTERIA.[b]	*Decand. Trigyn.*		Gen. 573. Sp. 611.
	laurifolia.	S.	*Laurel-leaved*, or *Jamaican* Baniſteria.
BARLERIA.	*Didynam. Angioſp.*		Gen. 785. Sp. 887.
	Prionitis.	S.	*Prickly* } Barleria.
	buxifolia.	S.	*Box-leaved*
BASELLA.	*Pentand. Tetragyn.*		Gen. 382. Sp. 390.
	rubra.	S.	*Red Malabar* Nightſhade.
BAUHINIA.[c]	*Decand. Monogyn.*		Gen. 511. Sp. 535.
	acuminata.	S.	*Pointed-leaved* } Mountain Ebony.
	divaricata.	S.	*Honeyſuckle*
	ſpicata.	S.	*Spiked*
	tomentoſa.	S.	*Woolly*
BEGONIA.[d]	*Polygam. Monœcia.*		Gen. 1156. Sp. 1497.
	obliqua.	S.	*Oblique* Begonia.
BETULA.	*Monœcia Tetrand.*		Gen. 1052. Sp. 1393.
	nana.	S.	*Dwarf* Birch.
BIGNONIA.[e]	*Didynam. Angioſp.*		Gen. 759. Sp. 868.
	Leucoxylon.	S.	*Jamaica Tulip-tree* } Trumpet Flower.
	ſtans.	S.	*Jaſmine*
	indica.	S.	*Indian*
BIXA.[f]	*Polyand. Monogyn.*		Gen. 654. Sp. 730.
	Orellana.	S.	*American* Ornatto.
BLECHNUM.	*Cryptogam. Filices.*		Gen. 1175. Sp. 1534.
	orientale.	S.	*Oriental* Blechnum.
BOCCONIA.	*Dodecand. Monogyn.*		Gen. 591. Sp. 634.
	fruteſcens.	S.	*Tree* Celandine.
BOERHAAVIA.	*Monand. Monogyn.*		Gen. 9. Sp. 4. 1676.
	ſcandens.	S.	*American*, or *climbing* Hogweed.

[a] *Bolontas*, M.
[b] *Loo-utau*, M.
[c] *Daun Lida*, M.
[d] *Daun-aſſam*, M.
[e] *Cajo-Conda*, M.
[f] *Coſombo-kling*, M. in Sumatra *Caſſoomboo*.

GENUS.	SPECIES. &c.			ENGLISH NAMES.
BOMBAX.[a]	*Monadelph. Polyand.*		Gen. 835. Sp. 959.	
	Ceiba.	S.	*Five-leaved*	Silk Cotton-tree.
	goſſypinum.	S.	*Hairy*	Silk Cotton-tree.
BONTIA.	*Didynam. Angioſperm.*		Gen. 791. Sp. 890.	
	daphnoides.	S.	*Barbadoes*	Wild Olive.
BOSEA.	*Pentand. Digyn.*		Gen. 315. Sp. 326.	
	Yervamora.	G.	*Golden Rod.*	
BROMELIA.[b]	*Hexand. Monogyn.*		Gen. 395. Sp. 408.	
	Ananas.	S.	*Queen*	Pine Apple.
	Variegat. Fol. Arg.	S.	*Surinam*	Pine Apple.
	Karatas.	S.	*Wild Jamaica*	Pine Apple.
BRUNIA.	*Pentand. Monogyn.*		Gen. 274. Sp. 288.	
	muſcoſa.	S.	*Moſſy*	Brunia.
BRUNSFELSIA.	*Pentand. Monogyn.*		Gen. 260. Sp. 276.	
	americana.	S.	*American*	Brunsfelſia.
BUBON.	*Pentand. Digyn.*		Gen. 350. Sp. 364.	
	macedonicum.	G.	*Macedonian*	Parſley.
	Galbanum.	G.	*Galbaniferous*	Parſley.
	gummiferum.	G.	*Myrrh-leaved*	Parſley.
BUDDLEJA.	*Tetrand. Monogyn.*		Gen. 140. Sp. 162.	
	globoſa.	S.	*Globular*	Buddleja.
BUPTHALMUM.	*Syngen. Polygam. ſuperf.*		Gen. 977. Sp. 1273.	
	fruteſcens.	G.	*Shrubby*	Ox-eye.
	ſpinoſum.	G.	*Spinous*	Ox-eye.
BUPLEURUM.	*Pentand. Digyn.*		Gen. 328. Sp. 340. 1678.	
	fruteſcens.	G.	*Shrubby*	Hare's-ear.
BUXUS.	*Monœcia Tetrandria.*		Gen. 1053. Sp. 1394.	
	Balearica.	G.	*Minorca*	Box.
	ſempervirens.	G.	*Ever-green*	Box.
CACALIA.[c]	*Syngen. Polygam. Æqualis.*		Gen. 933. Sp. 1168.	
	Ficoides.	G.	*Baſtard Ficoides*	Foreign Colt's-foot.
	ſonchifolia.	G.	*Sow-thiſtle-leaved*	Foreign Colt's-foot.
	repens.	G.	*Creeping*	Foreign Colt's-foot.
	Anteuphorbium.	S.	*Spurge-bane*	Foreign Colt's-foot.
	atriplicifolia.	G.	*Orach-leaved*	Foreign Colt's-foot.
	papillaris.	S.	*Pimply*	Foreign Colt's-foot.
CACTUS.	*Icoſand. Monogyn.*		Gen. 613. Sp. 666.	
	moniliformis.	G.	*Jointed India*	Fig.
	mamillaris.	S.	*Leſſer Melon*	Torch Thiſtle.
	Melocactus.	S.	*Greater Melon*	Torch Thiſtle.
	tetragonus.	S.	*Four-ſided Torch*	Torch Thiſtle.
	hexagonus.	S.	*Six-ſided Torch*	Torch Thiſtle.
	pentagonus.	S.	*Five-ſided Torch*	Torch Thiſtle.
	repandus.	S.	*Obtuſe-angled*	Torch Thiſtle.
	peruvianus.	S.	*Peruvian*	Torch Thiſtle.

[a] *Capok*, M. [b] *Nanas*, M. [c] *Catta Camœdi*, M.

GENUS.	SPECIES, &c.		ENGLISH NAMES.	
CACTUS.	Royeni.	S.	*Nine-angled*	Torch Thiſtle.
	grandiflorus.	S.	*Greater flowering*	
	flagelliformis.	S.	*Creeping Cereus*	
	triangularis.	S.	*Prickly Pear*, or *triangular Torch*	
	Opuntia.	S.	*Oval-leaved Indian Fig*	
	Ficus Indicus.	S.	*Indian Fig*	Indian Fig.
	Tuna.	S.	*Greater Indian Fig*	
	cochenillifer.	S.	*Cochineal Fig*	
	curaſſavicus.	S.	*Leaſt Indian*	
	Phyllanthus.	S.	*Spleenwort-leaved*	
	ſpinoſiſſimus.	S.	*Clyſtered ſpiny*	
CÆSALPINIA.	*Decand. Monogyn.*		Gen. 516. Sp. 544.	
	Sappan.		*Sappan-wood*	Cæſalpinia.
	veſicaria.		*Bladder*	
CALCEOLARIA.	*Syngen. Monogam.*		Gen. 1007. Sp. *nova.*	
	Fothergilli.	G.		
CALENDULA.	*Syngen. Polyg. neceſſaria.*		Gen. 990. Sp. 1303.	
	graminifolia.	G.	*Graſs-leaved*	Marygold.
	fruticoſa.	G.	*Shrubby*	
CALLA.	*Gynand. Polyandria.*		Gen. 1030. Sp. 1373.	
	æthiopica.	G.	*Æthiopian*	Arum.
CALLICARPA.	*Tetrand. Monogyn.*		Gen. 135. Sp. 161.	
	americana.	G.	*Carolina*	Callicarpa.
	tomentoſa.	G.	*Downy*	
CALLISIA.	*Triand. Monogyn.*		Gen. 63. Sp. 62.	
	repens.	G.	*Creeping*	Calliſia.
CAMELLIA.	*Monodelph. Polyand.*		Gen. 843. Sp. 982.	
	japonica.	S.	*Tſubakki*, or *Japan*	Roſe.
CAMPANULA.	*Pentand. Monog.*		Gen. 218. Sp. 231. 1669. 1678.	
	aurea.		*Golden*	Bell-flower.
	rotundifolia.	G.	*Round-leaved*	
	americana.	G.	*American*	
CANARINA.	*Hexand. Monog.*			
	Campanula.	G.	*Canary*	Campanula.
CANELLA.	*Dodecand. Monogyn.*		Gen. 598. Sp. *nova.*	
	Cinnamomæa.	S.		
CANNA.[a]	*Monand. Monogyn.*		Gen. 1. Sp. 1675.	
	Indica.	S.	*Common red*	Indian Shot, *or* Cannacorus.
	variegata.	S.	*Striped-leaved*	
	lutea.	S.	*Yellow-flowered*	
	glauca.	S.	*Sea-green*	
CAPPARIS.	*Polyand. Monog.*		Gen. 643. Sp. 720. 1674.	
	ſpinoſa.	S.	*Prickly*	Caper-tree.
	arborea.	S.	*Shrubby*	

[a] *Daun Taſſibeh*, M.

GENUS.	SPECIES, &c.		ENGLISH NAMES.
CAPSICUM.[a]	*Pentand. Monog.*		Gen. 252. Sp. 370.
	fruteſcens.	S.	*Barberry*, or *ſhrubby* — Guinea Pepper.
CARICA.[b]	*Dioecia Decand.*		Gen. 1127. Sp. 1466.
	Papaya.	S.	*Melon-ſhaped* — Papaw.
CASSIA.[c]	*Dioecia Tetrand.*		Gen. 1101. Sp. 537.
	Fiſtula.	S.	*Medicinal* — Wild Sena.
	biflora.	S.	*Two-flowered* — Wild Sena.
	Sena.	S.	*True Sena.* — Wild Sena.
	liguſtrina.	S.	*Privet-leaved* — Wild Sena.
	planiſiliqua.	S.	*Flat-podded* — Wild Sena.
	tenuiſſima.	S.	*Slender-podded* — Wild Sena.
	auriculata.	S.	*Eared* — Wild Sena.
	Madraſſenſis.	S.	*Madras* — Wild Sena.
	bicapſularis.	S.	*Two-capſuled* — Wild Sena.
	haſtata.	S.	*Spear-ſhaped* — Wild Sena.
CASSINE.	*Pentand. Trigyn.*		Gen. 371. Sp. 384.
	Paragua.	G.	*Yapon*, or *Paraguay* — Hottentot Cherry.
	Maurocenia.	G.	*Greater* — Hottentot Cherry.
	capenſis.	G.	*Phyllirea*, or *Cape* — Hottentot Cherry.
CASSUARINA.[d]			
	equiſetifolia.	S.	*Tinian* — Pine.
	tuberoſa.	S.	*Tuberous Tinian* — Pine.
CASSYTA.	*Enneand. Monogyn.*		Gen. 505. Sp. 530.
	filiformis.	S.	*Barbarian* — Caſſytha.
CATESBÆA.	*Tetrand. Monogyn.*		Gen. 130. Sp. 159.
	ſpinoſa.	S.	*Lily* — Thorn.
CATENANCHE.	*Syngen. Polygam. Æqualis.*		Gen. 920. Sp. 1142.
	cærulea.	G.	*Blue Candia* — Lion's-foot.
CEANOTHUS.[e]	*Pentand. Monogyn.*		Gen. 267. Sp. 284.
	africanus.	G.	*African* — Alaternoides.
	aſiaticus.	G.	*Aſiatic* — Alaternoides.
CEDRELA.	*Pentand. Monogyn.*		Gen. 277. Sp. 289.
	odorata.	S.	*Barbadoes* — Cedar.
CELASTRUS.	*Pentand. Monogyn.*		Gen. 270. Sp. 285.
	buxifolius.	G.	*Box-leaved* — Staff-tree.
	ſpinoſus.	G.	*Spinous* — Staff-tree.
	pyracanthus.	G.	*Pyracantha-leaved* — Staff-tree.
	bullatus.	S.	*Jamaica* — Staff-tree.
CELTIS.	*Polygam. Monœcia.*		Gen. 1143. Sp. 1478.
	ſinenſis.	S.	*Eaſtern* — Nettle-tree.
	occidentalis.	S.	*Weſtern* — Nettle-tree.
CENTAUREA.	*Syngen. Polygam. Fruſt.*		Gen. 984. Sp. 1285.
	raguſina.	G.	*Silver* — Centaury.
	orientalis.	G.	*Oriental* — Centaury.

[a] *Tjabe*, M.
[b] *Papaja*, M.
[c] *Cajo-Samara*, M.
[d] *Cajo-bakat*, M.
[e] *Tinda parvi.*

GENUS.	SPECIES, &c.		ENGLISH NAMES.
CERATONIA.	*Polygam. Triœcia.*		Gen. 1167. Sp. 1513.
	Siliqua.	G.	*Carob-tree*, or *St. John's Bread.*
CERBERA.	*Pentand. Monogyn.*		Gen. 294. Sp. 303.
	Manghas.	S.	*Lanceolate-leaved* Cerbera, *or* Ahouæi.
CERCOIDEA.			
	erecta.	S.	*Erect* Cercoidea.
CESTRUM.	*Pentand. Monogyn.*		Gen. 261. Sp. 277.
	diurnum.	S.	*Day-ſmelling*
	latifolium.	S.	*Broad-leaved*
	nocturnum.	S.	*Night-ſmelling* } Baſtard Jaſmine.
	fœtidum.	S.	*Fœtid*
CHAMÆROPS.	*Polygam. Diœcia.*		Gen. 1219. Sp. 1657.
	humilis.	S.	*Dwarf* } Dwarf Palm.
	mitis.	S.	*Mild*
CHENOPODIUM.	*Pentand. Digynia.*		Gen. 309. Sp. 318.
	capenſe.	G.	*Cape*
	rugoſum.	G.	*Wrinkly* } Wild Orach.
	multifidum.	G.	*Shrubby*
CHIRONIA.	*Pentand. Monogyn.*		Gen. 255. Sp. 272.
	fruteſcens.	S.	*Shrubby* } AfricanCentaury.
	lacerum.	S.	*Jagged*
CHRYSANTHEMUM.[a]	*Syngen. Polyg. ſuperf.*		Gen. 966. Sp. 1251.
	floſculoſum.	G.	*Cretan* } Corn Marygold.
	maritimum.	G.	*Sea*
CHRYSOCOMA.	*Syngen. Polygam. Æqualis.*		Gen. 939. Sp. 1177.
	Coma Aurea.	G.	*Greater ſhrubby*, or
	retuſa.	G.	*Retuſe* [*African* } Goldy-locks.
	Artemiſioides.	G.	*Mugwort-leaved*
CINCHONA.[b]	*Pentand. Monogyn.*		Gen. 228. Sp. 244.
	officinalis.	S.	*Peruvian Bark.*
CINERARIA.	*Syngen. Polygam. ſuperf.*		Gen. 957. Sp. 1242.
	geifolia.	G.	*Ground Ivy-leaved*
	angulata.	G.	*Blue Cape Aſter*, or
	populifolia.	G.	*Poplar-leaved* [*Cape* } Ragwort.
	Amelloides.	G.	*Oppoſite-leaved*
CISSAMPELOS.	*Diœcia Monadelph.*		Gen. 1138. Sp. 1473.
	Caapeba.	G.	*Velvet-leaf.*
CISTUS.	*Polyand. Monog.*		Gen. 673. Sp. 736.
	creticus.	G.	*Cretan* } Rock-roſe.
	Sicyoides.	G.	*Cucumber-leaved*

[a] *Tjonge*, M.

[b] See Remarks on the Cinchona, in the Life of Dr. FOTHERGILL; the Note on which I ſhall tranſcribe. "A Friend of Dr. Clarke's, of Jamaica, (Alexander Roberts) has lately found a ſpecies of the Cinchona with racemoſe flowers, very ſimilar to thoſe of the Cinchona Carribæa of Jaquin and Linnæus, and to the Cinchona Jamaicenſis of Dr. Wright, deſcribed in the Philoſophical Tranſactions, vol. lxvii. p. 504. In the year 1781 a periodical publication, entitled The Jamaica Magazine, commenced; and in the third, fourth, and fifth numbers, the Jamaica Cinchona is particularly deſcribed."

GENUS.	SPECIES, &c.		ENGLISH NAMES.	
CISTUS.	Vitiginea.	G.	*Vine-leaved*	Rock-rose.
	populifolius.	G.	*Poplar-leaved*	
	trifoliata.	G.	*Three leaved*	
	halimifolius.	G.	*Sea Purslane-leaved*	
	albidus.	G.	*White*	
	salvifolius.	G.	*Sage-leaved*	
	Helianthemum.	G.	*Dwarf*	
	laurifolius.	G.	*Laurel-leaved*	
	lævipes.	G.	*Heath-leaved*	
	rosaceus.	G.	*Rose*	
	Tuberaria.	G.	*Plantain-leaved*	
CITRUS.[a]	*Pentand. Icosand.*		Gen. 901. Sp. 1100.	
	Medica.	G.	*Citron*	Tree.
	Limonum.	G.	*Lemon*	
	Aurantium Sin.	G.	*China Orange*	
	orientalis.	G.	*Willow-leaved Orange*	
	Aurantium acre.	G.	*Seville Orange*	
	myrtifolia.	G.	*Myrtle-leaved Orange*	
	pumila.	G.	*Dwarf Nutmeg Orange*	
	trifoliata.	G.	*Three-leaved Orange*	
	Spinosa.	G.	*Lime*	
CLAYTONIA.	*Pentand. Monogyn.*		Gen. 287. Sp. 294.	
	virginica.	S.	*Virginian*	Claytonia.
CLIFFORTIA.	*Dicœcia Polyand.*		Gen. 1133. Sp. 1469.	
	ilicifolia.	G.	*Ilex-leaved*	Cliffortia.
CLITORIA.[b]	*Diadelph. Decand.*		Gen. 869. Sp. 1025.	
	Ternatea.	S.	*White Wing-leaved*	Clitoria.
CLUSIA.	*Polygam. Monœcia.*		Gen. 1154. Sp. 1495.	
	flava.	S.	*Yellow-flowered*	Balsam-tree.
CLUTIA.	*Dicœcia Gynand.*		Gen. 1140. Sp. 1475.	
	alaternoides.	G.	*Narrow-leaved*	Clutia.
	pulchella.	S.	*Broad-leaved*	
COCCOLOBA.	*Octand. Trigynia.*		Gen. 496. Sp. 523.	
	punctata.	S.	*Spotted*	Grape.
COCOS.[c]	*Monœcia Hexand.*		Gen. 1223. Sp. 1658.	
	nucifera.	S.	*Cocoa*	Nut.
COFFEA.	*Pentand. Monogyn.*		Gen. 230. Sp. 245.	
	arabica.	S.	*True*, or *Arabian*	Coffee-tree.
COIX.[d]	*Monœc. Triand.*		Gen. 1043. Sp. 1378.	
	Lachryma.	S.	*Job's Tears.*	
COLUMNEA.	*Didyn. Angiosp.*		Gen. 792. Sp. 891.	
	humilis.	S.	*Dwarf*	Columnea.
COLUTEA.	*Monœcia Triand.*		Gen. 880. Sp. 1045.	
	frutescens.	G.	*Scarlet*, or *shrubby*	Bladder Senna.

[a] *Jourcek*, M.
[b] *Borga-ciru*, M.
[c] *Claspa*, M.
[d] *Sajor-trorboe*, M.

GENUS.	SPECIES, &c.		ENGLISH NAMES.
COMMELINA.[a]	*Triand. Monogyn.*	Gen. 62. Sp. 60.	
	africana.	S. *Creeping African*	Commelina.
	tuberosa.	S. *Tuberous-rooted*	
CONVOLVULUS.[b]	*Pentand. Monog.*	Gen. 215. Sp. 218. 1668.	
	canariensis.	G. *Canary*	Bindweed.
	farinosus.	G. *Mealy*	
	panduratus.	G. *Fiddle*	
	hederaceus.	G. *Ivy-leaved*	
	Cneorum.	G. *Silver-leaved*	
	vitifolius.	G. *Vine-leaved*	
	cantabrica.	G. *Flax-leaved*, or *Cantabrian*	
	althæoides.	G. *Mallow-leaved*	
	Dorycnium.	G. *Eastern*	
	Batatas.	*Tuberous-rooted*	
CONYZA.	*Syngen. Polyg. superf.*	Gen. 950. Sp. 1205.	
	candida.	G. *Cretan*	Fleabane.
	mollis.	G. *Soft-leaved*	
	sordida.	G. *Dirty*	
	viscosa.	G. *Clammy*	
CORDIA.	*Pentand. Monog.*	Gen. 256. Sp. 273.	
	Sebestena.	S. *Lignum Aloes.*	
CORNUTIA.	*Didynam. Angiosp.*	Gen. 766. Sp. 875.	
	pyramidalis.	S. *Pyramidal*	Cornutia.
CORONILLA.	*Diadelph. Decand.*	Gen. 883. Sp. 1046.	
	juncea.	G. *Rush-leaved*	Joint-podded Colutea.
	glauca.	G. *Lesser*	
	valentina.	G. *Greater*	
	argentea.	G. *Silver-leaved*	
CORYPHA.		Gen. 1221. Sp. 1657.	
	umbraculifera.	S. *Thatched*	Palm.
COSTUS.	*Monand. Monogyn.*	Gen. 3. Sp. 2.	
	arabicus.	S. *Arabian*	Costus.
COTULA.	*Syngen. Polyg. superf.*	Gen. 968. Sp. 1256.	
	tanacetifolia.	G. *Shrubby*	Tansey.
	stricta.	G. *Upright*	
COTYLEDON.[c]	*Decand. Pentag.*	Gen. 578. Sp. 614.	
	orbiculata.	G. *Round-leaved*	Navel-wort.
	hemisphærica.	G. *Semi-globular*	
	serrata.	G. *Saw-leaved*	
CRASSULA.[d]		Gen. 396. Sp. 404.	
	coccinea.	G. *Scarlet*	Lesser Orpine.
	cultrata.	G. *Orpine-leaved*	
	tetragona.	G. *Square-leaved*	
	pellucida.	S. *Pellucid*	

[a] *Sajor-Culla*, M.
[b] *Daun-Canleng*, M.
[c] *Sajor-bebek*, M.
[d] *Daun-Manio*, M.

perfoliata.

GENUS.	SPECIES, &c.		ENGLISH NAMES.
CRASSULA.	perfoliata.	S.	*Jacob's-ladder*
	punctata.	S.	*Spotted*
	quadrata.	S.	*Whip-cord*
	ſcabra.	S.	*Smooth-leaved*
			} Leſſer Orpine.
CRESCENTIA.	*Didynam. Angioſperm.*		Gen. 762. Sp. 872.
	Cujete.	S.	*Calabaſh Tree.*
CRINUM.[a]	*Hexand. Monog.*		Gen. 405. Sp. 419.
	africanum.	S.	*African*
	latifolium.	S.	*Broad-leaved*
	aſiaticum.	S.	*Aſiatic*
	longifolium.	S.	*Long-leaved*
	pendulum.	S.	*Pendulous*
	americanum.	S.	*American*
	zeylanicum.	S.	*Zeylon*
			} Lily Aſphodel.
CROTALARIA.[b]	*Diadelph. Decand.*		Gen. 862. Sp. 1003.
	turgida.		*Swoln*
	laburnifolia.	S.	*Laburnum-leaved*
	jamaicenſis.	S.	*Jamaican*
	chinenſis.	S.	*China*
			} Crotalaria.
CROTON.[c]	*Monœcia Monand.*		Gen. 1083. Sp. 1424.
	ſebiferum.	G.	*Poplar-leaved*
	Caſcarilla.	S.	*Sweet-ſcented*
	glabellum.	S.	*Smooth oval-leaved*
	acerifolium.	S.	*Maple-leaved*
			} Tallow-tree.
CUPRESSUS.	*Monœcia Monand.*		Gen. 1079. Sp. 1422.
	juniperoides.	G.	*Cape* — Cypreſs-tree.
CURCUMA.	*Monand. Monog.*		Gen. 6. Sp. 3.
	longa.	S.	*Long-rooted* — Turmerick.
CYCAS.			Gen. 1222. Sp. 1658.
	circinalis.	S.	*Sago*
	guinenſis.	S.	*Guinea*
	latifolia.	S.	*Broad-leaved*
			} Palm.
CYCLAMEN.	*Pentand. Monog.*		Gen. 201. Sp. 207.
	indicum.	G.	*Perſian*
	odoratum.	G.	*Sweet*
			} Sow Bread.
CYNANCHUM.	*Pentand. Digyn.*		Gen. 304. Sp. 310.
	hirtum.	S.	*American*
	ſuberoſum.	S.	*Spongy*
			} Scammony.
DAPHNE.	*Octand. Monog.*		Gen. 485. Sp. 509.
	indica.	S.	*Indian*
	Cneorum.	S.	*Silver-leaved*
			} Daphne.
DELIMA.	*Polyand. Monog.*		Gen. 672. Sp. 736.
	ſarmentoſa.	S.	*Branching* — Delima.
DIGITALIS.	*Didynam. Angioſp.*		Gen. 758. Sp. 866.
	canarienſis.	G.	*Canary*
	obſcura.	G.	*Black Spaniſh*
			} Fox-glove.

[a] *Bacong*, M. [b] *Sago Pohon*, M. [c] *Daun Maas*, M.

GENUS.	SPECIES, &c.		ENGLISH NAMES.
DIONÆA.	*Decand. Monog.*	Gen. Sp.	
	Muſcipula.	G. *Venus*	Fly-trap.
DIOSCOREA.[a]	*Diœcia Hexand.*	Gen. 1122. Sp. 1462.	
	bulbifera.	S. *Weſt Indian*	Yam.
DIOSMA.	*Pentand. Monog.*	Gen. 272. Sp. 286.	
	oppoſitifolia.	*Oppoſite-leaved*	African Spiræa, *or* Dioſma.
	hirſuta.	*Hairy*	
	rubra.	*Red*	
	ericoides.	*Heath-leaved*	
	capenſis.	*Cape*	
DOLICHOS.[b]	*Diadelph. Decand.*	Gen. 867. Sp. 1018.	
	ſempervirens.	G. *Evergreen*	Dolichos, *or* Creeper.
	braſilienſis.	G. *Brazilian*	
	lignoſus.	G. *Ligneous*	
	capenſis.	G. *Cape*	
DRACÆNA.			
	Draco.	S. *True*	Dragon-tree.
	enſifolia.	S. *Sword-ſhaped leaved*	
	erecta.	S. *Upright*	
	terminalis.	S. *Herbaceous Iron-tree*	
DRACONTIUM.[c]	*Gynand. Polyand.*	Gen. 1029. Sp. 1372.	
	pertuſum.	S. *Perforate-leaved*	Dragons.
DURANTA.	*Didynam. Angioſp.*	Gen. 786. Sp. 888.	
	Plumieri.	S. *Creeping prickly*	Duranta, *or* Caſtorea.
	Elliſia.	S. *Upright*	
ECHITES.[d]	*Pentand. Monog.*	Gen. 299. Sp. 307. 1671.	
	ſuberecta.	S. *Upright*	Echites.
EHRETIA.	*Pentand. Monog.*	Gen. 257. Sp. 274.	
	tinifolia.	S. *Laurus-tinus leaved*	Ehretia.
	Bourreria.	S. *Honeyſuckle-leaved*	
ERICA.	*Octand. Monog.*	Gen. 484. Sp. 501. 1672.	
	triflora.	G. *Three-flowered*	Heath.
	carnea.	G. *Fleſh-coloured*	
	cerinthoides.	G. *Scarlet-flowered*	
	abietina.	G. *Juniper-leaved*	
	auſtralis.	G. *Spaniſh*, or *Mediterranean*	
	multiflora.	G. *Many-flowered*	
	baccans.	G. *Three-leaved*	
	curviflora.	G. *Curve-flowered*	
	fucata.	G. *Painted*	
	longiflora.	G. *Long-flowered*	
	urceolens.	G. *Pitcher*	
	arborea.	G. *Shrubby*	
ERIGERON.	*Syngen. Polyg. ſuperf.*	Gen. 951. Sp. 1209.	
	fœtidum.	S. *Fœtid*	Erigeron.

[a] *Jan Raja*, M.
[b] *Cadjang*, M.
[c] *Takka*, M.
[d] *Carandas*, M.

ERINUS.

GENUS.	SPECIES, &c.		ENGLISH NAMES.
ERINUS.	*Didynam. Angiosperm.*	Gen. 771. Sp. 878.	
	alpinus.	G. *Purple Alpine*	Erinus.
ERIOCEPHALUS.	*Syngen. Polygam. neceſſ.*	Gen. 994. Sp. 1310.	
	africanus.	G. *African*	Eriocephalus.
	racemoſus.	G. *Silvery-leaved*	
ERYTHRINA.[a]	*Diadelph. Decand.*	Gen. 855. Sp. 992.	
	herbacea.	S. *Herbaceous*	
	Corallodendron.	S. *True*	Coral Tree.
	picta.	S. *Black ſpined*	
EUGENIA.[b]	*Icoſand. Monog.*	Gen. 616. Sp. 672.	
	Jambos.	S. *Weſt India*	
	malaccenſis.	S. *Eaſt India*	Pomme Roſe.
	nova ſpecies.	S. *New ſpecies*	
EUPHORBIA.[c]	*Dodecand. Pentag.*	Gen. 609. Sp. 646.	
	antiquorum.	S. *Triangular*	
	canarienſis.	S. *Canary*	
	officinarum.	S. *Medicinal*	
	Clavi Herculis.	S. *Hercules Club*	
	neriifolia.	S. *Oleander-leaved*	
	mauritanica.	S. *African*	
	cotonifolia.	S. *Rhus-leaved*	
	cordifolia, *vel* padifolia.	S. *Padus-leaved*	Spurge.
	cereiformis.	*Torch-thiſtle*	
	Characias.	G. *Red-ſtalked*	
	Caput Meduſæ.	G. *Meduſa's head*	
	Tithymaloides.	G. *Myrtle-leaved*	
	amygdaloides variegata.	G. *Striped*	
	ſpinoſa.	*Prickly*	
	Tirucalli.	G. *Tree*	
FAGARA.	*Tetrand. Monog.*	Gen. 150. Sp. 172.	
	Pterota.	S. *Iron-wood*, or	Lechea.
FERRARIA.	*Gynand. Triand.*	Gen. 1018. Sp. 1353.	
	undulata.	S. *Undulated Starry*	Iris.
FICUS.[d]	*Polyg. Polyœcia.*	Gen. 1168. Sp. 1513.	
	religioſa.	S. *Poplar-leaved*	
	benghalenſis.	S. *Bengal*	
	racemoſa.	S. *Cluſtered*	Fig-tree.
	dumoſa.	S. *Buſhy*	
	indica.	S. *Indian*	
	pumila.	S. *Dwarf*	

[a] *Gelaga*, M.

[b] Or *Jamboſa-domeſtica*; the Malabar name is *Jambeli*. The Weſt Indian, or Jambos, was brought from the Eaſt Indies originally. *Jamboes*, M.

[c] *Sudu-ſudu*, M.

[d] Figs grow in great perfection in Carolina, and would become a valuable trade, if the inhabitants had the method of curing them as in Turky. *Varingin*, M.

GENUS.	SPECIES, &c.		ENGLISH NAMES.	
FRITTILLARIA.	*Hexand. Monog.*		Gen. 411. Sp. 435.	
	regia.	S.	*Royal*, or *greater*	Corona Regalis.
	nana.	S.	*Leſſer*	Corona Regalis.
GALENIA.	*Octand. Digyn.*		Gen. 492. Sp. 515.	
	africana.	G.	*African*	Galenia, *or* Atriplex.
GARDENIA.[a]	*Pentand. Monogyn.*		Gen. 492. Sp. 305. 1679.	
	florida-fl. plen.	S.	*Double-flowered*	Cape Jaſmine.
	flore ſimplici.	S.	*Single-flowered*	Cape Jaſmine.
GENISTA.	*Diadelph. Decand.*		Gen. 859. Sp. 997.	
	canarienſis.	G.	*Canary*	Broom, *or* Cytiſſus.
	ſpinoſa	G.	*Spinous*	Broom, *or* Cytiſſus.
	candicans.	G.	*Montpelier*	Broom, *or* Cytiſſus.
GERANIUM.	*Monod. Enneand.*		Gen. 832. Sp. 945.	
	inquinans.	G.	*Common ſcarlet*	Crane's Bill, *or* Geranium.
	papilionaceum.	G.	*Butterfly*	Crane's Bill, *or* Geranium.
	cucullatum.	G.	*Hollow-leaved*	Crane's Bill, *or* Geranium.
	peltatum.	G.	*Ivy-leaved*	Crane's Bill, *or* Geranium.
	acetoſum.	G.	*Sorrel-leaved*	Crane's Bill, *or* Geranium.
	zonale.	G.	*Horſe-ſhoe*	Crane's Bill, *or* Geranium.
	variegatum.	G.	*Striped-leaved*	Crane's Bill, *or* Geranium.
	vitifolium.	G.	*Balm-ſcented*	Crane's Bill, *or* Geranium.
	capitatum.	G.	*Roſe-ſcented*	Crane's Bill, *or* Geranium.
	alchemilloides.	G.	*Lady's-mantle-leaved*	Crane's Bill, *or* Geranium.
	odoratiſſimum.	G.	*Muſk*	Crane's Bill, *or* Geranium.
	groſſularoides.	G.	*Gooſeberry-leaved*	Crane's Bill, *or* Geranium.
	gibboſum.	G.	*Gouty-ſtalked*	Crane's Bill, *or* Geranium.
	fulgidum.	G.	*Flaming red*	Crane's Bill, *or* Geranium.
	lobatum.	G.	*Vine-leaved*	Crane's Bill, *or* Geranium.
	hybridum.	G.	*Hybrid*	Crane's Bill, *or* Geranium.
	rutilans.	G.	*Multifid*	Crane's Bill, *or* Geranium.
	terebinthinum.	G.	*Aromatic-ſmelling*	Crane's Bill, *or* Geranium.
	cordifolium.	G.	*Heart-leaved*	Crane's Bill, *or* Geranium.
	glaucophyllum.	G.	*Glaucous*	Crane's Bill, *or* Geranium.
	orientale.	G.	*Oriental*	Crane's Bill, *or* Geranium.
	ſcabrum.	G.	*Rough*	Crane's Bill, *or* Geranium.
	lacerum.	G.	*Jagged*	Crane's Bill, *or* Geranium.
	carnoſum.	G.	*Fleſhy-ſtalked*	Crane's Bill, *or* Geranium.
	trigonum.	G.	*Triangular-ſtalked*	Crane's Bill, *or* Geranium.
	triſte.	G.	*Anemony-leaved*, or *Night-ſmelling*	Crane's Bill, *or* Geranium.
	hirſutum.	G.	*Hairy*	Crane's Bill, *or* Geranium.
	lævigatum.	G.	*Smooth-leaved*	Crane's Bill, *or* Geranium.
	pinnatum.	G.	*Wing-leaved*	Crane's Bill, *or* Geranium.
	lanceolatum.	G.	*Spear-ſhaped*	Crane's Bill, *or* Geranium.
	cotyledonis.	G.	*Orbicular Heart-ſhaped*	Crane's Bill, *or* Geranium.
	glutinoſum.	G.	*Glutinous*	Crane's Bill, *or* Geranium.

[a] *Catje-piring*, M.

GENUS.	SPECIES, &c.		ENGLISH NAMES.
GESNERIA.	*Didynam. Angiosperm.*		Gen. 749. Sp. 850.
	tomentosa.	S.	*Woolly-leaved* — Gesneria.
GLADIOLUS.	*Triand. Monog.*		Gen. 57. Sp. 52.
	spicatus.	S.	*Spiked*
	tristis.	G.	*Spotted-flowered*, or *sorrowful*
	angustus.	S.	*Narrow-leaved*
	blandus.	G.	*Smooth-leaved* — Corn-flag, *or* Sword-lily.
	plicatus.	G.	*Plaited*
	strictus.	G.	*Straight*
	byzantinus.	G.	*Byzantine*
GLEDITSIA.	*Polygam. Dicecia.*		Gen. 1159. Sp. 1509.
	monosperma.	S.	*Single-seeded*
	orientalis.	S.	*Eastern* — Gleditsia.
GLORIOSA.	*Hexand. Monog.*		Gen. 413. Sp. 437.
	superba.	S.	*Superb* — Lily.
GNAPHALIUM.	*Syngen. Polyg. superf.*		Gen. 946. Sp. 1191.
	sessilifolium.	G.	*Sessile-leaved*
	trifurcatum.	G.	*Three-forked*
	Stæchas.	G.	*Common*
	orientale.	G.	*Eastern* — Tree Everlasting.
	ericoides.	G.	*Heath-leaved*
	cylindricum.	G.	*Oblong-leaved*
	flabelliforme.	G.	*Fan-shaped*
GORDONIA.			
	Lasianthus.	G.	*Loblolly Bay.*
GORTERIA.	*Syngen. Polygam. Frust.*		Gen. 982. Sp. 1283.
	ringens.	G.	*Grinning*
	setosa.	G.	*Bristly* — Gorteria.
	ciliaris.	G.	*Hairy-leaved*
GOSSYPIUM.[a]	*Monand. Polyand.*		Gen. 845. Sp. 975.
	arboreum.	S.	*Shrubby*
	religiosum.	S.	*Vine-leaved* — Cotton.
GOUANIA.	*Polygam. Monœcia.*		Gen. 1157. Sp.
	domingensis.	S.	*Domingo* — Gouania.[b]
GREWIA.[c]	*Gynand. Polyand.*		Gen. 1026. Sp. 1367.
	occidentalis.	G.	*Elm-leaved*
	orientalis.	S.	*Eastern* — Grewia.
	Microcos.	S.	*Panicled*
GUAJACUM.	*Decand. Monog.*		Gen. 518. Sp. 546.
	officinale.	S.	*Officinal*
	sanctum.	S.	*Holy* — Lignum Vitæ.
	arbum.	S.	*Myrtle-leaved*
GUILANDINA.[d]	*Decand. Monog.*		Gen. 517. Sp. 545.
	Bonduc.	S.	*Indian* — Nicker-tree.

[a] *Capas*, M.
[b] So called from Professor Gouan.
[c] *Cajou-Ceram*, M.
[d] *Klitti*, M.

Bonducella.

GENUS.	SPECIES, &c.		ENGLISH NAMES.	
GUILANDINA.	Bonducella.	S.	*Leſſer*	Nicker-tree.
	Moringa.[a]	S.	*Zeylon*	
	lacerans.	S.	*Rending*	
GURULLA.				
	aſiatica.	S.	*Aſiatic*	Gurulla.
HÆMANTHUS.	*Hexand. Monog.*		Gen. 400. Sp. 412.	
	coccineus.	S.	*Tongue-leaved*	Blood-flower.
	puniceus.	S.	*Waved-leaved*	
	ciliaris.	S.	*Hairy*	
	villoſus.	S.	*Villous*	
HÆMATOXYLUM.	*Decand. Monog.*		Gen. 525. Sp. 549.	
	Campechianum.	S.	*Logwood.*	
HALLERIA.	*Didynam. Angioſperm.*		Gen. 761. Sp. 872.	
	lucida.	G.	*African-fly*	Honeyſuckle.
HEDYSARUM.[b]	*Diadelph. Decand.*		Gen. 887. Sp. 1051.	
	ſtyracifolium.	S.	*Storax-leaved*	French Honeyſuckle.
	amentaceum.	S.	*Amentaceous*	
	movens.	S.	*Moving Plant.*	
HELICTERES.[c]	*Gynand. Decand.*		Gen. 1025. Sp. 1366.	
	Iſora.	S.	*Screw-tree.*	
HELIOTROPIUM.	*Pentand. Monog.*		Gen. 179. Sp. 187.	
	peruvianum.	S.	*Sweet-ſcented*, or *Peruvian*	Turnſole.
HERMANNIA.	*Tetradyn. Pentand.*		Gen. 828. Sp. 941.	
	althæifolia.	G.	*Marſhmallow-leaved*	Hermannia.
	candicans.	G.	*White*	
	alnifolia.	G.	*Alder-leaved*	
	lavendulifolia.	G.	*Lavender-leaved*	
	groſſularifolia.	G.	*Gooſeberry-leaved*	
HERNANDIA.[d]	*Monodelph. Pentand.*		Gen. 1049. Sp. 1391.	
	ſonora.	S.	*Jack in a Box.*	
HIBISCUS.[e]	*Monodelph. Polyand.*		Gen. 846. Sp. 975.	
	tiliaceus.	S.	*Lime-leaved*	Syrian Mallow.
	Roſa Sinenſis.	S.	*China Roſe*	
	mutabilis.	S.	*Changeable Roſe*	
	malvaviſcus.	S.	*Mallow-leaved*	
	ſpecioſus.	S.	*Shewy*	
	Abelmoſchus.	S.	*Muſk-leaved*	
	Sabdariffa.	S.	*Cut-leaved*	
HIPPIA.				
	fruteſcens.	G.	*Æthiopian Shrubby*	Tanſey.
HOPEA.				
	tinctoria.	G.	*Called after Dr. Hope.*	

[a] Or *Nipbriticum Lignum*. The Malabar name is *Moringu*. In Ceylon it is called *Katu-murungha*, or *Wattu-murunga*. In Malay, *Cancordoe*.

[b] *Cadjang-goenong*, M.

[c] *Bona-radja*, M.

[d] *Cajo-raja*, M.

[e] *Daun-caro*, M.

GENUS.	SPECIES, &c.		ENGLISH NAMES.
HURA.	*Monœcia Monodelph.*	Gen. 1087. Sp. 1431.	
	crepitans.	S. *Sand-box tree.*	
HYDROCOTYLE.	*Pentand. Digyn.*	Gen. 325. Sp. 338.	
	aſiatica.	S. *Aſiatic*	Pennywort.
HYMENÆA.[a]	*Decand. Monogyn.*	Gen. 512. Sp. 537.	
	Courbaril.	S. *Locuſt*, or *Gum*	Elemi-tree.
HYOSCYAMUS.	*Pentand. Monog.*	Gen. 247. Sp. 257.	
	aureus.	G. *Golden*	Henbane.
HYPERICUM.	*Polyadelph. Polyand.*	Gen. 902. Sp. 1101.	
	balearicum.	G. *Minorcan*	St. John's Wort.
	olympicum.	G. *Olympian*	
	monogynum.	G. *Chineſe Tutſan*	
JASMINUM.	*Diand. Monogyn.*	Gen. 17. Sp. 9.	
	grandiflorum.	G. *Great flowered*, or *Catalonian*	Jaſmine.
	azoricum.	G. *Azorian*	
	odoratiſſimum.	G. *Yellow Indian*, or *moſt fragrant*	
JATROPHA.[b]	*Monœcia Monad.*	Gen. 1084. Sp. 1428.	
	multifida.	S. *Multifid*	French Phyſic-nut.
	Curcas.	S. *Angular-leaved*, or *American*	
	urens.	S. *Stinging*	
	goſſypifolia.	S. *Gooſeberry-leaved*	
IBERIS.	*Tetradyn. Siliculoſa.*	Gen. 804. Sp. 904.	
	ſemperflorens.	G. *Broad-leaved*	Candy Tuft-tree.
	ſempervirens.	G. *Narrow-leaved*	
	flor. variegatis.	G. *Striped-leaved*	
	gibraltica.	G. *Gibraltar*	
	ſaxatilis.	G. *Rock*	
ILEX.	*Tetrand. Tetragyn.*	Gen. 172. Sp. 181.	
	aſiatica.	G. *Perado-tree.*	
ILLICIUM.	*Dodecand. Polygyn.*	Gen. 611. Sp. 664.	
	floridanum.	S. *Starry*	Aniſeed.
INDIGOFERA.	*Diadelph. Decand.*	Gen. 889. Sp. 1061.	
	ſcandens.	S. *Climbing*	Indigo.
	pſoraloides.	S. *Pſoralea-like*	
JUNIPERUS.	*Dioecia Monadelph.*	Gen. 1134. Sp. 1470.	
	bermudiana.	G. *Bermudas*	Cedar.
	phœnicea.	G. *Phœnician*	
JUSTICIA.[c]	*Diand. Monogyn.*	Gen. 27. Sp. 20. 1663.	
	Adhatoda.	G. *Malabar Nut.*	Malabar Nut.
	Ecbolium.	S. *Reflexed-flowered*	
	hyſſopifolia.	S. *Hyſſop-leaved*	
	picta.	S. *Spotted*, or *painted*	

[a] This tree is ſuppoſed to yield the true Gum Copal, and that the difference between this and Gum Anime may be owing to ſoil and heat of climate; it grows wild in the American iſlands, the Moſkito Shore, and in Terra Firma.

[b] *Daun-Maas*, M.

[c] *Daun-Prada*, M.

IXIA,

GENUS.	SPECIES, &c.		ENGLISH NAMES.
IXIA.	*Triand. Monogyn.*	Gen. 56. Sp. 51. 1664.	
	pulcherrima.	G. *Moſt beautiful*	Ixia.
	ſqualida.	G. *Squalid*	
	longicaulis.	G. *Long-ſtalked*	
	plicata.	G. *Plaited*	
	chinenſis.	G. *Chineſe*	
	ſpecioſa.	G. *Shewy*	
	crocata.	G. *Saffron-coloured*	
	flexuoſa.	G. *Flexible-branched*	
	bulbifera.	G. *Bulb-bearing*	
	Bulbocodium.	G. *Bulbocodium*	
	polyſtachia.	G. *Many ſpiked*	
	violacea.	G. *Violet-coloured*	
	maculata.	G. *Spotted-flowered*	
	tubiflora.	G. *Tube-flowered*	
	trifoliata.	G. *Three-leaved*	
IXORA.[a]	*Tetrand. Monogyn.*	Gen. 131. Sp. 159.	
	coccinea.	S. *Scarlet*	Wild Jaſmine.
KÆMPFERIA.[b]	*Monand. Monogyn.*	Gen. 7. Sp. 3.	
	Galanga.	S. *Oval-leaved*	Galangal.
KIGGELARIA.	*Diœcia Decand.*	Gen. 1128. Sp. 1466.	
	africana.	G. *African*	Kiggelaria.
LACHNÆA.	*Octand. Digyn.*	Gen. 490. Sp. 514.	
	conglomerata.	G. *Cluſtered*	Lachnea.
LAGERSTROEMIA.	*Polyand. Monogyn.*	Gen. 667. Sp. 733.	
	indica.	S. *Eaſtern*	Lagerſtrœmia, *or* Munchauſia.
LANTANA.	*Didynam. Angioſperm.*	Gen. 765. Sp. 873.	
	ſalvifolia.	G. *Sage-leaved*	American Viburnum.
	africana.	G. *African Ilex-leaved*	
	involucrata.	S. *Round-leaved*	
	Camara.	S. *Smooth Nettle-leaved*	
	aculeata.	S. *Nettle-leaved*	
	trifolia.	S. *Three-leaved*	
LAVANDULA.	*Didynam. Gynoſperm.*	Gen. 711. Sp. 800.	
	multifida.	G. *Canary*	Lavender-tree.
	dentata.	G. *Serrated-leaved*	
LAVATERA.	*Monadelph. Polyand.*	Gen. 842. Sp. 972.	
	olbia.	G. *Small-flowered*	Mallow.
LAURUS.[c]	*Enneand. Monog.*	Gen. 503. Sp. 528.	
	Camphora.[d]	G. *Camphor-tree*	Bay-tree.

Borbonica.

[a] *Djarong*, M.
[b] *Tjorkor*, M.
[c] Laurus in the Malay is *Randou*.
[d] The Camphire from Sumatra is greatly preferable to that of Japan: we are not certain whether it is from a different ſpecies of tree; but it ſeems well worth enquiring into, as the effects of proportionable quantities in medicine are ſurprizingly different; perhaps it may be owing to the great difference of heat in the climates. ELLIS on tranſplanting Seeds, p. 27. It may be doubted whether we are yet in poſſeſſion of the true Camphor-tree. In Arabic it is called *Capur*,

GENUS.	SPECIES, &c.	ENGLISH NAMES.	
Laurus.	Borbonia.	G. *Carolina*	Bay-tree.
	indica.	G. *Laurus Regis*	
	fœtans.	G. *Stinking*	
	nobilis.	G. *Noble*	
	Cinnamomum.[a]	S. *Cinnamon-tree*	
	Caſſia.	S. *Baſtard ditto*	
	Perſea.	S. *Allegator Pear*	
Lawsonia.[b]	*Octand. Monog.*	Gen. 482. Sp. 498.	
	ſpinoſa.	S. *Spinous*	Lawſonia.
Leea.[c]			
	criſpa.	S. *Curled-ſtalked*	Leea.
	æquata.	S. *Downy-ſtalked*	
Lechea.	*Triand. Trigyn.*	Gen. 109. Sp. 133.	
	major.	S. *Greater*	Lechea.
Limodorum.	*Gynand. Diand.*	Gen. 1013. Sp. 1345.	
	tuberoſum.	S. *Purple*	Helleborine.
Linum.	*Pentand. Pentagyn.*	Gen. 389. Sp. 397. 1672.	
	maritimum.	G. *Sea*	Flax.
Lobelia.	*Syngen. Monogam.*	Gen. 1006. Sp. 1317.	
	longiflora.	S. *Long-tubed*	Cardinal Flower.
	coronopifolia.	S. *Swines-creſs*	
Lotus.	*Diadelph. Decand.*	Gen. 897. Sp. 1089.	
	jacobæus.	G. *Black*	Bird's-foot Trefoil.
	creticus.	G. *Cretan*, or *ſilvery-leaved*	
	Dorycnium.	G. *Montpelier*	
Ludwigia.[d]	*Tetrand. Monogyn.*	Gen. 153. Sp. 173.	
	ovata.	S. *Ovate*	Ludwigia.
Lychnis.	*Decand. Pentag.*	Gen. 584. Sp. 625.	
	coccinea.	S. *Scarlet Chineſe*	Campion.
	coronata.	S. *Crowned*	
Lycium.	*Pentand. Monog.*	Gen. 262. Sp. 277.	
	barbarum.	G. *Prickly*	Box-thorn.
Malpighia.	*Decand. Trigyn.*	Gen. 572. Sp. 609.	
	glabra.	S. *Smooth-leaved*	BarbadoesCherry.

Capur, and *Cafur*; in Sumatra, *Capoor Barroos*. Conſult Marſden's ingenious Hiſtory of Sumatra, juſt publiſhed, p. 120. & *ſeq.* Kæmpferi Amœnitates, p. 773. By a particular proceſs, Camphire is procured in a liquid ſtate, reſembling oil, and is much uſed by the Sumatrans in ſtrains, ſwellings, and inflammations. A reſpectable Surgeon in London has informed me, that he applied this Camphire oil to the ſcrophulous glands of a child's neck, ſoon after which the diſeaſe diſappeared.

[a] Though a ſpecies of Cinnamon has been introduced into the French Weſt India iſlands, its quality is ſo much inferior to the beſt Ceylon, as to excite a ſuſpicion that the Weſt India is a different ſpecies. In Ceylon it is called *Kurundu*. In the Moluccas, the iſland of Batsjan, Java, and in Borneo, there is a ſpecies of Laurus nearly reſembling the Cinnamon; it has more of the flavour of Cloves than of Cinnamon, and is perhaps the Cinnamon of Guadaloupe, &c. In Borneo it is called *Culitlawan*. Mr. Le Poivre ſays, that Cochin-China produces Cinnamon, though in ſmall quantity, yet much ſuperior in quality to the Ceylon.

[b] *Patjar-tjalong*, M.

[c] *Sajor-babek*, M.

[d] *Seroni-aiger*, M.

GENUS.	SPECIES, &c.	ENGLISH NAMES.
MALPIGHIA.	urens.	S. *Stinging* } Barbadoes
	verbaſcifolia.	S. *Mullein-leaved* } Cherry.
MALVA.	*Monadelph. Polyand.*	Gen. 841. Sp. 967. 1675.
	capenſis.	S. *Cape* Mallow.
MAMMEA.	*Polyand. Monog.*	Gen. 656. Sp. 731.
	americana.	S. *American* Mammee Apple.
MANGIFERA.	*Pentand. Monog.*	Gen. 278. Sp. 290.
	indica.	S. *Indian* Mangoe-tree.
MARRUBIUM.	*Didynam. Gymnoſp.*	Gen. 721. Sp. 815.
	Pſeudodictamnus.	G. *Baſtard Dittany* Horehound.
MARTYNIA.	*Didynam. Angioſp.*	Sp. 862.
	perennis.	S. *Perennial* Martynia.
MEDEOLA.	*Hexand. Trigyn.*	Gen. 455. Sp. 483.
	aſparagoides.	G. *Baſtard* Aſparagus.
MEDICAGO.	*Diadelph. Decand.*	Gen. 899. Sp. 1096.
	arborea.	G. *Shrubby* Moon Treefoil.
MELIA.[a]	*Decand. Monog.*	Gen. 527. Sp. 550.
	Azederach.	G. *Common* } Bead-tree.
	Azadirachta.	G. *Indian* }
MELIANTHUS.[b]	*Didynam. Angioſp.*	Gen. 795. Sp. 892.
	major.	G. *Greater* } Honey-flower.
	minor.	G. *Leſſer* }
MENTHA.	*Didynam. Gymnoſp.*	Gen. 713. Sp. 804.
	canarienſis.	G. *Shrubby* } Canary-mint.
	paniculata.	G. *Panicled* }
MESEMBRYANTHEMUM.	*Icoſand. Pentag.*	Gen. 628. Sp. 687.
	geniculiflorum.	G. *Jointed*
	noctiflorum.	G. *Night-flowering*
	ſplendens.	G. *Shining-flowered*
	umbellatum.	G. *Umbellated*
	calamiforme.	G. *Quill-leaved*
	Tripolium.	G. *Plain-leaved*
	bellidiflorum.	G. *Daiſy-flowered*
	deltoides.	G. *Delta-ſhaped.*
	var. major.	G. *Greater Delta* } Fig Marygold.
	var. minor.	G. *Leſſer Delta* }
	barbatum.	G. *Bearded*
	humile.	G. *Dwarf-bearded*
	hiſpidum.	G. *Briſtly-ſtalked*
	ſtriatum.	G. *Striped-flowered*
	villoſum.	G. *Downy-leaved*
	ſcabrum.	G. *Rough-leaved*
	emarginatum.	G. *Notched-flowered*
	pugioniforme.	G. *Dagger-leaved*

[a] *Foela-moergatti*, M. [b] *Taratti-kiſjil*, M.

uncinatum.

GENUS.	SPECIES, &c.		ENGLISH NAMES.
MESEMBRYANTHEMUM.	uncinatum.	G.	*Leſſer hooked-leaved*
	var. major.	G.	*Greater ditto*
	ſpinoſum.	G.	*Prickly*
	tuberoſum.	G.	*Tuberous-rooted*
	ſtipulaceum.	G.	*Upright ſhrubby*
	craſſifolium.	G.	*Thick-leaved creeping*
	falcatum.	G.	*Crooked-leaved*
	glomeratum.	G.	*Crowded*
	loreum.	G.	*Leathery-ſtalked*
	filamentoſum.	G.	*Six-ſided purple*
	acinaciforme.	G.	*Scymiter-ſhaped*
	forficatum.	G.	*Forked*
	edule.	G.	*Eatable-fruited*
	bicolorum.	G.	*Two-coloured*
	ſerratum.	G.	*Saw-leaved*
	micans.	G.	*Glittering*
	roſtratum.	G.	*Beaked*
	veruculatum.	G.	*Spit-leaved*
	glaucum.	G.	*Glaucous-leaved*
	corniculatum.	G.	*Greater horned*
	var. minor.	G.	*Leſſer horned*
	expanſum.	G.	*Broad-leaved*
	tortuoſum.	G.	*Twiſted-leaved*
	ringens caninum.	G.	*Dog's chops*
	ringens felinum.	G.	*Cat's chops*
	aggregatum.	G.	*Cluſtered*
	gibboſum.	G.	*Gibbous*
	pubeſcens.	G.	*Downy*
	procumbens.	G.	*Procumbent*
	ciliatum.	G.	*Fringed*
	carinatum.	G.	*Keeled*
	cordifolium.	G.	*Heart-leaved*
	fiſſum.	G.	*Cloven*
	capenſe.	G.	*Cape*
	lævigatum.	G.	*Smooth-leaved*
	ſucculentum.	G.	*Succulent*
	echinatum.	G.	*Prickly*
	ſcalpatrum.	G.	*Broad-leaved*
	villoſum.	G.	*Hairy*
	Tripolium.	G.	*Sea-ſtarwort*
	teſticulatum.	G.	*Teſticulated*
	dolabriforme.	G.	*Hatchet-leaved*
	difforme.	G.	*Deformed*
	albidum.	G.	*White*

Fig Marygold.

linguiforme.

GENUS.	SPECIES, &c.		ENGLISH NAMES.
MESEMBRYANTHEMUM.	linguiforme.	G.	*Tongue-leaved*
	aureum.	G.	*Golden*
	decumbens.	G.	*Proſtrate*
	auſtrale.	G.	*Southern*
	tenuifolium.	G.	*Slender-leaved*
			Fig Marygold.
MIMOSA.[a]	*Polygam. Monœcia.*		Gen. 1158. Sp. 1498.
	latifolia.	S.	*Broad-leaved*
	pernambucana.	S.	*Pernambuque*, or *Italian*
	cornigera.	S.	*Horned*
	arborea.	S.	*Indian-tree*
	nilotica.	S.	*Gum Arabic*
	tamarindifolia.	S.	*Tamarind-leaved*
	pudica.	S.	*Humble Plant*
	farneſiana.	S.	*Indian Gazia*
	latiſiliqua	S.	*Broad-podded*
	virgata.	S.	*Twigged*
	unguis Cati.	S.	*Twiſted-podded*
	jamaicenſis.	S.	*Jamaican*
	vaga.	S.	*Fraxinella-leaved*
	punctata.	S.	*Dotted*
	japonica.	S.	*Japonic*
	monoſperma.	S.	*Single-ſeeded*
	reticulata.	S.	*Reticulated*
	glauca.	S.	*Glaucous*
	horrida.	S.	*Horrid*
	peregrina.	S.	*American*
	Intſia.	S.	*Indian*
	circinalis.	S.	*Spiral*
	ſimplicifolia.	S.	*Simple-leaved*
	montana.	S.	*Mountain*
	Lebbeck.	S.	*Egyptian*
	pigra.	S.	*Long-ſpined*
			Acacia, *or* Senſitive Plant.
MORÆA.	*Triand. Monogyn.*		Gen. 60. Sp. 59.
	vegeta.	G.	*Sword-ſhape leaved*
	iridioides.	G.	*Iris-leaved*
			Moræa.
MURRAYA.			
	exotica.	S.	*Exotic*
			Murraya.
MUSA.	*Polygam. Monœcia.*		Gen. 1141. Sp. 1477.
	paradiſiaca.	S.	*Plantain-tree.*
MYRICA.	*Diœcia Pentand.*		Gen. 1107. Sp. 1453.
	quercifolia.	G.	*Oak-leaved*
	cereifolia.	G.	*Cereus-leaved*
			Candleberry Myrtle.
MYRSINE.	*Pentand. Monog.*		Gen. 269. Sp. 285.
	africana.	G.	*African*
			Box-tree.

[a] *Parrang*, M.

MYRTUS,

GENUS.	SPECIES, &c.		ENGLISH NAMES.	
MYRTUS.[a]	*Icosand. Monog.*		Gen. 617. Sp. 673.	
	communis.	G.	*Broad-leaved*	Myrtle.
	romana.	G.	*Roman*	
	tarentina.	G.	*Box-leaved*	
	italica.	G.	*Upright*	
	boetica.	G.	*Orange-leaved*	
	mucronata.	G.	*Nutmeg-leaved*	
	rosmarinifolia.	G.	*Rosemary-leaved*	
	maculata.	G.	*Blotch-leaved*	
	trifoliata.	G.	*Three-leaved*	
	zeylanica.	S.	*Zeylon*	
	Pimento.	S.	*Allspice*, or *long-leaved*	
	var. rotundifolia.	S.	*Round-leaved*	
NERIUM.[b]	*Pentand. Monogyn.*		Gen. 297. Sp. 305.	
	Oleander.	G.	*Single red*	Rose Bay.
	var. flore pleno.	G.	*Double red*	
	divaricatum.	G.	*Double-flowered*	
	americanum.	G.	*Carolina Olive*, or	
NYCTANTHES.	*Diandria Monogyn.*		Gen. 16. Sp. 8.	
	Sambac.	S.	*Single Arabian*	Jasmine.
	var. flore pleno.[c]	S.	*Double ditto*	
	fol. variegatis.	S.	*Striped ditto*	
OLEA.	*Diandria Monogyn.*		Gen. 20. Sp. 11.	
	americana.	G.	*American*	Olive-tree.
	odoratissima.	G.	*Sweet-scented* [*European*	
	europæa latifol.	G.	*Common broad-leaved*, or	
	var. angustifolia.	G.	*Narrow-leaved*	
	var. buxifolia.	G.	*Box-leaved*	
	capensis.	G.	*Cape*	
ONONIS.	*Diadelph. Decand.*		Gen. 863. Sp. 1006.	
	Natrix.	G.	*Viscous*	Rest Harrow.
	rotundifolia.	G.	*Round-leaved*	
	crispa.	G.	*Curled*	
OPHIOXYLUM.[d]	*Polygam. Monœcia.*		Gen. 1142. Sp. 1478.	
	serpentinum.[e]	S.	*Snake-like*	Ophioxylum.
ORIGANUM.	*Didynam. Gymnosp.*		Gen. 726. Sp. 822.	
	ægyptiacum.	S.	*Ægyptian*	Marjoram.
	Dictamnus.		*Dittany of Crete*	
	sipyleum.		*Dittany of Mount Sipylus*	
	Majorana.		*Sweet Marjoram*	

[a] *Hiveong*, M.

[b] *Sidarraja*, M.

[c] Or Goa Jasmine, with a very large double flower, of an exquisite scent. In the Malabar tongue it is called *Katu*, or *Kudda Mulla*; in Malay, *Malati*; in Sumatra corrupted to *Melloor*, or *Melattee*.

[d] *Boa-ati*, M.

[e] Or *Lignum Colubrinum*. In Ceylon it is called *Rametul*, or *Cametul*; in the island of Rotthe, and of Timor, it is called *Caju Nassi*; in Siam, Malacca, and Sumatra, *Caju Ular*. It is the *Kudda Mulla* of the Hortus Malabaricus. *Jasminum Indicum Mali Aurantiæ foliis, flore albo, pleno amplissimo*. This beautiful double-flowering Indian Jasmine was brought from Goa, in 1690, to the Grand Duke of Tuscany, who would not suffer cuttings or layers of it to be given to any body. The root of this plant is said to be a powerful vermifuge.

GENUS.	SPECIES, &c.		ENGLISH NAMES.	
ORNITHOGALUM.	*Hexand. Monog.*		Gen. 418. Sp. 439.	
	latifolium.	G.	*Broad-leaved*	Star of Bethlehem.
	arabicum.	G.	*Arabian*	
	luteum.	G.	*Yellow*	
OSTEOSPERMUM.	*Syngen. Polyg. neceſſaria.*		Gen. 992. Sp. 1308.	
	piſiferum.	G.	*Pea-ſhaped*	African Chryſanthemum.
	ſpinoſum.	G.	*Spinous*	
	moniliferum.	G.	*Poplar-leaved*	
	rigidum.	G.	*Rigid*	
OTHONNA.	*Syngen. Polyg. neceſſaria.*		Gen. 993. Sp. 1309.	
	bulboſa.	G.	*Bulbous*	Ragwort.
	gibboſa.	G.	*Gibbous*	
	cheirifolia.	G.	*Spear-leaved*	
	parviflora.	G.	*African*	
	pectinata.	G.	*Comb-leaved*	
OXALIS.[a]	*Decand. Pentagyn.*		Gen. 582. Sp. 620.	
	purpurea.	S.	*Purple*	Wood Sorrel.
	flava.	S.	*Yellow*	
	Pes capræ.	S.	*Umbelliferous*	
PANCRATIUM.[b]	*Hexand. Monogyn.*		Gen. 404. Sp. 417.	
	carolinianum.	G.	*Carolina*	Narciſſus.
	zeylanicum.	S.	*Zeylon*	
	mexicanum.	S.	*Mexican*	
	Calpenſe.	S.	*Gibraltar*	
	africanum.	S.	*African*	
	caribæum.	S.	*Caribbee*	
	amboinenſe.	S.	*Broad-leaved*	
PASSERINA.	*Octand. Monogyn.*		Gen. 489. Sp. 513.	
	filiformis.	G.	*African*	Sparrow Wort.
PASSIFLORA.	*Gynand. Pentand.*		Gen. 1021. Sp. 1355.	
	incarnata.	G.	*Three-leaved*	Paſſion Flower.
	rotundifolia.	G.	*Round-leaved*	
	jamaicenſis.	S.	*Jamaican*	
	laurifolia.	S.	*Laurel-leaved*	
	punctata.	S.	*Spotted-leaved*	
	Murucuja.	S.	*Moon-ſhaped-leaved*	
	ſuberoſa.	S.	*Cork-barked*	
	minima.	S.	*Small-leaved*	
	normalis.	S.	*Squared*	
PATAGONULA.	*Pentand. Monogyn.*		Gen. 208. Sp. 212.	
	americana.	S.	*American*	Patagonula.
PAULINIA.[c]	*Octand. Trigynia.*		Gen. 497. Sp. 524.	
	aurea.	G.	*Yellow-flowered*	Paullinia.
	barbadenſis.	S.	*Barbadoes*	
	Cururu.	S.	*Eaſtern*	

[a] *Daun-idop*, M. [b] *Liat-Saare*, M. [c] *Cururu*, M.

GENUS.	SPECIES, &c.	ENGLISH NAMES.
PENTAPETES.[a]	*Monodelph. Dodecand.*	Gen. 834. Sp. 958.
	phœnicea.	S. *Indian Vervain* Mallow.
PERIPLOCA.	*Pentand. Digynia.*	Gen. 303. Sp. 309.
	africana.	G. *African climbing* } Apocynum.
	græca.	G. *Grecian* }
PETIVERIA.	*Hexand. Tetragyn.*	Gen. 459. Sp. 468.
	alliacea.	S. *Guinea* } Henweed.
	octandra.	S. *American* }
PHILADELPHUS.	*Icosand. Monogyn.*	Gen. 614. Sp. 671.
	aromaticus.	G. *Broad-leaved* } New Zealand
	rubicaulis.	G. *Shining-leaved* } Tea.
PHOENIX.	*Diœcia Triandria.*	Gen. 1224. Sp. 1659.
	dactylifera.	S. *Date* Palm.
PHLOMIS.	*Didynam. Gymnosp.*	Gen. 723. Sp. 818.
	purpurea.	G. *Purple* } Jerusalem Sage.
	Leonurus.	G. *Lion's-tail* }
PHYLICA.	*Pentand. Monogyn.*	Gen. 266. Sp. 283.
	ericoides.	G. *Heath-leaved* } Baſtard
	buxifolia.	G. *Box-leaved* } Alaternus.
PHYLANTHUS.[b]	*Monœcia Triand.*	Gen. 1050. Sp. 1392.
	Emblica.[c]	S. *Pinnated* } Sea-ſide Laurel.
	grandiflora.	S. *Large-flowering* }
PHYLLIS.	*Pentand. Digynia.*	Gen. 323. Sp. 335.
	nobla.	G. *Simpla Nobla of the Canaries.*
PHYSALIS.[d]	*Pentand. Monogyn.*	Gen. 250. Sp. 261. 1670.
	flexuosa.	G. *Flexuoſe Indian* } Alkekengi, *or* Winter Cherry.
	viscosa.	S. *Viſcous* }
	curassavica.	S. *Curaſſao* }
	peruviana.	S. *Peruvian* }
PHYTOLACCA.	*Decand. Decagynia.*	Gen. 588. Sp. 631.
	dioica.	S. *Tree-like American* Nightſhade.
PIPER.	*Diand. Trigynia.*	Gen. 43. Sp. 40.
	Amalago.	S. *Jamaica long* } Pepper.
	obtusifolium.	S. *Obtuſe-leaved* }
	verticillatum.	S. *Whirled* }
PISCIDIA.	*Diadelph. Decand.*	Gen. 856. Sp. 993.
	Erythrina.	S. *Oval-leaved* Dogwood-tree.
PISONIA.	*Polygam. Diœcia.*	Gen. 1162. Sp. 1511.
	aculeata.	S. *Prickly* Fingrigo.
PISTACIA.	*Diœcia Pentand.*	Gen. 1108. Sp.
	vera.	G. *True* } Piſtacia Nut-tree.
	trifolia.	G. *Three-leaved* }
	Lentiscus.[e]	G. *Maſtick-leaved* }

[a] *Conga-haram*, M.
[b] *Daun-Jinta*, M.
[c] In the Malabar, *Nelli-camaram.*
[d] *Peretti*, M.

[e] Gum Maſtick from the Iſle of Scio. As this tree, commonly called the *Lentiſcus*, is doubted to be the genuine Maſtick-tree, ſeeds of the true kind may be procured from the Iſle of Scio.

GENUS.	SPECIES, &c.		ENGLISH NAMES.
PLUMBAGO.[a]	*Pentand. Monogyn.*		Gen. 213. Sp. 215.
	zeylanica.	S.	*Ceylon* } Leadwort.
	ſcandens.	S.	*Climbing* } Leadwort.
PLUMERIA.[b]	*Pentand. Monog.*		Gen. 298. Sp. 306.
	rubra.	S.	*Red Weſt Indian* } Jaſmine.
	alba.	S.	*White ditto* } Jaſmine.
	obtuſa.	S.	*Obtuſe-leaved* } Jaſmine.
POINCINIA.[c]	*Decand. Monog.*		Gen. 515. Sp. 544.
	pulcherrima.	S.	*Barbadoes* } Flower Fence.
	elata.	S.	*Tall* } Flower Fence.
POLYGALA.	*Diadelph. Octand.*		Gen. 851. Sp. 986.
	myrtifolia.	G.	*Myrtle-leaved* } Milkwort.
	ſpinoſa.	G.	*Prickly* } Milkwort.
POLYPODIUM.[d]	*Cryptogam. Filices.*		Gen. 1179. Sp. 1542.
	aureum.	S.	*Golden*, or *Hare's-foot* } Polypody, *or* Fern.
	auriculatum.	S.	*Eared* } Polypody, *or* Fern.
	trifoliatum.	S.	*Three-leaved* } Polypody, *or* Fern.
	effuſum.	S.	*Spreading* } Polypody, *or* Fern.
PORTULACA.[e]	*Dodecand. Monogyn.*		Gen. 603. Sp. 638.
	Anacampſeros.	S.	*Shrubby* — Purſlane.
PRASIUM.	*Didynam. Gymnoſp.*		Gen. 737. Sp. 838.
	majus.	G.	*Shrubby* — Hedge Nettle.
PROTEA.	*Tetrand. Monogyn.*		Gen. 111. Sp. 137.
	argentea.	G.	*Broad-leaved*, or *Cape* } Silver-tree, *or* Protea.
	pallens.	G.	*Pale* } Silver-tree, *or* Protea.
	conifera.	G.	*Upright narrow-leaved* } Silver-tree, *or* Protea.
	glauca.	G.	*Smooth* } Silver-tree, *or* Protea.
	ſaligna.	G.	*Oblique ſpear-ſhaped* } Silver-tree, *or* Protea.
PSIDIUM.[f]	*Icoſand. Monogyn.*		Gen. 615. Sp. 672.
	pyriferum.	S.	*Pear-ſhaped* } Guava.
	pomiferum.	S.	*Apple-ſhaped* } Guava.
	montanum.	S.	*Mountain* } Guava.
	vittata.	S.	*Filleted* } Guava.
PSORALEA.	*Diadelph. Decand.*		Gen. 894. Sp. 1074.
	pinnata.	S.	*Pinnated-leaved* } Jupiter's Beard, *or* Trefoil.
	aculeata.	S.	*Prickly-leaved* } Jupiter's Beard, *or* Trefoil.
	bituminoſa.	S.	*Bituminous* } Jupiter's Beard, *or* Trefoil.
	bracteata.	S.	*Floral-leaved* } Jupiter's Beard, *or* Trefoil.
PTEROCARPUS.[g]	*Diadelph. Decandria.*		Gen. 854. Sp. 1662.
	polygonoides.	S.	*Knot-graſs* } Pterocarpus.
	aphyllus.	S.	*Leafleſs* } Pterocarpus.

[a] *Akar-binaſſi*, M.
[b] *Sambodja*, M.
[c] *Bonga-merak*, M.
[d] *Simbor*, M.
[e] *Gelang*, M.
[f] *Gujave*, M.
[g] This grows to a very large tree, and produces that moſt beautiful and uſeful *wood*, for cabinets, doors, &c. called *Amboina-wood*. In the Malay it is called *Lingoum*, or more frequently *Lingoa*.

GENUS.	SPECIES, &c.		ENGLISH NAMES.	
PTERONIA.	*Syngen. Polygam. Æqualis.*		Gen. 937. Sp. 1176.	
	camphorata.	G.	*Camphor-leaved*	Pteronia.
	oppoſitifolia.	G.	*Oppoſite-leaved*	
	lavendulifolia.	G.	*Lavender-leaved*	
PUNICA.	*Icoſand. Monogyn.*		Gen. 618. Sp. 676.	
	nana.	G.	*Dwarf*	Pomegranate.
RANDIA.	*Pentand. Monogyn.*		Gen. 211. Sp. 213.	
	mitis.	S.	*Mild*, or *round-leaved*	Box-thorn.
	aculeata.	S.	*Prickly*	
RANUNCULUS.	*Polyand. Polygynia.*		Gen. 699. Sp. 772.	
	alpeſtris.	G.	*Alpine*	Crowfoot.
	aconitifolius.	G.	*Monk's-hood*	
RAUVOLFIA.	*Pentand. Monogyn.*		Gen. 293. Sp. 303.	
	nitida.	S.	*Four-leaved ſmooth*	Rauvolfia.
RHODODENDRON.			Sp. 562.	
	maximum.	G.	*Large*	Rhododen-dron.
	ferrugineum.	G.	*Ferruginous*	
	ponticum.	G.	*Pontic*	
	hirſutum.	G.	*Hairy*	
RHUS.	*Pentand. Trigynia.*		Gen. 369. Sp. 379. 1672.	
	tomentoſum.	G.	*Hairy-leaved*	Sumach.
	anguſtifolium.	G.	*Narrow-leaved*	
	Cobbe.	G.	*Ceylon*	
	lucidum.	G.	*Shining-leaved*	
	var. minor.	G.	*Leſſer ditto*	
	lævigatum.	G.	*Smooth-leaved*	
	odoratum.	G.	*Sweet-ſmelling*	
	Copallinum.	G.	*Copal*	
	ſuccedaneum.	G.	*Succedaneous*	
RIVINIA.	*Tetrand. Monogyn.*		Gen. 162. Sp. 177. 1679.	
	humilis.	S.	*Dwarf*	Rivinia.
RONDELETIA.[a]	*Pentand. Monogyn.*		Gen. 224. Sp. 243. 1671.	
	americana.	S.	*Tinus-leaved*, or *American*	Rondeletia.
ROSA.[b]	*Icoſand. Polygynia.*		Gen. 631. Sp. 703.	
	indica.	G.	*China*	Roſe.
ROYENA.	*Decand. Digynia.*		Gen. 555. Sp. 568.	
	lucida.	G.	*Shining-leaved*	Royena.
	latifolia.	G.	*Broad-leaved*	
	myrtifolia.	G.	*Myrtle-leaved*	
RUBIA.	*Tetrand. Monogyn.*		Gen. 127. Sp. 159.	
	peregrina.[c]	G.	*Turky*	Madder.
RUDBECKIA.	*Syngen. Polygam. Fruſt.*		Gen. 980. Sp. 1279.	
	laciniata.	G.	*Jagged*	Rudbeckia.

[a] *Karak-Naſſi*, M.
[b] *Cambang Marrer*, M.
[c] Suppoſed to be the ſame that is now cultivated in Smyrna for a crimſon dye.

GENUS.	SPECIES, &c.		ENGLISH NAMES.
Ruscus.	*Diœcia Syngeneſia.*	Gen. 1139. Sp. 1474.	
	androgynus.	G. *True*	Alexandrian Laurel.
Saccharum.[a]	*Triand. Digynia.*	Gen. 73. Sp. 79.	
	officinale.	S. *Sugar*	Cane.
	pumilum.	S. *Dwarf Sugar*	Cane.
Sagina.	*Tetrand. Tetragynia.*	Gen. 176. Sp. 185.	
	procumbens.	G. *Procumbent*	Pearlwort.
Salicornia.	*Monand. Monogyn.*	Gen. 10. Sp. 5.	
	fruticoſa.	G. *Shrubby jointed*	Glaſſwort.
Salsola.	*Pentand. Digynia.*	Gen. 311. Sp. 322. 1678.	
	capenſis.	G. *Cape*	Glaſſwort.
	fruticoſa.	G. *Shrubby*	Glaſſwort.
Salvia.	*Diandria Monogyn.*	Gen. 39. Sp. 33. 1675.	
	coccinea.	G. *Scarlet*	Sage.
	canarienſis.	G. *Canary*	Sage.
	paniculata.	G. *Panicled-flowered*	Sage.
	africana.	G. *African*	Sage.
	nilotica.	G. *Egyptian*	Sage.
	aurea.	G. *Yellow*	Sage.
	pinnata.	G. *Feathered*	Sage.
	mexicana.	G. *Mexican*	Sage.
	capenſis.	G. *Cape*	Sage.
Sanguisorba.	*Tetrand. Monog.*	Gen. 146. Sp. 169.	
	ſpinoſa.	G. *Spinous*	Burnett.
	dioca.	G. *Dioicous*	Burnett.
Sapindus.[b]	*Octand. Trigynia.*	Gen. 499. Sp. 526.	
	Saponaria.	S. *Indian*	Soap-berry.
	americana.	S. *American*	Soap-berry.
Saxifraga.	*Decand. Digynia.*	Gen. 559. Sp. 570.	
	ſtolonifera.	G. *Chineſe*	Saxifrage.
	mutata.	G. *Silver-edged*	Saxifrage.
	bryoides.	G. *Moſſy*	Saxifrage.
	aſpera.	G. *Rough*	Saxifrage.
Scabiosa.	*Tetrand. Monogyn.*	Gen. 115. Sp. 141. 1677.	
	africana.	G. *African*	Scabious.
	cretica.	G. *Cretan*	Scabious.
	rigida.	G. *Stiff-leaved*	Scabious.
	atropurpurea.	G. *Purple-flowered*	Scabious.
Schinus.	*Diœcia Decandria.*	Gen. 1130. Sp. 1467.	
	molle.	G. *Soft*	Maſtick-tree.
Scilla.	*Hexand. Monogyn.*	Gen. 419. Sp. 442.	
	autumnalis.	G. *Autumnal*	Squill.
	peruviana.	G. *Peruvian*	Squill.
Scrophularia.	*Didynam. Angioſp.*	Gen. 756. Sp. 863.	
	lucida.	G. *Shining-leaved*	Figwort.

[a] *Toboe*, M.

[b] *Rarax*, M.

canina.

GENUS.	SPECIES, &c.		ENGLISH NAMES.
SCROPHULARIA.	canina.	G.	*Dogs-rue*
	fruteſcens.	G.	*Shrubby* } Figwort.
	aquatica.	G.	*Aquatic*
SEDUM.	*Decandria Pentagyn.*		Gen. 579. Sp. 616. 1673.
	Cepæa.	G.	*Purſlane-leaved*
	rubens.	G.	*Red* } Stonecrop.
SELAGO.	*Didynam. Angioſperm.*		Gen. 769. Sp. 876.
	corymboſa.	G.	*Upright-ſtalked* Selago.
SEMPERVIVUM.	*Dodecand. Polyand.*		Gen. 612. Sp. 664.
	arboreum.	G.	*Tree-Sedum*
	globiferum.	G.	*Hen and Chicken* } Houſe-Leek.
	canarienſe.	G.	*Canary*
	arachnoideum.	G.	*Cobweb*
SENECIO.[a]	*Syngen. Polygam. ſuperf.*		Gen. 953. Sp. 1215.
	Pſeudo-China.	S.	*Yellow China-root*
	pectinatus.	G.	*Pectinated*
	Doria.	G.	*Sea Lavender* } Groundſel.
	elegans.	G.	*Elegant*
	Rigidus.	G.	*Rigid*
	Coronopifolius.	G.	*Buck's-horn Plantain*
SIDA.[b]	*Monadelph. Polyandria.*		Gen. 837. Sp. 960.
	cordifolia.	S.	*Heart-ſhaped*
	rhombifolia.	S.	*Rhomboid* } Indian Mallow.
	Abutilon.	S.	*Heart-ſhaped undivided*
	multiflora.	S.	*Many-flowered*
SIDERITIS.	*Didynam. Gymnoſperm.*		Gen. 712. Sp. 801.
	ſyriaca.	G.	*Syrian* } Stachys, *or*
	canarienſis.	G.	*Canary* } Ironwort.
SIDEROXYLUM.[c]	*Pentand. Monog.*		Gen. 264. Sp. 278.
	inerme.	S.	*Æthiopian*
	tenax.	G.	*Carolina* } Iron Wood.
	lycioides.	G.	*Prickly*, or *Canada*
	oppoſitifolia.	G.	*Oppoſite-leaved*
SILENE.	*Decand. Trigynia.*		Gen. 567. Sp. 594. 1673.
	fruticoſa.	G.	*Myrtle-leaved*
	acaulis.	G.	*Moſs* } Viſcous
	valleſia.	G.	*Valleſian* } Campion.
	capenſis.	G.	*Cape*
SISYRINCHIUM.	*Gynand. Triand.*		Gen. 1017. Sp. 1353.
	bermudianum.	G.	*Greater*
	graminifolium.	G.	*Graſs-leaved* } Bermudiana.
	capenſis.	G.	*Cape*
	palmifolium.	G.	*Palmated*
SKINNERA.			
	Capenſis.	G.	*Cape* Skinnera.

[a] *Saijor-bali*, M. [b] *Silagouri-panjang*, M. [c] *Caco-molli*, M.

GENUS.	SPECIES, &c.		ENGLISH NAMES.	
SMILAX.[a]	*Diœcia Hexandria.*		Gen. 1120. Sp. 1458.	
	aſpera.	G.	*Rough*	Bindweed.
	excelſa.	G.	*Eaſtern*	
	floridenſis.	G.	*Florida*	
	Sarſaparilla.[b]	G.	*Sarſaparilla*	
SOLANUM.[c]	*Pentand. Monogyn.*		Gen. 251. Sp. 263.	
	quercifolium.	G.	*Oak-leaved*	Nightſhade.
	guinenſe.	S.	*Guinea*	
	papilionaceum.	S.	*Papilionaceous*	
	acanthifolium.	S.	*Acanthus-leaved*	
	bonarienſe.	S.	*Tree*	
	mammoſum.	S.	*Pear-fruited*	
	radicans.	S.	*Creeping*	
	indicum.	S.	*Indian*	
	ſodomeum.	S.	*Apple-bearing*	
	verbaſcifolium.	S.	*Verbaſcum-leaved*	
	tomentoſum.	S.	*Downy-leaved*	
	igneum.	S.	*Red-ſpined*	
SOLDANELLA.	*Pentand. Monogyn.*		Gen. 199. Sp. 206.	
	alpina.	G.	*Alpine*	Soldanella.
SOPHORA.[d]	*Decandria Monogyn.*		Gen. 508. Sp. 533.	
	tomentoſa.	S.	*Zeylon ſilver*	Colutea.
	lupinoides.	S.	*Lupine*	
	alba.	S.	*White-flowered*	
	biflora.	S.	*Double-flowered*	
	capenſis.	S.	*Cape*	
	angulata.	S.	*Angular-leaved*	
	microphylla.		*Small-leaved*	
SPARTIUM.	*Diadelph. Decand.*		Gen. 858. Sp. 995.	
	ſpinoſum.	G.	*Prickly*	Broom.
	ſphærocarpum.	G.	*Round-fruited*	
	complicatum.	G.	*Montpelier*	
	radiatum.	G.	*Starry*	
SPONDIAS.	*Decand. Pentagyn.*		Gen. 577. Sp. 612.	
	Myrobalanus.	S.	*Black*	American Plumb.
STACHYS.	*Didynam. Gymnoſperm.*		Gen. 719. Sp. 811. 1674.	
	tomentoſa.	G.	*Downy-leaved*	Baſe-Horehound.
	hirta.	G.	*Hairy-leaved*	
	æthiopica.	G.	*Æthiopian*	
	capenſis.	G.	*Cape*	
STAPELIA.	*Pentand. Digyn.*		Gen. 307. Sp. 346.	
	hirſuta.	S.	*Greater*	Stapelia.
	variegata.	S.	*Leſſer*	
	mammillaris.	S.	*Warty*	

[a] *Cajo-Tjina-utan*, M.

[b] It is brought from the Bay of Campeachy, and the Gulph of Honduras, where it grows in plenty, and might eaſily be propagated in Florida. ELLIS, p. 29.

[c] *Irong*, M.

[d] *Upas-bidji*, M.

STATICE.

GENUS.	SPECIES, &c.		ENGLISH NAMES.	
STATICE.	*Pentand. Pentagyn.*		Gen. 388. Sp. 394.	
	monopetala.	G.	*Narrow-leaved*	Sea-Pink.
	fuffruticoſa.	G.	*Shrubby*	
STRUTHIOLA.				
	virgata.	G.	*Spear-ſhaped-leaved*	Struthiola.
	erecta.	G.	*Erect*	
STYRAX.	*Dodecand. Monogyn.*		Gen. 595. Sp. 635.	
	lævigatum.	G.	*Smooth-leaved*	Storax-tree.
	grandifolium.	G.	*Large-leaved*	
	officinale.[a]	G.	*Medicinal*	
SWIETENIA.	*Decand. Monogyn.*		Gen. 521. Sp. 548.	
	Mahagoni.	S.	*American*	Mahogany-tree.
TAMARINDUS.	*Triand. Monogyn.*		Gen. 46. Sp. 48.	
	indicus.[b]	S.	*Tamarind-tree.*	
TARCHONANTHUS.	*Syngen. Polygam. Æqualis.*		Gen. 940. Sp. 1179.	
	camphoratus.	G.	*African*	Fleabane.
TAXUS.	*Diœcia Monadelph.*		Gen. 1135. Sp. 1472.	
	elongata.	G.	*Broad-leaved*	Yew-tree.
	nucifera.	G.	*Nut-bearing*	
TETRAGONIA.	*Icoſand. Pentagyn.*		Gen. 627. Sp. 687.	
	cornuta.	G.	*Horned*	Tetragonia.
	herbacea.	G.	*Herbaceous*	
TEUCRIUM.	*Didynam. Gymnoſp.*		Gen. 706. Sp. 786.	
	fruticans.	G.	*Common Spaniſh*	Germander
	Marum.	G.	*Syrian*	Marum.
	Polium.	G.	*Shrubby*	Mountain Poley.
	luteum.	G.	*Yellow*	
	album.	G.	*White*	
	coccineum.	G.	*Red*	
	creticum.	G.	*Cretan*	
THEA.	*Polyand. Monogyn.*		Gen. 668. Sp. 734.	
	viridis.	G.	*Green*	Tea.
	bohea.	G.	*Bohea*	
THEOBROMA.	*Polyadelph. Pentand.*		Gen. 900. Sp. 1100.	
	Cacao.	S.	*Chocolate*	Nut.
	Guazuma.	S.	*Baſtard*	Cedar.
	anguſta.	S.	*China*	

[a] There is a reſinous juice, which, by age, hardens into a ſolid brittle reſin, of a pungent, warm, balſamic taſte, and very fragrant ſmell, not unlike the Storax Calamita, heightened with a little Ambergreaſe, which is produced from the Styrax Aceris folio, or Liquid Amber ſtyraciflua of Linnæus, Sp. Pl. 1418, which grows in perfection in the Floridas. This, Dr. Lewis, in his Materia Medica, p. 353, ſays, might be applied to valuable medicinal purpoſes. The French, in Du Pratz's Hiſtory of Louiſiana, ſpeak with rapture of its healing qualities, and the high eſteem it is in among the Indians of Florida, on account of its virtues. It is known to the Engliſh by the name of the *Sweet Gum-tree*, and to the French by the name of *Copalm*. This we can have genuine, whereas the Storax from the Eaſt is often adulterated. ELLIS's Directions for tranſporting Seeds, p. 24.

[b] *Aſſam*, M. i. e. *acidum*.

GENUS.	SPECIES, &c.		ENGLISH NAMES.
THUJA.	*Monœcia Monadelph.*	Gen. 1078. Sp. 1421.	
	orientalis.	G. *Oriental*	
THYMBRA.	*Didynam. Gymnosp.*	Gen. 708. Sp. 795.	
	spicata.	G. *Spiked*	Mountain Hyssop.
	verticillata.	G. *Rough narrow-leaved*	
THYMUS.	*Didynam. Gymnosp.*	Gen. 727. Sp. 825.	
	mastichina.	G. *Mastick*	Thyme.
TOURNEFORTIA.[a]	*Pentand. Monogyn.*	Gen. 192. Sp. 201.	
	serrata.	S. *Serrated-leaved*	Tournefortia.
	volubilis.	S. *Twining-stalked*	
	Ehretia.	S. *Ehrets*	
	diffusa.	S. *Spreading*	
TRACHELIUM.	*Pentand. Monogyn.*	Gen. 221. Sp. 243.	
	cæruleum.	G. *Blue*	Throat-wort.
TRICHILIA.	*Decand. Monogyn.*	Gen. 528. Sp. 550.	
	glabra.	G. *Smooth*	
TRICHOMANES.	*Cryptogam. Filices.*	Gen. 1181. Sp. 1560.	
	canariensis.	G. *Portugal*	Fern.
TRIOPTERIS.	*Decand. Trigynia.*	Gen. 574. Sp. 612.	
	jamaicensis.	G. *Jamaica*	Triopteris.
TROLLIUS.	*Polyand. Polygyn.*	Gen. 700. Sp. 782.	
	asiaticus.	G. *Asiatic*	Globe-flower.
TROPÆOLUM.	*Octand. Monogyn.*	Gen. 466. Sp. 490.	
	majus fl. pleno.	G. *Double*	Nasturtium.
VERBENA.	*Diand. Monogyn.*	Gen. 32. Sp. 27.	
	bonariensis.	G. *Tallest spiked*	Vervain.
	indica.	G. *Indian*	
VINCA.[b]	*Pentand. Monog.*	Gen. 295. Sp. 304.	
	rosea.	S. *Madagascar*	Periwinkle.
	var. alba.	S. *White-spotted-flowered*	
VITEX.[c]	*Didynam. Angiosp.*	Gen. 790. Sp. 890.	
	trifoliata.	G. *Three-leaved*	Chaste-tree.
	Negundo.	G. *China*, or *five-leaved*	
VITIS.[d]	*Pentand. Monog.*	Gen. 284. Sp. 293.	
	trifolia.	S. *Three-leaved*	Wild Vine.
	indica.	S. *Indian*	
VOLKAMERIA.[e]	*Didynam. Angiosp.*	Gen. 788. Sp. 889.	
	inermis.	S. *Smooth-stalked*	Volkameria.
	aculeata.	S. *Prickly-stalked*	
WACHENDORFIA.			
	thyrsiflora.	G. *Spear-shaped*	Wachendorfia.
WINTERANA.	*Dodecand. Monog.*	Gen. 598. Sp. 636.	
	Canella.	S. *Bastard Cinnamon*	Winter's Bark.
	aromatica.	S. *Aromatic*	

[a] *Moral-Cabulu*, M.
[b] *Foela-malega*, M.
[c] *Penarrar-Jambi*, M.
[d] *Daun-Capialon*, M.
[e] *Moegri*, M.

GENUS.	SPECIES, &c.		ENGLISH NAMES.
XERANTHEMUM.	*Syngen. Polygam. ſuperf.*		Gen. 947. Sp. 1201.
	retortum.	G.	*Retorted* } Everlaſting
	fulgidum.	G.	*Shining* } Flower.
XYLOPHYLLA.			
	longifolia.	S.	*Long-leaved* } Love-flower.
	latifolia.	S.	*Broad-leaved* }
YUCCA.	*Hexand. Monogyn.*		Gen. 429. Sp. 456.
	aloifolia.	G.	*Aloe-leaved* } Adam's Needle.
	draconis.	G.	*Dragon-leaved* }
ZAMIA.	*Monœcia Enneand.*		Gen. 1227. Sp. 1659.
	pumila.	S.	*Dwarf ſaw-leaved* } Palm.
	ſpinoſa.	S.	*Prickly-leaved* }
	integrifolia.	S.	*Entire-leaved* }
ZYGOPHYLLUM.	*Decand. Monogyn.*		Gen. 530. Sp. 551. 1673.
	ſeſſilifolium.	G.	*Seſſile* } Bean-Caper.
	Morgſana.	G.	*Four-leaved* }

CORRESPONDENCE.

CORRESPONDENCE.

LARGE is the catalogue of human maladies, and these are not unfrequently as complicated as the machine upon which they act. A physician, therefore, of celebrity, will often have his sagacity exercised, by the application of patients, whom pain, or long continuance of disease, has compelled to seek for relief, where antecedent advice has not been successful: physicians, likewise, from a principle of humanity, are no less disposed to encourage such applications for additional advice, where their own has been baffled. Hence Dr. Fothergill was frequently consulted from various parts of the kingdom, as well as of Europe and America. Applications of this kind were too numerous, with his other labours, to admit of many words in reply; but what he suggested was generally so pointed, or, what is the same thing, so successful, that it may be concluded, were his consultations collected together, much instruction might accrue, at least to young practitioners.

There are symptoms in many diseases, which may for a long time agitate the patient, or elude medical art, and wherein, perhaps, great penetration and long experience may discover some simple yet efficacious remedy, that did not before occur. There are diseases, indeed, rebellious to all medicine: the humane physician, nevertheless, in fond hope of procuring more beneficial aid, may laudably appeal to others of his profession, to clear up his doubts, or to lessen the solicitude of his patients. The known sagacity of Dr. Fothergill, his long and successful practice, and not less his philanthropy, combined to point him out as a consulting physician. From some letters, entrusted to me by gentlemen who are an honour to their acquaintance, I have inserted a few instances of the Doctor's familiar manner of communication. As single cases, they may not appear very important; but, I trust, few practitioners will deem them useless.

CORRESPONDENCE.

DR. Cuming is perſonally unknown to me; and it was ſubſequent to the deceaſe of our mutual friend, that our correſpondence commenced: it has, however, afforded me ſo much ſingular pleaſure, that I regret it did not commence ſooner. Whether it is that I perceive in the living friend a ſimilitude of the deceaſed Fothergill, or that this epiſtolary intercourſe has afforded me the moſt pleaſing inſtruction, I know not; but I confeſs, without reſerve, that I recollect the ſhort period of our correſpondence as one of the moſt happy events of my life.

Letters written in the hurry of conſtant employment, between familiar friends, are rarely written with grammatical preciſion; they may, nevertheleſs, contain too much uſeful matter to be ſuppreſſed; and at the ſame time exhibit that acute judgment, and quick diſcernment, of the practitioner, in a point of view which is leſs ſtriking in elaborate performances, becauſe in them we naturally expect to find judgment and preciſion united.

Dr. Cuming has communicated to me ſome letters of Dr. Fothergill's, containing his opinion and advice on the caſes of a few patients ſubmitted to him by Dr. Cuming. The letters of Dr. Cuming are loſt; having, however, received ſome detached memorandums haſtily written by the Doctor, when he viſited his patients, *memoriæ cauſâ*, from which he was afterwards enabled to compoſe regular hiſtories of the ſeveral caſes to be tranſmitted to his correſpondents; I have taken the liberty to inſert them in their preſent form, in order to explain Dr. Fothergill's anſwers.

" Mrs. D——, aged about twenty-four, of a lax delicate habit, ſubject about two or three years ago to the fluor albus, and accuſtomed to have the menſes very irregularly, in the month of March laſt ſuffered a miſcarriage in the third month of her pregnancy; ſubject at times to a pain in her back, which ſtretched forwards, not in the direction of the ureters, but towards her

ſtomach. In the latter end of September laſt, ſhe bathed in the ſea ten or twelve times. About the 20th of October, on catching cold, ſhe felt a pain in the region of the bladder, with a frequent deſire of making water. In a day or two, the menſes appeared; this pain increaſed, but did not prevent her going abroad and taking ſhort journies: however, ſhe drank plentifully of mucilaginous liquors, and uſed an emollient fomentation. When I firſt viſited her, November the 5th, the pain was become more violent; her face fluſhed, her pulſe full and quick, with a conſiderable heat on her ſkin; her deſire of making water was frequent; ſhe had no ſtoppage, made it in conſiderable quantity, but the pain was acute for ſome time afterwards. I ordered about a pint of blood to be taken off; emollient fomentations to be frequently applied; draughts of ſpermaceti, oil of almonds, with a few grains of camphor and nitre, &c. to be taken ſextis horis, and to drink largely of an apozem ex rad. conſ. mag. &c. with gum Arab. Her pain became, on the uſe of medicines, much more tolerable, and continued daily to abate. As ſhe drank, at this time, very plentifully of theſe aqueous, lubricating, balſamic liquids, her water was in great quantity, and often quite limpid; but, in general, there was more or leſs of a purulent-like ſediment of ſmall membranulæ floating in the urine. About the 8th of November, an univerſal efflorescence appeared on her ſkin, attended with a conſiderable itching: by keeping in bed, and plentiful perſpiration, this went off in about two or three days. From that time ſhe has been gradually gaining ground; the pain has abated, ſo as not now to be pungent and acute; but, to uſe her own words, ſhe feels, as it were, a ſoreneſs or rawneſs in the part; this is generally moſt troubleſome about bed-time. The quantity of matter depoſited is, upon the whole, leſs in a given time. The water made firſt after waking contains moſt of this purulent-like ſediment, for obvious reaſons; but, as is uſual in ſuch caſes, the quantity of the ſediment is ſome days more, ſome days leſs; the ſediment too is become whiter and lighter, though, in ſome glaſſes, it has appeared ſlightly tinged of a pink colour. I have viſited her two or three times ſince. The medicines have been occaſionally varied. After the raſh diſappeared, ſhe took two gentle doſes of rhubarb and manna, which moved her moderately three or four times: and for theſe three weeks paſt ſhe has taken the following; with a decoction of pearl barley, gum Arabic, and balſamic ſyrup, for common drink:

" ℞. Spermat. Ceti,
Pulv. e Tragac. comp. ā ſcrup. i.
Balſam. Gilead. gut. iv.
Syr. Roſar. ſolut. q. ſ. fiat Bolus, ter in die ſumendus, ex cochlear. quatuor miſturæ ſequentis:

" ℞. Emulſ.

" ℞. Emulſ. Arabic. unc. vi.
Olei Amygd. drachm. x.
Syr. Balſam. unc. i.
Tinct. Cinnam. drachm. ij. miſce.

" In every other reſpect, ſhe is in good health; no heat or thirſt; her appetite is good, which ſhe does not indulge; ſhe ſleeps well, and is in general tolerably chearful; ſhe has had no return of the monthly diſcharge ſince ſhe deſiſted from bathing in the ſea. She has likewiſe, by my advice, drank aſſes milk twice a day. She eats, at dinner, boiled mutton, chicken, calves feet, puddings, hartſhorn jellies; for ſupper, barley gruel, ſago. During the whole time of her illneſs, ſhe has lain in a recumbent, horizontal poſture; as an erect one always increaſed her pain, till of late.

" The pain ſhe deſcribes is very different at different times. Particularly, about a fortnight ago, ſhe ſays, ſhe was ſeized, two or three times a day, with frequent momentary, acute, darting pains, more pungent than at any time of the diſorder: theſe uſed to moleſt her during the interval of making water; and, upon the next diſcharge of urine, the pains went entirely off, and continued ſo for ſome hours.

" For ſome days before I ſaw her, ſhe had a conſtant teazing pain in her bowels, with, generally, every day, three or four griping looſe ſtools, which were removed by ſome gentle doſes of rhubarb.

" Her water, at this time, is in general quite pale, though ſometimes of an amber colour, and ſoon depoſits a white purulent ſediment, with films and ſtreaks of membranes of different ſizes. For ſeveral days before I ſaw her, her water had, in a leſſer degree, the ſame appearance, though not made in ſuch large quantity."

" Dear Doctor,

" It was not till this morning that I received Mrs. D——'s caſe. I have conſidered it with attention; and though it is drawn up in ſo clear and diſtinct a manner, yet I own myſelf at a loſs to determine what the diſeaſe really is.

" That the bladder is the ſeat of it, is evident; but whether a ſtone, an affection of the coats of the bladder by its being thickened, or an excoriation, is not quite ſo clear.

" I wiſh the lady would ſubmit to a ſearch. If there is a ſtone, the indications would be certain; if there is none, our conjectures would be more confined.

" If

" If this cannot be complied with, we can only have recourſe to palliatives for a diſeaſe we do not perfectly know; a mortifying ſituation for the phyſician and his patient!

" This, therefore, I could wiſh might be done in the firſt place; that ſome able accoucheur, if ſuch you have, might carefully examine the ſtate of the bladder.

" If there is a ſtone, it will moſt probably be diſcovered; if the bladder is ſmall, contracted, and its coats thickened, theſe alſo, by a ſkilful hand, may be known, and the cure directed accordingly. Perſons of Mrs. D——'s age, are ſeldom ſubjected to ulcers in the bladder: I have never ſeen an inſtance of this kind; nor do I apprehend the diſcharge is *purulent*. Does it not adhere to the glaſs or pot, and, when poured out, remain till the urine is gone, and then cling to the veſſel, as the whites of eggs would do? or elſe is it merely flocculent? Pus, the produce of an ulcer, will clearly ſhew itſelf.

" Till we can be extricated from theſe uncertainties, will not the following indications be reaſonable?

" To mitigate the pain of the part affected, abate acrimony, and ſtrengthen the whole habit.

" Would anodyne clyſters be improper? If nothing better than the form (A) occurs, ſuppoſe it be adminiſtered? If this cannot be complied with, the draught (B) will probably anſwer the purpoſe.

" Briſtol water, drank on the ſpot, is often a ſovereign remedy for diſeaſes of the bladder; and if there be no juſt grounds to ſuppoſe a ſtone, winter as it is, I ſhould think this place moſt proper, and to drink as much of the water as poſſible. Aſſes milk, a light nutritive diet, and a moderate uſe of wine, will not, I imagine, be improper.

" If this ſtep ſhould be judged inconvenient or improper, I cannot at preſent ſuggeſt any thing better than the following formulæ (C). Dr. Cuming will be kind enough to conſider theſe as hints, not directions, for his procedure; and will accordingly vary them as emergencies may require.

" I ſhall return an anſwer to another letter I received, as ſoon as poſſible; and in the mean time ſubſcribe myſelf,

" Dr. Cuming's affectionate friend,

" JOHN FOTHERGILL."

(A.)

" ℞. Gelat. Amyl.
Olei Amygd. Dulc. ā unc. ij.
Tinct. Thebaic. gut. xxv. fiat enema horâ ſomni injiciendum; vel,

(B.) " ℞. Pulv.

(B.)

" ℞. Pulv. e Succino Comp. ſcrup. i.
Aq. Alexit. Simp. drachm. x.
— Nuc. Moſchat.
Syr. Balſam. ā drachm. i. m. fiat hauſtus ſumendus horâ ſomni, addendo, ſi opus fuerit, Pulv. Rhabarb. gran. viii. vel x.

(C.)

" ℞. Balſam. Traumat.
Elix. Paregor. ā gut. xxv.
Tinct. Cort. Peruvian. Simp. gut. xxx.
Aq. Puræ, drachm. x. fiat hauſtus ſumendus meridie et veſperi.

" *December* 18, 1761. J. F."

I am not in poſſeſſion of Dr. Cuming's minutes, to which the following refers; but this is introduced ſo much in the manner of recapitulation, that the loſs of the former is of leſs conſequence.

" Dear Doctor,

" I embrace the firſt leiſure moment I have to communicate what occurs to me, upon a careful conſideration of the additional circumſtances I have juſt received in relation to Mrs. D——'s caſe.

" I know Dr. Cuming's preciſion too well, to have the leaſt doubt but he has conveyed to me as much information, perhaps more, than I could have been able to have collected if preſent. It is owing to the concealed nature of the caſe, that I could form no clearer idea of it; and not for want of my friend's judgment in collecting, or accuracy in deſcribing, ſo equivocal a complaint.

" The ſearch has informed us of two things; that there is moſt probably no ſtone, nothing foreign in the bladder itſelf, and that there is one part that diſcovers a particular tenderneſs; and farther, that no obvious thickneſs of the bladder itſelf was diſcovered. Theſe circumſtances reduce our conjectures into a leſs compaſs; and that either an excoriation of ſome part of the bladder,

or

or acrimony, or both, are the cauſes of the preſent complaints. The ſearch, I think, declares in favour of the firſt ſuſpicion; and that we may ſafely conclude, that the complaints proceed from an ulceration, ſuperficial I hope, and therefore I have called it an excoriation; and as ſuch we may ſafely treat it. All that we can do, in ſuch caſes, I imagine, is to remove as many cauſes as we can of its not healing, by mitigating pain, leſſening the activity of the urinous ſalts perpetually diſtilling upon the wound, and, by filling the veſſels with good blood and juices, enable nature to do what art cannot pretend to, heal the ulceration.

" I have ventured, with good ſucceſs, in ſome ſimilar caſes, to give the extract of hemlock, and found it ſingularly beneficial. It is anodyne; but, in a juſt doſe, it neither affects the head like other anodynes, nor occaſions coſtiveneſs; of ſharp corroſive juices, it often forms good pus; and, under Dr. Cuming's care, cannot poſſibly do harm; but ſtands a fair chance, I think, of being beneficial. Eight grains, at bed-time, in a bolus, with a little conſerve of roſes, may be given with ſafety, and ſix, a little before dinner, encreaſing the doſe to eight in the morning, and ten at night, in three or four days, if it agrees; that is, if it produces eaſe, abatement of the diſcharge, and ſymptoms of returning health. But, if it excites a kind of puſhing, uneaſy ſenſation at the bottom of the orbits, a head-ach, or glimmering of the ſight, the doſe muſt be leſſened; for that doſe is too much, that produces theſe effects; and one may ſafely proceed in augmenting the doſe, till ſome ſuch ſymptom is perceived.

" There is no officinal medicine differs from itſelf ſo much, in point of efficacy, as this extract. For I have occaſion to believe, that a few days in the age of the plant it is made from, will make the extract ſtronger or weaker. I know where to have ſome of tried efficacy, if none is to be met with at Dorcheſter, and ſhall ſend ſome down, if it is wanted.

" But in caſe this method ſhould ſeem leſs to be relied on, than thoſe medicines with whoſe effects we are in general better acquainted, I would propoſe the plan encloſed, ſubmitting it entirely to my friend's correction and amendment.

" The diet muſt be mild and nutritive. Aſſes milk once a day at leaſt, or twice; Tilbury water, with a little milk, and a very ſmall portion of the beſt old French brandy, for common drink; light animal food, rather boiled than roaſted, and with as little ſalt as may be. Acids may be uſed moderately; and a glaſs of good Cyprus, a little diluted, at meals occaſionally. Our object being to keep every thing out of the urine that is in itſelf acrimonious, and at the ſame time guarding againſt its becoming alkaleſcent; for this reaſon a liquid diet, on milk eſpecially, will be uſeful.

" I am a little doubtful how far injections may aſſiſt us. At firſt view,

they may ſeem to favour our intentions, by conveying immediately, to the part affected, balſamic liquors, capable at once of abating the urinous acrimony, and deterging or defending the excoriations.

" But when I reflect on the tenderneſs of the bladder, the difficulty of introducing a fluid, exactly of the ſame temperature in reſpect to heat; the neceſſity of ſuddenly ſtretching a membrane we would wiſh to keep at reſt; the liability of waſhing off the beginning efforts of nature to cicatrize; the poſſibility of making it a ſort of open fiſtula; theſe things diſcourage me. However, if ſomething of this kind ſhould be thought neceſſary, would any thing be eaſier than a ſolution of ſtarch, or a thin mucilage of quince ſeeds? Nothing ſtyptic or irritating, or what is not of the moſt lenient quality, can, I think, be uſed with ſafety. I ſhould likewiſe ſuſpect, that as the ſeat of the diſeaſe is very near where the inſtrument muſt be introduced, there would be ſome hazard of protracting the diſeaſe by introducing a remedy. Theſe ideas, however, may be vague; and I hazard them the more freely, as they will have no weight with Dr. Cuming, if he ſees them trifling.

" I have endeavoured to form a compoſition, on the other ſide, that I could wiſh might have theſe effects; to mitigate pain, and to keep the body gently ſoluble. Should the proportion of rhubarb be found too ſmall, a few grains may be added to the night bolus; if too much, a mixture may be made without rhubarb, of which to form the morning bolus, which may be then encreaſed to half a drachm.

" Perhaps thirty drops of the ſimple tincture of bark, with five or ſix only of elix. vitriol. and one drop of tinct. thebaic. might be uſeful at noon, in a glaſs of warm Briſtol water; and again in the evening, if it ſhould not diſagree.

" I am, with great eſteem, Dr. Cuming's aſſured and affectionate friend,

" J. FOTHERGILL."

" ℞. Elect. e Caſſia, unc. i.
Pulv. e Tragac. Comp. drachm. ij.
—— Rhei, drachm. i.
—— e Succin. Comp. ſeſquidrachmam fiat elect. cujus ℥ſs. vel ℈ij. ſum. om. nocte, ſuperbib. cochl. ij. Julep. ſequentis:

" ℞. Aq. Menth. Simp. unc. ij.
Tinct. Helvet. ſeſcunciam.
Syr. Simp. drachm. ij. miſce.

" ℞. Elect. ſupra præſc. ℈i. fiat Bolus ſumendus manè, ſuperbibendo coch. ij. Julep. præſcripti.

" *December* 26, 1761. J. F."

CASE II.

" Mr. —— riſes daily with the ſun, or before it: every day, when the weather is tolerable, he uſes exerciſe for two, three, or four hours, ſometimes on foot, ſometimes on horſeback, in viſiting his friends, inſpecting his workmen in the fields, ſhooting, &c. He eats moderately of plain food, (his appetite is very good;) drinks three or four glaſſes of Port wine after dinner and ſupper, and goes regularly to bed by eleven. Soon after he returned into the country, he made a glaſs or two of urine, in which there was evidently ſome blood, ſome rough ſand, and ſome ſmall particles of gravel, about the ſize of the head of a ſmall pin; ſince that time, no palpable ſand or gravel. Sometimes, after two or three hours exerciſe, his water has been ſtrongly tinged and foul; next day, perhaps, after the ſame exerciſe, it has been clear, without any ſediment, only a cloud towards the bottom; and, at different times, without any aſſignable cauſe, has been of the colour of Port wine, diluted by a great quantity of water (though this ſeldomer of late than uſual): ſometimes like, and of the colour of, foul ſmall-beer; ſometimes of an amber or lemon colour; and ſometimes quite limpid. I have ſeen, at one time, eſpecially when the water is pale, a very ſmall quantity of white ſediment juſt covering the bottom of the glaſs; and at other times the ſediment is in a greater quantity, and like red coral: ſometimes it is like a cloud that has juſt weight enough to reach the bottom of the glaſs. Thus much for the appearance of his water, which he makes in greater quantity ſince he began the uſe of the lixivium and broth. The pain about the region of the ſpleen, ſtretching towards his ſtomach, and attended with ſlight momentary dartings from thence towards his back, he ſtill feels at times; as alſo in his back, ſtretching upwards as high as the points of his ſhoulder blades: but neither of them are violent, or interrupt his exerciſe. His pulſe is regular, ſlow, ſoft, and below ſtandard; his ſpirits are tolerably chearful; he ſleeps but badly; mentions ſomewhat of a clamminеſs in his mouth, though he has no foulneſs on his tongue; and likewiſe an aukward, uncomfortable dryneſs, and want of proper genial warmth, in his hands and feet.

" He goes regularly to ſtool once, ſometimes twice, every day; can lie equally eaſy upon either ſide, and bend his body in every direction, without any degree of pain. He never has any obſtruction or difficulty in making water."

" Dear

" DEAR DOCTOR,

" To what cauſe can we aſcribe the effects we perceive in our worthy, ſenſible friend J——, Eſq; if not to a ſtone in the kidney? I wiſh moſt cordially to be perſuaded that I am miſtaken in thinking ſo. Let us trace its progreſs.—The urine now and then, without manifeſt cauſe, ſometimes with ſuch circumſtances as ſeem likely to produce it, appears with ſuch a hue, that we muſt think it bloody. This muſt proceed either from a ſtone bedded in the kidney, in ſuch a manner, as, though it gives little pain, yet has injured the contiguous blood-veſſels ſo, as that, every now and then, either when the tide of the blood runs higher, from internal cauſes, or from external motion, blood oozes from the wounded veſſels, mixes in the urine, and ſhews itſelf plainly to the ſenſes: or elſe, by ſome other cauſe, not to me obvious, the like effects enſue. Let us ſuppoſe it ſcorbutic acrimony. Would this confine itſelf ſolely to the urinary paſſages? would it not be diſcoverable by other effects, deducible from the ſame origin? yet I ſee none; nevertheleſs, I am diffident of my own opinion, when Dr. Cuming is not quite of the ſame judgment, in a caſe that he has conſidered ſo attentively, and under ſo many ſituation that none but himſelf can judge of ſo completely.

" Shall we not have diſcharged the duty of able phyſicians, if we take ou indications from the moſt obvious appearances? *Rationalem quidem puto medicinam eſſe debere et inſtrui ab evidentibus cauſis*, is always uppermoſt with us both. Nothing more commonly produces ſuch appearances in the urine, than a ſtone, either in the kidney or in the high road to the bladder. Suppoſing it a ſtone, what better diſſolvent have we than lime? That preparation of lime, that gives us its ſolvent properties in the leaſt compaſs, is the beſt. No experiments have diſcovered any thing better, that I know of, than ſoap-lees: the power of lime is here ſtrongly concentrated. Fraud, avarice, or worſe motives, may have raiſed many medicines of this claſs into reputation for a time; but *quò ſimpliciùs, eò meliùs*, is an axiom of undoubted truth.

" If theſe notions correſpond with my good friend's, let the lixivium, in any ſhape, be continued for weeks, nay months, without any limitation, unleſs ſome obvious inconvenience ariſes from it.

" Dr. Cuming will not be at a loſs to know if any ſuch appear, and to direct accordingly.

" Believe me, affectionately,

" Thy friend,

" *December* 26, 1764. " J. FOTHERGILL."

CASE III.

"Miſs —— is a young lady of twenty-ſeven years of age, of a ſanguine conſtitution, plump habit, and of a chearful, lively diſpoſition. She enjoyed an uninterrupted ſtate of health till the year 1734, when ſhe was ſeized with a pleuretic fever, from which ſhe recovered; but, for ſeveral years, was ſubject to acute pains in the ſide firſt affected, which were always removed by bleeding. During this time ſhe ſuffered a very broken ſtate of health.—About the middle of the year 1739 I firſt viſited her, when I found her labouring under many of the ſymptoms of a beginning phthiſis, from an obſtruction of the menſes. When the moſt threatening ſymptoms were removed, a fluor albus appeared: that too was cured; but ſtill her monthly courſes did not return, either at the proper periods, or in due quantity. A violent hemicrania next ſeized her (to which ſhe had before been ſubject in a leſſer degree), which withſtood the united force of the moſt efficacious medicines that I know for that diſtemper, for almoſt a twelvemonth: at length it yielded. It were endleſs to tell you the efforts I made to remove this obſtinate, this ſtubborn diſtemper, or to deſcribe to you the pain and miſery ſhe endured. What expedient did I leave untried, what method unattempted? At laſt I ſucceeded. After her recovery, a courſe of the Bath waters reinſtated her, and confirmed her former health. Thus ſhe continued, free from any complaint, (her menſtrual evacuations returning regularly) till about the month of April laſt, that my advice was aſked on account of a great diſcharge of blood by ſtool, unattended by any pain, which ſhe had three or four times before laboured under. The quantity was exceſſive. I ordered ten ounces of blood to be taken from her arm, and preſcribed a few gently aſtringent draughts, with a ſoft balſamic diet, and reſt. After taking two of her draughts, the diſcharge became extremely moderate. I ordered, from time to time, ſome gentle opening medicines, to prevent her being coſtive. Thus ſhe continued for ſome weeks, ſometimes voiding blood in ſmall quantities, without pain; but ſoon felt an uneaſineſs and pain upon, or ſoon after, going to ſtool. As I imagined the caſe to be a varicous vein broke a little way up the rectum, I ordered ſome anodyne and gently aſtringent injections, with doſſils, dipped in an ointment of the ſame nature, to be thruſt up the anus; and preſcribed the Æthiops mineral, with the teſtaceous powders; taking care that ſhe ſhould not be coſtive. Thus ſhe continued pretty eaſy: but, about the middle of June, ſhe obſerved ſome ſmall miliary pimples, at firſt in the arms, then over all her body, attended with a great itching. As the complaint in her bowels was now eaſy, I purged her; ordered the Æthiops

min.

min. to be continued; afterwards the pilulæ Æthiop. of the Edinburgh diſpenſary; and, laſt of all, a courſe of Plummer's pills, with a decoction of the woods. To this the eruption ſeemed to give way; the pimples were fewer in number, and the itching leſs. About the beginning of Auguſt, ſhe returned from a viſit to the country, when the pains in her bowels were become much more violent than ever, and beyond her patience. I ordered eight ounces of blood to be taken off; the former injections, with ſome drops of laudanum, to be repeated pro re nata; with a decoction of conſolida maj. &c. for ordinary drink. Small ſtreaks of blood would now and then appear in her ſtools; but nothing of pus, upon the ſtricteſt enquiry. For ſome time before, I had perceived a ſmall cartilaginous excreſcence on the right ſide, and cloſe to the ſphincter ani, from which ſhe ſeemed to think her pain ſolely proceeded; and, upon preſſing upon the root of this, her pain was greatly aggravated. A ſpoonful or two of common digeſtive, mixed with ol. roſar. was frequently thrown up the anus, and digeſtive alone applied to this excreſcence. The pimples now appeared in greater number, and the itching increaſed. In a few days, when ſhe could bear it, ſhe took a few grains of calomel, which was purged off next morning; this was repeated, and Plummer's pills brought again upon the ſtage. I ordered a lixivium of ſalt of tartar to waſh with, and made the experiment of an ointment with white precipitate, upon her arms and hands, in Boerhaave's proportion; one ounce, to one and a half of pomatum. But theſe failing, ſhe was at length cured of this troubleſome complaint, by anointing her body with a ſulphur ointment, which till now ſhe would not hear of. This eruption had not the appearance of a genuine itch, nor was it at all infectious; for the family did not avoid the moſt familiar intercourſe with her, and more than one of them ſlept with her for ſeveral weeks. Thus I had brought matters, till towards the end of October, 1764; when the pains about her fundament returning, and ſhe poſitively aſſerting, that they proceeded, as far as ſhe could judge, from that excreſcence before mentioned, various methods were uſed to ſoften and diſcuſs it. But, though they gave her a truce from pain for ſeveral days together, and ſhe imagined it was thereby become leſs and ſofter, yet her pains returned ſo violently, about the middle of laſt month, beyond any thing ſhe had ever ſuffered, that it was cut off. Her pain was exquiſite for about two hours after this operation; but, after that, ſhe enjoyed much eaſe. However, as I was ſenſible there ſtill remained another cauſe of her pain (whatever ſhare the excreſcence might have had in it) I ordered her an electuary, compoſed of balſ. Lucatel. fl. ſulph. ſperm. ceti, amyg. &c. with a decoction of the ſymphit. eryngo, ſem. papav. alb. &c.; and a ſpoonful, morning and evening, of a ſolution of the balſ. capaivi. Upon taking theſe medicines, ſhe continued tolerably eaſy for eight or ten days; and when her

pain

pain returned, an injection of ſtarch ſize, with a little ol. lini, and twenty drops of laudanum, was thrown up. But, after having talked ſo much of theſe pains, you may expect that I ſhould give you a more particular deſcription of them.

" The ſeat of them ſeems to be about the verge of the anus, on the right ſide, ſtretching a little upwards upon the os ſacrum, and downwards along her thigh, and ſometimes acroſs on the ſame ſide. They give her no uneaſineſs when going to ſtool, nor till an hour or two afterwards; and I have known them continue upon her for ſeveral hours, nay, a whole night, without half an hour's intermiſſion. Her pulſe (which is ſurprizing, conſidering the violence of them, as they are exceſſively acute, and have ſometimes almoſt deprived her of her ſenſes) is not ſenſibly raiſed by them; and while they are upon her, ſhe labours under a great difficulty of making water; which may eaſily be accounted for, from the proximity of the parts concerned. She goes regularly to ſtool; and, when free from theſe pains, is chearful, and, in every other reſpect, in good health. I ought, indeed, to have told you, that, though ſhe is regular as to the time, her menſes have been in very ſmall quantities theſe three months; and, likewiſe, that, within theſe three weeks, a ſmall quantity of pus has been diſcovered in her ſtools."

" Dear Doctor,

" If I have appeared to be remiſs in anſwering the caſe I received a few poſts ago, it has been for a reaſon, that ought, above all others, to plead my excuſe: it was ſolely to have leiſure to reflect upon every part of that obſtinate diſorder, which affords a more doubtful prognoſtic, as it has not wholly yielded to ſuch judicious methods as have already been tried.

" The young lady's misfortunes are very juſtly deduced from that unhappy attack of the pleuriſy. The methods neceſſary to relieve this, and the weakneſs left in the part affected, occaſioned the repeated neceſſity of contributing to what has ſince happened. She had ſcarce time to recover the weakneſs which frequent bleedings occaſioned, before a freſh attack rendered the like meaſures neceſſary. The blood, by this means, was ſtill depraved, the habit weakened, and a ſcorbutic acrimony ſeems to have become predominant.

" It is very likely that the young lady, either in her infancy, or as ſhe grew up, had ſome cutaneous eruptions in ſome part of her body; or it might only ſhew itſelf in branny ſcales. If nothing of this kind was diſcoverable in her, I ſhould ſuſpect that her parents had it, or that her mother had very ill health during geſtation. Theſe I only mention as ſtrong ſuſpicions, from what

I have obſerved, in ſome caſes that have occurred to me, not wholly unlike the preſent diſorder.

" Whilſt the young lady enjoyed uninterrupted health, the natural ſoftneſs, and proper diſpoſition of the juices, would prevent any thing of this kind from appearing; but, when once the ſtrength of the ſolids was impaired, and the fluids conſequently altered from their natural texture, any latent ſharpneſs would diſcover itſelf, and act with more force, in proportion to what the conſtitution had ſuffered.

" The violent hemicrania, ſucceeding the fluor albus, ſeems to confirm a ſuſpicion of this kind: viſcidity alone could not have produced ſo much pain, without acrimony conjoined. The ſame cauſe ſeems at length to have fixed about the rectum. The irritation was, at firſt, but ſufficient to ſolicit a larger flow of the blood to thoſe parts than naturally ought to flow thither; the veſſels became varicous, and at length burſt; the diſcharges weakened her; the blood loſt of its mildneſs; the acrimony increaſed, and fixed upon thoſe parts to which the blood now ſtrongly tended, and gave inceſſant pain.

" Proper applications checked the bleeding, eaſed the pain, ſtrengthened her conſtitution, and the cauſe was thrown upon the ſkin, the part to which acrimonious humours are naturally directed. The miliary puſtules, I apprehend, were owing to the ſame cauſe that had excited her ſo much pain about the rectum: for theſe no ſooner diſappear, than her bowels are again affected, and a fungus, almoſt carcinomatous, appears. The extirpation of this, and the diſcharge which attended it, gave her eaſe in that part, which a freſh crop of puſtules on the ſkin made more durable.

" From this view, I imagine, it will be eaſy to account for ſeveral appearances that ſucceeded; and why the diſorder has been ſo extremely obſtinate and refractory to the beſt-concerted meaſures.

" I ſhall therefore proceed to offer my ſentiments upon the queries which are ſo judiciouſly propoſed, in as narrow a compaſs as poſſibly I can; which will lead us to what is of the laſt importance to the young lady, if we are ſo happy as to ſucceed in it, the method of cure.

" 1ſt. I think the blood diſcharged is from the hæmorrhoidal veins become varicous; and that there may be a ſinous ulcer in the rectum.

" 2d. I apprehend the pains ariſe from a particular acrimony in the blood, either derived from her parents, contracted in her infancy, or produced by the neceſſary debilitation of her habit by repeated bleedings; and that the excreſcence was the effect of the ſame cauſe, which produced the pains, the bleeding, the puſtules, and her preſent complaints of pain and uneaſineſs about the rectum and os ſacrum. This is, likewiſe, the beſt cauſe I can aſſign as an anſwer to query 3d.

" 4th. It

" 4th. It appears to me, that the propereſt method of cure would be, to ſtrengthen her habit in general, and promote the natural ſecretions:

" To intermix gentle evacuations, as far as may be done conſiſtently with the firſt intention:

" To make an artificial ulcer as near the part affected as we can; and to attempt, by ſpecifics, to correct the peccant acrimony.

" It is unneceſſary for me to ſay any thing with reſpect to diet, exerciſe, &c. as that is already ſo prudently adjuſted. Garden-ſtuff, fruits, acids, ſalt, butter, and cheeſe, in any quantity, muſt be avoided. Water merely tepid, with a toaſt, would be the beſt liquid; and a glaſs or two of red wine may be allowed. If beer cannot be eaſily given up, what ſhe drinks ought neither to be new or ſtale.

" With reſpect to medicines, I apprehend thoſe directed in the encloſed may poſſibly be of ſome advantage. The mercurial is of the moſt mild kind, and has ſometimes proved very beneficial. The quantity of purgative ingredients may be added or diminiſhed pro re nata: if ſhe has a motion every day, it will be ſufficient. An iſſue, I think, ſhould be made with a cauſtic on the inſide of the thigh, juſt above the gartering place, capable of holding two or more peas, as ſoon as poſſible. If ſhe dreads the cauſtic greatly, it may be done by the lancet. This, perhaps, will be a very uſeful drain, and cannot ſafely be diſpenſed with.

" When the ſeaſon is proper, the uſe of ſome chalybeate purging water, I believe, would be of great advantage. Whether you have any ſuch in your neighbourhood, I know not. The Scarborough waters are of this ſort, if the diſtance is not too material an objection.

" When the eruption appears, as the menſes are not in due quantity, a day or two before the expected period, a few grains of pil. Ruf. diſſolved by rubbing in aq. rutæ and brionæ. c. may be given, without any danger to the parts at preſent affected. Pediluvia may then be uſed, and ſitting over a pan, with warm water, and ſome aromatic herbs infuſed in it.

" ℞. Sapon. Venet.
Gum. Ammoniac. ā ſeſquidrachmam;
Salis Martis ſemidrachmam;
Extract. Gentianæ liquid. q. ſ. fiat maſſa in pilulas l. formanda, quarum iij. vel iv. horâ ante prandium ſumantur, inſuper bibendo coch. iij. infuſ. ſeq.

" ℞. Pulv. Cortic. Peruvian. drachm. vi.
—— ——— Winterani, drachm. ij.
Aq. Fontan. unc. xij.
— Abſinth. Comp. unc vi. leni calore per triduum digere, tincturam cola.

" ℞. Hydrarg.

" ℞. Hydrarg. pur. drachm. ij.
Gum. Guaiac.
Olei Amygd. Dulc. ā ſcrup. ij. ſimul tere ad extinctionem mercurii, adde dein pilul. cocciæ ſemidrachmam, pulveris glychyrrhizæ q. ſ. fiat maſſa in pilulas xxx. formanda, quarum ij. ſingulis vel alternis noctibus ſumantur.

" ℞. Aq. Rutæ, ſeſcunciam;
— Brion. Comp. ſemidrachmam;
Pilul. Rufi, gran. vi. vel. viij.
Syr. Croci, drachm. ij. fiat hauſtus ſumendus cubitum itura: tribus circiter diebus ante menſium periodum, et pro re nata, repetendus.

" *December* 23, 1764. J. F."

With relation to the event of theſe three caſes, Dr. Cuming has informed me, in general, that they all terminated favourably. Mrs. D—— gradually got well, and never had any return of her complaint. Since that time ſhe has borne ſeveral children, and is now alive and in good health.

The young lady, labouring under a hemicrania, married ſome years after, and removed at a diſtance from Dorcheſter. Since that time he has ſeen her occaſionally ſeveral times, and has been conſulted by her, but never heard her complain of the hemicrania. She has been a grandmother for ſome years paſt, and now enjoys good health.

The gentleman, too, who had ſome threatening appearances of the ſtone, has, ſince he took the lixivium, been, in general, free from thoſe complaints, and is now, at the age of ſeventy-three, luſty and ſtrong, ſubject only, at times, to occaſional fits of an hereditary gout.

AN intimate acquaintance had long ſubſiſted between Dr. Fothergill and Dr. Percival. A friendſhip of ingenious minds is ever productive of public benefit; for what is the object of philoſophy, but the intereſt of the community? This was their mutual purſuit. Many are the letters written by the deceaſed, which the unreſerved politeneſs of Dr. Percival has entruſted to me, and I have availed myſelf of ſome of them, in the annexed Life; but I am concerned to add, that the multitude of Dr. Percival's engagements have prevented him from preſerving copies of the caſes of the patients communicated by him to Dr.

Fothergill for his opinion, which would otherwiſe have rendered their correſpondence invaluable, in a medical point of view. I have, however, collected the following detached obſervations, as not immediately requiring previous elucidation.

Extract of a Letter from Dr. Fothergill to Dr. Percival, Anno 1767.

" Dear Doctor,

" I have repeatedly peruſed the caſe I received by the laſt poſt, and with attention and pleaſure: with pleaſure, becauſe of its accuracy and preciſion; and likewiſe that it ſeems capable of being relieved.

" I think the whole train of ſymptoms proceed from a natural delicacy of conſtitution, and have been increaſed by the patient's having been a mother ſo early, and perhaps by inattention to her diet and regimen. There are few chronic diſeaſes but what are augmented by theſe means, or that ſpeedily yield to medicine, without the ſtricteſt regard to regimen. If I have ſucceeded in ſome caſes, where others have ſometimes failed, it has oftener been owing to enjoining this, than to a happier choice of medicines; and here we have need of every auxiliary.

" Theſe painful paroxyſms are doubtleſs owing immediately to ſpaſmodic affections of the parts concerned, brought on probably by acrimony ariſing from indigeſtion. Pain, languor, immoderate and irregular evacuations, are the conſequences, and will continue, under one ſhape or another, till the ſtomach, digeſtion, and its conſequences, produce better blood, more ſtrength, and leſs irritability.

" Her diet muſt be of the lighteſt animal kind, and the quantity preciſely ſuch as to occaſion no uneaſineſs after eating: whatever does this, be it kind or quantity, muſt be ſtudiouſly avoided. Tea ought to be abandoned altogether: a little milk, in any ſhape, thin chocolate, or light broth, would be much preferable to tea and bread and butter. Her dinners muſt be ſparing; and a little light animal food may be allowed for ſupper, and will agree better than moſt ſpoon-meats. Spa water, with one third of white Port, Liſbon, or Madeira wine; or common water, with the like proportion of red Port, afterwards. Vegetables of all kinds, and every thing made from them, muſt be uſed ſparingly, even bread itſelf. Sweets and acids muſt be proſcribed.

" The medicines, if they ſeem not improper, nor on experience are found to diſagree, ſhould be long and regularly continued. *Gutta cavat lapidem* ought ſometimes to be our motto.

" Accept

"Accept my beſt wiſhes for thy health and happineſs. Acquaint me with the reſult of theſe hints, which are ſubmitted entirely to thy corrections; and believe me to be, with great reſpect,

"Thy aſſured friend,

"JOHN FOTHERGILL."

"℞. Conſerv. e Cort. Aurant. ℥i.
Confect. Damocrat. ℥ſs.
Spec. Aromat.
Cryſt. Tartar.
Pulv. Rhej. a ʒi. Syr. e Cort. Aurant. q. ſ. electarium; de quo capiat quantitatem nucis avellanæ, vel quantum ſatis ad alvum ſemel quotidiè ſolvendum, ſuperbibendo cochlearia duo julepi ſequentis:

"℞. Aq. Menth. piper. Simpl. ℥vi.
Tinct. Helvet. ℥iſs.
Syr. Simplic. ʒij. miſce.

"℞. Aq. Cinnam. tenuis, ℥i.
Tinct. Amar. ʒi.
—— Flor. Mart. gut. vij. fiat hauſtus ſumendus mane et meridie.

"℞. Aquæ Puræ.
Julep. e Camphora, ā ℥iv.
Elixir Paregor. ℥ſs. miſce; capiat cochlearia duo in languoribus.

"28th *Nov.* 1767. J. F."

The plan above adopted, I am informed, gradually and happily reſtored the patient to priſtine health.

Extract of a Letter from Dr. Fothergill to Dr. Percival, Anno 1780.

"DEAR DOCTOR,

"I received thy obliging letter this evening; and ſit down immediately to reply to it, leſt, as ſometimes happens to me, new and preſſing calls unexpectedly interpoſe. The patient's diſeaſe is but too evident; and the event, I am afraid, more than doubtful. If the habit had been ſtrong enough, to have thrown the gout on the extremities, a dropſy would not ſo ſoon have happened. —Attacked by both diſeaſes, the former ſmothered, the latter increaſing, leaves us but a bad prognoſtic.

" To ſupport his ſtrength by a generous diet, and to promote the thinner ſecretions, without weakening the powers of digeſtion, ſeem to be the obvious indications. How far the medicines, which I propoſe to recommend on the other ſide, may be likely to ſucceed, I ſubmit to thy better judgment; better it muſt be, were it only for this reaſon, the patient is preſent. His liquor ſhould be generous—old hock and ſpa water, half and half—cyder and ſpa water, and the like, according as, from obſervation, they appear to promote urine: punch made with ſpa water, old hock, and brandy, rum, or Geneva, is not a diſagreeable liquor to many—three parts water, two parts old hock, one of ſpirit, and a little ſugar. His diet ſhould be of light animal food.

" I much lament the loſs of my moſt ſteady friend Dr. Pemberton. I greatly regret, that I truſted too much to his own account of himſelf. I lament that he did not get either thyſelf, Dr. Dobſon, or Dr. Haygarth, or all of you, to ſee him. His family have ſuffered an irreparable loſs, and ſo, I think, has the country.

" Farewel, and believe me,

" Thy affectionate friend,

" JOHN FOTHERGILL."

℞. Aq. Menth. Pip. Simp. ℥x.
Tinct. Amar. ℥iſs.
Sal. Abſinth. gr. viij. fi. hauſtus ſumendus meridie et veſperi.

" ℞. Aq. Cinnam. ten. ℥x.
Pulv. Diaphor. Doveri, ℥ſs.
Syr. Balſ. ℥i. fiat hauſtus ſumendus omni nocte.

" Si alvus quotidiè non deſcenderit, mane capiat hauſtum ſequentem pro re nata:

" ℞. Aq. Menth. Pip. Simp.
Tinct. Senæ, ā ℥vi.
Elect. e Scammon. ℥ſs. vel ℥i. miſce.

" ℞. Aq. Puleg. Simp. ℥v.
Liet. Ammon.
Olei Amygd. Dulc. a ℥iſs.
Oxym. Scillit. ℥ſs.
Gum. Arabic.
Elixir Paregor. a ℥iſs. miſce, capiat cochlearia duo urgente dyſpnœa.

" *8th Nov.* 1780. J. F."

This caſe, as was reaſonable to expect, proved rebellious to every endeavour. But I cannot diſmiſs this Paper, without paying a tribute of reſpect to the memory of Dr. Pemberton, whom I knew early in my life; if any tribute can be more reſpectful than ſaying, he was the friend of Dr. Fothergill. He reſided at Warrington, in Lancaſhire, where he acquired extenſive medical reputation: he poſſeſſed a frankneſs in his behaviour, and a tenderneſs towards the ſick, that gained him the love, as his ſkill did the eſteem, of his patients. Dr. Fothergill, and his relations, particularly, who reſided in the neighbourhood of Warrington, lived in habits of friendſhip and intimacy with this worthy phyſician; and thoſe of them who ſurvived him muſt deeply regret the loſs of ſo valuable a friend and medical companion.

MANY years before I enjoyed Dr. Falconer's perſonal acquaintance, I had the pleaſure of his correſpondence, which I commenced at the expreſs deſire of Dr. Fothergill, who then informed me of the ſatisfaction it had afforded him. Had the Public not known this, the reputation of a writer, that will ſurvive ages to come, ſtands in no need of contemporary eulogy.

I am ſorry that Dr. Falconer had not preſerved the caſes, to which the following communications refer; but every monumental fragment of a great artiſt will acquire admirers.

The following Extract of a Letter to Dr. Falconer will afford an inſtance of Dr. Fothergill's preciſion and quick diſcernment, to ſuch as conſider his own apology: "I am conſcious of great merit," he familiarly obſerves, "in writing this long letter, however jejune: I have not ſlept theſe twenty hours, and have been in action moſt of the time."

"I have peruſed, with attention and pleaſure, thy attempt to ſolve the difficulties in Dr. Heberden's and Dr. Percival's experiments, reſpecting the proportion of rain in different heights from the earth.

"But, to be more certain of the data, it would be right to fix the meaſure to the top of a high pole, inſtead of a building; or at leaſt to ſuſpend it at ſuch a diſtance from any building, as to render any reverberation ineffectual.

"Suppoſe we add the chemical and electrical doctrines, ſome ſentiments deducible from the aſcent of vapours, and the deſcent of bodies. Vapours are perpetually aſcending from the ſurface of the ground: the nearer they are to

to the ſurface, the more denſe; the higher, the more rare. Thus, by a chemical decompoſition of air, it affords the more water, the nearer it approaches to the ſurface. The increaſing velocity of falling bodies, I think, is the principal cauſe of this difference; though it receives addition from all the other cauſes. The guttula of rain, that is ſcarcely perceptible at 400 yards from the ſurface, by attracting the moiſture of the atmoſphere through which it falls, and which atmoſphere is the wetteſt near the ground, grows larger at 300, ſtill larger at 200, and much more ſo at 100.

" Thus not only velocity, but magnitude, are increaſed. For, as the deſcent of the ſmalleſt drop of moiſture poſſible to be conceived, brings in contact a freſh ſurface of freſh moiſt air, from whence it borrows ſomething; ſo every the ſmalleſt addition not only accelerates its motion downwards, but enables it to lick up freſh moiſture in every inch of its deſcent."

Some time after the powder of the male fern was recommended as a ſpecific againſt the Tænia, or Tape-worm, I aſked the opinion of Dr. Fothergill on the ſubject; who informed me, that he conſidered tin filings as a much more efficacious remedy: and, in a letter to Dr. Falconer, he obſerves, " I have put down, in the preſcription, *Limatura Stanni*; pleaſe to direct that it be the filings, not the powder. I have two reaſons for it:—In the firſt place, I think tin deſtroys worms mechanically; that is, by the points of the filings gradually diſlodging the heads of the Tænia, or other worms, from their neſts. The powder is robbed of this property entirely.

" In the next place, it is not improbable, at leaſt impoſſible, but the zinc contained in the tin, or annexed to it, may be a powerful anthelmintic; and this muſt inevitably be deſtroyed, by the repeated fuſions of the metal, in reducing it to powder. A perſon of my acquaintance, to whom I had preſcribed with ſucceſs the filings of tin, diſcharged a Tænia fourteen feet in length. He waſhed it clean, and put it into a bottle of ſpirits of wine, lowered to proof. The ſpirits acquired preſently a moſt beautiful amethyſt colour; I think not merely from the ſanguineous juices of the animal, but from the effects of zinc.—This, however, is matter of conjecture; the former is a fact."

THE ingenious Dr. Dobſon, of Bath, is only known to me, as he is known in the republic of letters; and this is ſuch as will gain the following obliging communications the regard of the Public; and they command, as they juſtly merit, the thanks of the Editor.

To

To Dr. LETTSOM.

" DEAR SIR,

" MANY of the letters which I received from Doctor Fothergill, have been miſlaid, and I fear are loſt. I recollect this with greater regret, as the correſpondence of our intelligent friend always conveyed ſome uſeful information. From the few letters which remain, I have ſelected the following practical obſervations."

§ 1. *On the flatulent Affections of the Duodenum.*

In a letter which I received from Dr. Fothergill, in the year 1768, he ſays,

" I think Hoffman's treatiſe *De Morbis Duodeni* one of his beſt performances: at leaſt I have profited more by it, than by any of his other writings. Painful affections about the ſtomach, proceed more frequently from a diſtention of this gut, than from either the ſtomach or the liver. If one conſiders the curve it takes behind the liver, and the many important acts neceſſary to perfect *Chylopoieſis*, which muſt be performed in this region, we may eaſily conclude it to be the ſtage of many excruciating tranſactions. All the parts connected with it are extremely irritable, and liable to ſpaſmodic conſtrictions; every irritating cauſe, to which the habit is incident, being here united: acrid bile, undigeſted aliments, and the reſult of theſe combinations.

" In all caſes, a true knowledge of the part affected is of the utmoſt conſequence to a cure; and yet it is not always eaſy to diſtinguiſh between the affections of the *Duodenum*, the affections of the liver, or the ſymptoms which accompany biliary concretions. In ſuch ſituations, and where the ſymptoms are rather equivocal, I always think it right to purſue the general and evident indications, to promote the proper ſecretions, to give firmneſs to the ſolids, and by their aſſiſtance produce good blood and good juices."

§ 2. *On the Uſes of the Vapour ariſing from the Salt-Pans, in Pulmonary Conſumptions.*

About ten years ago, I communicated to Dr. Fothergill ſome experiments and obſervations on Sea Air; and, among other concluſions, mentioned the benefit that conſumptive patients might derive from breathing an air, which has the peculiar advantage of being of an equal temperature; and is likewiſe impregnated with a mild, reſolving, and antiſeptic vapour, conſtantly exhaling from

from the ſurface of the ocean. Such a ſituation muſt have its uſes, both in the early ſtages of Tubercle, and the more advanced ones of Abſceſs, Rupture, and Ulceration.

The following is an extract from one of the Doctor's letters, which I received ſoon after this.

" I was in hopes, when I got down into the country, to have thrown together ſome more remarks on conſumptive caſes, the uſe of the bark, elixir of vitriol, Briſtol water, and ſome other uſual medicines in this diſeaſe; but I am fairly diſtanced. Whilſt we are on this ſubject, however, permit me to mention an application that I think may be made extremely ſerviceable in this dire diſtemper; eſpecially when it attacks people near the middle of life, or later, from ill-cured pleuriſies, catarrhs, and the like cauſes.

" Let the patients go every morning to the Wich-houſes, where they are boiling brine into ſalt; let them advance gradually to the pan-ſide, not in the hotteſt place; and let them ſtay there about a quarter of an hour, more or leſs, as they can bear it: let them gradually approach the door, to grow cooler; then have an additional garment to put on; clap a handkerchief to their mouths, to keep the atmoſphere from feeling too cold; and after they are got home, if their cloaths are damp, either from too free perſpiration in the ſalt-ſteam, which I could wiſh might be avoided, or from the ſteam itſelf, let them change their cloaths prudently.

" By this means, a penetrating antiſeptic vapour is moſt probably conveyed, with eaſe and certainty, to the parts affected; capable of reſolving recent obſtructions, and reſtraining a tendency to putrefaction.

" Young perſons may try it with ſafety; and I perſuade myſelf that a few experiments will enable one to direct the uſe of this not inefficacious medicine with propriety. I have ordered it to ſome perſons here, ſince I came down: we have good conveniencies about us; and I have met with no inſtances that diſcourage me from perſevering.

The above practice may have its uſes; but will be found to be different, in its effects, from the conſtant, equable, and temperate action of a ſea atmoſphere.

§ 3. *On the Diabetes.*

Dr. Fothergill deſired that the experiments and obſervations I had made on the urine of diabetic patients, might be inſerted in the Medical Inquiries*; and, in his letter, makes ſome ſhort practical remarks on the diſeaſe.

* Vol. v. p. 298.

" I have

" I have always ſuſpected the Diabetes to ariſe from impaired digeſtion, either from mere debility, or from a defect of bile. The obſtinate coſtiveneſs frequently attending this complaint, ſeemed to argue this defect; in part, no doubt, the quantity of moiſture running off perpetually by the kidnies, would leave the inteſtinal canal much drier. To ſtrengthen the organs of digeſtion, the ſecretory organs likewiſe, to forward the diſcharge of bile into the inteſtines, and to promote perſpiration, were generally my objects. Some gentle effectual laxative, ſome tonic but not heating medicines, were what I chiefly depended on; together with the uſe of either Briſtol or Buxton waters, or lime-water, with a little milk, and lowered with common water, ſo as to drink it freely for common drink. There is ſome kind of ſlight and almoſt unheeded calcareous ſtypticity both in the Briſtol and Buxton waters, which is carried into the remoteſt receſſes. Bark and elixir of vitriol are valuable medicines, if they prove not too aſtringent. It is neceſſary to regard the condition of the hepatic ſecretion. I ſuſpect the Diabetes often originates from this viſcus. Perhaps an inſpiſſated bile, neither flowing into the inteſtines, nor yet abſorbed, as in the jaundice, may be at leaſt one cauſe of the moſt quick and pernicious kinds of this diſeaſe."

§ 4. *On Bleeding, in Paralytic and Apoplectic Caſes.*

In one of my letters to Dr. Fothergill, I put the following query: What are the circumſtances which ſhould determine us to bleed, or not to bleed, when called immediately or ſoon after a paralytic or apoplectic attack?

In this caſe, the Doctor very judiciouſly ſays, " Weigh well, whether the ſtrong, ſlow, bounding pulſe, is the effect of vital vigour, renewing efforts for recovery; or it is the remains of that plenitude, which brought on the ſtroke.—This muſt determine us.—I believe it happens much more frequently, both in apoplexies and palſies, that the former is the caſe: and then, ſo ſure as we bleed, we increaſe the diſeaſe: we rob nature of that vigour, which was employed in reſtoring the circulation, and all the offices depending upon it. Many, many fatal miſtakes have I ſeen in this very point. If bleeding ſhould not be proper, it is miſchievous. If it ſhould be warranted, yet neglected, provided other evacuations, which are almoſt always indicated, are clearly followed, no great harm can enſue."

The laſt letter which I received from our very excellent and much lamented friend, appears to have been almoſt prophetic of his approaching diſſolution.—" I am juſt advancing to a period, when my attachment to this life ought to grow leſs ſtrong. I am ſolicitous, therefore, to get my debts, of various kinds,

diſcharged, that I may ſtand ready, as I may be aſſiſted, to attend a call which muſt be obeyed."—A few months after this, the fatal relapſe put a period to his moſt amiable and valuable life.

I cannot conclude my letter without obſerving, that Dr. Fothergill was, in the line of his profeſſion, very judicious, very active, and very humane. He had a quick diſcernment, both in diſtinguiſhing diſeaſes, and in adapting the means of cure; ſo much ſo, indeed, that he has ſometimes been thought to have trifled with the patient, till the event has made it evident, that his practical concluſions were as ſound as they were expeditious; and that the patient has recovered, by the uſe of ſome eaſy and ſimple means, after more complex and apparently more powerful remedies had been adminiſtered without effect.

I remain

Dr. Lettſom's moſt obedient ſervant,

Bath, *Auguſt* 16, 1781. MATTH. DOBSON.

MY amiable and valuable friend, Dr. Anthony Fothergill, has kindly addreſſed to me the following letter; which contains ſufficient information to intereſt the attention, and acquire the approbation, of the Public.

To Dr. LETTSOM.

DEAR SIR,

PURSUANT to your requeſt, concerning the correſpondence with my late excellent friend Dr. John Fothergill, I have reviſed his letters, from the year 1764 to the time of his late fatal illneſs, including a period of about ſixteen years. Though there were few ſentiments, which dropt from his pen, that would not do credit to their author in print, yet I muſt beg leave to paſs over in ſilence the major part of his letters, which, being of the confidential kind, were written in haſte, on particular occaſions, and deſigned for the eye of friendſhip only. During the above ſpace that I was favoured with his inſtructive communications, I generally obſerved, that he expreſſed himſelf with a degree of terſeneſs peculiar to himſelf; ſo that I have frequently been at a loſs which to admire moſt, the conciſeneſs and perſpicuity of his ſtyle, or the juſtneſs and energy of his ſentiments.

The

The converſation and correſpondence of a perſon poſſeſſed of ſuch talents, joined to an infinite fund of knowledge, acquired by experience and a thorough acquaintance with mankind, could not but be highly intereſting to one whoſe curioſity was awake, and whoſe avidity for treaſuring up uſeful facts was boundleſs. It is not to be wondered at, then, if I availed myſelf of the opportunities which he ſo kindly afforded me, of imbibing inſtruction from ſo copious a ſource, and of learning the reſult of his obſervation and experience in a variety of the moſt obſcure and difficult caſes.

As the preſent volume, I preſume, is not intended to be confined to medical communications alone, but alſo to convey ſuch information as may beſt tend to the illuſtration of his life and writings, and to ſelect ſuch traits from his familiar correſpondence as may throw moſt light on his general character, I ſhall ſubmit the following miſcellaneous extracts to your conſideration. Though medical obſervations, ſimilar to ſome of thoſe which follow, may have already appeared in other parts of his writings, yet it may not be unpleaſing to the reader, to ſee them here farther illuſtrated, or confirmed by collateral circumſtances. But, before I enter on theſe, I muſt beg leave briefly to mention one inſtance, out of many that might be produced, of

His unaffected Piety and Benevolence.

He was evidently of a ſerious and religious turn of mind; and, though free from any tincture of bigotry or ſuperſtition, he was not aſhamed, like the minute philoſophers of the preſent age, to acknowledge his firm belief in a Supreme Being: and, as he felt himſelf under the conſtant influence of that important truth, he endeavoured ſtrongly to impreſs a juſt ſenſe of it upon others. In the year 1764, on my firſt entrance into practice at Northampton, under the ſanction of his patronage and recommendation, I met with more difficulties, and had greater oppoſition to encounter, than we had been taught to expect. In his anſwer to my repreſentation of the ſtate of affairs, he concludes with the following truly pious and paternal admonitions:

"Depend more on propriety of conduct than any recommendations, though theſe ought not to be neglected. Have patience, be firm; and I hope every thing will in time ſucceed. There is a ſecret ſuperintending Providence that directs every thing for the beſt. All that we have to do, is to act uprightly, and to the beſt of our ſkill, in every thing that offers. It is no ſmall ſatisfaction to me to hear, that thoſe, who are beſt able to judge, ſpeak of thee very favourably: and this is to me a mark of thy future ſucceſs. I am thy aſſured friend," &c.*

* December 4, 1764.

In a ſubſequent letter, he purſues the ſame kind and affectionate exhortation: "I perſuade myſelf that by this time thy proſpects begin to brighten up. Forget not, however, that it is on Providence we muſt depend for a bleſſing on our diligent, upright endeavours. Difficulties are of uſe to the prudent: I cannot, however, but wiſh thee as much ſucceſs as may be moſt conducive to thy happineſs; and am ever thy aſſured friend," &c.*

Permit me here to add, that the event proved conformable to his good wiſhes; and I think we may venture to conclude, that, in all important undertakings, it will ever be our duty, as well as our intereſt, duly to obſerve ſuch excellent admonitions, though they ſhould not always be immediately crowned with the deſired ſucceſs.

I ſhall now proceed to ſelect ſome medical obſervations from his letters; and particularly from a few of the caſes in which we were jointly concerned: to the reſult of which I paid no ſmall degree of attention.

His Opinion of the Hemlock.

In two caſes of carcinomatous affections of the Uterus, attended with very diſtreſsful circumſtances, he ſays, "I know not that any thing better can be done for our patients, than to perſevere in the uſe of Hemlock, till it either ſeems to produce no effect, or diſagreeable ones. Perhaps this drug is indebted to Dr. Rutty and myſelf, for its continuing a little longer in uſe than it would have done without us. It will not do half of what Dr. Storck ſays; but I am ſure it is an uſeful medicine in many diſorders ſimilar to thoſe before us †." Accordingly I had the ſatisfaction to find, that the pain and inquietude were conſiderably alleviated; and, though the relief was only temporary in the above cancerous caſes, it produced a permanent cure in an obſtinate painful affection of the face and gums, accompanied with a high degree of irritability, in three female patients, who tried a variety of other medicines in vain. Therefore this remedy, though unequal to the cure of cancers, for which it was perhaps too haſtily extolled by Dr. Storck; yet theſe, and a variety of other authentic facts, clearly prove that it is poſſeſſed of *anodyne* and ſedative powers, which juſtly entitle it to our further candid inveſtigation.

Of the Emetic Tartar in the Tuſſis Convulſiva.

"I have," ſays he, "long made uſe of this remedy for the Hooping Cough, with much benefit to my patients; and think, if it is judiciouſly managed, it will generally

* December 24th, 1764. † June 14th, 1767.

generally prove as ſucceſsful in the cure of this diſeaſe, as the bark in intermittents, if the ſubject is not too far gone before it is adminiſtered *.

"I would rather wiſh to be able to cure a trivial diſeaſe with certainty, than to be the author of the moſt ſpecious ſyſtem in the world. The *citò, tutò, et jucundè*, ſhould always be the phyſician's motto and his aim †."

His Zeal for the Public Good, and the Improvement of the Healing Art.

Having been diſappointed by the Bark, in ſome inſtances of the *Angina Scarlatina*, which prevailed in the year 1770, he ſays, "I ſhall be pleaſed with ſeeing thy obſervations on the putrid ſore throat, which ſtill continues to ſpread in many places. By the obſervations of numbers, the diſeaſe will be better known, and treated with better ſucceſs. We are preparing another volume of Medical Obſervations and Inquiries for the preſs. As I was the firſt who planned this work, and ſupported the firſt ſecretary at my own expence, till our publications would anſwer it, I may now claim more merit than I ever expected, not only in having been the occaſion of preſenting the world with a number of very uſeful obſervations in our collection, but in having proved the inſtrument of exciting the college to an honourable emulation ‡.—I ſhould be glad to ſee another volume publiſhed, before I lay aſide the *cæſtus*. I did nothing laſt ſummer; if I am well the next, I hope to contribute ſome little towards it. One man cannot do a great deal, be his practice ever ſo extenſive. Of the diſeaſes that daily occur, how few are there which furniſh matter of real ſolid inſtruction? I am ſure I wiſh to let nothing eſcape me, that can contribute to the uſefulneſs, ſimplicity, and certainty of medicine §."

During his ſhort ſtay at Buxton, 1779, he propoſed many important improvements at that place, which now prove highly advantageous to thoſe who frequent that ſalutary ſpring. "Among the neceſſary improvements," ſays he, "from which I hope the Public will be great gainers, we have recommended ſome private baths, as well as the public ones; and alſo to have a few capable of being warmed to any degree required. In this manner they cannot fail of being extremely uſeful in many diſeaſes. At preſent, thoſe who go thither follow no certain plan of operations, and return often with diſguſt ‖."—I ought before to have mentioned, that about the year 1770 he was extremely

* June 14th, 1767.

† For further particulars concerning its uſe, ſee London Medical Inquiries, vol. iii. and the preſent collection of Dr. Fothergill's Works.

‡ September 30, 1770.

§ March 9th, 1779.

‖ November 11, 1779.

deſirous

deſirous of having the Bills of Mortality reviſed, and put upon a much better footing throughout the kingdom. "Would it not be practicable," ſays he, "to prevail upon the principal inhabitants of Northampton to attempt it?" To ſecond his deſign, and to ſtimulate the people to ſo deſirable an improvement, an addreſs ſoon appeared in the Northampton Mercury, of which he was pleaſed to teſtify his approbation; concluding, "that by thus ſtrenuouſly purſuing the object, we may in time be enabled to accompliſh that, which a proper act of parliament would have eſtabliſhed in an inſtant*." But I am ſorry to add, that although the generality of the people ſeemed inclinable to adopt the plan, and two capital towns had already begun to carry it into execution, and have ſince fully evinced its utility †, yet the reſt have not deigned to follow ſo laudable an example.

His ſucceſsful Treatment of certain Epileptic Caſes.

In conſultation on an obſtinate epileptic caſe, in a young man who had indulged in free living, whoſe diſeaſe had baffled a variety of medicines, he ſuggeſted frequent evacuations, and an entire vegetable diet. This method was ſoon followed by the deſired ſucceſs; and, after a very ſatisfactory trial had been made, I informed him of the reſult. To which he replied, "I have relieved many by a plan of this kind; viz. by interdicting animal food, by enjoining a ſpare vegetable diet, and interpoſing frequent gentle purgatives: and I wiſh that this plan may be tried in epileptic caſes, which come under thy care at the Northampton hoſpital, as the reſult would, I think, afford uſeful information in our Medical Obſervations ‡." Here I think it neceſſary to remark, that notwithſtanding all poſſible attention was paid to my worthy friend's requeſt, the relief which reſulted from this plan, though conſiderable, was chiefly confined to plethoric young men, from whoſe aſpect and courſe of living there was reaſon to ſuſpect a degree of turgeſcency, or congeſtion, in the veſſels of the brain. Neither muſt it be concealed, that the flattering ſucceſs in the above, as well as other ſimilar caſes in which it was tried, was generally defeated, whenever the patients committed any conſiderable exceſs in diet, or in the uſe of ſpirituous or fermented liquors: upon which I found it afterwards neceſſary to enjoin abſtinence from theſe, as well as from animal food, and to interpoſe arteriotomy as well as purgatives, before the cure could be completed: and it muſt be further acknowledged, that, notwithſtanding every precaution of this nature, the diſeaſe would ſometimes recur, after very long intervals, even when no irregularity, nor any obvious exciting cauſe, could

* December 10th, 1770. † Mancheſter and Cheſter. ‡ November 4, 1774.

be

be reaſonably ſuſpected. But every method of prolonging the interval, though we ſhould not be always able totally to prevent the return of the paroxyſm, certainly merits our attention. With this view, he alſo generally recommended an electuary, the baſis of which conſiſted of tin filings, waſhed down with a ſtrong decoction of miſletoe. The filings appeared to anſwer much better than when tin was given in the granulated ſtate; though it might be difficult to give a ſatisfactory explanation of their mode of operation. Tin is allowed to contain a ſlight arſenical impregnation; and as arſenic has been lately diſcovered to have conſiderable efficacy in obviating the paroxyſm of intermittents, when given in very minute doſes; and as filings of tin ſeemed to prove equally ſucceſsful in the epilepſy, whether they were accompanied by the miſletoe or not; may not the virtue of this ſemi-metal be, in ſome meaſure, attributed to a ſmall portion of arſenic which adheres to it in this ſtate, but is diſſipated in the proceſs of granulation?

On a Caſe of hereditary Gout, complicated with peripneumonic Symptoms:—and, whether Bath Water be adviſeable under ſuch Circumſtances.

A gentleman of family and diſtinction, aged about forty, of a highly florid complexion, being of a very lively and convivial diſpoſition, and too remiſs in taking proper exerciſe, was often afflicted with ſevere paroxyſms of the gout; a diſeaſe which he originally derived from his anceſtors. During an interval of the gout, which had long been anomalous, he was ſuddenly attacked by a ſevere cough, and other peripneumonic ſymptoms; which, however, ſeemed to me to proceed from a latent arthritic cauſe. In this point of view, the Bath water appeared to be a neceſſary auxiliary; eſpecially as the pulſe and vital motions were not ſo much accelerated, as in the genuine peripneumony. But a doubt aroſe, how far he could, under ſuch a ſeeming contra-indication, with propriety avail himſelf of its uſe. During this dilemma, having prevailed on him to allow me to ſtate his caſe to my learned friend, I was ſoon favoured with the following very ſatisfactory anſwer:

"DEAR DOCTOR,

"I have conſidered our patient's caſe with much attention: and if my opinion correſponds with thy own, be ſo kind as to impart my free ſentiments on this occaſion. I think the water may be of very conſiderable uſe; and therefore wiſh him to repair to Bath. There are two ſituations of gouty people, in which, I think, the Bath waters are very uſeful: the one is, when the gout either

either does not attack the parts it ought to do, the extremities; the other, when the ſtrength has been ſo much waſted by the diſeaſe, as to leave all the functions debilitated. The firſt, I apprehend, is our friend's caſe; and yet, as the lungs have ſuffered ſo much, and the Bath water, unleſs it is drank with great prudence, may tend to injure them more, we cannot enjoin too ſtrict a regard to its uſe, and his general regimen; the neglect of which will inevitably increaſe the peripneumonic tendency, and bring on miſchiefs that no art can remedy.

"To a man of quick ſenſations, to acquire an abſolute command over appetite, requires more philoſophy, more ſtrength of mind, than moſt people are aware of. Yet it is the want of this command, and too eaſily yielding to the preſent moment of appetite, that not only diſpoſes conſtitutions that are even averſe to gout, to feel all its miſeries; but precipitates thoſe who are entitled to it by birth, and, I may ſay, education, to the full ſeverity of its torture.—If our friend can reſolve to reſtrain himſelf, he may add to his days many years; if not, the whole that art can do, is to extricate him from the effects of inattention, as long as nature aſſiſts us. It is much to be wiſhed, that gouty perſons could be prevailed on to fall on ſome plan to correct this propenſity, and that they would never dine upon more than one diſh at a time; and, if there is much variety on the table, to chuſe *that* which they *like* the leaſt. Therefore ſay to our friend, If he regards his own life, the happineſs of his family, his friends, and his country, he muſt either now determine to conform to the ſtricteſt regimen, agreeable to the rules here ſuggeſted, or prepare himſelf for the miſerable life of an invalid—either extreme pain, or unutterable dejection of ſpirits; according to what I have obſerved in a thouſand ſimilar inſtances.

"In my opinion, it will be right for him to begin with one third part of a pint of the croſs Bath water, with a few ſpoonfuls of milk added, in bed; a ſecond draught after riſing, at the pump, before breakfaſt; and a third before dinner. If the water does not increaſe the cough, affect the breathing, or produce ſome obvious inconvenience, he may gradually proceed to increaſe the quantity, and at length change the water; and, if it agrees, drink the ſtrongeſt in the ſame quantity, taking care to prevent coſtiveneſs by any gentle means.

"I am, with much reſpect,

London, "Thy aſſured friend," &c.
October 21, 1778.

It may not be amiſs to obſerve, that about the time the above letter arrived, the medicines he had taken ſeemed to produce a happy effect in diſlodging the gout from the internal parts: for no ſooner did the pain ſeize the lower extremities, than the dangerous peripneumonic ſymptoms abated, and at length

wholly diſappeared; which of courſe ſuperſeded the neceſſity of a journey to Bath.

His painful and dangerous Diſeaſe deſcribed by himſelf, about the Time of its Commencement.

The firſt attack of this formidable complaint happened in November 1778, which he deſcribes as follows:

"DEAR DOCTOR,

"I have juſt received thy very obliging letter; and though I am not very fit for writing, it claims my grateful acknowledgments.

"This day week, in the night, I was ſeized with a ſudden obſtinate retention of urine, which nothing would relieve but the catheter, and this with the utmoſt difficulty. Several trials having been made, under *inexpreſſible ſufferings*, before any could be drawn off, we ſucceeded at laſt: but as no urine is yet diſcharged ſpontaneouſly, I am ſtill under the neceſſity of ſubmitting to the operation.—This is my preſent ſtate:—what may be the event is very uncertain.—I thank thee for this kind proof of thy attention; and am thy aſſured friend," &c.*

His Patience and Reſignation.

In the next letter† he proceeds to deſcribe the progreſs of his ſufferings, with exemplary calmneſs and reſignation:

"I moſt kindly accept thy benevolent wiſhes, and am ſorry I cannot yet inform thee I am in a viſible way to be well. The ſame obſtinate retention ſtill continues to require the frequent uſe of the catheter, and to be guided by the moſt experienced hand in Britain, to gain admiſſion into the bladder; ſuch is the obſtinate ſtricture at its entrance. But this poſſibly may relax in time; and I have the more reaſon to hope ſo, as the operation becomes leſs and leſs difficult to the operator himſelf. At preſent, I take no other medicine than a ſoft laxative potion occaſionally; obſerving to regulate my diet, in as exact a manner as I can, ſo as neither to deprive myſelf too much of natural ſtrength, nor to add to the diſeaſe. The complaint being now wholly local, our views will be directed to this point. We thought it better to wait for time to diſcover what ought to be done with effect, than too officiouſly to be combating a malady ſo very obſcure.

* November 24th, 1778. † Id. 28th.

"When I can give any better account of myſelf, I will do it with the utmoſt pleaſure; as I know it will afford thee ample ſatisfaction. Till then, reſt in hope that I am not loſing any ground; and that, under all this affliction, I am often *chearful*, eaſy, and at *no time*, I hope, *diſcontented* with my lot. I am," &c.

His Opinion concerning the Nature and Cauſe of the Diſeaſe.

Having for the ſpace of three weeks undergone much anxiety on account of my dear friend's calamity, I was at length favoured with the following letter *, which afforded me the joyful proſpect of his recovery. It contained moreover a ſolution of the chief difficulties of this very intricate and diſtreſsful caſe.

"DEAR DOCTOR,

"I am happy to inform thee, that I have not ſtood in need of undergoing the operation for theſe ſix days paſt, during which I have been daily gaining ſome little ground. I am almoſt afraid of facing the world yet; but if I continue recovering, I hope the week after next to get a little abroad. I have much reaſon to be very thankful for my hair's-breadth eſcape, and ſhall not willingly run any riſque of a relapſe. At preſent my ſituation appears to be the following. I know not that the circumſtances have ever been deſcribed, and therefore hope to be excuſed for ſuggeſting my opinion.

"The prediſponent cauſe of this complaint, I think, was the unavoidable neceſſity (either for want of time, or convenience, or both) of retaining my urine longer than I ought, and to a degree of great uneaſineſs. This rendered the reſtraining muſcles of the ſphincter more forcible, and more irritable: a violent cold brought on an inflammatory diſpoſition; and the parts moſt liable to inflammation became the ſeat of the diſeaſe. The inflammation was removed by the uſual means; but the bladder had loſt its power, while the contractors of the ſphincters had increaſed theirs; by which means, every effort was moſt painful and fruitleſs. It requires the united action of the contractile force of the bladder, the dilatation of the ſphincter, and the acceleratores urinæ, to be exerted equally, and at the ſame inſtant, to perform this operation ſucceſsfully: any irregularity in reſpect to time, or proportionate force, renders it impracticable. From this ſtate, which *I feel very ſenſibly*, and which none but a medical perſon can have any idea of, I am now recovering.—I have no fixed obſtruction, no perceptible enlargement of the proſtate gland, no inflam-

* December 19, 1778.

matory

matory diathesis; the secretion is perfect, but the *consensus partium* is imperfect. —I find, as I recover strength, this consent is improving; and I now have reason to hope for its full restoration. I know not that this situation is any where mentioned; yet *I am sure*, both from *attentive observation of my own present feelings*, as well as from *the condition of the parts*, that this supposition cannot be far from the truth.

"I am, with much gratitude and esteem,

"Thy obliged friend," &c.

From this time he gradually recovered; and at length, to the unspeakable joy of his friends, was enabled again to pursue the duties of his profession with his wonted diligence and assiduity.

Here it may not be amiss to remark, that in this first attack of the disease, which he so pathetically describes from his own feelings, as there was no enlargement of the prostate gland, nor any fungous substance near the sphincter yet perceptible, there is reason to conclude that these morbid affections existed but then in embryo: and it is easy to conceive how the irritation, which necessarily accompanied so long and painful a suppression, contributed to the subsequent growth of that fatal tumour, which, about two years afterwards, put a final period to the life of my much esteemed—ever to be lamented friend!

I remain, Dear Sir,

Your very obedient servant,

A. FOTHERGILL.

Bath,
Dec. 20, 1782.

THE Bills of Mortality, wherever they have been kept in this kingdom, afford the most melancholy proofs of the fatality of Consumptions. Whilst a subject of such serious magnitude acquired the attention of Dr. Fothergill, it excited him to suggest some means of preventing, or at least diminishing, the ravages of a disease so fatal to the rising generation, and to that part of it, whose tenderness of constitution is often united with a delicacy and refinement of mind, that must peculiarly interest a feeling heart in the restoration and happiness of such subjects *.

Dr. Johnstone, of Kidderminster †, for whom Dr. Fothergill entertained a distinguished regard, has obligingly communicated to me the following copies

* See his Essays on Pulmonary Diseases, collected in his Works.

† Since the death of his son, removed to Worcester.

of letters, which reſpect the treatment of two conſumptive patients; and as every thing Dr. Fothergill ſuggeſted in the Phthiſis Pulmonalis merits attention, I agree with Dr. Johnſtone in opinion, that their inſertion here would be acceptable to the Public. He concludes his letter to me with the following animated eulogy:

"I ſend you copies of two letters, ſelected from a correſpondence with which I was honoured by Dr. Fothergill. They ſhew the application of thoſe juſt ideas this divine man held concerning conſumptive diſeaſes. They will add ſome value to your collection of his Works; and I ſhall be gratified in having theſe remembrances of the friendſhip of this excellent phyſician, and of the great privilege and honour I enjoyed, preſerved."

Worceſter,
December 20, 1783.

(N° I.)

London, April 25, 1759.

"DEAR DOCTOR,

"Yeſterday I received thy obliging letter, and the caſe it incloſed. I have conſidered this with attention; and ſit down to give my opinion, though with much doubt of any thing availing, as well as my preſent ſituation will allow.

"I am afraid a *Phthiſis* is ſo far confirmed, that nothing can retard a gradual but certain diſſolution of the whole. I know of nothing, at leaſt under ſuch circumſtances, that promiſes ſo much as the Briſtol water, drank at the Wells. If the gentleman can bear the journey, let him ſet out immediately, and take lodgings as near the Hot Well as poſſible. About ſeven in the morning, or earlier, he may drink his aſſes milk; and, about half paſt eight or nine, go to the well, and drink half a pint from the pump. He may drink a ſecond glaſs at noon, and a third at five in the evening. In three or four days he may proceed to two half pints in a morning, and in three or four days more to three; continuing to drink one only at the other parts of the day.

"His diet ſhould be much of the milky kind, and of the lighteſt animal food, a little at once, and the oftener repeated; his exerciſe very moderate; and the ſlighteſt cold ſtudiouſly avoided. In regard to medicine, after the trial of ſo many efficacious ones, it is difficult to propoſe any with a proſpect of much ſucceſs. The remedies propoſed on the paper within, may, with ſuch variations as Dr. Johnſtone ſees neceſſary, be worth a trial. The intention at preſent ſeems, to mitigate the cough, without totally ſtopping expectoration; and to leſſen the inflammatory tendency, without weakening the vis vitæ. Every thing in medicine, as well as diet, of an active, heating, ſtimulating nature, ſhould be ſtudiouſly avoided: the mildeſt balſamics, with a gentle aſtringency intermixed, with antiſeptics and anodynes, are all that ſeem at preſent indicated.

"Vernal

"Vernal intermittents have been more frequent here than I have ſeen them for many years. It is often difficult to know them, they appear in ſo many ſhapes; but the bark never fails to remove them effectually. Even low, continual, chronic complaints, of many kinds, become now intermittent, and give way to the bark, after baffling every other medicine. I believe I muſt be forced to enter a proteſt againſt ſome part of the great Sydenham's doctrine, reſpecting the uſe of riding in conſumptive caſes: in ſummer, it is right, with proper limitations; in winter, I fear, it is not ſo. In this place we have too many opportunities of obſerving its deluſive progreſs.

"I can only add, that I am Dr. Johnſtone's aſſured friend,

"J. FOTHERGILL."

The patient for whom theſe judicious directions were given, died, according to Dr. Fothergill's expectations. The following medicines were preſcribed:

"℞. Pulv. e Tragacanth. comp. ℈i.
—— e Succin. comp.
Trochiſc de Nitro āā gr. xv. fiat pulvis ſumendus mane et ſerò e Cochlear. iv. Emulſ. ſequentis:

"℞. Emulſion. communis, ℥viij.
Aq. Nuc. Moſchat. ℥iſs.
Syr. e Meconio. ℥ſs. m. cap. Coch. iv. urgente Tuſſi.

"℞. Tinctur. Cort. Peruvian. Spir.
Elix. Paregoric. āā ℥iij.
—— Vitriol. acid. ℥iſs. m. cap. gutt. xl. meridie et veſperi, ex hauſtu aq. Briſtol. tepefact.

"℞. Pulv. e Tragacanth. comp. ℥iſs.
Ol. Amygd. dulc. ℥iſs.
Syr. e Meconio.
—— e Succ. Limon. ā ℥i. fiat Linctus, cujus cap. Cochleare unum plenum cubit. itur: & Cochlear. parvum, ſi Tuſſis nocte infeſta fuerit.

"J. F."

(N° II.)

London, March 24, 1762.

"DEAR DOCTOR,

"If my leiſure was equal to my inclination, Dr. Johnſtone would not have been ſo long without ſome intimations of the regard and eſteem I have for him.

But

But I live an exile in the midſt of a moſt populous city, and ſecluded from all correſpondence in the centre of it. It is only at night that I can have a moment's reſpite, and even ſeldom then: and judge with what reluctance one ſits down to write even to a friend, when every faculty of body and mind has been kept upon full ſtretch for twelve or fourteen hours together: and this is my caſe daily, with a body not ſtrong, and a mind not a little actuated with feelings for thoſe I ſerve.

"Our patient's caſe is diſtreſſing. I think nothing ſo likely to relieve her as Briſtol: to this place I could wiſh ſhe was ſent as ſoon as poſſible; and if the method propoſed on the other ſide ſeems not improper, that, or ſomewhat like it, may at the ſame time be recommended.

"It will give the Society pleaſure, to find their endeavours are not unacceptable; and that they may ſtill hope for the countenance of the learned, the attentive, and ingenious.—Of late I have been prevented, by conſtant hurry, from attending the Society; but I am not the leſs ſolicitous for its credit, as I think the improvement of medicine greatly depends upon it; and I know not a place in the world where medicine is practiſed with a more maſculine freedom and ſimplicity, and where we are at more liberty to follow nature, without the fetters of faſhion or ancient prejudice.

"Should I live to enjoy a few years of reſpite from exceſſive labour, before my faculties, ſuch as they are, are quite worn out, I ſhould be glad to leave behind me a few way marks to poſterity; not that I have made any diſcoveries, except it be of a few bogs and precipices, where an inattentive traveller may perhaps, from any thing yet left us that I know of, be liable to miſs his way, and ſuffer for it.—Has any body ever thought of writing Le Medicin de *bon Sens?* yet what is more wanting in the practice of phyſic?—the means of acquiring that ſuperiority with their patients, that commands their punctual obedience.—It is a ſcience worth ſtudying, hard to be learned, as hard to be taught, yet of ſome conſequence. I am not the perſon who can do it, but I could wiſh to attempt it. Excuſe this prolixity, and believe me to be thy aſſured friend,

"J. FOTHERGILL."

This worthy lady followed her preſcription with the deſired ſucceſs; and is now the reſpected amiable mother of a large family.

"Pergat cum Lact. Aſin. mane quotidiè.

"℞. Raſur. C. C. Radic. Sarſaparill. āā ʒi. coque in Aq. Font. ℔iij ad ℔ij. Colaturæ adde

Aq. Cinn. Spir. ʒi. Syr. Balſ. ʒij. m. Sit pro potu ordinario.

"℞. Tinct.

" ℞. Tinct. Cort. Peruvian. Simp. ʒiij.
—— Myrrhæ Simp. ʒi. m. cap. gut. xl. horâ ante prandium, et ſextâ veſpertinâ e Coch. aliquot Decoct. ſupra preſcript. paulò tepefact.

" ℞. Aq. puræ, ʒx.
— Sem. Carui.
Spir. Minder. āā ʒi.
Sperm. Cet. v. ovi. ſolut.
Pulv. e Chel. Canc. āā ϑi.
Syr. e Meconio, ʒi. fiat Hauſt. ſumend. horâ ſomni.

" ℞. Conſerv. Roſar. ℥ſs.
Syr. Pectoral. ℥ſs.
—— e Meconio, ℥ſs. m. cap. Cochl. mane urgente tuſſi.

March 24, 1762. " J. F."

THE following Letter from the ingenious Smeathman, author of an Hiſtory of the Termites, is ſo much connected with the ſubject of my narrative, that its appearance here will undoubtedly prove acceptable to the Reader.

SIR,

I AM ſorry to have been ſo long in complying with your requeſt, of being made acquainted with the circumſtances which induced me to undertake my voyage to the coaſt of Africa; as well as an outline of the advantages likely to accrue from it to the Public.

The deſire of giving ample information is frequently, as in this caſe, the cauſe of involuntary delay. My attention indeed has been ſome time neceſſarily fixed upon objects, which demanded immediate conſideration and preſent diſpatch; and my engagements have not left me that leiſure, or thoſe opportunities, of which I could have wiſhed to avail myſelf for your ſatisfaction. It is however with great pleaſure that I now attempt this relation to meet your deſire; and as it will give me an occaſion of paying in part the debt of gratitude I owe to that great and good man *Doctor Fothergill*.

Every one who had the happineſs of his acquaintance muſt have obſerved, that he was a fountain of benevolence, diſpenſing protection and aſſiſtance to the

the diſtreſſed; that he breathed the pureſt good-will to all men; and inſtantly endeavoured to promote their happineſs, generally or individually, as far as lay within his power.

It was this diſpoſition which led the Doctor to patronize this, as well as other expenſive adventures to various parts of the earth, for the encouragement of arts and ſciences, the advancement of medicine, manufactures, and commerce.

In the ſummer of the year 1771, my friend, Mr. Lee, of Hammerſmith, informed me that the Doctor was deſirous of promoting ſome enquiry into the natural products of the kingdom of Spain, and the coaſt of Africa; and of encouraging ſome lover of natural hiſtory to viſit either of thoſe countries. Deſirous of travelling, and not particularly engaged at that time in any other purſuit, I eagerly ſeized the opportunity; and requeſted my friend to acquaint the Doctor, that a voyage to the coaſt of Africa would be exceedingly pleaſing to me, as a country the leaſt known to Europeans, and the moſt likely to afford a variety of new, curious, and valuable ſpecimens in the three kingdoms of Nature.

This meſſage was followed by an introduction to Dr. Fothergill; who expreſſed much ſatisfaction at my enterprize, and promiſed to exert his intereſt with other learned and philoſophical gentlemen to encourage and carry it into execution. I then waited on Sir Joſeph Banks, Bart. who had been impelled, by the ardour of ſcience, to deny himſelf the enjoyment of an ample fortune and the moſt honourable connections, and encounter the hazards of a dangerous navigation round the world; from which extraordinary voyage he was juſt returned. Of this ſcheme that gentleman alſo expreſſed his warm approbation; and patronized it in the benevolent manner which ever characterizes men zealous for the promotion of uſeful knowledge. Marmaduke Tunſtall, Eſquire, F. R. S. to whom I was introduced by Mr. Lee, and my friend Mr. Drury, author of the Illuſtrations of Natural Hiſtory—gentlemen eminent among the lovers of that ſcience—having alſo promiſed their aſſiſtance, I engaged in the preparations for the voyage with ſuch ardour and diſpatch, that in about ſix weeks the cabinets, inſtruments, furniture, clothes, and various apparatus neceſſary for my plan, and adapted to the climate which I was to viſit and reſide in three years, were provided; and I had actually embarked. My diligence, joined to the anxiety natural to a ſanguine adventurer, was attended with ſome unpleaſant circumſtances. I became languid and weak before I quitted England; and, in conſequence, the ſea ſickneſs kept its cruel dominion over me during the whole voyage *.

When

* Experience and obſervation have led me to be of opinion, that embarkation, in an exhauſted and relaxed ſtate of body, will frequently be attended with long continuance of the ſea-ſickneſs; and

When I got on ſhore, this malady had ſo debilitated me, that I was unable to walk more than two or three hundred yards without reſt. The firſt place at which I landed was the promontory of Sierra Leona, in the latitude of about 8°. 20. North; where a few days exerciſe, and land refreſhments, in ſome degree reſtored my ſtrength. A voyage of one day carried me in tolerable health to the Bananas, which are three little iſlands about eleven leagues more to the ſouthward; which, from good information, it had been determined ſhould be the center of my adventures in that country, and the principal ſcenes of my ſtudy and obſervation.

Pleaſant ſcenes of vernal beauty, a tropical luxuriance, where fruits and flowers laviſh their fragrance together on the ſame bough! There Nature animates every embryo of life; and reigning in vegetable or animal perfection, perpetually glows in wild ſplendour and uncultivated maturity!

I contemplate the years which I paſſed in that terreſtrial Elyſium, as the happieſt of my life. The ſimple food, which my ſolitude uſually afforded, was ſweetened with rural labour; and my reſt was not broken by thoſe corroding cares and perplexing fears, which pride and folly are ever creating in the ambitious emulations of populous communities. Perhaps the reduction of bodily ſtrength which I underwent, was of uſe; and proved a ſalutary, though ſevere preparative for the ſudden change to a ſultry, humid climate; which, from want of proper information, has been fatal to many enterpriſing and valuable adventurers.

Doctor Fothergill, in the warmth of his benevolence, and in providence for my ſafety, had given me ſome general inſtructions to guard againſt the diſeaſes endemical to hot climates, and preſcriptions ſuited to particular caſes. I had alſo with me a medicine cheſt, and ſeveral medical and chirurgical books: among which were Lind on Diſeaſes in hot Climates, Sharp's Surgery, Brooke's Practice of Phyſic; and particularly the London Practice *, written by an eminent merchant of this city, formerly of the Faculty; which the Doctor made me a preſent of, and recommended as the firſt book of the kind.

In about five days after my arrival at the Bananas, and by the time my little cargo was landed and ſecured, I was compelled to avail myſelf of the Doctor's goodneſs, being attacked by a miliary fever; of which, by following his

and that, on the contrary, the undertaking a voyage when in full health, or a ſtate of convaleſcence, will be productive of ſalutary and agreeable conſequences: and in this I have been confirmed by the concurrent obſervations of other travellers.

* *The author of this publication, is James Bogle French, Eſq; who was long an intimate friend of Dr. Fothergill; and it was with the Doctor's unreſerved approbation that this uſeful work was publiſhed.* *Editor.*

preſcription pretty cloſely, with ſome reference to my other medical information, I got very well in a few days *.

By the ſame help having quickly cured my draughtſman, and ſeveral other Europeans, of very bad fevers, and healed the head of a negro, which appeared to be in a dangerous ſituation from the wound of a cutlaſs, which had penetrated the ſkull, I was complimented with the title of Doctor by both Blacks and Whites.

You, Sir, will perhaps ſmile at my medical enterprizes: but you will recollect that I was in a rude and uncivilized country, where a traveller has few reſources but in his own knowledge or experience; and that his eaſe or ſafety, and the welfare of others, occaſionally compel him to officiate in various capacities.

If ſucceſs, however, can juſtify honours, my practice warranted and confirmed my title; and *Ba Docter il Bana*, or *Father Doctor of the Bananas*, left the coaſt of Africa with the conſcious ſatisfaction of having ſometimes mitigated human miſery, and ſometimes lengthened human life.

In a few weeks after my arrival at the Bananas, I had the mortification to hear that Mr. Graham, a worthy fellow-paſſenger, who had been driven by misfortunes to take a refuge in this dangerous climate, and who had not experienced a moment's pain or illneſs on the paſſage, but had partaken of the comforts of the table and all its indulgencies with his uſual feſtivity, had fallen a victim to the bilious fever, within a month after our ſeparation: within a ſhort

* In one of the Doctor's affectionate letters he obſerves,—"The diſeaſes moſt to be dreaded on the coaſt of Africa, are fevers and fluxes. To prevent theſe as much as poſſible, in caſe of perceiving any feveriſh ſymptoms, take care, in the firſt place, to cleanſe the ſtomach and bowels by a proper doſe of ſome antimonial, joined with ipecacuanha: a drachm of antimonial wine to an ounce of ipecacuanha wine will probably be ſufficient; and the antimonial may be continued, to the quantity of twenty drops every ſix hours, till the heat abates. It will then be neceſſary, in moſt of the fevers on the coaſt of Africa, to have recourſe to the bark, in large quantities, during the interval of the fits: an ounce may be taken, either in a little brandy and water, or red port and water, between the fits; half an ounce between the next two fits; and ſo on till the fever goes off. If the bark occaſions coſtiveneſs, add a quarter of an ounce of Epſom ſalt to an ounce of bark, and take it as above directed. Eat any kind of ripe and wholeſome fruit, but eat it ſparingly. Never load the ſtomach, if poſſible, even with the lighteſt nouriſhment.—In caſe of any attack of the flux, with vomiting, pain, and much inquietude, griping and purging, order a common fowl to be killed, plucked, and ſplit open, the entrails taken out, and the fowl to be put into ſix quarts of water, and boiled about eight minutes. Drink the whole of this liquor as quick as poſſible. If it does not make its way downwards ſufficiently, let a pint of it be given as a clyſter.—The great cauſes of all diſtempers in hot climates, at leaſt the generality, either proceed from, or are aggravated by, bile; and to diſcharge this, either upwards or downwards, is the beſt method of cure. If, after proper evacuation, the pain ſhould continue, anodynes will then be ſerviceable, and not till then."

month of the time, when we had promiſed ourſelves ſoon to meet again, and ſettle future plans of mutual operations and convenience. He was a chearful man, of athletic form, and healthy appearance; on which however little dependence is to be placed in that climate. Medical aſſiſtance, ſeaſonably and judiciouſly adminiſtered, would, in all probability, have prolonged his life.

But where was ſuch help to be found? Not among people living on the ſimpleſt food, and little acquainted with the virulent diſeaſes to which our luxuries and refinements make us liable.

Even I was too far diſtant to communicate relief to this unfortunate adventurer. Such is the rapidity with which diſeaſe brings diſſolution in thoſe climates, that, as in this inſtance, the news of ſickneſs and death generally arrive by the ſame meſſenger. However, the inconveniencies I felt from the fatigue I had undergone, previous to my embarkation, were amply compenſated by the advantage I afterwards received from the great number of uſeful things I had amaſſed together; which not only ſupplied many unavoidable wants, but enabled me to aſſiſt my neighbours, and barter ſome of the conveniences for the neceſſaries of life.

During my ſtay abroad, Doctor Fothergill was exceedingly attentive to me. He expreſſed all the tenderneſs and ſolicitude of a kind parent, and really almoſt kept me alive by an uncommon fund of kindneſs and philanthropy, which breathed in every line of a long and punctual correſpondence. During my travels I made various obſervations; among others, ſome medical ones. Theſe, he ſaid in one of his letters, "gave him great ſatisfaction, and would, one time or other, with a few corrections, make a valuable preſent to the public." They are now before you *.

A Diary which I kept of the weather, with obſervations on the Harmattans, may probably throw ſome light on meteorological knowledge. I ſent home to Sir Joſeph Banks, from Africa and the Weſt Indies, about ſix hundred different ſpecies of plants, moſt of them from Africa new, and among them many new genera: one of thoſe Sir Joſeph Banks has done me the honour to call *Smeathmannia*. In inſects I was ſtill more ſucceſsful: my collections have enriched moſt of the cabinets in Europe with ſingular and beautiful genera and ſpecies. In minerals and ſhells I was not ſo fortunate. In this part of Africa are no mines; and the ſteepeſt cliffs are ſoon covered with verdure if any part is torn away: indeed, the channels of rivulets and the ſea ſhores ſcarce afforded any variety of foſſil bodies: it did not appear to me that I had ſeen five different

* This ingenious traveller is preparing a large work for the preſs, in which it is hoped the encouragement of the Public will induce the author to relate more fully the particulars of a uſeful and entertaining voyage. *Editor.*

ſpecies in all the countries through which I paſſed. I loſt the greateſt part of the ſhells, birds, and animals, which I had collected and preſerved, by misfortunes; and for want of caſks and jars, and ardent ſpirits, I was precluded from making any great collection of fiſh and amphibious creatures. In the account of the Termites, or white Ants, I have perhaps uſefully extended the knowledge of the œconomy of Nature, by inveſtigating and elucidating a mode of propagation, new to naturaliſts, as ſingular and wonderful in itſelf. In this account ſome of the works of creation are illuſtrated. By ſhewing the general and important objects of the agency of inſects, hitherto only known by the partial deſtruction which they commit, their uſes are demonſtrated; and I have thereby contributed my mite "to vindicate the ways of God to man*."

He travels to a very limited purpoſe, who paſſes through a country, and confines his views to the inſpection and inveſtigation of its natural productions, without attending to objects that do not degrade the ſtudies of the naturaliſt, and may juſtly be deemed more important; and, as the nobleſt and moſt intereſting ſtudy of mankind is man, I am in hopes that my obſervations on the manners and cuſtoms of the inhabitants of thoſe climates will be of utility, and not the leaſt entertaining. Opening a new proſpect of human nature, and of our tranſactions in thoſe parts, will, I truſt, ultimately be conducive to the happineſs of thoſe wretched people, who form the chief object of our mercenary viſits to that continent. My hiſtorical account of the trade to Africa, from the earlieſt voyages to the preſent time, may probably throw ſome light on a ſubject of great importance, and tend to the advantage of commerce in general. After a reſidence of about four years in Africa, I embarked with my collections for Europe, by way of the Weſt Indies; but being very ill on my arrival in Tobago, I determined to ſtay there, rather than meet the winter's winds, which the ſhips from thence, at that ſeaſon, muſt neceſſarily encounter. I had ſeen the equinoctial lands in a ſtate of nature, and was curious to mark the appearance of them in high cultivation. Much information too was expected, nor did the event diſappoint my wiſhes; and great as my misfortunes were in conſequence of that ſtay, the knowledge I thereby obtained ſcarcely leaves me room to regret them. In the mean time Dr. Fothergill finding, that notwithſtanding all our care and precaution, my ſucceſs had been much abridged for want of ſufficient information before I ſet out, projected another voyage on a larger ſcale; which however my ſtay in the Weſt Indies, together with the American war, fruſtrated. This plan was to have enabled me to

* This curious account of the Termites was firſt publiſhed in the Philoſophical Tranſactions. *Editor.*

purchaſe

purchaſe a ſmall ſhip, in which I was to have traded for ivory, dying wood, cotton, indigo, wax, oil, gum, &c. and to have collected ſubjects of natural hiſtory at the ſame time. By this method I might have amaſſed a great collection with little or no expence, and have got things home in good condition, which would be ſoon ruined on ſhore, for want of conveniencies to preſerve them from the corroſive damps, deſtructive inſects, voracious animals, the ſtupid careleſsneſs or curioſity of the ignorant natives, and the irreſiſtible viciſſitudes of weather in thoſe hot climates.

My ſtay in the Weſt Indies furniſhed opportunities of corroborating and improving the obſervations I made in Africa. There I became acquainted with tropical agriculture and manufactures, and much to my ſatisfaction.

Dr. Fothergill's character was too well known to require the praiſe of an individual, but I take pleaſure in acknowledging that I received from him many great proofs of his generous and liberal ſpirit; and though I ſtaid abroad two or three years longer than I ought to have done in prudence, much againſt his inclination, and indeed againſt his opinion and requeſt, when I returned he received me with all the kindneſs of a real friend, and continued it to that fatal period, which his too great ſolicitude to ſerve mankind brought on ſo prematurely. It is well known the Doctor paid very liberally for what the vulgar call curioſities; but it neither aroſe from a ridiculous taſte for virtû, nor for want of knowing the true and intrinſic value of thoſe things. He poſſeſſed that taſte which ſeems common to well-informed minds and enlarged underſtandings, and could quickly ſee, and accurately perceive, the beauties of creation; yet he did not purchaſe ſuch things from the mere delight they gave, either in obſerving or poſſeſſing them, but from that noble and glorious motive which was the rule of his conduct—the wiſh to promote uſeful knowledge, and the happineſs not only of his contemporaries, but of poſterity. Hence he was a conſtant patron and friend to ingenious artiſts; and, to my knowledge, merely to encourage and ſupport them, often bought things which he neither much admired nor wanted. He even employed thoſe whoſe conduct he diſapproved, that they might not by diſtreſs be driven to do a ſecond time, that which had loſt them their character, and expoſed them to ruin and miſery.

His name will be venerated, I hope and truſt, as long as the knowledge of letters and goodneſs ſhall continue reſpectable among mankind. You, Sir, will have the ſingular honour and happineſs of recording to future ages one of the beſt men that ever exiſted: a moſt illuſtrious example; to be revered, but not eaſily imitated. Whatever thoſe who were unacquainted with his virtues may have thought or aſſerted, what I now ſay (if my heart does not deceive me) is

ſtrictly

ſtrictly true, though faintly expreſſed: for words are inadequate to paint my feelings, or to do juſtice to a character ſo tranſcendantly good. I offer theſe facts as one teſtimony of the amiable qualities of this uncommon philanthropiſt; facts, with which all his friends are very well acquainted.

I am, very reſpectfully,
Sir,
Your moſt obedient
and humble ſervant,

Clement's Inn,
19th October 1782.

HENRY SMEATHMAN.

THE

THE following Eſſays include Dr. FOTHERGILL'*s poſthumous pieces. They contain ſo much uſeful information, that every medical reader will lament the loſs of a phyſician, who was once not only one of the beſt qualified, but likewiſe one of the moſt willing, to impart inſtruction.*

" *The laſt Eſſay contains a particular account of the epidemic cold, as it appeared in various parts of the nation towards the end of the year* 1775, *collected from a general correſpondence which the Doctor eſtabliſhed with the Faculty at large. From theſe materials, and his own ſketch, he intended to have formed a complete hiſtory of this diſeaſe. What his ſudden deceaſe prevented him from performing, the Society (of which he was Preſident at the time of his deceaſe) have now endeavoured to accompliſh. Indeed, conſidering the not unfrequent returns of this epidemic; how troubleſome it was to moſt; how it affected many with laſting debility; and, though not dangerous in itſelf, how it accelerated the fatality of dangerous diſtempers; it deſervedly becomes an object of ſerious enquiry to the Faculty* *."

* See Preface to the ſixth volume of Medical Obſervations and Inquiries.

SO various are the cauſes of diſeaſes, that it is difficult to lay down a general rule of practice, without ſome exception; and, perhaps, in no diſeaſes is this more true than in the Epilepſy and Apoplexy, as in none have the obvious cauſes been more clearly exhibited by diſſection, and collected in the Sepulchretum Anatomicum, Morgagni de Cauſis et Sedibus Morborum, and Lieutaud Hiſtoria Anatomica; and theſe afford us many inſtances of inflammation and fulneſs of the veſſels of the brain, and other cauſes which evidently indicate copious evacuation.

It muſt be admitted, that, in many caſes of Apoplexy, the indiſcriminate uſe of the lancet has done irreparable injury; but it is as clearly eſtabliſhed, by writers who have drawn their obſervations from diſſection and practical knowledge, that, in other caſes, no leſs injury has reſulted from the omiſſion of venæſection. I have, therefore, ſubmitted this caution, leſt the Doctor's judicious objections againſt the improper uſe of bleeding in Apoplexies in general, might be conſtrued into a total excluſion of the lancet, where it cannot be rejected with impunity.

Editor.

REMARKS

REMARKS

ON THE

CURE OF THE EPILEPSY.

TO WHICH ARE ADDED,

Some Conſiderations on the Practice of Bleeding in APOPLEXIES.

Read, September 21, 1776*.

To the MEDICAL SOCIETY in LONDON.

GENTLEMEN,

I Shall ſuppoſe the diſeaſe to be well known to the phyſician who is conſulted on an epileptic caſe; and that he is anxiouſly conſidering which of the various means, either the authority of the beſt medical writers, or his own judgment, may point out, as the beſt under the preſent circumſtances.

Permit me here to relate what has happened in my own practice. Though the epilepſy is not a diſeaſe that can be ſaid to be very frequent, yet in the courſe of a phyſician's practice of moderate employ, many caſes muſt occur, and in perſons of different ages and conditions. Some have the diſeaſe from early youth; in others, it begins about puberty, or later; ſome are attacked chiefly in the night; others, ſeldom but in the day. Both ſexes are expoſed to it. In ſome females it returns with a degree of regularity, now and then preceding a certain period, now and then ſucceeding it; and a multitude of cauſes ſeem to influence the vehemence of the attacks.

* Medical Obſervations and Inquiries, vol. vi. p. 68.

My firſt endeavours to ſubdue this diſeaſe were directed by the beſt information I could collect from thoſe who had treated profeſſedly of it, and from the obſervations of men of long experience and extenſive knowledge in their profeſſion. Particular medicines, as ſpecifics for this diſeaſe, were more or leſs enjoined by all, as worthy of great attention: and alſo thoſe which come under the name of nervous medicines, as valerian, caſtor, the gums, and many others: theſe I followed with ſtrict attention, and ſometimes I flattered myſelf with ſucceſs. The diſappointments, however, that I met with in many inſtances, made me diſſatisfied with this method; it was always tedious, too often uncertain.

In ſeveral caſes, I thought much benefit was received from the uſe of tin, and in ſuch where there was no juſt reaſon to ſuſpect worms were the cauſe. I gave it liberally, and often without addition, that I might be the better able to decide on its efficacy. Sometimes I added a decoction of miſletoe; ſometimes valerian; or other reputed medicines. I had the ſatisfaction of finding full as much advantage from this proceſs, as the preceding.

The filings of tin, made into an electuary with ſome conſerve and a little ſyrup, was the medicine I made uſe of, and on various conſiderations I prefer the filings to any other mode of preparing this metal for internal uſe. If any benefit is to be expected from tin as a medicine, it muſt ariſe either from ſome qualities in the tin itſelf, that are communicable to the habit, or from the form it is given in.

The form it is uſually given in, is the powder, to which it is reduced by frequent fuſions. It is reaſonable to ſuppoſe, that the more frequently it is expoſed to the action of the fire, the more it is deprived of any qualities it poſſeſſes that are communicable to the habit; ſo that it may rather be deemed an inert calx, than a medicine of any efficacy, in the form in which it is commonly exhibited.

If any medical properties reſide in the tin, it is moſt probable they are the more entire the ſeldomer it is expoſed to fuſion; the filings, therefore, in this view, ſeem to be much preferable to the powder, and ſtill more ſo, if it ſhould be thought that worms are the cauſe of the epilepſy. For it is moſt likely the anthelmintic virtues of this metal proceed much more from the points of the filings, than from any other peculiarity it poſſeſſes. Large doſes of tin filings are undoubtedly a certain remedy for the *tænia*, given to the quantity of an ounce a day, which may be taken with eaſe and ſafety for four or ſix days together, ſucceeded by a moderate cathartic; and both repeated once a fortnight, for two or three ſucceſſive periods: theſe ſeldom fail of curing the diſeaſe entirely; and I believe this cannot be ſaid ſo ſafely of any other medicine now in uſe for removing this obſtinate diſorder.

Finding,

Finding, however, there were epilepſies that eluded all my endeavours, it ſeemed neceſſary to adopt ſome other line of procedure. I had obſerved that the fits were moſt liable to return in the plenitude of health; that epileptics were often extremely incautious in reſpect to diet; that children, highly indulged, were liable to the diſeaſe; that in every other period of juveneſcence, and in middle-aged adults, if they were attacked by the diſeaſe, it was when they had either committed ſome exceſſes, or, by one means or another, were plethoric; and that, in habits ſubject to epilepſy, the diſeaſe ſeldom recurred, without either an habitual indulgence in eating, or a neglect of neceſſary exerciſe. This induced me to recommend, in many caſes, a total abſtinence from all animal food, and from all fermented liquors. Care was taken to regulate the ſecretions, and ſuch a courſe of medicine preſcribed, as might ſeem expedient to induce the patients, or their friends, ſcrupulouſly to comply with this courſe of diet. It was in vain to reſtrict the quantity of animal food: there are few who have, at all times, reſolution enough to ſubmit to the firſt intimations of ſatiety. It was, therefore, neceſſary to enjoin that kind of diet which was accompanied with but ſlender provocations to exceſs, and which, at the ſame time, would afford the leaſt quantity of nutriment; whereby that fulneſs, which, in many epileptic caſes, appears to be a ſtimulus ſufficient to produce the ſpaſms, would be avoided, and the parts which are the immediate ſeat of irritation might gradually recover a degree of ſtrength and firmneſs, that would be proof againſt every ſlight impreſſion.

In young boys, I apprehend the epilepſy moſt generally proceeds from their own craving appetites, and the neglect of thoſe who are about them. It may not be improbable that, in ſuch caſes, worms may alſo have a ſhare in producing the fits. Be this as it may, anthelmintics, however powerful, ſeldom cure the diſeaſe; they may abate, occaſionally, the frequency, or the violence of the attacks, but they too often, at the ſame time, bring on a greater degree of irritability, and at length, if repeated frequently, and in conſiderable doſes, ſeldom fail of confirming the diſeaſe. Mild laxatives, with a light chalybeate interpoſed, and ſteadily continued, together with a courſe of diet, conſiſting of milk, vegetables, fruit, and things prepared from them, and in moderate quantities, ſeldom fail of removing the diſeaſe in ſuch habits. Riding, and bathing in cold water, and the uſual means of eſtabliſhing good health, muſt, at the ſame time, be attended to, and the plan purſued with patience; for it is not to be expected in diſeaſes that affect the nervous ſyſtem, the moſt remote and fineſt part of the œconomy, when once they have debilitated, or otherwiſe diſordered, theſe very feeling parts, and their influence is become habitual, that after-medicines, however active, penetrating, and efficacious, can, in a very ſhort time, reſtore the ability to perform their functions as they ought to do.

It often happens in caſes, that a proper plan of diet is of much more importance in the cure, than any thing we are acquainted with in the *materia medica*: it is, however, of not leſs neceſſity to engage the patients and their friends in a ſteady perſeverance in the method we direct. The generality of people have very little notion that diet can do more than merely ſupport their ſtrength; that it can be made ſubſervient to the cure of their diſeaſes, they cannot eaſily be brought to comprehend. Many will, however, implicitly obey the rules laid down to them in this reſpect, during a courſe of medicine, and will follow the phyſician's injunctions ſteadily, through fear of counteracting his intentions by their own neglect.

For the diſeaſe we are treating of, we are amply ſupplied with many noted ſpecifics, any of which may be given without prejudice, for a long ſpace of time, if due attention is paid, in the mean while, to the nature of the *ingeſta*, and the quantity, ſuppoſing there appears not any obvious indication to point out remedies to a particular object, as there does in the caſe of young females, when the fits may appear to proceed either from a total obſtruction or deficiency in the *menſes*, in which caſes it is evident what ought to be principally aimed at—promoting this diſcharge by the means moſt likely to effect it in the caſe before us. And I believe, in theſe inſtances, it will generally be found that the method of diet I have propoſed, will be not leſs neceſſary, than in thoſe in whom the diſeaſe may be aſcribed to groſs diet and *plethora*. We ſeldom find chlorotic habits affected with epilepſies. For the moſt part, epileptics are plump, ſanguine, rather of a ſtrong make, and low ſtature. The *menſes* do not ſeem to be deficient in theſe, either through want of ſtrength, or ſufficient quantity of blood. The *impetus* ſeems wrong directed.

Coſtiveneſs is often a companion of this complaint, in the generality of caſes, and ſhould always be our firſt buſineſs to obviate. In ſhort, a diſtended ſtomach and loaded bowels appear, in moſt caſes, to be ſtrong diſpoſing cauſes to this diſorder.

When I have reflected on the various ſpecifics which have been employed in the cure of epileptics, and on the caſes related of their efficacy, I could ſcarce forbear ſuſpecting that ſome of them, at leaſt, have effected a cure by a very different operation than that for which they might have been intended by the preſcriber. I may poſſibly have fallen into the ſame predicament, and rather propoſe it as a queſtion worthy of ſome attention, than as a point proper for me to decide upon.

Valerian, caſtor, the fœtid gums, empyreumatic oils, and any thing if poſſible ſtill more diſguſtful, commonly make a part of the medicines propoſed for this diſeaſe. There are ſome others, whoſe qualities, indeed, are not quite ſo repugnant to our taſte and ſmell, ſuch as the miſletoe and the *flores cardamines*; but

but to balance this difference, it is requiſite to take theſe ſuch a length of time, and in ſuch quantities, as make them not leſs diſguſtful at length. May not, therefore, both theſe kinds of medicines, and moſt of thoſe made uſe of as ſpecifics from ancient authority, now and then confirmed with inſtances of benefit, derive the greateſt part of their conſequence from their quantity, or their diſguſting qualities, which, by leſſening the appetite, allow nature to recover herſelf, and ſhake off a diſeaſe, which indulgence principally produced?

It is by no means my intention to enter minutely into the treatment of particular caſes of this diſtemper. From the opportunities I have had of obſerving it in various ſituations, I think, in general, this method of proceeding has been the moſt ſucceſsful. There may be caſes, wherein the diſeaſe is ſo ſtrongly rivetted in the conſtitution, as to admit of very little aſſiſtance from any method hitherto deviſed; but, for the moſt part, ſooner or later, by a ſteady perſeverance in a courſe like the preceding, the diſorder gives way.

Perhaps a ſingle grain of calomel, with three, four, or five of *pil. ruf.* given every night, at bed-time, for fifteen or twenty days together, may often prove an efficacious emmenagogue in the caſes formerly mentioned. The doſe ſhould be ſuch as to procure a motion the day following, and, if this is aided with very ſmall doſes of a chalybeate bitter, conſiderable benefit may be reaped from it. Thoſe who are about the ſick ſhould be particularly careful never to call their attention to the time of the moon, or any other periodical return. Perhaps this attention, once deeply impreſſed, has much more influence on the return of the fits, than the changes of the moon, or any other revolution.

The ſudden influence of terror, is often ſaid to produce epilepſies: I have met with many relations of this kind, and the fact is not improbable. In theſe caſes, the medicines now ſtiled ſedatives, are clearly pointed out, eſpecially if the diſeaſe returns at any known period, that they may be given before-hand. Small doſes of anodynes are ſometimes beneficial, and large ones may become neceſſary, if the fits proceed from any violent pain, as is ſometimes the caſe from that which attends menſtruation. In theſe circumſtances, the doſe of opium muſt be ſuch as gradually may overcome the pain, giving one or two grains every hour till the pain abates.

I muſt intreat your patience a little longer, while I mention ſome circumſtances relative to another diſeaſe, altogether different from that which I have been mentioning. I do not think what I may have to ſay upon it requires a formal chapter on this ſubject; yet ſome doubts have ariſen reſpecting the cure of it, which makes me deſirous they ſhould either be cleared up by your own

and

and the experience of others, or that a practice ſomewhat different from the one generally adopted, ſhould be recommended.

Bleeding in apoplexies is one of thoſe operations which, on ſeveral accounts, requires the moſt diſpaſſionate conſideration.

In no diſeaſe, perhaps, is the judgment of the preſcriber of more conſequence to the patient.—If it is ſucceſsful—if the patient recovers upon it—it is a fortunate event for both. If bleeding is performed when it ought not, either death enſues, or an incurable *hemiplegia*.

This being the caſe, it is worth while to conſider the affair as carefully as poſſible.—Who are the perſons moſt ſubject to this diſtemper?—thoſe who live freely, or rather eat plentifully; and whoſe make, or manner of life, diſpoſes them to ſuch attacks; fat, ſhort-necked, inactive perſons, and who neglect due care in reſpect to evacuations, eſpecially when the weather changes to an extreme, either as to heat or to cold. Such people are moſt commonly diſpoſed to apoplexies; and it is evident that ſuch are moſtly plethoric, both in reality and appearance. Where, then, can a doubt lie in reſpect to bleeding, when a perſon is ſeized with an apoplexy? and, eſpecially, if the pulſe be extremely full and tenſe, with a general appearance of ſuffocation?—It is often, nay moſt commonly performed under theſe circumſtances, I confeſs, and yet, from the conſequences attending it in general, there ſeems reaſon to ſuſpect, that bleeding, in this caſe, is performed much oftener than is proper or conducive to the patient's recovery.

If a perſon fall down in a fit of any kind, the ſurgeon is immediately ſent for; he, perhaps, upon feeling the patient's pulſe, finds it as above deſcribed, and general practice not only authoriſes, but cuſtom, become a law, generally directs the operation. The pulſe, in ſuch a ſituation, is often an inſufficient guide; it may be that ſtruggle which ariſes from an exertion of the *vires vitæ*, to reſtore health. I believe it happens in moſt caſes, where there has been a temporary, or even momentary ceſſation of their animal powers; and it is, perhaps, in this ſituation that bleeding is performed, and often very liberally.—It is poſſible that, by leſſening the quantity of blood, the reſiſtance to the heart is leſſened, and what nature was attempting in vain, is acquired by this means, and the patient's recovery much facilitated.—It is poſſible, likewiſe, that by a copious bleeding, the animal ſtrength may be ſo much reduced, and the effort begun ſo powerfully checked by the operation and the effects of the diſeaſe itſelf, that the patient expires ſoon afterwards, or ſurvives a few days, and ſuffers a *hemiplegia*; none of which might probably have happened had bleeding been omitted. It becomes the operator, therefore, moſt carefully to attend to every circumſtance of his patient's ſituation, before he opens a vein, which may, perhaps, be deciſive of his patient's fate.—The following circumſtances

ſtances may enable the practitioner to form a judgment of what is neceſſary to be done, with ſome degree of preciſion.

Among the ſeveral cauſes from whence apoplexies appear to proceed, perhaps a plentiful meal is the moſt common. I need only refer to the numerous inſtances of ſudden deaths that are mentioned in the daily papers. Scarce any thing is more common than articles relating, that ſuch a one dropped out of his chair, after eating a full meal.

If one conſiders the time it may require to perform digeſtion—to tranſmit a large quantity of chyle into the blood, and ſuddenly to increaſe the maſs, ſo as to form a fatal *plethora* almoſt inſtantly, ſeems ſcarcely credible; and yet this is the principal ground, I believe, on which phlebotomy, in theſe caſes, is generally deemed to be of abſolute neceſſity.

To me it ſeems much more probable, that a large undigeſted meal, diſtending the ſtomach, preſſing upon the *aorta deſcendens*, obſtructing the free expanſion of the lungs, is the means of crowding the arterial ſyſtem in the head with more blood than ought to be there, and hence producing the diſeaſe.

It is true, if we could ſuddenly remove this ſurcharge of blood in the upper parts of the body by bleeding, and without reducing the patient's ſtrength, it would be at all times requiſite; but this is hardly to be expected: we are, therefore, to remove the obvious cauſe as ſpeedily as poſſible, that is, to endeavour, by all the means we can, to remove the load by emetics and purgatives, and to excite as plentiful a flow of blood and vital energy to the lower extremities as we can by ſtimulants, ſinapiſms eſpecially.

Liberal doſes of white vitriol, ℈i ʒſs for a doſe; emetic tartar diſſolved in water, and got down by ſpoonfuls, furniſh us with the means of promoting the alvine diſcharges with effect. We need not be under much reſtraint in the uſe of theſe medicines, till thorough evacuations are procured. The ſtimulus exerted on the ſtomach, and the room provided for a freer circulation, are almoſt alike beneficial, and without diminiſhing the patient's ſtrength, make way for his recovery. The faintneſs or weakneſs which theſe evacuations produce are temporary; a little broth given frequently, a glaſs of wine, or any cordial, ſoon, for the moſt part, recruit the loſs ſuſtained by theſe evacuations.

If the patient cannot ſwallow, active irritating clyſters may be given, frequently repeated, and every endeavour uſed to empty the bowels ſpeedily and effectually.

Flour of muſtard-ſeed, and ſoft bread made into poultices, with a ſtrong infuſion of horſe-radiſh root, to be applied to the ſoles of the feet, generally act both ſpeedily and efficaciouſly.

Sudden guſts of paſſion, in particular conſtitutions; expoſure to ſudden heat, by the reflection of the ſun againſt hot walls; or by ſudden alterations of the

weather from cold to great heat, or from moderate to extreme cold; the ſuppreſſion of ſome uſual evacuation, frequently produce apoplexies; and, perhaps, at ſuch times of the day as will not allow us to charge them to the account of plenitude; and even in theſe caſes, it will be neceſſary to conſider the habit and other circumſtances, before we bleed. Could we have foreſeen the accident, bleeding might probably have prevented it; but when it has happened, if copious evacuations from the bowels afford no relief, I fear that bleeding would not only be ineffectual to recovery, but would ſap that ſtrength, which, in theſe caſes, is of great importance to it.

It ſeldom happens that a phyſician arrives at the patient before this operation is performed, let the diſeaſe have originated from what cauſe it may; and though very few would probably recover if this operation had been omitted; yet, comparing what has happened to thoſe who have been blooded, and the few I have ſeen who have not, I am of opinion that bleeding in apoplexies is, for the moſt part, injurious, and that we ſhould probably render the moſt effectual aid, by endeavouring, in all caſes, to procure a plentiful diſcharge from the ſtomach and bowels; as, by theſe revulſions, the head is, perhaps, much more effectually relieved from plenitude, and that without weakening or interrupting any other effort of nature to relieve herſelf, than by venæſection.

There is a circumſtance of ſome moment to perſons who, from their make, may ſeem more diſpoſed to apoplexies than others, which I have frequently taken notice of, and it appears not improper to mention it in this place. The following relation will probably explain pretty clearly what I wiſh to inculcate.

A gentleman not quite thirty years of age, of a ſize rather tall than ſhort, remarkably plump, freſh complexion, and his neck very ſhort; his manner of living full, never to great exceſs, in reſpect to liquors eſpecially.—He was ſeized with an apoplectic fit one day, as he was croſſing the Thames in an open boat; the waterman landed him, as quick as poſſible, at the place he was going to, where all poſſible aſſiſtance was procured expeditiouſly, and he ſoon recovered. Being at a diſtance, I was not called in as a phyſician, but I ſaw him at his own houſe ſoon after his recovery. In our converſation I enquired, if he could recollect the poſture he was in when he loſt himſelf: he replied, he was looking at a ſhip which had formerly belonged to his brother and himſelf, and kept his eye upon her after he had gone by her, till he loſt himſelf, and ſunk down in the boat.

This, and ſome other occurrences, have induced me to think it is very unſafe for perſons of ſuch a make to look backwards any length of time, without turning the whole body; and if we inquire of ſuch perſons, they generally acknowledge,

acknowledge, that they find themſelves become extremely giddy, and in hazard of falling down, when they keep in that poſture only for a moment or two. And I believe that many perſons have dropped down in apoplectic fits merely from this unheeded cauſe.

If we take a hollow flexible tube of leather, or any other yielding ſubſtance, ſix inches or more in length, holding one end in each hand, and endeavour, by turning each hand a contrary way, to twiſt the tube, we ſhall make but very little impreſſion on its cavity, whilſt our hands are at that diſtance, with one twiſt of our hands; but if we ſhorten the diſtance, and leave only one or two inches between each hand, the ſame turn of the hands, oppoſite ways, will leſſen the diameter of the tube extremely, nay almoſt wholly to bring the ſides of the tube into contact, and prevent the paſſage of any fluid.—In ſome reſpects, the ſame thing happens to the jugular veins in very ſhort-necked people. The carotid arteries lying nearer the centre of motion, are very little affected by the turn of the head, even in very ſhort-necked people; they continue to convey full ſtreams of blood to the head. But this is not the caſe with the jugular veins; they lie near the ſurface, and, if the neck is ſhort, and full at the ſame time, the twiſt ſo far contracts their diameters, that it is impoſſible for them to return a proportionable quantity. Hence, therefore, firſt a giddineſs, at length a total, though temporary ceſſation of every faculty, or, in other words, a perfect apoplexy.

The ſhorter the neck, the longer and more fixed the poſition, the ſpeedier and more laſting the effect will be, every thing elſe being alike. If the ſhirt-collar, ſtock, or neckcloth are tight, they will increaſe the accident not a little. All ſuch people ſhould, therefore, be adviſed never to put themſelves into this poſture, but to turn their whole bodies towards the object they wiſh to view, whether they are on foot, on horſeback, or in a carriage. For although apoplexies proceeding from ſuch a cauſe may be attended with no very bad effects, yet the fall of itſelf, and the fear it inſpires, may be productive of much injury.

THE following paper was first read before the Select Society of Licentiates, of which Dr. FOTHERGILL *was President at the time of his decease. At that time, or since, the Doctor informed me that it was very imperfect, and that one sheet of the manuscript was mislaid; though since, I believe, it has been recovered. After his death, his medical papers were laid before the Society who have favoured the public with six volumes of Medical Inquiries and Observations, of which Society he was likewise the President. I thought it a decent respect to the memory of Dr.* FOTHERGILL, *to mention this circumstance, to prevent any unfavourable impression which the reader might entertain from observing the imperfect language which, in many instances, this and the preceding essay, on the Cure of the Epilepsy, &c. exhibit.*

Soon after I concluded to publish Dr. FOTHERGILL'S *Works, I applied to the Society for the Doctor's manuscript papers, with the approbation of his executors; but this request being refused, it obliged me to protract my edition, till the Society had published their sixth volume. I was the more reconciled to wait, under an expectation that the communications of my deceased friend would have been accurately corrected; but so greatly am I disappointed, that, in justice to a writer of his perspicuity, I have ventured to correct some erroneous and ambiguous sentences; and hope that the Society, upon reviewing their publication, will be induced, from a just respect to the memory of their deceased President, to cancel and reprint the sheets to which his name has been prefixed, as an act of justice due to his literary character.*

Editor.

REMARKS

ON

That Complaint commonly known under the Name of the SICK HEAD-ACH.

Read, December 14, 1778*.

THERE is a diſeaſe, which, though it occurs very frequently, has not yet obtained a place in the ſyſtematic catalogues. It is commonly to be met with in practice, and is deſcribed by thoſe who are affected with it, and who are not few in number, under the compound title of a ſick head-ach.

Under this title they, at leaſt, deſcribe their feelings, and, on a little inquiry, one finds that they are affected by both ſickneſs and head-ach.—This is not the complaint of any particular age, or ſex, or conſtitution, or ſeaſon—it is incident to all. The ſedentary, inactive, relaxed, and incautious reſpecting diet, are the moſt expoſed to it; and they are, ſometimes, not much leſs ſufferers by the means frequently made uſe of to remove it, than by the diſeaſe itſelf.

To collect into a ſhort compaſs all the ſymptoms which accompany this diſeaſe, would be difficult, and not ſo very intereſting; to deſcribe ſo many, as to make the complaint eaſily to be diſtinguiſhed in the firſt place, and in what manner it may be treated with ſucceſs, will be of more importance.

Thoſe who are affected with the ſick head-ach, moſt commonly deſcribe it in this manner;—that they awake early in the morning with a head-ach, which ſeldom affects the whole head, but one particular part of it, moſt commonly the forehead, over one frequently, ſometimes above both eyes.

* Medical Obſervations and Inquiries, vol. vi. p. 103.

Sometimes it is fixed about the upper part of the parietal bone, of one ſide only; ſometimes, and not unfrequently, the *occiput* is the part affected: ſometimes it darts from one to another of theſe places. From the time it commences, till it wholly ceaſes, it is ſometimes more, ſometimes leſs tolerable.

With this is joined more or leſs of ſickneſs, which in ſome is juſt barely, in many people is not ſufficient, without aſſiſtance, to provoke vomiting. If this pain does happen, as it moſt commonly comes on early in the morning, and before any meal is taken, ſeldom any thing is thrown up but thin phlegm, unleſs the ſtraining is ſevere, when ſome bitter or acid bile is brought up. In this caſe the diſeaſe ſoon begins to abate, leaving a ſoreneſs about the head, a ſqueamiſhneſs at the ſtomach, and a general uneaſineſs, which induces the ſick to wiſh for repoſe. Perhaps, after a ſhort ſleep, they recover perfectly well, only a little debilitated by their ſufferings.

The duration of this conflict is very different in different perſons; in ſome, it goes off in two or three hours; in others, it will laſt twenty-four hours, or longer, and with a violence ſcarcely to be endured, when the leaſt light or noiſe ſeem to throw them on the rack. In young perſons, it moſt commonly goes off ſoon; if it continue to harraſs them many years, as it ſometimes does, the fit is of longer duration, and leaves the whole frame in ſo weak a condition, as to require ſome length of time to recover.

Its returns are very irregular, as muſt be the caſe, ſince the diſeaſe, for the moſt part, proceeds from accidental cauſes. Some have it every two or three days, ſome once in two or three weeks, others in as many months, and ſome yet ſeldomer.

I have met with it in moſt habits and complexions, moſtly in the early and middle parts of life, and amongſt the middle and upper ranks of life. Thoſe who uſe but little exerciſe, and are inattentive to their diet, are the greateſt ſufferers. Coſtive habits are more expoſed to it, than others of a contrary diſpoſition. I have known many inſtances, where a diſpoſition to purging, become habitual, has entirely removed this complaint.

The diſeaſe is very frequently treated as a nervous diſtemper—as an ague in the head, as a ſpaſm (which indeed it appears to be), and perhaps conſidered as pertaining to other diſeaſes.—The manner and time of its attack, is after digeſtion is performed, the chyle admitted into the blood, and the bile has acquired its full activity, undiluted by freſh ſupplies of liquid; the ſtomach and *duodenum* empty, and the nerves expoſed to irritation: and indeed, from numerous circumſtances, it is moſt clear, that the head-ach proceeds from the ſtomach; not the reverſe, as is the opinion of many who have been ſufferers by it.

Having

Having had ſome little experience of this complaint myſelf, and having met with numerous occaſions of ſeeing it in others, in a variety of degrees of force and continuance; and having likewiſe attended to the different ideas and modes of treatment, in regard to this diſtemper, I thought it might be uſeful to ſuggeſt what had occurred to me on this ſubject; and the more ſo, as it may lead to ſome explanations reſpecting diet, which it is of ſome conſequence, to the ſick eſpecially, to be made to comprehend.

My opinion of this diſeaſe is, that, for the moſt part, it proceeds from inattention to diet, either in reſpect to kind or quantity, or both; and that whatever medicinal means are propoſed for its removal, will prove ineffectual, without enjoining an exact conformity to rule.

There are ſome things which, in very ſmall quantities, ſeldom fail to produce the ſick head-ach in ſome conſtitutions. Such are a larger proportion than uſual of melted butter, fat meats, and ſpices, eſpecially common black pepper. Meat pies often contain all theſe things united, and are as fertile a cauſe of this complaint as any thing I know; ſo are rich baked puddings, and every thing of a ſimilar nature. A little error in theſe things will ſeldom fail to be attended with much ſuffering, in many conſtitutions. Indeed, as the diſorder comes on moſtly towards morning, the generality of patients are led to conſider it as a thing impoſſible, that they ſhould ſuffer ſo long after a meal; it is nevertheleſs true, and ought to be ſtrictly inquired into, and the conduct of the ſick regulated in this reſpect, or medicine is exhibited in vain.

That ſtrong liquors will produce ſimilar diſtreſſes to thoſe who are not accuſtomed to them, is but too well known, and has been too generally experienced. Moſt kinds of malt liquor, taken too liberally, ſeldom fail to have this effect in particular conſtitutions, perhaps from the quantity of hops; for moſt bitters ſeem rather to increaſe than leſſen the complaint.

It is not, however, the kind of diet alone that will produce this diſorder; repeated errors in quantity will produce the like effects. Bile, if very acid, will prove a *ſtimulus* ſufficiently ſtrong, in many caſes, to excite this ſick head-ach in a violent degree. There are habits in which the bile, if exceeding in point of activity, either from its bitter or its acid quality, will act as a purgative, ſometimes with pain, ſometimes without, according to the nature of different habits. Such conſtitutions rarely are affected with the diſeaſe I am deſcribing; even thoſe who have ſuffered its moſt violent attacks are free from it altogether, when a diſpoſition to purging takes place of habitual coſtiveneſs; and on the contrary.

From theſe conſiderations it is therefore evident, that as the quality of the bile, in a great meaſure, depends on the quality of the food, regard being had,

had, at the ſame time, to quantity: and that the diſeaſe we are treating of appears to ariſe from this cauſe, it is neceſſary to point out, as experience may direct, what kinds of aliment are moſt likely to add to the diſeaſe, in order that the patients who conſult us, may be inſtructed to avoid the cauſes of ſo diſtreſſing a complaint, as well as directed to ſuch a courſe of medicine, as may contribute to aſſiſt them in the recovery of their uſual healths, provided they reſolutely ſubmit to the regulations propoſed to them.

To obtain pretty ſpeedy relief will not be difficult. An emetic, or mild cathartic—an anodyne, ſoon, for the moſt part, reſtore them to their uſual health; to undergo the ſame conflict in a few days, perhaps, or a month or two, juſt as the cauſe of the diſeaſe is accumulated; and in this manner I have known many perſons ſpend a great part of their lives. Wearied, perhaps, with ineffectual endeavours, they, at length, give up all hopes of getting rid of their malady, and think patience muſt be their only cure.

Many ſuch I have met with, and ſo, I doubt not, have moſt other practitioners; and have not often been diſappointed in relieving them by the following proceſs:

If they are diſpoſed to coſtiveneſs, which is generally the caſe, ſome eaſy laxative is directed to keep the belly gently open, varying the form and ſubſtance, as the particular circumſtances may require:—where acid bile abounds, the bitter and abſorbent laxatives; where the bitter, ſaline generally are uſeful.

In the former caſe, it will be requiſite to give ſmall doſes of ſtomach bitters, joined with a little alcaline ſalt, or a chalybeate, as the caſe requires, once or twice a day: in the latter, mineral or vegetable acids, and a diet of the ſame nature. Soap and *pil. ruf.* or magneſia and rhubarb, in ſmall doſes, daily continued, will often prove, in caſes of acid bile, very uſeful remedies; and ſo will a ſolution of aloes in lime-water in the following manner *.

But whatever proceſs the phyſician's judgment leads him to purſue, there is one object, that will deſerve his attention, and will require the patient's. This diſeaſe is not the effect of any ſudden accidental cauſe; it is the effect of reiterated errors in diet, or in conduct, which, by weakening the organs of digeſtion, and otherwiſe diſordering the animal functions, have affected the

* ℞ Aloes Soccotrin. ℥j.
Rad. Rhabarb.
—— Glycyrrhiz. incif. āā ℥ſs.
Infunde in Aq. Calc. ℨviij.
Colaturæ, adde
Sp. Lavend. C. ℨſs.
M. Capiat Cochl. j. ij. aut iij. pro re natâ.

ſecretions

ſecretions of their juices, and perhaps the organs themſelves, in ſuch a manner, as to require a ſteady perſeverance in the uſe of ſuch medicines, as experience has ſuggeſted are moſt likely to reſtore them to full health.

This change cannot be effected ſpeedily; it requires a patient obſervance of proper regimen, in reſpect both to medicine and diet. The former ought, therefore, to be ſo contrived, as to be taken without diſguſt for ſeveral weeks together, and to be repeated at proper diſtances, till the end is obtained, digeſtion rightly performed, and the bile ſecreted and diſcharged as health requires; by which means, all that train of evils, which are the conſequences of its detention and diſtempered ſtate, will be gradually removed.

The benefits reſulting, in many caſes, from the uſe of the mineral waters, when drunk in proper quantity, and for a proper length of time, are undoubted proofs of the utility of perſeverance in the uſe of ſuch medicines as may appear, at firſt ſight, of no great efficacy, yet, if well directed, and ſteadily purſued, will, at length, obtain the moſt ſubſtantial advantages.

There is another part of our aſſiſtance, which is not leſs neceſſary, in this caſe, than medicine, to a perfect recovery, which, perhaps, is too often diſregarded both by the patient and phyſician; and if I have ſometimes ſucceeded in removing many complaints of this nature, where very judicious preſcriptions had been uſed in vain, it has been by entering more minutely into that part of preſcription, which depended on the patient's own conduct, than by the uſe of medicines of greater efficacy than thoſe which had been preſcribed by others.

We are, perhaps, too ready, in chronic caſes, where digeſtion is concerned, to confide in the *materia medica*, and judge it ſufficient to ſelect and enjoin ſuch articles in our preſcriptions, as are of known uſe in ſuch caſes. But unleſs the whole plan of diet, both in kind and quantity, are made to conſpire with medical preſcription, the benefits ariſing from this are hourly annihilated by neglect or indulgence.

It is not ſolely with a view to the cure of this ſick head-ach, of which I have been treating, that I wiſh to offer ſome general reflections on the dietetic part of medicine, and to point out the neceſſary reſtrictions, in order to its cure; but likewiſe, as they may be of ſome importance in the management of many other chronic and anomalous diſeaſes, as well as for the preſervation of health in general.

Nothing is of ſo much conſequence to invalids, and the more delicate of both ſexes, as attention to quantity.—There are many people, who ſeem to be poſſeſſed of ſuch powers of digeſtion, as to be under no reſtraints on that account, and who never feel themſelves incommoded, either with quantity, or the moſt heterogeneous qualities of their food. They riſe from the moſt

plentiful mixed and rich repaſts, without any kind of apparent uneaſineſs. But this is not the caſe with the generality—they are affected with uneaſineſs, ſome in one way, ſome another, by the unnatural load. And how often do we hear ſuch complaining of the ill effects of this or that particular kind of diet, when perhaps their ſufferings ariſe from the quantity of all, rather than the diſagreement of any.

It demands attention to obſerve that juſt medium, and no leſs reſolution to keep to it, which the ſtomach invariably points out in reſpect to quantity. The *how much* muſt be determined by every individual; and thoſe who are happy enough to abſtain at the firſt ſenſation of ſatiety, have made great progreſs in the art of maintaining ſuch a command of appetite, as, under moſt chronic indiſpoſitions, is one of the greateſt aids of recovery; and in health, is one of the ſureſt preſervatives againſt them.

It is a doctrine, however trite and familiar, which cannot be too ſtrongly inculcated; as a neglect of this attention to the *quantity* of food proportioned to the neceſſity of each individual, is ſooner or later followed with the moſt ſerious conſequences. To the ſtrong and robuſt inflammatory diſeaſes happen, and all ſuch as proceed from plenitude and acrimony combined, as the gout, and many other chronic indiſpoſitions. To the more tender and delicate, it is the parent of a numerous progeny of diſtempers, affecting both body and mind; there is ſcarcely a malady that can be named, which either does not originate from this neglect of diet, or is not increaſed by it, till the diſeaſe at length bids defiance, even to temperance itſelf, and all preſcription.

What renders this attention, to invalids of this order, ſtill the more neceſſary is, that they are often ſubject to a falſe appetite, to a craving that does not ariſe from the demands of health, but from the morbid picquancy of the juices in the ſtomach, which prompts them to eat more, and more frequently than nature requires. Whence it happens that ſuch people are often diſpoſed to take in much more than can be digeſted, to devour their food, rather than eat it; by which means their ſufferings are increaſed; the diſeaſe gains ground, defeats every purpoſe of the phyſician, and leads them into ſome permanent and incurable malady.

And ſhould the patients have admitted an opinion (and ſuch an opinion occurs but too often) that their recovery will be aided by taking in a greater ſhare of food, their misfortune is complete. Theſe are not ideal traits in the hiſtory of the ſick; they are known to be but too true by every phyſician of obſervation; and they cannot be mentioned too often, or with too much fervency, for the ſake of thoſe who are liable to become the victims of appetite or inattention.

Early habits of ſelf-command are of the utmoſt benefit to all; and even thoſe

thoſe who do not feel any immediate diſtreſs from the utmoſt repletion at preſent, would find it their intereſt to be moderate and diſcreet.

The cuſtoms of countries, in reſpect to meals, are different. Breakfaſt, dinner, and ſupper have been, in this country, habitual. Suppers, at preſent, are diſcouraged among the affluent; and exceſſive ones, ſuch as have been in uſe among our anceſtors, very probably with good reaſon; yet there are ſome conſtitutions to which this practice may not be beneficial: two very moderate meals, at a ſuitable diſtance, may perhaps be digeſted with much more eaſe than one full meal, and be made more conſiſtent with the duties of life in various ſituations. From obſervation, I am led to ſuſpect, that when people aſſure us they eat no ſuppers, that it would be better for them if they did, than to oppreſs nature with a cumbrous load, that may be much more detrimental.

The general breakfaſt of people, from the higheſt to the loweſt, is tea, coffee, or chocolate. I ſay general, becauſe there are many exceptions; ſome for one reaſon, ſome for others, making choice of other ſubſtitutes, as their inclinations or opinions guide them.

To the articles I have mentioned, bread of ſome kind, with more or leſs butter and ſugar, are commonly joined to make up the meal. It would take up more of your and my time than we have to ſpare, and make a volume of no ſmall ſize, to enter into a minute conſideration of theſe affairs. We are often aſked, and not improperly, what our opinion is of theſe articles reſpectively, in reſpect to their being more or leſs wholeſome? Perhaps the moſt pertinent anſwer in common would be, that which is reported of the late Dr. Mandeville, of famous memory, who being often the convivial gueſt, I think it was of one of the firſt Earls of Macclesfield, was frequently interrogated on the ſubject of diet: Doctor, is this wholeſome? Does your Lordſhip like it? Yes. Does it agree with your Lordſhip? Yes. Why then it is wholeſome.

Perhaps this is the beſt direction that can be given, provided we can caution the enquirer againſt the *too much*.

From many inconteſtable proofs, that butter in conſiderable quantities is injurious, it is leſs uſed in many families. It is found, by many, to be very difficult of digeſtion, eſpecially when toaſted before the fire, or fried, as well as in ſauces. Many people, apparently robuſt, and whoſe organs of digeſtion are ſtrong, often find themſelves much diſordered by large quantities of butter. Nothing more ſpeedily and effectually gives the ſick head-ach, and ſometimes within a very few hours. After breakfaſt, if much toaſt and butter has been uſed, it begins with a ſingular kind of glimmering in the ſight; objects ſwiftly changing their apparent poſition, ſurrounded with luminous angles, like thoſe

of a fortification. Giddineſs comes on, head-ach, and ſickneſs. An emetic, and warm water, ſoon waſh off the offending matter, and remove theſe diſorders. Theſe are circumſtances that often happen to people who are inattentive to the quantity of butter they eat at breakfaſt; and which are very often attempted to be cured by very different remedies, and improper ones. A ſudden giddineſs, let it ariſe from what cauſe it may (and it ariſes oftener, I believe, from ſome diſorder in the ſtomach, than from all other cauſes put together) is a ſufficient motive to call the ſurgeon; who muſt have a large ſhare of diſintereſtedneſs and ſkill, not to be compelled to bleed the patient, ſometimes under circumſtances that do not admit of it with impunity.

A moderate quantity of freſh butter, with bread expoſed as little to the fire as poſſible, or not at all, but uſed cold, appears to me to be wholeſome; it is capable of becoming, with the other aliments, as ſoft and inoffenſive chyle, perhaps, as any part of diet.

The ſame thing may, perhaps, be ſaid of coffee as of tea; the heat, the ſtrength, and the quantity, make it unwholeſome or otherwiſe. There are nations who almoſt live upon it, as others do on tea; amongſt neither do we meet with diſeaſes, that can juſtly be aſcribed to theſe ingredients in the common courſe of living.

Chocolate may ſeem to require more conſideration. It is, as we all know, the fruit of a tree growing in the Weſt Indies, ground into a paſte, with other ingredients, and ſerves as repaſt to multitudes of people of all conditions. It has not been obſerved, I believe, that thoſe who, in this manner, make chocolate a part of their food, are ſubject to any particular diſtempers. It may be conſidered therefore as a wholeſome kind of breakfaſt to thoſe who like it, and with whom it agrees. It is of an unctuous nature, therefore little or no butter ſhould be uſed with it. Were it commonly made thinner than is the general practice, and a large proportion of milk added, it would ſeem to be much more proper for common uſe, than as it is generally ſerved up at preſent.

To all theſe ſugar is for the moſt part a neceſſary addition: and, perhaps, much depends on the quantity of this addition, whether they are to be ſtyled wholeſome or otherwiſe. Nothing is more common than to hear perſons complaining of the heart-burn after breakfaſt, aſcribing it to the tea, or the other articles they have been drinking. The liquors themſelves have no ſhare, or very little, in producing this complaint. It ariſes from the bread, the butter, the ſugar, in conjunction; and is a proof that more of ſome of theſe, or all of them together, have been taken than the ſtomach could digeſt: and this circumſtance ought to be a ſtanding monitor againſt exceſs in quantity, even of things deemed the moſt inoffenſive.

Coffee,

Coffee, perhaps, is an exception to what was ſaid above, that the liquors themſelves have little or no ſhare in producing the heart-burn. Coffee made ſweet ſeldom fails to produce it; and it would be right to uſe as little ſugar with it as poſſible.

The effects of improper conduct in reſpect to thoſe things which now conſtitute our breakfaſts, are of little conſequence, compared with thoſe which ariſe from the well-covered table at noon. The indulgences of breakfaſt ſupply but very few materials for deſtruction. The repeated exceſſes at dinner are ſerious affairs. It has been thought that more people ſuffered by hard drinking, than immoderate eating. My obſervation leads me to take the oppoſite ſide. At preſent, indeed, the former practice is generally baniſhed to the vulgar; but whilſt it prevailed to the utmoſt, it ſeems to me that more were injured by exceſs of diet, than of drinking. But leaving this to other enquirers, I haſte to a few obſervations on a ſubject very intereſting to the generality of mankind.

Though I think the quantity of food is a matter principally to be regarded, yet the quality is not a matter of indifference. I am not to be ranked among the robuſt and athletic; perhaps I am a good deal below the middle point of general ſtrength.

It was neceſſary for me to obſerve ſome management in reſpect to my own health, and to attend to the *juvantia* and *lædentia*, yet without adopting it as a rule, that others ought to live as I found was moſt conſiſtent with my ſtrength and ability. A great part of my life has been ſpent amongſt the infirm and invalid: it was eaſy, it was neceſſary to obſerve what kind of diet, what kind of conduct was proper to be attended to by the generality. From this ſource I have endeavoured to draw inſtruction; and for the benefit of ſuch, theſe reflections are offered.

If we look into the hiſtory of mankind inhabiting the different parts of the globe, ſo far as we are acquainted with it, we ſhall find that different nations ſubſiſt on kinds of diet very different from each other; yet all enjoy a degree of health that is competent to their duties in life in the countries they inhabit. A great part of the Eaſtern world is principally ſubſiſted by rice and vegetables. Many countries live upon fiſh; others on a mixed diet, partly animal, partly vegetable. Some have no fermented liquors, others uſe none elſe; yet all, compared with each other in the ſame community, are healthy. The Author of Nature has ſo formed us, and conſtructed the organs of digeſtion, that we can gradually accommodate ourſelves to every ſpecies of aliment;—live on rice, on vegetables, on animal food ſolely, or mixed with vegetables, without ſuffering injury. No *kind* of food hurts us; we are capable of being accuſtomed to every thing; but this is not the caſe in regard to quantity.

Nature,

Nature, by degrees, may be accuſtomed to ſubdue and change into nutriment almoſt every part of the creation that is produced; but to quantity ſhe yields: if there is not ſufficient, decay enſues; if too much is uſed, fatal oppreſſion.

One of the firſt articles of diet I ſhall mention, is bread; and that only to ſay, that to digeſt it properly, if taken in conſiderable quantities, very ſtrong organs are requiſite. The huſbandman and labourer find no difficulties in this reſpect; but to many others, this is not the caſe. In weak ſtomachs, a large proportion of bread is indigeſtible; it turns ſour, produces the heartburn, flatulencies, and interrupts the perfect concoction of every thing elſe. This is not owing to any ſuppoſed adulteration in common (nor do I believe bread is adulterated to ſuch a degree as many apprehend) but to its own nature, which requires organs of a certain ſtrength, to aſſimilate it properly; and if not ſo aſſimilated, it happens, as in many other caſes, the corruption of what is good makes it the worſt of all others.

On this principle, I have endeavoured to inculcate the neceſſity of paying much attention to this capital article of diet, to valetudinaries in general; never to abſtain from it wholly, but to uſe it with moderation; to conſider it as one of thoſe things which, ſparingly uſed, was extremely neceſſary and beneficial; if otherwiſe, the fruitful ſource of many complaints, which were little ſuſpected to ariſe from this cauſe.

In this country animal food, of one kind or another, conſtitutes the chief part of our nouriſhment. That there are ſome kinds of more eaſy, ſome of harder digeſtion than others, is well known to every body. Yet I am inclined to think, there is ſcarcely any part of animal diet in uſe, that would not occaſionally be made to agree, that is, to be digeſted without much difficulty, if we were full as anxious in reſpect to exceſs of quantity, as to the unſuitableneſs of the kind; at leaſt this opinion correſponds with my own obſervation and experience. If a perſon eats as much of ham, ſalted beef, or bacon, as he ought to do of fiſh or of chicken, he may ſuffer by it.

The article of puddings, on an Engliſh table, is an affair of conſequence. After a plentiful dinner of animal food, rich ſweet puddings, deſerts, or even fruit, ſeem a very unnatural and improper addition; more eſpecially if the puddings are baked: for a little butter, long expoſed to the heat of an oven, becomes, oftentimes, a cauſe of much ſuffering.

Of vegetables it will be neceſſary to ſay ſomething. The rule in general is, to appeal to what beſt agrees, in this reſpect, with each particular conſtitution. I have only one ſhort caution to give on this head.—Thoſe who think it neceſſary to pay any attention to their health at table, ſhould take care that the quantity of bread, and of meat, and of puddings, and of greens, ſhould not

not compoſe each of them a meal, as if ſome were only thrown in to make weight; but carefully to obſerve, that the ſum of all together do not exceed due bounds, or incroach upon the firſt feelings of ſatiety.

In reſpect to fruit, I apprehend it is a moſt injurious practice to eat it, as is generally done, after a plentiful meal. There are ſome people who may be happy enough not to feel themſelves incommoded by any quantity they can take; but this is not the caſe with the generality, to whom I appeal for the proof of this aſſertion.

Fruit was given us for uſe, as well as pleaſure; to contribute to our health, not to hurt it. The forenoon ſeems, of all others, the moſt ſuitable ſeaſon, unleſs it is taken inſtead of a meal. This I believe is the cuſtom in many parts of the world, and ſeems moſt conſiſtent with health and right reaſon. This, and another cuſtom which I believe prevails in France, I ſhould be glad to ſee introduced into England more generally, for ſome families have long been in the practice of it; which is, to drink what may be neceſſary, what health or inclination requires, during the repaſt, and then to diſmiſs the bottle entirely.

It might ſeem not improper, in this place, to mention my opinion of the different kinds of liquors, reſpecting their comparative advantages; but this might likewiſe demand a volume. It muſt be left at laſt to the experience of the individual.

The leſſer quantity of fermented liquors we accuſtom ourſelves to, the better.

To abſtain from ſpirits of every kind, however diluted, as much as may be.

Where mild, well-brewed beer agrees, to keep to it, as beverage.

Where water does not diſagree, to value the privilege, and continue it.

In reſpect to wine, cuſtom, for the moſt part, will decide. The leſs the exceſs in quantity, the more conſiſtent with health and long life.

Punch is a favourite with many;—if weak, in hot bilious conſtitutions, when naturally ſo, or which become ſuch by a long reſidence in warm climates, it ſeems not to be an unwholeſome compoſition. Like what has been ſaid of diet in general, ſo likewiſe it may be added in reſpect to liquors: it is the quantity, in common, that does more harm than the kind; and people, eſpecially in the fore-part of life, cannot be too ſolicitous to ſhun the firſt temptations to the love of ſpirituous liquors.

There is another repaſt which, ſince the introduction of tea, is become a kind of neceſſary of life, and as much expected in every family as the other uſual meals themſelves. It may not, perhaps, be wholly improper to ſuggeſt ſome conſiderations reſpecting the uſe of tea and coffee after dinner. If we may judge from various circumſtances, from the time of dinner, digeſtion is performing during the courſe of ſeveral hours. This operation requires labour

and time in performing it, more or leſs, in proportion to the quantity of food taken in, and the powers of digeſtion. Much food taken into a weak ſtomach, requires a greater length of time, if it is digeſted at all, than where leſs has been received.

Whilſt that power, which we call nature, is performing this taſk, a ſecond meal is added, which, though of a lighter quality, adds to the quantity, and as it muſt be aſſimilated to the chyle now forming, is an additional burthen. To the robuſt this may appear trifling, it is not felt; but to thoſe who may be ſaid to be barely not valetudinary, it is a matter of ſome conſequence.

It is thought by many, that tea aſſiſts digeſtion, by the additional ſtimulus of its quantity; it may excite the ſtomach and duodenum to paſs the digeſting food ſooner than they otherwiſe would have done, and ſooner than the chyle is properly elaborated;—it may perhaps aſſiſt in carrying off flatulency, and the food together. This, at leaſt, is my opinion of it; and I therefore think the ſubjects of whom I have been ſpeaking, ought to drink either tea or coffee with great moderation; never to make it ſweet, coffee eſpecially; and to eat with it as ſeldom as poſſible. For either ſweet cakes, cakes of any kind, or butter in any proportion, rather retard digeſtion than promote it. The only proper time to drink either tea or coffee, or any ſuch beverage, with ſafety or advantage, is to take it as ſoon after dinner as poſſible, and inſtead of ſitting down to the bottle. This is one of thoſe cuſtoms, which perhaps might be adopted by us, with fewer diſadvantages than many of the faſhions we receive from our neighbours. As on the due performance of digeſtion depends much of our health, eaſe, and proſpect of longevity; ſo we ought moſt ſtudiouſly to avoid every thing that has a probable chance of interrupting it.

I have proviſionally recommended ſuppers to the objects of theſe remarks; as thinking that nature can effect that eaſily at twice, which at once would cauſe ſome degree of diſtreſs. I have had occaſion to remark to you, that the robuſt are not perfectly ſecure from the dangerous effects of a full meal. Apoplexies, perhaps, proceed more frequently from this cauſe, than all the reſt put together. If perſons feel no injury from eating twice a day, neither from a meal ſufficient to ſerve the purpoſes of health taken at once, let them perſevere in the practice. Experience, cautiouſly attended to, is moſt certainly the beſt guide. From one cauſe or another, the practice appears to increaſe, of abſtaining from ſuppers entirely, and is rather to be encouraged in the general. For thoſe who have but little command over themſelves at dinner, ought not to have the farther temptation to exceed what is right at a ſecond meal. Where diſcretion prevails, and eſpecially in perſons of buſineſs where attention is required, the plan I have propoſed would ſeem more proper, to divide the meals; eſpecially ſuch whoſe occupations require the full and immediate exerciſe of every faculty.

To

To deſcribe in detail what would be proper for the purpoſe, belongs not to this place. I will only mention, that the leſs it is in quantity, and the lighter in kind, the better. Many of the perſons I have deſcribed, will not bear liquid ſuppers ſo well as ſolids. Indeed the volume hurts them as much as any thing. Broth, gruel, panada, and the like, ſeldom are eaſy to them, and ſeem to diſagree, by becoming flatulent and oppreſſive.

I will detain you no longer than to mention a circumſtance in which I am concerned, and which one day or other may poſſibly be your fate; and I truſt you will therefore allow me to expoſe a Bookſeller's impoſition.

I would obſerve, that ſeveral years ago, a pamphlet was publiſhed under the title of *Rules for the Preſervation of Health*, &c.; it conſiſts of parts taken from Dr. Mackenzie's *Rules of Health*, and extracts from ſeveral other Authors: it was the produce of an eminent Bookſeller's ſon, who being in want of a little ready caſh, threw theſe together, and publiſhed them under a name as near like mine as he dared to do *, and which has been tortured ſince into as many likeneſſes as the change of a few letters would allow him. Many people have purchaſed it, under an opinion that it was mine; and againſt this impoſition I wiſh to enter a caveat, where I believe it will remain, as long as any books in our profeſſion are read. Having informed the Public oftener than once of its ſpurious origin—the title has been reprinted, and the name varied every time. As you, Gentlemen, are all of you liable to a ſimilar treatment, you muſt make my caſe your own; and permit me to declare, that the tract in queſtion is a barefaced impoſition.

* The Title-page now before me is—" Rules for the Preſervation of Health; being the Reſult " of many Years Practice. By J. FORTHERGELL. The Sixth Edition, with the following Ad- " ditions:

" I. Above Two Hundred of the moſt approved Receipts for all Diſorders incident to Mankind.

" II. Dr. Jurin's Account of the Effect of Soap Lye, taken inwardly, for the Stone.

" III. The Hiſtory of Mrs. Stephens's Medicines, and her Original Receipt for the Cure of the " Stone.

" IV. The preſent new Method of Inoculation, the Small Pox," [*of*] omitted,—" and alſo in " the Natural Way."

The Title-page is here given at full length, as it may aſſiſt the Public in guarding againſt the impoſture. I have ſeen the fourteenth edition of the Title-page. Sometimes my name is printed as above, ſometimes S. FOTHERGILL; ſometimes M. D. is added; with many other variations, none of them exactly correſponding to the name and deſignation, yet all of them retaining ſuch a ſimilitude, as to impoſe upon the inattentive part of the Public.

OBSERVATIONS

ON THE

Cure of FLUXES, by ſmall Doſes of IPECACUANHA.

Read, Auguſt 21, 1780 *.

To the MEDICAL SOCIETY in LONDON.

IF the following remarks on the uſe of ipecacuanha, in the cure of diarrhœas, appear to you not improper to make a part of your next volume, they are wholly at your diſpoſal. It may ſeem to be an unneceſſary buſineſs to ſay more on this ſubject, than has already been offered by others; but as I think I have obſerved this medicine, as well as rhubarb, to be uſed in theſe caſes ſometimes improperly, I thought it might be doing ſome ſervice to the young practitioner, to point out the means by which he might beſt avail himſelf of theſe uſeful auxiliaries. I am,

With much deference and reſpect,

Your friend and colleague,

J. FOTHERGILL.

Lea Hall, 1780.

IT is not intended to deſcribe the different kinds of fluxes that occur in practice, in which the ipecacuanha may be uſed with advantage. An habitual diarrhœa, depending on ſome irritating acrimony of the juices, accompanied with great weakneſs and irritability of the bowels (whatever may have given riſe

* Medical Obſervations and Inquiries, vol. vi. p. 186.

to ſuch a ſtate of both) ſeems to be the proper object of ſuch a treatment as I mean to propoſe, and which has ſucceeded in a variety of caſes, which have obſtinately withſtood the efficacy of very oppoſite remedies. We meet with perſons of both ſexes, and different ages, who, from a variety of cauſes, have long been ſubject to habitual diarrhœas; ſometimes accompanied with ſickneſs, bitter taſte, furred tongue, and ſome degree of fever; and ſometimes without theſe ſymptoms, yet both ſubject to frequent diſcharges, often in the morning, ſometimes in the night, and generally after taking any quantity of aliment, whether liquid or ſolid. It is not always that the ſtools are accompanied with pain; but their frequency and continuance exhauſt the ſtrength, and emaciate the habit.

If the viſcera are not injured in their ſtructure, and become unable to perform their functions, much benefit may often be found from the following proceſs:

Let a grain, one and an half, or two, of Ipecac. be given in Aq. Alexit. ſimp. or any other vehicle, in bed, in a morning.—This will ſometimes act as an emetic, and bring up bile; ſometimes it proves cathartic, and gives a few motions downwards extraordinary. In either caſe, a ſmall baſon of thin gruel may be taken, gently to promote its operation.

At night an anodyne ſhould be given, if there be nothing to forbid it; rather a warm and cordial one, than a ſimple anodyne. Confect. Damocrat. Theriac. Androm. or Philonium, as the caſe may ſeem to require.

By this means an undiſturbed night is generally obtained, at leaſt the doſe of the anodyne ought to be ſuch as to enſure it. The ipecacuanha may be repeated or omitted the next morning, according to its operation the preceding day. If vehement, either upwards or downwards, omit it till the morning following; but repeat the anodyne at bed-time.

It moſt commonly happens, that a very few doſes of theſe medicines, with proper attention to regimen, gradually reſtrain theſe diſcharges. And the ſame proceſs, at longer intervals between the doſes of ipecacuanha, generally put a ſtop to them, both ſafely and effectually.

I have ſeen the like doſes of ipecacuanha given every ſix hours, in ſome ſuch caſes; five, ſix, or ſeven grains in others; the vitrum antimonii cerat. in others;—and what has been the conſequence? An increaſe of that very diſorder which they were intended to cure; as might juſtly have been expected, had the preſcribers allowed themſelves time to reflect. There was not ſufficient time allowed for the medicines to have their due effect, and no more. They excited a conſtant diſpoſition to purging, which made it difficult to determine how much proceeded from the medicine, how much from the diſeaſe. Ipecacuanha given thus, in ſmall doſes, evacuates gently, and without weakening.—If the ſtomach is loaded with impurities, they are brought up; if the inteſtines, it acts.

acts as a gentle purgative.—But theſe ſeem not to be the whole of its efficacy; it acts as a diaphoretic; it promotes the diſcharge of the perſpirable matter, by thoſe emunctories, through which it ought to paſs; and leſſens, by this means, the quantity of acrimonious fluid tending unnaturally to the inteſtines; a conſtant aggravation, if not the moſt frequent cauſe, of ſuch maladies; as we ſeldom find that either the milder or more malignant fluxes are effectually cured, till the ſkin becomes ſoft, and a free perſpiration is reſtored.

In reſpect to regimen, one injunction will be found eſſential:—That is, to have ſtrict regard to *quantity*: for let the diet be never ſo wiſely appropriated, if the quantity is conſiderable, it will be in hazard, by its bulk, or its weight, of acting as a ſtimulant; in another word, as a purgative: if animal food be allowed, enjoin the patient, as much as poſſible, to confine himſelf, for a certain time, to one kind only. I have known inſtances where this attention alone has effected a perfect cure. Mutton, perhaps, is as ſuitable a diet as any other; and ſome perſons have dined on mutton only for a month together, much to their benefit.

It is ſcarcely neceſſary to ſuggeſt, that ſome gentle tonics may be neceſſary to eſtabliſh general health; the bark, or chalybeates, as the circumſtances may require. One caution may, however, be of uſe: let the doſes be ſmall, and continued the longer. The inteſtines being left, by the purging, in a very tender and irritable ſtate, will ſeldom bear, what might, in other reſpects, be deemed only a competent doſe. Beſides, the patients will often be induced to comply with rules of diet and conduct with tolerable exactneſs, whilſt they are taking medicine, in hopes of giving it greater effect; but are too prone to forget regimen, however neceſſary, the moment they are releaſed from medicine.

J. F.

[Dr.

[Dr. FOTHERGILL having drawn up a Sketch of the epidemic diſeaſe which appeared at London, and in various parts of the nation, towards the end of the year 1775, and having ſent printed copies thereof to ſeveral phyſicians, both in town and the country, in order to obtain a more complete hiſtory of the diſeaſe; this Sketch, and alſo the Communications of ſeveral of his ingenious Correſpondents on the ſame ſubject, are here inſerted, being thought well worthy a place in this Collection *.]

A SKETCH OF THE EPIDEMIC DISEASE,

Which appeared in LONDON towards the End of the Year 1775.

1. ABOUT the beginning of the laſt month, it was mentioned to me in many families, that moſt of the ſervants were ſick; that they had colds, coughs, ſore-throats, and various other complaints.

2. In the ſpace of a week theſe complaints became more general; few ſervants eſcaped them, eſpecially the men, who were moſt abroad; many of the other ſex, likewiſe, and people of higher conditions, were attacked: nor were children exempted.

3. The diſeaſe, which had hitherto been either left entirely to itſelf, or had been treated with the uſual domeſtic medicines appropriated to colds, now claimed the attention of the Faculty, and, for the ſpace of near three weeks, kept them for the moſt part univerſally employed.

* Medical Obſervations and Inquiries, vol. vi. p. 340.

4. Moſt

4. Moſt of thoſe whom I ſaw, were ſeized (and often ſo ſuddenly as to be ſenſible of the attack) with a ſwimming or ſlight pain in the head, a ſoreneſs of the throat, and all over the body, with a ſenſe of coldneſs, particularly in the extremities. A cough ſoon followed, a running of the noſe, watery eyes, ſlight nauſea, frequent calls to make water, and ſome were ſeized with a diarrhœa.

5. More or leſs of feveriſh heat, inquietude, pain about the breaſt, præcordia, and in the limbs, ſoon ſucceeded, but in various degrees. Many were capable of continuing in their uſual occupations under theſe ſymptoms; others were obliged to ſubmit to confinement; and not a few to their beds.

6. The tongue was always moiſt; the ſkin ſeldom remarkably hot or dry; the pulſe often full, quick, and harder than one would have expected from ſuch a temperature of the ſkin.

7. Several were ſeized with a diarrhœa: the ſtools were always black, or of a deep yellow colour; and ſo were thoſe, for the moſt part, which were procured by purgative medicines.

8. In a few days every complaint abated, except the cough; this continued the longeſt of all the ſymptoms, and, in the fore part of the night, was exceedingly troubleſome and vexatious; towards morning generally came on a ſweat and eaſy expectoration.

9. Thoſe who were ſeized at firſt with very copious defluxions from the noſe and the fauces; or had a plentiful and ſpontaneous diſcharge of black bilious ſtools; or made large quantities of a high-coloured urine; or ſweated profuſely of their own accord, a night or two after the ſeizure, ſooneſt grew well.

10. In many caſes it was neceſſary to take away ſome blood, the condition of the pulſe and vehemence of the cough requiring it. The blood was almoſt uniformly ſizy, repreſenting a flat cake of yellowiſh tallow, floating in a deep yellow ſerum. Very few inſtances occurred where the ſize formed that cup-like appearance which occurs in moſt of the genuine inflammatory diſorders.

11. By warmth, diluting, cooling liquids, mild diaphoretics, gentle and repeated purgatives, the diſeaſe for the moſt part ſoon gave way, in ſubjects otherwiſe healthy. Sometimes it was neceſſary to repeat the bleeding; ſometimes bliſters became neceſſary, and were ſerviceable in abating the cough, which was the laſt of all the ſymptoms that gave way: after the proper evacuations, anodynes for the moſt part had very ſalutary effects.

12. In many inſtances the diſeaſe aſſumed the type of an intermittent towards its decline: the bark however did not generally ſucceed in curing it. The ſymptoms, as often happens in bilious diſorders, were ſometimes aggravated by this medicine. A few doſes of ſome mild cathartic moſt commonly removed it effectually.

13. Many

13. Many who neglected themſelves, and went abroad with the diſtemper upon them, frequently got additional colds, and brought on a fever of the moſt dangerous kind; a few died phrenetic.

14. Ancient, aſthmatic perſons, were likewiſe great ſufferers for the moſt part: a peripneumonic fever came gradually on, which often terminated fatally. And of thoſe who did recover, their amendment was ſlow, and treatment difficult.

15. And indeed it appeared that very few perſons wholly eſcaped the influence of this morbid conſtitution: for it ſeemed to aggravate every preſent malady.

16. It proved fatal likewiſe to ſeveral very young children, diſpoſing them to violent coughs or diarrhœas.

17. Perhaps, however, there is ſcarcely an inſtance to be met with, of any epidemic diſeaſe in this city, where ſo many perſons were ſeized, and in ſo ſhort a time; and with ſo little comparative mortality.

18. Though attempts to aſcertain the cauſes of epidemics are, for the moſt part, more ſpecious than ſubſtantial, it may not be improper to mention a few facts that gained my attention; to others many more may have occurred, and worthy to be recorded. During the greateſt part of the ſummer, in that part of the country where I then was (Cheſhire) the air was of the moſt equal temperature I ever knew. In the ſpace of two months the quickſilver in the thermometer once roſe to 68, once fell to 56; but for ſix weeks together it kept between 60 and 66 continually, day and night.

19. The barometer did not vary much more. The weather was, during this time, very changeable, much inclining to wet; and, though it rained more or leſs almoſt every other day for ſix weeks, yet upon the whole no unuſual quantity of rain fell: it ſunk into the ground as it fell, and made the earth very ſoft and miry; but ſeldom ſwelled the brooks, or occaſioned floods.

20. During this time, horſes and dogs were much affected; thoſe eſpecially that were well kept. The horſes had ſevere coughs, were hot, forbore eating, and were long in recovering. Not many of them died, that I heard of; but ſeveral dogs.

21. To the conſideration of the Faculty in this city, is this Sketch of the late Epidemic ſubmitted, with all due deference; and with a requeſt, that if the obſervations they have made do not correſpond with this recital, they will be pleaſed to communicate their remarks while the remembrance of the facts are recent; in order that as exact an account of this diſeaſe as poſſible may be tranſmitted to our ſucceſſors.

22. If thoſe Phyſicians in the country, into whoſe hands this Eſſay may come, will be ſo obliging as to mention the time when this Epidemic made

its appearance in their neighbourhood, and wherein it differed from the preceding Sketch, either in the ſymptoms or the method of cure, they will likewiſe contribute to the ſame good purpoſe. The united obſervations of the Faculty at large muſt greatly exceed the utmoſt efforts of any individual, however warmly he may be diſpoſed to promote the utility of his profeſſion.

JOHN FOTHERGILL.

London,
6th *Dec.* 1775.

OBSER-

OBSERVATIONS

FROM

VARIOUS CORRESPONDENTS.

Sir JOHN PRINGLE, *Bart.*

4*. THE ſpecies that I had of the influenza was a ſore throat, with fever and ſhooting pains through the back part of my head; but theſe ſymptoms were never followed by a cough. I heard of ſeveral others who, like me, had never been troubled with a cough, and only with this inflammatory angina.

18. I think you do well to record the ſtate of the weather; but I think the concluſion ought to be, that the ſenſible qualities of the air had moſt probably no ſhare in producing this Epidemic, I ſhould be tempted to ſay, that they had evidently no part; for we hear of the ſame diſtemper having been in Italy, France, and in the Low Countries; and, I doubt not, in other parts of Europe, had we inquired. But it cannot be ſuppoſed that the ſtate of the atmoſphere, either as to weight, heat, or moiſture, was the ſame every where. And in the ſame country have we not ſeen it rage in one diſtrict, or city, whilſt others, at no great diſtance, were totally free? Yet between the ſound and the ſickly there could be no conſiderable meteorological difference. My concluſion, therefore, ſhould be, that ſuch Epidemics (of which there have been four in my remembrance) do not depend on any principles we are yet acquainted with, but upon ſome others, to be inveſtigated, and by ſuch means as Dr. Fothergill very properly and moſt commendably propoſes to be done by the united inquiries of his brethren.

* The numbers refer to thoſe in the preceding Sketch.

Dr. HEBERDEN.

Dec. 16, 1775.

THE 28th of October was the firſt day on which the late epidemic cold ſeized upon any one whom I had an opportunity of obſerving; and, at the end of three weeks the cauſe, whatever it was, of this diſtemper was ſo far weakened, as to be incapable of infecting thoſe who had eſcaped it until that time; though many, who had ſuffered by it before, continued to complain of the cough and hoarſeneſs much longer. The violence of this diſtemper uſually began to abate in five or ſix days.

In ſome it began with a ſickneſs and perpetual vomiting, which were the forerunners of a ſevere degree of this illneſs; in others the firſt ſymptoms were ſneezing, and a copious defluxion from the noſe and eyes, and theſe ſuffered much leſs, and were ſooner recovered. Many complained of a hoarſeneſs and ſore throat, and of a tightneſs, oppreſſion, and heat of their breaſts, and of feeling pains in various parts, particularly in their heads, ſides, and backs. Almoſt every one of theſe patients was afflicted with a racking cough; with a ſenſe of coldneſs frequently returning upon them; with a failure of appetite and of ſleep; and with a languor and weakneſs much greater than might have been expected from the effects of any of the other ſymptoms. The degree of fever was ſeldom great. I ſaw two perſons in this diſtemper who had eruptions upon their ſkins reſembling that of a ſcarlet fever. In two or three young men this diſorder was increaſed to a dangerous height, and became a true peripneumony, attended with bloody phlegm, and manifeſtly requiring frequent bleedings, by which they were much relieved. Towards the middle or end of this illneſs a few were attacked with intolerable ſtitches in their ſides or loins, ſo that for two or three days they were confined almoſt to the ſame poſture, and if they were neceſſitated to change it, they ſhewed all the marks of exquiſite pain. Lighter cramps in the legs and arms were not uncommon at the going off of this malady.

I knew none who could properly be ſaid to die of it; but it ſeemed to haſten the death of two or three perſons, whom it found dying of age, and of other diſeaſes.

The keeping quiet within doors, together with an abſtinence from the groſſer foods, and from heating liquors, was all which the generality of patients required. Small quantities of an opiate were very ſerviceable in allaying the inceſſant teazing of the cough, and in quieting the reſtleſſneſs. Where the

fever,

fever, or any of the ſymptoms, were conſiderable, it appeared to me that bleeding was unqueſtionably uſeful, and leſſened rather than increaſed the languor. In a few it was neceſſary, beſides bleeding, to employ bliſters, with the other uſual remedies for inflammations of the lungs.

Sir GEORGE BAKER, *Bart.*

IT is certain that many people, both in this town and its neighbourhood, were attacked by the epidemic diſeaſe ſome days preceding the 20th of October. As to the preciſe day when I firſt heard of it, I cannot ſpeak of it with accuracy.

Men, confined by their buſineſs at home, ſuffered much leſs than thoſe who were expoſed to the air; and women, in general, leſs than men. Very young children were not much affected by this diſeaſe. Boys at ſchool were almoſt univerſally diſordered. Girls at ſchool (I ſuppoſe on account of their greater confinement) were remarkably free from the influence of this conſtitution; at leaſt, were not ſo generally attacked.

Many were ſuddenly ſeized with *great* giddineſs, and *intenſe* pain in the head; ſome with a conſiderable nauſea, which ſometimes continued ſeveral days. Some few had, in the beginning, ſucceſſive rigours. An uncommon languor, reſtleſſneſs, and anxiety, ſeemed to be the general characteriſtics of this diſeaſe.

I ſaw none whoſe firſt indiſpoſition was a *diarrhœa*. Thoſe who had a diarrhœa, had firſt complained of the common ſymptoms of a cold; which ceaſing, a diarrhœa followed. This, in ſome, aroſe even to a dyſentery. They had almoſt conſtant pains a little above the navel, and a very frequent evacuation of thin excrement, mixed with mucus. This was my caſe in particular, and that of ſeveral whom I viſited, and many others, a relation of whoſe caſes has been communicated to me.

Dr. Fothergill ſays, *the tongue was always white*. This ſeems too general an aſſertion: at leaſt the contrary happened in ſeveral inſtances which fell under my notice.

The blood, in the beginning, was not always *ſizy*; nor did I, in general, obſerve *the deep yellow ſerum* mentioned by Dr. Fothergill. Likewiſe *the cup-like appearance of the craſſamentum* was remarkable in ſeveral caſes.

In

In many caſes it was neceſſary to take away blood, even three or four times, on account of the violence of the pleuritic and peripneumonic ſymptoms.

Clyſters, frequently injected, were of ſingular ſervice.

The fever having ſenſibly remitted, according to my experience, the Peruvian bark was uſed with advantage. And likewiſe, when a languor and debility (as frequently happened) continued after the vehemence of the diſeaſe was ſubdued, this proved an uſeful remedy.

Many perſons, even now, feel the effects of this diſeaſe; and I know ſeveral who are likely to die tabid.

Accounts received from France, Holland, and Germany, give us reaſon to conclude, that this Epidemic was much more fatal in other countries than in this iſland. And I believe it will appear that it was more fatal in ſeveral diſtant countries than in this metropolis and its neighbourhood.

January, 1776.

Dr. HENRY REVELL REYNOLDS.

1. MY wife had this complaint on the 23d of October, and on the 2d of November I viſited ſeveral patients who had laboured under it for ſome days.

2. All my children had it. The order in which the ſymptoms appeared is as follows: watery eyes, ſwelling of the eye-lids, running from the noſe, cough, diarrhœa; ſo that every part of the mucous membrane ſeemed to be progreſſively attacked. I ſaw two others affected in the ſame way.

6. In two inſtances I ſaw the tongue very dry, parched, and chopped. The patients were both corpulent women, aged between 30 and 40. At the time I was called in to them they laboured under a true peripneumony; but I learned that they were firſt attacked with the catarrhal ſymptoms. Blood drawn from both theſe patients, even at the third bleeding, had a very thick buff coat, and exhibited the cup-like appearance.

9. Several whom I attended had this kind of diarrhœa; but I did not find it of ſervice to any: on the contrary, I thought it prejudicial to ſome, as it ſeemed to prevent a free expectoration, which, to my apprehenſion, was the moſt critical and moſt ſalutary evacuation. Neither did warm copious ſweats, though univerſal, (unleſs they happened before the ſeventh day) give that relief which one might have expected from them.

11. With

11. With reſpect to the method of cure, mine was nearly the ſame as yours, and in the ſame order. Permit me only to mention, that I found the Kermes mineral to anſwer my purpoſe exceedingly well, both as a diaphoretic and an expectorant. After ſeveral trials I preferred it to any other preparation of antimony.

12. In thoſe caſes where the diarrhœa was troubleſome I had recourſe to the ipecacuanha in ſmall doſes; a grain of the powder, for inſtance, once in ſix hours; and it ſucceeded to my utmoſt wiſh, checking the diarrhœa, and promoting a free expectoration.

Jan. 29, 1776.

Extract of a Letter from Dr. WILLIAM CUMING *to Dr.* FOTHERGILL.

"DEAR DOCTOR, *Dorcheſter, Dec.* 25, 1775.

"I RECEIVED your printed hiſtory of the Epidemic Diſorder that has "been of late ſo generally felt, not only over all this iſland, but in ſeveral "other parts of Europe: and, probably, its influence has been far more ex- "tenſive. I honour you highly for your exerting yourſelf in this manner, to "obtain as accurate an account as poſſible of this diſorder, and hope that "none will be found ſo perverſe and malevolent as to attempt to detract from "your merit with your cotemporaries, or with poſterity.

"The account you have given of the ſtate of the atmoſphere, in reſpect of "*warmth* and *gravity* during the preceding autumn, is, I believe, very juſt, "as far as I can recollect. I often, during that time, examined both the "barometer and thermometer; but, finding the variation of the mercury "confined within ſuch narrow limits, I made no minutes of its height; in- "deed I never now do, unleſs it verges towards one or other of the extremes. "It was otherwiſe in reſpect to the *moiſture* of the air, as to which I can ſpeak "with preciſion. The autumn in this place was very wet, as the quantity of "rain that fell here during the months of Auguſt, September, October, and "November, was exactly fourteen inches and twenty-ſeven hundredth parts. "This circumſtance, joined to the mild temperature of the air, made me to "expect diſeaſes of the putrid claſs; but in this I was happily diſappointed. "We had here alſo many moiſt, warm, foggy days, in which no ſenſible "quantity of rain fell, when the quickſilver in the barometer ſtood ſo high as "30.2.

"After

" After the middle of Auguſt, I have heard, from good authority, that a " diſorder amongſt the horſes prevailed very generally in Yorkſhire. It has " not been ſo general here as to become the ſubject of converſation. About " the latter end of October, I remember to have heard that one gentleman had " loſt ſix dogs, in the uſual manner that theſe animals are ſeized—a giddineſs " in the head, an inability to eat, with a paralytic affection of the hinder extre- " mities.

" From the middle of October (to which time Dr. Pulteney fixes the com- " mencement of this diſorder, when he himſelf was ſeized, though he was never " confined by it) ſeveral individuals complained of colds, which were conſi- " dered as accidental, and but little attended to; but it was not, I think, till " after the 10th of November that the malady became general. On the 15th I " firſt viſited a patient labouring under it. The manner of ſeizure and the " ſymptoms were ſimilar here to your deſcription of them; ſeveral complained " of a heavy, dull pain in the head, and many had fixed pains in the ſide. " The appearance of the tongue, the feel of the ſkin, were as you deſcribe; " and, though the pulſe was generally full and quick, yet I was not ſenſible " of that hardneſs in it that you mention; ſo that the violence of the cough, " with the pains in the breaſt, and the difficulty of expectoration, indicated " the neceſſity of taking off blood rather than the hardneſs of the pulſe. The " blood always had the appearance which you deſcribe. I never once ſaw it " cupped or purſed up. In general it was neceſſary to draw off blood, and " many times oftener than once; but I never once ordered it without the " patient's being ſenſibly relieved by it, and the benefit was commonly felt im- " mediately. I uſually directed bliſters too, on account of the pain in the " head, the inceſſant cough, or the fixed pains in the breaſt; and their ſalutary " effects were, I think, as conſtantly perceived.

" Beſides theſe, I ordered the neutral ſalts, pectoral linctuſes, ſoft lubri- " cating drinks, which, with a ſuitable diet, univerſally ſucceeded, for I loſt " none; and I have not heard of any that could properly be ſaid to die of this " diſorder. The medicines and diet directed kept the bowels properly lax, for " which reaſon I hardly ever ordered a purgative. None of my patients were " ſeized with a diarrhœa, ſo that I never obſerved the colour of the ſtools; " though I have ſince heard that ſeveral young people were attacked in this " way, and had the diſorder lightly. Towards the decline of the diſorder, forty " or fifty drops of the elix. paregor. in a draught with oxym. ſcill. a drachm, " or a drachm and a half, taken at bed-time, abated the violence of the " cough, procured reſt, and occaſioned a gentle moiſture on the ſkin. In two " caſes which I ſaw, the diſorder ſhifted to the putrid claſs. A gentleman's " coachman was ſeized with the common ſymptoms, was blooded, &c. got

" better, went abroad, got well: the ſame complaints returned; was blooded " again, was relieved, but in a few days I was ſent for, when I found him " labouring under a great dejection of ſpirits, deſpairing of his recovery; a " ſtupifying pain in the head, oppreſſion of the præcordia, moderate warmth " of the ſkin, with a quick rather than low pulſe, and a great general debility. " I had the curioſity to examine his throat, of which he did not complain, " when I found thin white ſloughs on the uvula and tonſils. Bliſters, a warm " regimen, and the bark, with gargles, in about ten days reſtored him.

" The other was butler to a gentleman, ſix of whoſe ſervants I had preſcribed " for in the reigning diſorder, and who had been recovered by bleeding, " and the uſual regimen. This man, believing himſelf ſeized with the com- " mon complaint, ſent for the apothecary to bleed him; but four ounces only " were taken off, as he was faintiſh. I ſaw him by accident next day; the " blood was florid and of a weak texture; his pulſe quick and feeble: ſome " ulcers appeared on the tonſils. By the bark and a warm regimen he got " well in a few days. In many gentlemen's families in this county not one " ſervant free from the diſorder, in others but one or two infected. I think it " raged chiefly in the weſtern and northern parts of this county. Many per- " ſons in Dorcheſter complained of coughs and colds; but a few only were " confined to the houſe.

" You may remember that, in the ſpring of the year 1762, a diſorder " ſomewhat ſimilar to this, but not ſo general, was very frequent in moſt parts " of this kingdom; but what correſponded with it in almoſt every particular, " was the fever and cold that appeared in the winter of the year 1732, in moſt " parts of Europe, America, and the Weſt Indies, of which a particular account " is given in the ſecond volume of the Edinburgh Medical Eſſays."

Dr. THOMAS GLASS, *Exeter.*

IN the city of Exeter, and the country about it, colds and coughs were not more frequent than uſual during the latter part of the paſt autumn. But from the 8th of November the number of people who were continually coughing increaſed ſo faſt, that it was ſoon evident the Epidemical Colds, which began in London, as we were informed by the public papers more than a week before, had reached us. This diſeaſe appeared to be at its height

here from the 18th to the 24th of the ſame month, and attacked very few after the 4th of December; but by this time almoſt every one had felt more or leſs of its effects.

On the 11th or 12th of November it made its appearance in the Devon and Exeter Hoſpital, and within a week ſeized 173 perſons, being all the ſervants and patients then in the houſe, except two children; 162 of them were coughing together. Is it not remarkable that ſuch a number of hoſpital patients, afflicted with ſo various and different kinds of diſtempers, and under the operations of the moſt efficacious medicines of the moſt oppoſite qualities, ſhould have been all affected, almoſt at the ſame time, and in the ſame manner, by the cauſe of theſe epidemical coughs?

Two or three days after the hoſpital had been attacked, the City Workhouſe was viſited by them: of near 200 poor people, who are in this houſe, but few eſcaped; all the others were complaining at the ſame time.

From Exeter the diſeaſe travelled towards Cornwall; about the 13th of November it arrived at Okehampton and Aſhburton, and about the 15th at Plymouth. I have no certain intelligence when or where it paſſed from Devonſhire into Cornwall; but by the 20th it had reached Truro; and, before the end of the firſt week in December, had ſpread to all parts of that county.

The conſtitution, productive of this Epidemic, very ſeldom, I believe, continued to exert its influence with much force in any place more than three weeks or a month; ſo that, after this time, a few only were attacked by it: and it was generally obſerved, that in the churches, for two Sundays following, nothing was to be heard but coughing; and that on the third Sunday this diſturbance was much leſs. I cannot find that there is any part of theſe two counties but what was viſited by it.

Its appearance in this city was the ſame as in London, except only, that it was here much more favourable, and attended with ſome ſymptoms beſides thoſe you have mentioned in your Sketch: for many of our patients, eſpecially ſuch as had a conſiderable degree of fever, complained of great lowneſs of ſpirits and ſudden weakneſs; ſeveral of them of a perfect inappetency both to meat and drink (moſt of theſe had ſevere coughs without much fever) and ſome of them a ſoreneſs throughout the windpipe and œſophagus, with a great pain in ſwallowing even liquids; others of a violent pain in their ears. A few had ſloughs of the malignant kind on their tonſils; ſwellings of theſe, and of the ſub-maxillary glands were not unfrequent, but occurred oftener in ſome towns than others. One of my patients had a large parotid, which ſuppurated ſlowly, and broke at the end of three weeks. Eruptions on the lips, towards the criſis, were a common and very ſalutary ſymptom. Many felt no feveriſh heat, but almoſt all, if not all, had more or leſs of a cough.

This

This circumſtance, probably, induced Sydenham to give the name of Tuſſis Epidemica to the diſeaſe which had been called Febris Catarrhalis Epidemica by his predeceſſors, who ſeem to have been of opinion that a cough, without a fever, was nothing more than a ſymptom of a common cold. The impropriety of calling a cough, without any feveriſh heat, a catarrhous fever, being obvious.

Moſt people in this part of the kingdom, who had coughs and colds during the late epidemical conſtitution, took no more notice of them than they would have taken of common colds, and got well, when they were without a fever, ſooner than thoſe who, in the like circumſtances, ſubmitted to confinement. Nor needed ſuch perſons any other treatment than that which Sydenham recommended to his patients, who had epidemical coughs, but no fever, in the year 1675.

But thoſe who appeared to be feveriſh, and had pains in their head, breaſt, back, or limbs, were adviſed by the Faculty in this city to confine themſelves to their beds, and to drink frequently barley-water, water-gruel, linſeed-tea, and other ſoft diluting liquors (which were ſometimes ſweetened with honey) very hot. Saline draughts, with ſpermaceti, were often preſcribed; to which, if the patient felt himſelf low, and inclined to be faint, was added cordial confection; or, if he was not diſpoſed to ſweat freely, emetic tartar, but not enough to excite a nauſea. A plentiful and eaſy ſweat, continued for a ſufficient ſpace of time, carried off the catarrhous fever and pains on the firſt, ſecond, third, or fourth day of the diſeaſe. This fever, which has been called a Diary and Decreaſing Fever, becauſe it either ends or begins to decline within twenty-four hours, and never exceeds the fourth day, was accounted an eſſential part of the Catarrhous Epidemic, and ſeems indeed to be an immediate effect of its cauſe. But the cough generally remained after the fever was ſubdued, until an eaſy expectoration of concocted matter put an end to it. The ſoft diluting liquors, and the medicines above-mentioned, were deſigned to bring on this critical expectoration, as well as to promote a ſweat. And, to anſwer that end, paregoric elixir was likewiſe given, if the cough was very troubleſome, and the matter brought up by it crude and thin, after the fever was gone off or conſiderably abated.

In a certain town many perſons, to whom, as ſoon as they applied for aſſiſtance, wine-whey with ſpirits of hartſhorn was freely given to force out a ſweat, and paregoric elixir to quiet their cough, became delirious.

Sometimes a violent cough, with conſiderable but not inflammatory pains about the breaſt, ſeemed to require bleeding on the ſecond or third day of the diſeaſe; but this evacuation weakened the patient, without removing his pains, or mitigating his cough in any conſiderable degree, and ſeemed to retard

his recovery. In ſeveral inſtances, as I am well informed, the loſs of blood, at this early period of the diſeaſe, was followed, not immediately, but within a few days, by ſevere paroxyſms, reſembling thoſe of an intermittent. And I apprehend that bleeding is then only neceſſary in this diſtemper, when it is accompanied with real inflammatory ſymptoms: and that purging is alſo improper, unleſs a fever, which requires this evacuation, is complicated with the catarrhous complaints; a ſpontaneous ſweat being the natural remedy of the fever, which is moſt eſſential to them. Mercatus has very judiciouſly remarked, that this Epidemical Catarrhous Diſeaſe is to be treated according to the nature and diſpoſition of the fever with which it happens to be aſſociated; ſo that in ſome caſes bleeding is neceſſary, in others purging; but in moſt a proper regimen only is required. This judgment of the Spaniſh phyſician is confirmed by the experience of our ſagacious Sydenham, who cured the Stationary Fever of 1675, when it was united with the Epidemical Cough of that year, in the ſame manner, and with the ſame ſucceſs, as he had done before theſe coughs made their appearance.

If the feveriſh diſorder, accompanying the catarrhous complaints, continues increaſing for two or three days, it is certain that another fever, beſides the Diary or Decreaſing Fever, is complicated with them. This adventitious fever has been moſt commonly found to produce either ſymptoms peculiar to fevers of the inflammatory kind, or thoſe which were the diſtinguiſhing marks of the fever of the ſeaſon.

Before we were viſited by the late Epidemic, the atrabilious conſtitution, which, according to Dr. Grant's accurate obſervations, begins ſome time in October, or the beginning of November, had taken place. And on this account a plentiful diſcharge of black bilious ſtools, coming on of its own accord, or procured by gentle and repeated purging medicines, when there were pains or uneaſineſs in the bowels, or a diſtenſion of the belly and præcordia, with inquietude or other ſigns of turgid matter in the inteſtines, ſoon freed the patient from the fever of the ſeaſon, and all the complaints ariſing from it.

But when any danger was apprehended from inflammatory complaints, which did not often happen in this part of the country, more or leſs blood was taken away. This was always ſizy, and the ſize for the moſt part formed a cup-like appearance. We had likewiſe recourſe to anti-phlogiſtic medicines, and occaſionally to bliſters, which more ſenſibly abated pleuritic pains, being applied to the part affected, than the previous bleeding.

Peripneumonic complaints, the moſt alarming ſymptom of all, were gradually carried off by a free and eaſy expectoration of digeſted matter. Such remedies were therefore adminiſtered, as have been found, by experience, to promote

promote the digeſtion of thick viſcid humours, collected and retained in the lungs, and to facilitate their diſcharge.

This diſeaſe proved fatal to exceeding few in this city or country, and thoſe who died of it were ancient perſons or pulmonics. Such as theſe have been the principal ſufferers in every epidemical catarrhous conſtitution, of which I have read any deſcription. Children, both in Devonſhire and Cornwall, were leſs ſubject to the Diſtemper than adults; their complaints, when they had taken it, were ſlighter, and they ſooner got well. Almoſt all of them had watery eyes and a running noſe.

From the accounts and deſcriptions given us by phyſicians of the Febris Catarrhalis Epidemica, or Tuſſes Epidemicæ, which, ſince the year 1557, have made their appearance in Europe at leaſt a dozen times, it is ſufficiently evident that they are the ſame diſeaſe, diverſified only as the ſmall-pox are, by the influence of the climate, the ſeaſons of the year, and the conſtitution of the air.

Whilſt it was the general opinion of philoſophers, that all things upon earth were governed by the heavens, phyſicians imputed the Epidemical Catarrhous Semi-peſtilential Fever, to the influence of the ſtars; whence the Italians gave it the name of Influenza.

Wintringham and others, who attribute this general Epidemic to moiſt, cold weather, coming on ſuddenly after a laſting, warm, dry ſeaſon, ſeem not enough to have apprehended that it is a diſeaſe of all ſeaſons and climates, which I think it moſt certainly is. For we are informed by Willis, *in cap.* xvii. *de Febribus*, that it viſited this kingdom in April 1658; and that the whole ſpring and the beginning of the ſummer this year were uncommonly cold, and the preceding winter exceſſively hard. And Mercatus relates, *in lib.* ii. *de intern. morb. curat.* that it was raging in ſome part or other of Spain during the whole ſummer of the year 1580, and deſtroyed not a few. It is recorded by Fonſeca, *in Diſputat. de Garotillo*, that in the year 1557 it infeſted Aſia, came from thence to Conſtantinople, then ſpread itſelf over all Europe, and afterwards attacked America. And by a Society of Phyſicians at Edinburgh, *in the ſecond volume of their Medical Eſſays*, that about the middle of November 1732 it made its appearance in the northern parts of Germany, and reached Naples and Spain before the end of February 1733, having, in the mean time, over-run all Europe. That about the middle of the following October it arrived in New England, and travelled ſouthward to Barbadoes, Jamaica, Peru, and Mexico, much at the ſame rate as it had done in Europe. Now theſe hiſtorical facts being inconſiſtent with the conjectures of theſe gentlemen, who would perſuade us that this uncommon and moſt univerſal diſeaſe is produced by the ſame conſtitution of the air as that which produces our common autumnal colds and coughs—

coughs—if we believe the hiſtorians, we muſt neceſſarily conclude that this notion of the theoriſts is falſe.

Nor does this diſtemper ſeem to ariſe (which is, I think, at preſent the more general opinion) from contagion; for in this city, in the year 1729, it was conjectured that two thouſand perſons at leaſt were ſeized with it in one night. But what is more extraordinary, before the beginning of autumn, in the year 1557, it attacked all parts of Spain at once, ſo that the greateſt part of the people in that kingdom were ſeized with it almoſt on the ſame day. This very ſingular circumſtance is related by Mercatus, who ſays, that it happened in his own time.

And after all the attempts that have been made to aſcertain the cauſes of general Epidemical Diſeaſes, not ariſing from the ſenſible qualities of the air, we ſeem to have as little real knowledge of them as the ancient Greek phyſicians had; who referred theſe diſtempers to ſomething in the air, which is not the object of ſenſe, but which, like the Supreme Cauſe of all things, only manifeſts its exiſtence and power to us by its effects. This ſomething, therefore, though different in different epidemical conſtitutions, was not improperly called by Hippocrates τὸ θεῖον.

I have only to add, that in this part of the country, in the month of September, many horſes and dogs were ſeverely afflicted with colds and coughs. Which circumſtance, it ſhould ſeem, was not merely accidental; ſince it has been obſerved, that horſes were infected before men in three general epidemical conſtitutions that have happened in our time. And I am inclined to think, that the peſtilence mentioned by Homer, which, within the ſpace of nine days, ſpread itſelf over all the Grecian quarters, and a little while after diſappeared, was an Epidemic of the ſame kind; becauſe neither the true plague, nor any other epidemical diſeaſe, with whoſe hiſtory I am acquainted, has been known to make ſo rapid a progreſs, or to end ſo ſoon, as that peſtilence did.

Dr. A S H.

Birmingham, Dec. 2, 1775.

1, 2, and 3. THE Epidemic, of which we had accounts in the public papers from London, made its appearance in this place about the middle of November; and no freſh ſubjects were attacked with it after the 7th or 8th of December. The period of it did not exceed a month; there was no diſtinction

tinction of the ſexes amongſt grown perſons: thoſe who were moſt in the air were, in general, leaſt affected: few children diſeaſed.

4, 5, 6, and 7. In the town many were ſuddenly ſeized, eſpecially in the morning early, with univerſal rigours, and pains in the limbs and back part of the head, a roughneſs rather than ſoreneſs in the throat, great laſſitude and dejection of ſpirits, great oppreſſion on the præcordia, and ſome few with pleuritic pains. Many complained of a nauſea, and an inclination to vomit. The tongue was generally moiſt in the beginning, with a whiteneſs and ſometimes a darker cruſt toward the back part of it. The ſkin was ſeldom hot or dry, and the general temperature of the habit moderate. The appetite, except in the ſubjects who complained of nauſea, was not much affected; but the patients in general complained of a total loſs of a diſtinction of taſte of one kind of food from another. The cough was inceſſant, eſpecially on lying down in bed. In no patient, whom I attended, was there any hardneſs or tenſion in the pulſe: and it never appeared neceſſary to take any blood away. In ſome few who had been blooded, on account of an hæmorrhage from the noſe, through the violence of the cough, the blood appeared florid, and of a tender texture; the urine was ſecreted generally in ſmall quantities, and, of courſe, high-coloured: the ſtate of the bowels uncertain. Where a tendency to a diarrhœa came on, it generally removed the diſeaſe; and where a want of ſtools indicated an aperient in the beginning of the diſeaſe, it had in general the ſame happy effects.

8, 9, 10, 11, and 12. An early attention to adminiſter and repeat ſome mild cathartics, with diluting cooling liquors and mild diaphoretics, ſoon brought on an eaſy expectoration, and removed all the other ſymptoms, except the cough, which generally continued, in ſome degree, ten or twelve days, but was much relieved by ſmall doſes of anodynes. The aged and diſeaſed patients, eſpecially aſthmatics, ſuffered moſt, and to ſome few it proved fatal. In the progreſs of the diſeaſe, when not immediately relieved by the firſt intentions, many difficult and perplexing ſymptoms aroſe that were not eaſily removed, and often appeared alarming. Gentle and repeated purgatives were of the moſt certain uſe; and, if not early adminiſtered, or neglected to be repeated, an obſtinate coſtiveneſs ſometimes came on, that was to be relieved only by clyſters frequently repeated; and, in one caſe, all efforts of that kind were ineffectual; and, although the heat was moderate the whole time, the diſeaſe proved fatal, and terminated in a mortification of the bowels.

In theſe aggravated ſymptoms of the diſorder the nights were in general diſquiet; the cough continued violent, although the expectoration was plentiful; and the head was affected. Bliſters were generally of good effect, and fomentations and ſinapiſms to the feet gave great relief. The diſeaſe was par-

ticularly troubleſome to women in the latter part of their pregnancy. A healthy young woman, very near her time, was ſeized with this diſeaſe: the ſymptoms were more violent than common; but no aſſiſtance was called to her, on a ſuppoſition that medicines were improper in her preſent ſituation: after her delivery all aſſiſtance was in vain, and ſhe died phrenetic on the fifth day. Her child was born, to all appearance, in a healthful ſtate, but was ſeized with convulſions the ſecond day after its birth, and died the evening preceding the mother's death. I was called upon to attend two other women in the ſame ſituation, and directed for them the uſual methods of treatment; they had both a happy delivery, and the cough and all other ſymptoms ceaſed ſoon after, except the dejection of ſpirits, with ſome ſlight palpitations of the heart, which ſoon gave way to fœtid medicines.

The diſeaſe, in its decline, often aſſumed the form of an intermittent; and the Peruvian bark ſeemed immediately indicated, but it never had its wiſhed-for or expected ſucceſs: it ſeemed to aggravate the diſeaſe, and threatened to bring on a relapſe, and was never of uſe except it acted as a briſk purgative on its being firſt given, which was often its immediate effect; if not, it was highly prejudicial. Beſides; the gentle and mild cathartics, frequently repeated, with diluting liquors; mild diaphoretics, with ſmall doſes of emetic tartar in every form of medicine; emetics were given with the greateſt ſucceſs, eſpecially when the nauſea immediately indicated them; but if not immediately indicated, were in general found to abate the progreſs of the diſeaſe.

The different ſtate of the blood in this place, from what you found it in London, deſerves our peculiar attention. In a workhouſe in a neighbouring town, *three* died of the Epidemic, who were all blooded: all the reſt recovered, who were not bled, but took the repeated purgatives only, and the *Decoctum Nitroſum*.

Dr. W. WHITE.

York, Dec. 22, 1775.

THIS Epidemic Diſeaſe ſeems to have appeared rather earlier with us than in London: it was obſerved before the end of October, became general in the beginning of November, at which time many whole families were indiſpoſed. Not one dwelling-houſe eſcaped: I was myſelf ſeized with it on the 2d of that month; and, in a very ſhort time, it became the moſt univerſal diſeaſe that hath

hath been remembered with us. It was much abated by the firſt week of December, and ſeems now to have entirely left us.

The attack was generally ſudden, with a ſenſe of ſevere coldneſs, eſpecially in the back and lower extremities. This, in many, was attended with a giddineſs; in a few, with nauſea and abhorrence of food, generally uneaſineſs about the præcordia, great anxiety, and wearineſs. The pulſe ſmall and contracted, from ten to twenty above the natural rate; urine pale; body generally coſtive. Some had more or leſs ſoreneſs in the throat, and what is called a ſtuffing in the head, and ſneezing violently; all had a very bad tickling cough, which ſoon cauſed ſtitches and ſoreneſs in the breaſt.

Thoſe ſymptoms, as they were more or leſs violent, were ſooner or later followed by feveriſh heat, but ſeldom to any high degree, remarkable ſoreneſs all over the body, and ſlight pains in the head, limbs, loins, and breaſt. The urine now ſeldom high-coloured, forming a cloud when cold; a diarrhœa uncommon here, the contrary ſtate common. Pulſe in moſt one hundred in a minute, in ſeveral much quicker, ſeldom full or ſtrong. Tongue whitiſh, but moiſt, little remarkable thirſt; a complaint of a bad taſte in the mouth was general, and the breath offenſive.

No regular criſis was obſervable; the fever was of the remittent kind, and gradually ſubſided in general. All became much worſe in the afternoon, and ſo continued till three or four o'clock the following morning, about which time a moderate ſweating relieved the patient, who, after a few hours of quiet ſleep, awoke much eaſier: the diſeaſe thus went on ſeveral days, without any intervening cold fit. For four days together my pulſe was 90 (15 above the natural rate) in the morning, in the evening 115: the ſame I obſerved in ſeveral others.

In all, the nervous ſyſtem was much diſordered, various affections of the ſpaſmodic kind occurred, and the anxiety, deſpondency, and reſtleſſneſs, were much more remarkable than the general mildneſs of the vaſcular irritation gave room to expect.

Regarding the prognoſis: A quick recovery followed ſuch urine as quickly turned milky after making, ſoon after depoſiting a copious ſediment; it was always attended with moiſt ſkin, an abatement of the cough, the quickneſs of the pulſe, and anxiety. Some had more conſiderable ſweats; I ſaw no criſis by a ſpontaneous diarrhœa, nor any recovery without the urine above mentioned.

This Epidemic was, with us, in general ſo mild, as ſeldom to engage the attendance of a phyſician; yet it brought ſome aged aſthmatics, and young people of a conſumptive habit, into imminent danger: of ſuch a few died in this city, eſpecially the former.

As to the curative part, it was ſeldom neceſſary here to take away blood:

ſome were relieved by it, but, in general, it did hurt, by depreſſing the patients. An ingenious apothecary, who, from his extenſive practice, had a very great number of the ſick under his care, informed me that this evacuation ſeemed to relieve ſome immediately, but that he never ſaw in any other diſeaſe ſo many bad ſymptoms follow bleeding as in this Epidemic. Gentle cooling purgatives were univerſally beneficial in abating the anxiety and raiſing the ſpirits. Emetics were ſeldom indicated; nor were bliſters often required, but were uſeful in abating the cough and ſtitches.

The diſeaſe was ſeldom ſo violent as to call for antimonials; but when uſed, as I did in ſeveral caſes, they never failed in their febrifuge effects. I never gave an anodyne until the pulſe was conſiderably reduced, to about 80, then they had every deſirable effect: when given without this rule they often diſagreed with the patient, acting as a ſtimulant.

The appearance of the urine above mentioned, which was always attended with other ſigns of an apyrexia, was my rule for giving the cortex; and it never failed in quickly reſtoring the patient. Without its aſſiſtance ſeveral continued for ſome time in a weak and irritable condition, ſo as to alarm their friends with the apprehenſion of a conſumption. I was called to one patient who had been a month in this ſituation, weak, languid, diſpirited, and worn out with a violent cough and want of ſleep; his urine was as above deſcribed: the cortex, and an anodyne at night, with riding upon horſeback, ſoon cured him.

But, in general, a few days confinement, abſtinence from fleſh meat, and frequent ſippings of ſome tepid pectoral drink, ſufficed for the cure. But it was univerſally found neceſſary to allow a nutritious diet; and ſuch as had been accuſtomed to liquors of the more ſtimulating kind became worſe if debarred their uſe; the anxiety, inquietude, and other nervous affections, being encreaſed by ſuch procedure.

Although I keep a journal of weather, I think it unneceſſary to relate it; it agrees pretty much with Dr. Fothergill's account. I ſhall juſt obſerve, that the Epidemic was probably checked here by a ſudden ſevere froſt and ſnow. The thermometer, which had been for ſome time between 40 and 50, fell in one night's time to 22, and continued for ſome days below the freezing point. It is one of Farenheit's, and hangs in a garden behind my houſe, having an open expoſure to the ſouth-weſt.

The above account of the Epidemic, as it appeared at York, may be depended upon for its exactneſs, being the reſult of my own and the joint obſervations of the Faculty here, and it will give me pleaſure to find it acceptable to Dr. Fothergill.

W. W.

Dr.

Dr. HAYGARTH, *Cheſter.*

THE Epidemical Catarrh of 1775 ſeized, in general, the inhabitants of Cheſter about the middle of November. From the 15th till the 25th of that month the diſtemper ſpread moſt univerſally; yet very few were attacked ſo late as December. Indeed I ſaw one caſe, on the 2d of November, of a lady who had ſuffered manifeſt ſymptoms of this Epidemic ſix days before; but I heard of no other inſtance of its appearing here ſo early, and the diſorder did not become general till near a fortnight later. This Epidemic pervaded all North Wales within three or five days after its general ſeizure of the inhabitants in Cheſter; that is, on the 18th or 20th of November, as I have had authentic information from every town and every conſiderable village, and their neighbourhood. I was curious to know how thoſe were affected who were moſt ſecluded from the intercourſe of ſociety; an intelligent practitioner informs me, that in Llyn, the moſt weſtern and remote corner of Carnarvonſhire, this Epidemic began about the 20th of November, was general through every part of this peninſula, and affected all claſſes of people: that one in a family now and then eſcaped it, but that he knew no family, however ſmall, among whom it did not make its appearance. My medical correſpondents mention, that ſome caſes occurred in one part of Wales ſo early as October the 27th, and in another the beginning of November. In the weſtern part of Cheſhire, and that part of Shropſhire which borders on Cheſhire, I obſerved that this diſeaſe began ſoon after the middle of November. However, I am certain that in ſome Cheſhire villages the Epidemic had not appeared till more than ten days later, though it afterwards viſited theſe places. Theſe facts, compared with the general ſeizure, make the theory of this Epidemic very difficult. On the whole, I believe people in the country were attacked rather later than in the towns they ſurrounded, leſs ſeverely, and leſs generally; however, not only the inhabitants of villages, but of ſolitary houſes, were ſeized with this diſeaſe. I could not diſcover that high or low, dry or moiſt ſituations, the neighbourhood of mountains, or of the ſea, or any other particular expoſure, rendered the Epidemic either later or milder; though I made very circumſtantial inquiries to aſcertain theſe facts.

In this Epidemic at Cheſter the catarrhal and feveriſh ſymptoms were moſt general; yet I ſaw a few caſes of fever without cough, and more of cough without fever. The *catarrhal* ſymptoms were, a frequent cough, which generally brought up pellucid phlegm, and in old people a plentiful yellow diſ-

charge; but in ſome caſes was dry, hard, and violent: a copious watery defluxion from the eyes and noſe, frequent ſneezing, hoarſeneſs, and ſore throat. The *feveriſh* ſymptoms commenced ſometimes before and ſometimes after the cough, and began with chilly and hot fits, irregular and alternate, followed by laſſitude, inquietude, uncommon loſs of ſtrength and ſpirits, want of ſleep and appetite, giddneſs, acute pain in the head, cheſt, or a particular point of the belly, all increaſed by coughing; alſo an aching pain in the head, back, hips, and limbs. The pulſe was ſeldom very full or ſtrong, except in peripneumonic caſes; the ſkin had often no unuſual heat; the tongue was generally white and moiſt, ſometimes yellowiſh and furred; the urine appeared variouſly, but was commonly high-coloured during the fever. Unleſs an inflammation attacked the lungs, which was a frequent and dangerous termination of the diſeaſe, the fever uſually ceaſed in a few days. The cough continued longer, and was of more uncertain duration. The preceding ſymptoms were by far the moſt univerſal, and exhibit the regular appearance of the diſeaſe.

The moſt common anomalous complaint was a diarrhœa, with blackiſh ſtools: ſickneſs and vomiting occurred leſs frequently. I ſaw five patients who had fallen down in a ſwoon, preceded by a violent head-ach; three of theſe were young women, who had the other ſymptoms very mildly; the fourth was a gentleman of an athletic habit, who was never confined by the diſeaſe; and the fifth was a married lady, who, without a preceding cough, had a very violent looſeneſs, ſucceeded by a phrenetic delirium, and then by a very urgent cough; the looſeneſs, delirium, and cough, ſucceeded alternately to each other twice over in a regular manner, but never exiſted together: at laſt a red rough itching raſh covered the whole body, after which no ſymptom but the cough remained. In a young girl, a ſmooth redneſs of the ſkin covered a great part of her body, exactly like the appearance in ſcarlet fevers. One caſe differed entirely from the uſual inflammatory type of the diſeaſe. A young lady at a boarding-ſchool was ſeized at the ſame time, and with like ſymptoms, as 26 of her ſchool-fellows. Two days after her firſt indiſpoſition a diarrhœa, with black ſtools, began, and continued above three weeks, attended with a putrid fever, black dry tongue, fauces, and lips; ſordid teeth, total deafneſs, and an idiotic delirium; yet ſhe recovered. Her mother and two other attendants were infected by this fever, in which their heads were principally affected with violent pain and a wild delirium: the fever was fatal to one of the attendants, who died phrenetic. The proof of infection, in this putrid fever, was moſt evident; but I ſaw no inſtance of the epidemical catarrh that appeared to be communicated by infection. A very large proportion of the inhabitants of Cheſter were ſeized with this epidemic; but, as far as may be concluded from one obſervation, it appears that there were fewer in the higher than the lower

ranks

ranks of ſociety. In the Abbey Square, inhabited by perſons who live in eaſe and affluence, only 73 were attacked out of 97 neighbours; that is, ſcarcely more than 3 in 4; at the Croſs, inhabited by people in trade, that compoſe the middle rank, 109 had the diſeaſe out of 114, that is, nearly 18 in 19; whereas in the Houſe of Induſtry not one perſon eſcaped the diſorder out of 175. Other diſeaſes did not preclude this: I ſaw it accompany meaſles, conſumption, mortification, gout, ſcurvy, dropſy, jaundice, &c. It attacked many who were confined to their houſes, and even to their beds, with other ailments. Young children in general recovered ſooneſt, and had feweſt violent complaints: however, I was informed by a perſon of ſkill, that he ſaw one child of two, and another of three months old, with evident ſymptoms of this diſtemper. It was moſt fatal to the aged, the aſthmatic, and thoſe who were debilitated by other diſorders.

A ſlight degree of the diſeaſe ſoon went off without confinement, any particular diet, or medicines; but many aggravated both the fever and cough, by expoſing themſelves to cold. With a large number the ſymptoms were ſo violent as to confine them to the houſe, and even to bed: in theſe caſes plenty of cooling and diluting liquids, drank warm, by encouraging ſweats which came on ſpontaneouſly, ſeemed greatly to abate the fever. When the cough was very violent, during or after the fever, bleeding in general manifeſtly alleviated it, though the blood had ſeldom a thick ſizy cruſt, and often none at all. In one caſe, even at ſo advanced an age as 75, the breathing was ſo laborious, from a ſuppreſſion of the cough, and the relief from bleeding was ſo manifeſt, and ſo immediate, that it convinced both my patient and myſelf that this remedy ſnatched her out of the very jaws of death. In ſome caſes, antimonials manifeſtly abated both the fever and cough; in ſome, bliſters were of ſervice; in general, cooling purgatives and other antiphlogiſtic remedies and regimen, which it is unneceſſary to ſpecify, had a ſalutary effect.

At Cheſter, the ſpring of 1775 (March, April, May, and beginning of June) was remarkably dry, and the three laſt of theſe months unuſually warm: on April the 28th, at two P. M. the thermometer was 72° in the ſhade. July, Auguſt, and September, were wet and warm. On the 19th and 20th of October, for 48 hours, was a ſtorm of wind from the weſt, attended with rain. The ſtorm was remarkable, both for violence and duration, which wrecked many ſhips on our coaſt: the news-papers did not ſhew that it extended to any great diſtance; but different ſtorms are mentioned to have happened at different times: their hiſtory, connected with that of the catarrh, may illuſtrate the queſtion whether epidemics have any dependence on ſtorms. During November the wind was generally from the eaſt: the air was hazy for an unuſual

number

number of days in this month. About Auguſt and September, in North Wales, almoſt all the horſes were ſeized with coughs.

Though I find that 18 epidemics of this kind have been recorded in medical books during the laſt 400 years, yet perhaps it may not be deemed ſuperfluous to mention another inſtance of this catarrh, which ſeems to be different from the hiſtories I have had an opportunity to conſult, in regard to the age of thoſe who were affected. The diſtemper was general in this city and neighbourhood: the annexed caſe happened 15 miles from hence. As theſe epidemics are generally mildeſt in warm weather, the ſeaſon probably was a cauſe of its being attended with moderate ſymptoms. The following account is extracted from a letter I wrote to my highly-eſteemed friend, Dr. Watſon, junior, on July 5, 1769:

" In May ſome children were attacked with a cough and fever. Towards " the middle of June the diſeaſe became almoſt univerſal among children, " between a few months and eight or ten years old, very few eſcaping. In " general it ſeized upon all the children in a family, though ſome inſtances " occurred where only one was attacked out of ſeveral who lived together. " Others in the country, who had no communication with the infected, were " ſeized about the ſame time, and with equal violence. Hence this catarrh " ſeems to have been occaſioned by the epidemical conſtitution and unknown " influence of the air, rather than infection. Though the diſeaſe has been " univerſal, I have heard of but two or three caſes in which it was fatal. " The ſymptoms of this catarrh are, a ſhort frequent tickling cough, exactly " like the cough which attends the meaſles; ſome are firſt ſeized with ſneezing. " In a few days the fever begins, with a quick frequent pulſe, a hot and " ſometimes a moiſt ſkin, and a white tongue. The cough generally begins " before the fever, and continues after it. Some children have the cough " (which is a very diſtinguiſhable one) without any fever. During the fever " they are generally very ſleepy, and ſometimes delirious: a difficulty of " breathing generally comes on when the cough and fever are violent. The " urine, in all the caſes I have ſeen, has a copious white ſediment; the blood " is very ſizy; worms are frequently diſcharged by ſtool during the fever. " This circumſtance has increaſed a ſuſpicion I have entertained for ſome " time, that worms are not ſo often as ſuppoſed, or probably not at all, " the cauſe of fever. It is natural to expect that fevers ſhould expel worms " from the inteſtines, but not very likely that worms could produce fevers, " for many reaſons that might be adduced, were this the proper occaſion of " diſcuſſing the point.

" In this epidemic, bleeding gave immediate relief. Emetic tartar abated

" remarkably

" remarkably both the fever and cough: theſe, with bliſters and cooling " diluting drinks, are the remedies on which I principally depend. I do " not know of any caſe that ended fatally when treated in this method: one " of thoſe who died was not blooded. I will tranſcribe you a caſe to illuſtrate " the diſeaſe, in a conciſe method, that I keep the hiſtory of almoſt all my " patients:

" Junii 17, 1769. Ætatis 6, Miſs D—— Tuſſis, dies viii. nunc brevis,
" frequens, et pituitam movens. Febris, dies v. nunc cutis calor auctus,
" madorque; lingua albida; P. 132; capitis dolor; urinæ ſedimentum
" album, copioſum.
" V. S. ℥ v. Hirudo tempori. Tart. emet. gr. $\frac{1}{4}$, 2^{dis} horis ad ſurſum vel
" deorſum purgandum, quotidie. Veſic. dorſo.
" Jun. 25. Apyrexia. Tuſſis tantùm matutina.
" Hauſtus Peruvianus ter quotidie.
" Jul. 1. Ad ſanitatem perducitur.

" In this caſe emetic tartar, in others bleeding, gave moſt relief. It may " not be improper to mention, that while this epidemic prevailed, I met with " a caſe of the *croup*, diſtinguiſhed by a peculiar hoarſe wheezing reſpiration: " this patient, who was a boy about five years old, ſpat up from his wind- " pipe four white tough membranes, about four inches long, and half an inch " broad, on which the wheezing ceaſed. In this caſe both the tonſils and fauces " were covered with a white membrane. It ſeems remarkable, that this diſeaſe, " which is frequent in Scotland, Sweden, Germany, America, and the Weſt " Indies—places ſo diſtant, and ſo different in climate—ſhould never have ap- " peared in London, as I was lately aſſured by a phyſician of long and the moſt " general practice in that metropolis *. In Cheſter, and North Wales, ſeveral " caſes have occurred to my obſervation within a few years."

Dr. R. PULTENEY, *of* Blandford, Dorſetſhire.

In order to acquire the moſt accurate information reſpecting the Epidemic Influença, Dr. FOTHERGILL *ſent printed Sketches of the diſeaſe, with the preceding Queries,*

* This diſeaſe, of the Croup, occurs not unfrequently in the neighbourhood of London. *Editor.*

to ſeveral of his correſpondents in the country. Dr. Cuming tranſmitted one of theſe to his friend Dr. Pulteney, of Blandford; and the following anſwers from him were addreſſed to Dr. Cuming, by whoſe means I procured them; and, from a reſpect to the elegant author of A general View of the Writings of Linnæus, *I have inſerted the original, rather than the abridgment in the Medical Inquiries.* Editor.

Blandford, Dec. 17, 1775.

1. I THINK we heard of the diſorder in this country rather earlier than the beginning of November. I had this Epidemic myſelf among the firſt. You recollect my being ill, when we were together in the middle of October; and I did not get well in leſs than three weeks after that time.

2. I remarked, that the ſervants in many gentlemen's families were all ſaid to be ill of *the Diſtemper*; and that it was conſidered among themſelves as what they caught of each other.

4, 5. My obſervations, I think, confirm this detail of the ſymptoms, as far as the number of patients, that I was profeſſionally concerned for, will allow me to judge.

7. Two or three that I ſaw, who ſuffered conſiderably from it, had very dark-coloured ſtools in the beginning.

8. This obſervation was remarkably true with reſpect to ſeveral that fell under my care; who were ſo teazed with the cough, as to induce them to get out of bed and ſit by the fire in the night-time; by which method they gained a truce, and thought themſelves much relieved.

10. No means ſeemed to produce a better effect, in ſuch as ſuffered greatly from this diſorder, than bleeding: and, as far as I could judge, they bore it uncommonly well. I believe I mentioned to you in a letter, that, ſo far from finding any thing really putrid in this diſeaſe, as was then believed by ſome, on the contrary I had not remarked, for ſeveral years paſt, the ſame general neceſſity for bleeding, or the ſame good effects from it. Yet, had I not ſeen that good effect, and remarked the ſizy appearance of the blood, I own the black colour of the ſtools, in two or three caſes, would have deterred me, at leaſt, from the repetition of it.

11. It occurred to me, that bliſters, in ſeveral inſtances, did not abate the cough ſo much as might have been expected, and, as often happens, eſpecially for a night or two at leaſt, while the ſerous diſcharge continues ſomewhat copious.

Anodynes did very well after ſufficient evacuations; but I did not make much uſe of them, as I thought, in ſome caſes, they diſpoſed to profuſe ſweatings in a morning.

Excepting

Excepting bleeding, I truſted more to gentle, repeated, evacuating medicines, than to any other. I thought ſmall doſes of James's powder, with or without rhubarb, anſwered this purpoſe remarkably well. Indeed I was led ſometimes to acquieſce in giving this medicine, from having found my patients in the uſe of it when I was called in, and in finding that it had done well with them. Nevertheleſs it was judged neceſſary to repeat bleeding, in ſome caſes, to the third time, and I did not think that I ever had reaſon to be diſſatisfied with it.

12. Although ſomething like an intermittent type was remarked in a few caſes, yet I judged the diſorder to be going off at that time, and did not direct the bark.

13. I am certain, as to myſelf, that I never rode out, whilſt I ſuffered from this diſorder, without aggravating the cough. And, more than once or twice, when I thought it going off, a ride brought it on again with conſiderable violence: yet, at laſt the cough left me very abruptly, without my being able to aſſign any particular cauſe for ſo ſudden a departure.

15, 17. It ſeems to me that it was by no means ſo univerſally felt with us as it appears to have been in London; and I do not know of one perſon who fell under my particular cognizance, either profeſſionally or otherwiſe, that died of it.

20. I heard much of horſes and dogs being affected, before it was felt among the human race; and I remember to have ſeen blood that was taken from horſes, at the time, uncommonly ſizy: but I apprehend this appearance to be very common, and that the blood of ſtabled and pampered horſes has uſually this appearance on almoſt all occaſions.

Dr. WILLIAM THOMSON, *of* Worceſter.

Dec. 20, 1775.

THIS diſtemper became general here about the middle of November, and ſpread gradually in the country around.

In ſome, the head was affected to a degree of ſtupor and delirium, which were relieved as ſoon as the cheſt was affected.

A diarrhœa frequently happened, and always moderated the other ſymptoms.

In moſt caſes, where the ſymptoms were violent, bleeding was neceſſary, even to the third time: nor did I obſerve any inconvenience from it.

The fatal conſequences of the diſorder to old aſthmatic people were frequent hereabouts.

People in general recovered ſlowly, and, for a good while, ſuffered great weakneſs and dejection.

G. SKENE, *of* Aberdeen.

IT began here near the end of November, and continued for four or five weeks: the ſecond and third week it was very general. It went regularly northward, but was not univerſal to the north of this city. It did not viſit Fraſerburgh, though there was a putrid fever there very fatal at that time.

The diſeaſe never aſſumed the type of an intermittent here; but it is to be obſerved, that the intermittent fever is not known in Aberdeen. We never ſee a regular intermittent, except the patients bring it from other climates immediately, or have been great ſufferers by it formerly in other countries; and our fevers very rarely aſſume that form in their decline.

Dr. D. CAMPBELL, *of* Lancaſter.

Feb. 18, 1776.

WHEN the diſorder became ſo univerſal here, I think its nature, as a *contagious* complaint, might (beſides its running ſo generally through whole families) be fairly proved by its progreſs from London to the North. Every account ſhewed the prevalence of this epidemic in *London*, for near three weeks before it extended to *Lancaſter*. Even when almoſt every perſon at *Liverpool* was attacked by it, I ſcarcely remember to have heard, upon the moſt diligent enquiry, that a greater number of perſons was affected with catarrhous ſymptoms than uſual. But I think in about three days after we had been informed of the frequency of the complaint at Liverpool, there was ſcarcely a family in this town but had one or more perſons ſeized. About this

this time I remember to have ſeen a gentleman from Kirkby Lonſdale, which lies about fourteen miles hence, in a north-eaſt direction, who informed me, not a perſon he then knew of was, at that time, affected there; but the next week he informed me, it was then equally univerſal as with us. At the ſame time he told me, that *Kirkby Steven* (which lies about the ſame diſtance from Kirkby Lonſdale, in a ſimilar direction) had yet eſcaped. In a few days, however, I underſtood the complaint was equally general there.

Theſe complaints, which in a manner diſappeared on the ſetting-in of the froſt, in the beginning of January, have, ſince the thaw, which took place the 1ſt of February, again become rife, though not with the ſame frequency and violence as in December.

SOME ACCOUNT

OF THE

DISEASE OF WHICH DR. FOTHERGILL DIED.

THE urinary bladder, though ſituated in the lower part of the abdomen, where it is acceſſible, by the paſſage of the urethra, to the introduction of an external inſtrument; and, poſteriorly, by the rectum, almoſt to the contact of the finger; is nevertheleſs liable to diſeaſes, the ſtate and nature of which, during life, have been ſo dubious, as to be aſcertained by diſſection only after death. Morgagni *, who has paid attention to the diſeaſes of this viſcus, admits this difficulty; and the Symptomata and Extiſpicia of Lieutaud † afford the moſt deciſive proofs of this uncertainty, as well as the Noſologia of Sauvages ‡, and the writings of many other authors of celebrity §.

Dr. Fothergill's diſeaſe was one of thoſe attended with ſome obſcurity: we may trace ſymptoms of it as early as 1778, which was almoſt two years before its fatal termination. I have before me the Doctor's own opinion upon

* De Cauſis et Sedibus Morborum, lib. iii. lit. 41, art. 12, and particularly 13, 16, 17; and his numerous authorities, to lit. 43, art. 4.

† Hiſtoria Anatomico-Medica, vol. i. p. 293, et ſeq.; vol. ii. p. 330; Obſ. 1333 ad 1352.

‡ Noſologia, vol. ii. p. 520, et ſeq. de Iſchuria.

§ It is not my deſign to ſpeak particularly of the diſeaſes of the bladder; and therefore refer to the writers already quoted, and to their numerous authorities, which may be ſeen under the pages to which I have referred.

I may likewiſe add here, that Hippocrates, and many ancient writers, contain very uſeful facts upon this ſubject; and of the moderns, conſult Hoffmanni Oper. tom. iii. p. 275; Suppl. Secund. p. 476; De Exulceratione Veſicæ; Comment. de Rebus, vol. xvii. p. 3. pag. 641; and particularly Acta Academ. Regiæ Scientiar. an. 1758, vol. xix.; Comment. de Rebus, vol. viii. p. 16, vol. xix. p. 469, vol. xxi. p. 500; Adverſaria Medico-Practica, vol. ii. p. 675, entitled, Commentatio de Iſchuria ex Tumoribus Veſicæ; Petit Traitè des Maladies, &c. tom. iii. p. 7; Journal de Medécine, par M. A. Roux, tom. 31, Paris 1769.

the

the firſt attack of his diſorder, as communicated to ſome of his diſtant correſpondents ſoon after his recovery. To one of them he relates the following particulars, which I ſhall tranſcribe:

November 30, 1778. "This day fortnight I found, on waking out of a "ſhort ſleep, a forcible inclination to make water, but without the power. "I had perceived ſome heat and unuſual difficulty, for a day or two. I im- "mediately got up, took a ſaline laxative which I had in the houſe; and found "myſelf ſo much better next morning, as to go my uſual round of buſineſs. "In the night I was ſeized with a total retention: I was bled, had repeated "injections inſtantly, but to no effect. I took oily and highly anodyne "draughts; and, without the leaſt mitigation of pain, took upwards of 200 "drops of Tinctura Thebaica in the ſpace of a very few hours, which barely "mitigated my diſtreſs; till, after repeated and fruitleſs attempts to draw off "the water, with grievous ſuffering to myſelf, and no ſmall difficulty to the "moſt experienced operator in Britain, we at length ſucceeded. I ſtill "continue under the neceſſity of having it drawn off twice a day, not a "drop paſſing without it; but the operation becomes daily rather leſs painful "to myſelf, and leſs difficult to my friend Percival Pott, who attends me.

"The immediate cauſe of this difficulty ſeems to be a great thickening of "the neck of the bladder, which was the effect of inflammation. This, being "a recent cauſe, and all fever now removed, will probably ere long give "way.—To this another cauſe is added, which will require attention hereafter, "if I am permitted to ſurvive; an enlarged, but not otherwiſe morbid, proſtate "gland."

To another correſpondent, about two weeks afterwards, when the ſuppreſſion was removed, he offers a further explanation of this diſeaſe.

"Emptying the bladder as often as diſtenſion made it neceſſary, was the "only certain relief I had, till the obſtructing cauſe, an inflammation near the "bulbous part of the urethra, which cloſed the paſſage totally, was removed "by evacuations and regimen. In proportion as this gave way, the parts "began to produce their uſual effects, weakly and irregularly at firſt, but "by degrees more naturally and uniformly; for I found a conſiderable defect "in this operation for a long time, for want of all the parts concerned in it "uniting in action in the ſame moment.—If the bladder contracted, and the "ſphincter was not opened the ſame inſtant, pain enſued: if theſe acted at the "ſame time, and the muſcles neceſſary for its progreſs through the urethra "did not inſtantly lend their aſſiſtance, all was ineffectual. As ſtrength "returns, I find all theſe difficulties abate."

From this period he continued gradually to recover, and to regain all his uſual functions, except the ability of retaining his water as long as formerly;

and diſcharged the duties of his profeſſion with his uſual application and aſſiduity.

Soon after he began to recover he felt a pain, though not very acute, in one heel, which he aſcribed to the gout; and his ſubſequent continuance in health confirmed him in opinion, that the diſeaſe he had ſuſpected in the proſtate gland, was not a morbid enlargement, but a gouty affection of that part.

Under this deception he remained till the 12th of December 1780, when the ſecond and final attack commenced. He had, on this day, been inceſſantly engaged in his profeſſional duties till late in the evening; and had experienced throughout the day more frequent irritations to make water than uſual; but it was not till midnight that he perceived a total ſuppreſſion, accompanied with acute pain about the neck of the bladder. To obviate the pain, he had recourſe to a large doſe of laudanum; and in the morning the catheter was attempted to be introduced, but without effect: a conſiderable tenſion of the abdomen gradually ſupervened, on which account purgative medicines and clyſters were repeatedly adminiſtered; which, however, did not produce any inteſtinal diſcharge for near three days, either from the torpor of the canal, increaſed by opium, or from the preſſure of the bladder, enlarged by obſtructed urine, and its neck by a tumor, which diſſection afterwards more fully aſcertained.

To remove the inflammation, he was bled in the *arm*; and, after a few days from the attack, he occaſionally made uſe of a warm bath in his bedchamber.

In the whole progreſs of this diſeaſe no material variety of ſymptoms occurred. After the means were uſed to obviate inflammation, by bleeding, by laxatives (to which the inteſtines ſlowly and reluctantly anſwered, without removing the abdominal tenſion) by diluents, and a tepid bath, almoſt the only reſource was in the catheter: and this inſtrument, which, on a former occaſion, had afforded the moſt happy relief, was unavailable in the preſent inſtance, though directed by the ſame able hand *. However, though no urine was diſcharged by the catheter, a ſmall quantity was continually oozing through the urethra, which tended to prolong a painful exiſtence to the 26th of December, when he died.

It would prove of little utility, in the preſent caſe, to deſcribe every trifling variation in the ſymptoms of the diſeaſe itſelf, or the minutiæ of medical treatment. By the catheter no urine could ever be evacuated: after ſtools had been with difficulty procured by oily and ſaline purgatives, aided by clyſters, to leſſen the enlargement of the proſtate gland calomel was taken

* Dr. Watſon, Dr. Warren, and Dr. Reynolds, were his phyſicians; and Percival Pott the ſurgeon alluded to.

internally,

internally, and ſmall quantities of mercurial ointment were rubbed on the perinæum. When the pain was violent, opiates were neceſſarily given.

The pulſe, eſpecially in the early period of the diſeaſe, was hard and quick; the whole abdomen was tight, and amazingly tumified; the tenſion juſt above the os pubis was ſtill more conſiderable. He expreſſed his feelings to me, as if he had been violently inflated with wind to an unuſual magnitude; and his thirſt was almoſt inſatiable; but, throughout the courſe of the diſorder, his ſenſes were remarkably uniform and collected.

THE DISSECTION.

UPON inſpecting the dead body, the whole belly appeared to be conſiderably, but by no means uniformly, ſwollen, the tumeſcence being much greater on the left ſide than on the right.

Upon opening the abdomen, ſcarcely any veſtige of an omentum was to be found; although there was no deficiency of fat any where elſe, where it might be expected.

The *bladder*, containing a large quantity of urine, was ſo diſtended as to reach nearly as high as the navel; the coats were very conſiderably thickened, and the greater part of its bulk or volume occupied the left ſide of the body, owing to an unnatural connection with the parts in its vicinity on that ſide. The coats of this organ were much thickened every where, and in the lower part of its cavity, cloſe to its neck, was found a fungous excreſcence, in ſize ſomewhat larger than the largeſt of what are commonly called French walnuts, and longer in proportion to its breadth: it was hard, rough, unequal in its ſurface, of a pale red colour; and was largely and firmly attached to, if not ſpringing from, the internal coat of that part of the bladder which was next to its neck.

In the ſuperior part of the fungus, the body lying ſupine, there was a diviſion or ſlit, forming a kind of gutter or channel, which paſſed through about half the thickneſs, and occupied ſomething more than half the length, of this excreſcence. By means of the gutter or channel the catheter had always, during the Doctor's laſt illneſs, been with facility admitted into the body of the fungus, but could never proceed further; by which, although it was truly in the bladder, yet, being within the fungus alſo, it could never ſerve the purpoſe for which it was introduced.

On

VESICA. *Urinaria.*

J. Church del.

On the other hand, this gutter, ſeveral days before the Doctor died, had ſuffered ſuch a quantity of urine involuntarily and continually to paſs off, as, though inſufficient to empty the bladder, or remove its diſtenſion, had yet been fully ſufficient to prevent either its becoming gangrenous, or burſting; of neither of which was there the ſmalleſt appearance.

In the middle of the fungus was a ſmall ſtone, about the ſize of a very ſmall horſe-bean, but thin and flat *.

The proſtate gland itſelf was enlarged, hard, and by no means in a natural ſtate.

EXPLANATION *of the* PLATE.

The bladder, with part of the urethra opened from the anterior part.

a a. The body of the bladder.
b b. The inferior and anterior part of the bladder divided, and thrown back.
c. The neck of the bladder.
d d. The tumor connected with the proſtate gland.
e. A fiſſure or cavity in this tumor.
f. Part of the urethra divided.
g. Caput gallinaginis, with its orifice.
h h. The orifices of the excretory ducts of the proſtate.
i i. The corpus cavernoſum of the urethra.
k k. The ureters divided.
l l. The vaſa deferentia divided.
m. The veſiculæ ſeminales.
n n. The proſtate gland.
o o. The erector muſcles.

* This was probably collected, after the diſeaſe had been formed, by depoſition of ſand from the urine, as it percolated through the fiſſure or channel of the excreſcence.

REMARKS.

WHEN the bladder is thus diſtended, its neck is thrown up towards the os pubis, which renders the introduction of the catheter extremely difficult to the operator. The muſcular fibres running along the ſides of the bladder, are antagoniſts to the fibres ſurrounding the orifice of it. If the bladder be thus diſtended with urine, ſo that the muſcular fibres on its ſides loſe their contractile force, and become as it were paralytic, thoſe forming the ſphincter muſcle, having now loſt their equilibrium, immediately contract, and form a ſpaſm; and the greater the diſtenſion, the ſtronger is the ſpaſm on the orifice of the bladder, and a natural excretion of the urine becomes more and more impracticable: hence, in ſuch caſes, it happens, that after the urine has been evacuated by means of the catheter, the bladder does not recover its tone for many days, or even weeks.

A ſuppreſſion of urine may thus come on, without any primary morbid affection of the bladder in general, or the proſtate gland in particular; as from hæmorrhoids*, bliſters, or other external or internal ſtimulants. Perſons confined in company, and influenced by delicacy, have, by long retention of urine, ſuffered a total ſuppreſſion; and the muſcular fibres of the bladder, being once diſtended beyond the tone of contractile power, can only be relieved by means of the catheter: the diſtending fluid being removed, the diſeaſe, thus induced, uſually terminates ſpeedily.

If, from a repetition of ſuch circumſtances, or from any other exciting cauſes, inflammation to a conſiderable degree ſhould enſue, the cauſe of the diſeaſe, and the ſubſequent ſymptoms of ſuppreſſion, are more difficultly removed. The volume of urine preſſing more forcibly upon the proſtate gland, generally excites the moſt urgent ſymptoms in this part. This ſtage of the diſeaſe may be termed *ſimple inflammation.*

But if, from the violence of the inflammation, from acrimony of the fluids, or from other prediſpoſing diſpoſition of the patient, the veſſels of the internal coat of the bladder and proſtate gland become thickened and varicous, a more permanent and dangerous affection reſults; and this ſtage may be called *varicous inflammation.*

The internal membranes of the viſcera are ſeldom long inflamed, but aggravated miſchief enſues; thoſe lining the bladder and covering the proſtate

* Hoffmanni Conſult. et Reſponſ. Med. Cent. ii. & iii. § 3. caſ. 84, 93.

gland become conſiderably thickened, and a kind of herpetic eruption, or morbid obſtruction of the glands, have accompanied the varicous ſtate of this viſcus, and ſometimes alſo a cyſtirrhœa, which I have known inſtances of without the preſence of calculus or ulcer. This ſtage may be termed *chronic inflammation.*

In any of theſe ſtages, where inflammation has been great, and the fluids perhaps morbid, the membrane covering the proſtate gland and internal ſurface of the bladder * is liable to form fungous or ſchirrous excreſcences, which ſometimes deſtroy the patient, by mechanically ſtopping the paſſage of the urethra, as happened in the ſubject whoſe caſe gave riſe to the preſent enquiry. In theſe ſtates the proſtate gland itſelf is uſually diſeaſed, and moſtly ſcirrhous or enlarged, or even ulcerated †; being liable, like other glandular bodies, to various diſeaſes, from obſtruction, from a bad ſtate of the habit, or other cauſes. For the ſake of diſtinction, this ſtage may properly be called *a morbid affection of the proſtate gland.*

1. *The inflammatory ſtate,* after the urine has been evacuated by the catheter, is further relieved by bleeding from the arm; by oily laxatives, ſuch as caſtor oil, manna with oil of almonds ‡; by emollient anodyne clyſters §; by the warm bath; by ſmooth mucilaginous drinks, and indulging in an eaſy reclined poſition.

Beſides theſe means, which muſt occur to every practitioner, topical bleeding is one of the moſt eſſential remedies in every ſpecies of inflammation in the bladder, and it is at the ſame time one of the eaſieſt to inſtitute: for this purpoſe I have ordered from ſix to twelve leeches to be applied to the perinæum. As a partial inflammation, it occurred to me peculiarly to demand a partial application; and the benefit that has reſulted induces me to urge this

* Sometimes the internal membrane of the bladder forms a duplicature near the neck of the bladder, and acting like a valve, has prevented the exit of the urine, and thereby deſtroyed the patient, without any morbid affection of the bladder itſelf. A diſſection of this kind is in the poſſeſſion of ſurgeon Young.

† An ulcer of the uterus, or of the colon or rectum, in ſome inſtances, is communicated to the bladder, and has even diſſolved the ſubſtance of this viſcus, in ſuch a manner as to allow the fæces, &c. to paſs into it. A caſe and diſſection of this kind is now before me.

‡ Purgatives of neutral ſalts are often given, from a ſuppoſition of their action being determined to the bladder; but for this very reaſon they ſhould be avoided, and every other means likewiſe that determines the fluids to this viſcus, or excites irritation.

§ In moſt diſeaſes of the bladder and proſtate gland, anodyne clyſters are peculiarly intereſting: after having been uſed with gradual amendment of the patients, I have known inſtances where, from neglect, the injection has been omitted, all the painful ſymptoms have returned, and been aggravated.

practice in the ſtrongeſt manner, as one of the moſt eaſy and efficacious remedies.

2. *Varicous inflammation* not only requires all the former means of removing *ſimple inflammation*, but alſo a longer perſeverance in their uſe, in order to obviate that habitual fulneſs, and inflammatory affection of the blood-veſſels and mucous membranes of the parts. This is to be effected by a continued attention to vegetable, light, mucilaginous, and ſpare nouriſhment; by repeated bleedings, particularly in perinæo; by avoiding long retention of urine, riding on horſeback, and other cauſes, which bring a determination of the fluids to the bladder. When there is *varicous inflammation*, the introduction of the catheter, though carefully performed, often excites an hæmorrhage: this, however, is ſeldom pernicious, as it empties the veſſels preternaturally diſtended; and I have ſometimes ſeen the ſuppreſſion ceaſe, after a copious ſanguineous diſcharge has followed the removal of the catheter.

3. *Chronic inflammation* is a term, however paradoxical it may appear, that occaſionally takes place, and is particularly applicable in ſome ſtates of the bladder. Like *varicous inflammation*, the means of obviating preternatural determination muſt be long purſued. To theſe I may add the uſe of iſſues in the thighs, as one of the moſt important means of relief in this ſtage; and particularly, where a cyſtirrhœa * endangers the life, or where ulcers of the bladder may be ſuſpected. Here likewiſe a decoction of uva urſi †, with gummi ſtorax calamita ‡, has afforded conſiderable benefit: where much debility has enſued, a decoction of Peruvian bark may be ſubſtituted for that of uva urſi.

4. *In*

* Pyuria of Sauvages, Noſologia Methodica, tom. ii. p. 394, claſſ. 9. xxviii. See Parnham, Theſis de Cyſtirrhœa, Edinb. 1772.

† Jo. Andr. Myrray, Comm. de Uva Urſi, Gott. 1764; De Haen, Rat. Med. tom. ii. p. 160; Ejuſd. Lettre à un de ſes Amis, 1763, p. 92; Linn. Amœnit. Acad. vol. ii. p. 407; Crantz, Mat. Med. tom. ii. p. 24.

‡ In the following proportions:

℞. Uvæ Urſi, ſemi-unciam, coque ex
Aquæ Fontanæ, unc. xvj. ad unc. viij.
Sub finem coctionis addendo
Gummi Storacis Calam. drachmas duas, tum cola.

℞. Hujus Colaturæ, ſeſqui-unciam;
Spir. Lavend. comp. vel
Tinct. Cortic. Peruviani, ſemi-drachmam.
M. fiat hauſtus ter die ſumendus.

℞. Extract. Cicutæ, ℥j.
Sulph. Aurati Antimonii, ℈j.
M. fiat pilul. xiv. cap. i. vel ii. om. nocte.

℞. Argenti

4. *In morbid affections of the proſtate gland* attention muſt be directed to the primary cauſe, as well as to the preſent ſtate of morbid affection. The remedies before recommended may be applicable here alſo; but after all theſe means have been aſſiduouſly attended to, a ſchirrous enlargement of this gland may ſubſiſt.

In ſome inſtances of this nature, where inflammation no longer prevails, cicuta, and a ſolution of argentum vivum, in ſmall doſes, may be preſcribed, even where no ſyphylitic taint is ſuſpected to have brought on the diſeaſe: where this infection has preceded a morbid ſtate of the proſtate gland, mercurials have an effect ſtill more certain and efficacious.

If the cauſe of ſuppreſſion originates from a calculus, regard muſt be had thereto. It ſometimes happens that a calculus is preſent, but cannot be diſcovered, eſpecially when the proſtate gland is much enlarged; for the catheter, as it paſſes over the gland, may be carried above and beyond the calculus, and detection of it thus eluded, particularly if it lie immediately under the protuberance of this gland.

If the morbid affection prove rebellious to every effort of art, and increaſes ſo far as totally to obſtruct the urethra, I know of no alternative to prolong life, except puncturing the bladder; but of this I have no experience. Human ingenuity has never yet, that I have heard of, found out a means of removing ſuch tumors in the male ſex *, without wounding the bladder; and whether the operation, if it prolongs life a little, is preferable to death, is not quite clear †.

℞. Argenti Vivi, grana iij.
Pulv. G. Arab.
Sacch. Alb. ā ℈j.
Aq. Puræ, ℥iſs. Tere Argentum Vivum cum Gummi et Saccharo, donec evaneſcant globuli, et gradatim adde Aquam, fiat hauſt. bis die ſumendus.

* Surgeon Warner has communicated caſes of tumors of the bladder and urethra having been removed with ſucceſs in the female ſex. Ph. Tranſ. vol. xlvi. p. 1006; vol. xlvii. N° 45, p. 292, and N° 79, p. 475.

† See Medical Obſervations and Inquiries, vol. vi. p. 101.

MINUTES, &c.

OF THE

MEDICAL SOCIETY,

RESPECTING THE

FOTHERGILLIAN MEDAL.

To the MEDICAL SOCIETY of LONDON.

GENTLEMEN,

TO preſerve the memory of illuſtrious characters by ſome permanent memorial, is not only grateful to the friends of the deceaſed, but excites in the living that commendable emulation, which leads to great and virtuous actions. Such were thoſe which will render dear to diſtant poſterity the name of Dr. JOHN FOTHERGILL; in memorial of whom I have ordered a medal to be ſtruck, under the patronage and at the diſpoſal of the Medical Society of London, held in Crane Court, Fleet Street. It will be in gold, of ten guineas value, to be called the FOTHERGILLIAN MEDAL, and be given annually, on the 8th day of March, to the author of the beſt Eſſay upon a prize queſtion, propoſed by the Society, on a ſubject of Medicine or Natural Hiſtory.

The manner of propoſing the annual queſtion, and of determining upon the merits of the memoirs of the candidates, I refer to the determination of the Society; being perſuaded, from the unanimity of their meetings, and the learning and judgment of their members, that their deciſions will be calculated to promote medical ſcience in particular, and phyſics in general, which are my motives for requeſting their patronage of the FOTHERGILLIAN MEDAL.

JOHN COAKLEY LETTSOM.

London,
May 25, 1784.

LONDON

LONDON MEDICAL SOCIETY.

Crane Court, 4th *June* 1784.

SIR,

AT a ſpecial meeting of the Medical Society, convened for the purpoſe of taking into conſideration your very liberal propoſal of the FOTHERGILLIAN MEDAL, to be diſpoſed of annually, at the option, and under the patronage of this Society:

I am ordered to inform you, that the ſame has been conſidered accordingly, and met that warm reception and approbation ſuch a diſtinguiſhed favour was ſo well entitled to:

And that this Society, being highly ſenſible how much you had thereby contributed to its advantage and reputation, order me to preſent you with the Thanks which were unanimouſly voted to you at this meeting.

By order of the Society,

WM WOODVILLE,

(one of the Secretaries.)

To J. C. Lettſom, M. D. &c.

THE following Members of the Medical Society, being appointed a Committee to conſider of the plan and diſtribution of the FOTHERGILLIAN MEDAL; viz.

James Sims, M. D.
William Woodville, M. D.
John Meyer, M. D.
William Hamilton, M. D.
John Coakley Lettſom, M. D.
Mr. William Norris;

Recommend, That the obverſe of the Medal exhibit
The head of Dr. FOTHERGILL, with this legend;

FOTHERGILLIUS. MEDICUS. AMICUS. HOMO.

In the exergue—*Nat. Mart.* 8, 1712. *Ob. Dec.* 26, 1780.

The reverſe—Hygeia ſtanding near the tomb of Dr. FOTHERGILL, holding in her right hand a wreath to crown the ſucceſsful candidate, who is preſented by Eſculapius.

The legend—DON. SOC. MED. LOND. AN. SAL. 1773, INSTITUT.

REGU-

REGULATIONS *reſpecting the* MEDAL.

1. THAT the Medal be given annually to the author of the beſt Diſſertation, on a ſubject propoſed by the Society, for which the learned of all countries ſhall be invited as candidates.

2. Each Diſſertation ſhall be delivered to the Secretary, written in a legible hand, in the Latin, Engliſh, or French language, at leaſt two months before the meeting for adjudging the Medal.

3. With it ſhall be delivered a ſealed packet, with ſome device on the outſide; and within, the author's name and deſignation.

4. The ſame device ſhall be put on the Diſſertation, that the Society may know how to addreſs the ſucceſsful candidate.

5. There ſhall be a Committee appointed by the Society, for the purpoſe of adjudging this Medal, conſiſting of the Council; to whom ſhall be joined ſuch other Members as the Society ſhall think proper; and their ſentence ſhall be final.

6. The Medal ſhall be adjudged on the 8th day of March, that being the birth-day of the late Dr. FOTHERGILL. The firſt Medal ſhall be adjudged in the year 1786.

7. No Diſſertation with the name of the author affixed can be received, that the Committee may decide on the merits of each, without any knowledge of, or partiality for, the author.

8. All the Diſſertations, the ſucceſsful one excepted, ſhall be returned, if deſired, with the packets unopened which contain the names of the authors.

The following Queſtion is propoſed as the ſubject for the firſt Prize Medal:

"*What diſeaſes may be mitigated or cured by exciting particular affections or "paſſions of the mind?*"

FINIS.

Lately Publiſhed, by Dr. LETTSOM;

And Sold by C. DILLY, in the POULTRY.

I. REFLECTIONS on the general Treatment and Cure of Fevers. Octavo, 1772. Price 2s.

II. The Natural Hiſtory of the Tea-tree, with Obſervations on the Medical Qualities of Tea, and Effects of Tea-drinking. Quarto, 1772. Price 4s.—The Second Edition is now in the Preſs, Price 5s.

III. The Naturaliſt's and Traveller's Companion; containing Inſtructions for collecting and preſerving Objects of Natural Hiſtory. Octavo, 1774. The Second Edition, Price 2s. 6d.—The Third Edition, enlarged, is now in the Preſs, Price 5s.

IV. Medical Memoirs of the General Diſpenſary in London. Octavo, 1774. Price 5s.—The Second Edition is preparing for the Preſs, with an additional Volume, which will complete the Memoirs.

V. Improvement of Medicine in London, on the Baſis of Public Good. Octavo, 1775. Price 1s.

VI. Obſervations preparatory to the Uſe of Dr. Mayerſbach's Medicines. Octavo, 1776. The Second Edition, Price 1s. 6d.

VII. Hiſtory of the Origin of Medicine; and of the State of Phyſic prior to the Trojan War. An Oration delivered before the Medical Society of London. Quarto, 1778. Price 6s.

VIII. Obſervations on the Plan propoſed for eſtabliſhing a Diſpenſary and Medical Society, with Formulæ Medicamentorum Pauperibus præcipue accommodatæ. Octavo, 1779. Price 1s.

IX. A Letter to Sir Robert Barker, Knt. F.R.S. and George Stacpoole, Eſq; upon GENERAL INOCULATION. Quarto, 1779. Price 6d.

X. Obſervations on Baron Dimſdale's Remarks on Dr. Lettſom's Letter to Sir Robert Barker, and George Stacpoole, Eſq; reſpecting GENERAL INOCULATION. Octavo, 1779. Price 6d.

XI. An Anſwer to Baron Dimſdale's Review of Dr. Lettſom's Obſervations on the Baron's Remarks, reſpecting a Letter upon GENERAL INOCULATION. Octavo, 1779. Price 6d.

XII. Travels through the interior Parts of North America, in the Years 1766, 1767, and 1768. By J. Carver, Eſq; Captain of a Company of Provincial Troops during the late War with France. Illuſtrated with Copper-plates, coloured. The Second Edition; to which is prefixed ſome Account of the Author, by Dr. Lettſom. Octavo. Price 8s. in Boards.

XIII. A Journal of a Voyage to the South Seas, in his Majeſty's Ship the Endeavour, faithfully tranſcribed from the Papers of the late Sydney Parkinſon, Draughtſman to Sir Joſeph Banks, Bart. in his Expedition with Dr. Solander round the World; and embelliſhed with Twenty-nine Views and Deſigns, engraved by capital Artiſts: To which is now added, Remarks on the Preface, by the late John Fothergill, M.D. F.R.S. &c.; and an Appendix, containing an Account of the Voyages of Commodore Byron, Capt. Wallis, Capt. Carteret, Monſ. Bougainville, Capt. Cook, and Capt. Clerke. Royal Quarto, 1l. 16s. plain, and 2l. 10s. coloured, in boards.

XIV. The Works of Dr. Fothergill, complete, in 3 Volumes Octavo. Price 18s. plain, and 1l. 1s. with the Prints coloured.

Printed

BOOKS *published by* Dr. LETTSOM.

Printed ſeparately.

XV. Some Account of the Life of the late John Fothergill, M. D. F. R. S. &c. Octavo. Price 3 s.—A new Edition is in the Preſs, Price 5s.

XVI. Hortus Uptonenſis; or, A Catalogue of the Hot and Green-Houſe Plants in Dr. Fothergill's Garden at Upton, at the Time of his Deceaſe, Anno 1780. Octavo. Price 1s. 6d.

The following Performance, on the intereſting Subject of General Inoculation, has lately been publiſhed:

A Letter to J. C. Lettſom, M. D. F. R. S. and S. A. S. occaſioned by Baron Dimſdale's Remarks on Dr. Lettſom's Letter to Sir Robert Barker, and George Stacpoole, Eſq; upon GENERAL INOCULATION. By an unintereſted Spectator of the Controverſy between the Baron Dimſdale and Dr. Watkinſon on the above-mentioned Subject. Octavo, 1779. Price 1s. MURRAY, in Fleet-ſtreet.