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Contributors

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LETTERS

Relating to the

PLAGUE,

And other

CONTAGIOUS DISTEMPERS.

PART I.

LETTERS to MARTIN FOLKES, E.q. Prefident of the ROYAL SOCIETY of LONDON, &c. read at feveral Meetings of the ROYAL SOCIETY in the

Years 1743, 1744.

Wherein the principal Ways by which the Infection of the PLAGUE, or any other contagious Fever, may be conveyed to human Bodies, are carefully confidered; and proper Means of Safety from it are proposed.

PART II.

LETTERS to *****. Containing general RULES for a fuitable Management, when that SICKNESS shall be brought into any City, Army, or Navy; and proper PRESERVATIVES from it.

LIKEWISE an Account of EVENTS predicted in the Word of God, and to be expected in the Time of a Pestilence, &c.

And a LETTER to JOHN MILNER, Efq. containing an Account of the Nature of the Cause which produced the contagious Distemper among the CATTLE in 1714, with RULES to FARMERS for Management, and suitable REMEDIES, when such Contagion shall be among their Herds. And a METHOD proposed for finding out the Quality of the Cause producing the epidemical Diseases now among the Cattle in Great Britain, and foreign Countries, and the proper Medicines for Curing them.

WHEREUNTO are added Copper-Plates of MACHINES, which may be useful in an infectious Season.

Designed for Usefulness to the Public, and to Families; and particularly for the Sasety of Magistrates in the Performance of their Office, and the Preservation of those Divines, and others, who shall be obliged to visit, or attend the Sick.

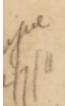
By THEOPHILUS LOBB, M. D.

Member of the College of Physicians, and Fellow of the ROYAL SOCIETY of LONDON, &c.

The Peftilence walketh in Darkness. PSAL. xci. 6.

LONDON:

Printed for James Buckland, at the Buck in Pater-noster-



HISTORICAL MEDICAL MEDICAL

Landard all the smooth organization for a spent with

To the

RIGHT HONOURABLE

ARTHUR ONSLOW, Efq.

SPEAKER

Of the Honourable

HOUSE of COMMONS,

AND

One of His MAJESTY's Most Honourable

PRIVY COUNCIL.

SIR,

HE Importance of the Subject of the following Sheets is the best Apology I can make A 2 for

for Addressing them to a GENTLEMAN of your high Rank, and Character.

WHAT Defects foever may be in these Endeavours to provide for the Safety, and Relief of Mankind, when exposed to one of the most dreadful Calamities that can befal them in this World; yet, that Humanity, for which You are as remarkable, as for your Descent from a long Succession of ANCES-TORS, always eminent for a faithful Attachment to the Welfare of their Country, has

has engaged You to approve the Defign: And this will, I hope, induce the Public to receive the Performance with Candour.

THERE are many Things proposed in these LET-TERS, which, I apprehend, cannot be put into Practice without the Influence of the Civil Power; and some of them, at the Approach of fuch a common Danger, may possibly be thought worthy of the Notice of the Legislature.

THIS

THIS, SIR, will further plead my Excuse for the Ambition of your PATRO-NAGE, whose great Abilities very early rendered You conspicuous, and induced one of the wifest, and most august SENATES in the World, to place You in that high Station, which You have held for fo many Years by their unanimous and repeated Suffrage, and with the Approbation of the greatest, and best of Princes: A Dignity, which You have supported with much Advantage to the Public,

DEDICATION. vii

Public, and great Honour to Yourself.

WHATEVER Infidels, or profane Persons may say, the PESTILENCE is one of the most terrible Scourges by which the fupreme GOVERNOR punishes incorrigible Nations for their Iniquities; and by which he has often excited an awful Sense of his Holiness, and Authority in the Consciences of Men: And however Scof-FERS, walking after their own Lusts, may deride the Judgont of so A 4 MENTS

MENTS of GOD, while at a Distance, yet, if they shall come near, and surround them, their Mirth may be turned into Lamentation, and the stoutest Hearts among them be filled with Terror, and Amazement.

I cannot wish better to Mankind, than that Piety, and true Religion, happily recommended by your Ex-AMPLE, may revive, and spread among them. This will be the best Barrier against so great a Calamity.

THAT

THAT You may be long continued by the divine Providence an Ornament, and a Bleffing to this Nation; that You may enjoy fuch an undifturbed State of Health as may enable You to perform with Pleasure the arduous Services to which You are called by his MAJESTY, and your Country; that You may reap here all the Honours due to your distinguished Merit; and, after a very long, happy, and ufeful Life in this World, may receive

receive everlasting REWARDS in a better, is the sincere Prayer of,

SIR,

Your very much obliged,

most humble, and

Sook I hope, will be very nieful, tho' no.

Sig. And as to the Placus; if the Peo-

most obedient Servant,

THEOPHILUS LOBB.

DEDICATION

receive everlaiting KEWARDS

ADVERTISEMENT

From the AUTHOR.

- Some in this Nation, which has enjoyed for a long Time a general Healthiness, and when no Pestilence is near us: But the Quarantaine, still required by the Government, gives us Reason to think the Sickness continues, and that our Danger is not yet over; and, therefore, that the Publication of the following Papers is not altogether needless.
- §. 2. INFECTIOUS Distempers frequently happen in Countries, that are not visited with the Plague; and especially in Ships, fails, and other Places, where People are crowded together; on which Account this Book, I hope, will be very useful, tho' no Pestilence should ever come into this Land.
- §. 3. AND as to the PLAGUE; if the People of Great Britain are an holy People, that fear, and love the holy God, and fanctify his Sabbaths, and carefully keep all his

Command-

xii ADVERTISEMENT.

Commandments, they have no Reason to fear the *Pestilence*, or the *Sword*, or the *Famine*, or any other destroying Calamity. For, the Curse causeless shall not come.*

§. 4. But every wicked Nation has Reafon to be afraid. When the Generality of People in any Country have long revolted from God, and go on stubbornly in evil Ways, they have just Ground to expect an awful Visitation by the righteous God, who can break in upon them with the Pestilence, or any other of his terrible Judgments, whenever he pleases; and suddenly, when they least think on such Events.

§. 5. The Day of the LORD so cometh as a Thief in the Night. For when they shall say, Peace, and Safety, then sudden Destruction cometh upon them, as Travel upon a Woman with Child; and they shall not escape.

§. 6. The serious Things offered to Confideration, in the second and fifth LETTERS of the second Part of this Book, need no Apology: They are the most important Matters.

^{*} Prov. xxvi. 2. + 1 Theff. v. 2, 3.

§. 7. It is certainly a kind Thing to perfuade Men to believe in Christ, the only Saviour; to forsake their Sins, and practise the Duties required in the holy Scriptures; that so, if God shall visit these Isles for Sin, they may be found doing his Will, seeking Righteousness, seeking Meekness, and then, it may be, they shall be hid in the Day of the LORD's Anger.* And likewise to endeavour the Establishment, and Comfort of serious Christians, of every Denomination, in the Way of Faith and Holiness; that so, they may not be afraid of evil Tidings, but have their Hearts fixed, trusting in the LORD.†

§. 8. And these Endeavours of mine, I am sure, are pleasing to God, who hath no Pleasure in the Death of the Wicked, but that the Wicked turn from his Way, and live.‡ And, who will have all Men to be saved, and to come unto the Knowledge of the Truth. And I pray, and hope, that He will bless my Labours, and make them instrumental, not only of Sasety, and Health to the Bodies of many People in sickly Seasons, but likewise of saving Advantage to their immortal Spirits. T. L.

^{*} Zeph. ii. 3. † Pfal. cxii. 7. † Ezek. xxxiii. 11. | 1 Tim. ii. 4.

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2. By the Emission of pestilential Particles from the Bodies of Persons sick of the Plague.

3. From their Urines and Stools. With some Methods proper to prevent the Spreading the Distemper by these Ways, §. 10. to §. 31.

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LETTER III.

Containing an Account of other principal Ways by which the Infection may be conveyed to the Propagation of the Distemper, viz.

4. By the Nurses who attend the Sick. 5. By Lodging Persons sick of the Plague in Rooms on the Ground Floor. 6. By a depressing State of the Wind and Air. 7. By Burning Rags, Plaisters, &c. taken from Bodies under the Sickness. 8. By Exhalations from Bodies dead of it. 9. By pestilential Particles passing into Houses, ab extra, thro' the Doors, or Windows, if open, when the Infection is in the circumambient Air. 10. By the Emission of infectious Essluvia from Persons seeming to be in Health. §. 32. to §. 62.

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Containing Directions bow to avoid the pestilential Insection, when the Air and Wind are in a depressing State; and to prevent the Burning Things taken from Persons under the Sickness; and to obviate the Spreading that Insection which exhales from the Bodies of People dead of the Plague: And an Account of the Preservation of Families, by shutting themselves up in their Houses: And likewise

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PART II.

LETTER I.

Wherein the Case of Flying from, or Staying in a CITY, on the Entrance of the Plague into it, is considered; and general Rules proposed for a proper Management, when that Sickness shall be brought into any City, Army, single Ships, or Navy: Likewise for the Safety of Magistrates in the Administration of fusice; and of Divines, &c. when Visiting the Sick, and of Nurses; and for the Preservation of People in the Places of public Worship, during the Time they are assembled together. §. 201. to §. 406.

LETTER II.

Wherein the Sin, and Vanity of Trusting in human Securities for Safety from the Pestilence, and other destroying Judgments of the righteous God, are shewed; with Remarks on the Difference of some Plagues: Likewise the Manner of God's Dealing with Nations, and Cities in this World, and the surest Methods for Escaping public Calamities, are considered. §. 407. to §. 547.

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Containing an Account of Some Remedies proper for Preserving Persons from the Effects of pestilential Infection, and other Contagion.

LETTER IV.

Containing, I. General Rules, viz. 1. For Diet of People in Cities, and other Places, when visited with the Plague, or other contagious Distempers. 2. For a proper Management, when the Sickness comes into a Family. 3. For Purifying the House, after the Plague has been in it. II. Considerations of some Things, which should carefully be avoided in the Time of Pestilence.

LETTER V.

Containing an Account of EVENTS predicted in the Holy Scriptures, and therefore to be expected in the Time of a raging Pestilence, and other destroying fudgments inflicted for Sin: Particularly, 1. That God will take a special Care for the Comfort and Protection of the Righteous. 2. That horrible Fears shall fill the Minds of many Wicked Persons. 3. That a Reformation among Sinners shall be accomplished. 4. That

Some of the Wicked will remain impenitent, become hardened, and blaspheme the Name of God. And, 5. That Multitudes of the Wicked will be destroyed.

LETTER VI.

Wherein is shewed the Impropriety of Burning Things which have Infection, either from the Plague, or any other contagious Distemper.

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LETTER VIII. relating to contagious Sicknesses among Cattle.

Containing, 1. An Enquiry into the Nature, or Quality of the Cause, by which the contagious Distemper in 1714, was produced.

2. Rules for Management, with proper Remedies for Cattle, when taken sick of such a Disease.

3. Advices for the Management of well Cattle, to preserve them from the Effects of Insection.

4. A Method for Finding out the Cause of the present epidemical Diseases among Cattle; and the proper Medicines for Curing them.

BOOKS published by Dr. LOBB.

A Brief DEFENCE of the CHRISTIAN RELIcion: Or the Testimony of God to the Truth of it, recommended to the Consideration of Christians for their Establishment, and of those, who are fallen into Deism, for their

Conviction and Recovery.

2. RATIONAL METHODS of curing Fevers, &c. together with a particular Account of the Effects of artificial Evacuations by Bleeding, Vomiting, Purging, Sweating, &c. with practical Rules deduced from them, shewing in what Cases they are proper, and in what they are improper.

3. Medical Practice in curing Fevers, &c. exemplified in many Cases of the most

usual Fevers, &c.

4. A PRACTICAL TREATISE OF PAINFUL DISTEMPERS with some effectual Methods of Curing them, exemplified in a Variety of suitable Histories.

N. B. In this Treatife Pains of the Head, Leeth, Eyes, Heart, Breast, Sides, Back, Stomach, and Bowels: Likewise of the Stone, Strangury, After-Pains, Piles, Cramp, Rheumatism, and Gout, &c. are particularly considered, and exemplified

emplified.

5. A TREATISE on DISSOLVENTS of the STONE, and on curing the Stone, and Gout by ALIMENT: Shewing by Reason supported with Experiments, and Cases, the Probability of dissolving the Stone, and curing the Gout by suitable Aliment, with Rules of Diet for Persons afflicted with these Distempers; likewise for such as are too fat,

BOOKS published by Dr. LOBB.

or too lean; and also in Regard to Colds, Fevers, Quinsies; Coughs, Asthma's, Cholicks, and Pains of the Stomach, Costiveness, Nervous Diseases, Cachexes, Dropsies, Tumours, and Scurvy, intended for Usefulness in Families.

ing an Account of the different Kinds of the Distemper, and their various Symptoms, with Directions for the Management of Persons sick of it, as to Diet, and Medicines in each Period, &c. Likewise Insructions for managing Infants and Children, together with a Method of external Remedies for those who will not take internal Medicines; &c. And Fifty Histories in which the Disease and its various Symptoms are exemplified. The Second Edition enlarged, and accommodated for Usefulness in Families.

Dr. BOERHAAVE (in a Letter to Dr. MORTI-MER. R. S. Secr.) gave his Opinion of this Treatise in the following Words, and consented that

it should be printed, and prefixed to it:

LIBRUM de Variolis, Anglicè conscriptum à Domino Theophilo Lobb, M. D. & R. S. S. perlegi, probavique; nam plenum vidi veræ Scientiæ Medicæ, promittentemque Genti bumanæ Bona plurima.

Leydæ 17 33 HERMANNUS BOERHAAVE.

In English thus, viz.

I have read through a Book on the Small-Pox, writ in English by Theophilus Lobb, Doctor of Physick, and Fellow of the Royal Society, and I approve of it; for I found it full of true Medical Knowledge, and like to be very useful to Mankind.

Leyden 12 July, HERMANNUS BOERHAAVE.

LETTER I.

Relating to the

PLAGUE.

Containing preliminary Observations concerning the Air, pestilential Infection, and the Course of the Air in Houses; and likewise concerning the Effects, both advantageous and prejudicial, of keeping Fires in the Chimnies. §. 1. to §. 9.

To MARTIN FOLKES, Efg. President of the ROYAL SOCIETY of LONDON.

SIR,

LONDON, Oct. 27, 1743.

HE LORD LIEUTENANT of Ireland, in his Speech to the Parliament, met at Dublin the 4th of this Month, faid,

" My Lords and Gentlemen,

"The contagious Distemper, which rages " fo violently in feveral Countries abroad,

calls

" calls upon you to take into your Confide-

" ration, what Provisions may be most ef-

" fectual to fecure this Kingdom from In-

" fection; or, if any Part of it should be

" fo unhappy as to be vifited by that dread-

" ful Calamity, to stop its further Pro-

" grefs."

- §. 2. I may here observe from this Part of his Grace's Speech, that the ISLES of Great-Britain are in Danger of having the contagious Distemper (which rages with Violence in several Countries abroad) brought into 'em; and, therefore, that it concerns not only those in Authority to consult Measures for Security from the pestilential Infection, but also the Physicians to study Means of Safety from the terrible Distemper, should it be brought among us from any of the infected Places wherewith we have Commerce.
- §. 3. I have, from an Apprehension of the Danger we are in, spent Part of some Evenings in such Researches; and shall lay before you some Observations relating to the Air, pestilential Insection, the principal Ways by which it is conveyed to human Bodies, and the proper Means of Safety from it: All which may be of great Use to this

City and Nation, and, indeed, to any other, when visited with the PESTILENCE, or any other contagious Distemper.

§. 4. I. As to the AIR, I would obferve a few Things, particularly.

Observ. 1. That the Quantity of the Air of the Atmosphere is immensely large; much more large, and extensive, than that of the Water of the Ocean.

Observ. 2. That the Air of the Atmofphere, like the Water of the Sea, has always a Motion one Way or other.

Observ. 3. That all Particles of Matter emitted from any Substance into the Air, whose Levity is greater than that of the Air, naturally ascend in it.

Observ. 4. That all Particles of Matter emitted from any Substance into the Air, whose Gravity is greater than that of the Air, naturally descend or subside in it.

Observ. 5. That Air is always flowing into, and out of Houses; as may be demonstrated by various Experiments and Arguments, was it needful.

Observ. 6. That the SMOKE from Chimnies, and the Particles of any Kind of Matter mixed with it, if they continue ascending in the Air of the Atmosphere, soon be-

come inconceivably diluted with it; in a Manner fomewhat fimilar to the Dilution of fmall Streams of muddy Water, upon their being carried into the Ocean.

Observ. 7. That pestilential Particles, whatever they be, are different from the Particles naturally constituent of that Fluid we call Air.

Observ. 8. That when pestilential Particles, emitted from any infected Matter, are carried upwards in the Air of the Atmofphere (that immense Mass of Fluid, especially, if there happens any Wind to agitate the Air, without driving the Smoke of Chimnies downwards) there is Reason to think they foon become fo fubdivided, and diluted with the Air, as to lofe their infecting Quality, or Power of producing Sickness: Because, otherwise, the pestilential Infection, and the Plague, its Effect, must spread much quicker, and more extensively thro' infected Cities, and to adjacent Villages and Towns, and thro' whole Countries, than it has been commonly known to do.

Observ. 9. That, therefore, the Danger of being infected with the Plague very much depends on the Quantity of the infecting

fecting Matter emitted into the Air, and the Nearness of Persons to receive it, before it is fo much diluted with the Air, as to have lost its Power of producing the Diftemper.

§. 5. II. As to PESTILENTIAL INFEC-TION, I may observe,

Observ. 1. That, in Bodies fick of the Plague, the pestilential Particles, which produced it in them, do affimilate, or tranfmute fome Parts of the Blood, and, it may be, of other of the animal Fluids, into their own Nature or Kind, (as variolous Particles, in the Body of a Person sick of the Small-Pox, do transmute many Parts of the Blood into a variolous Nature) and thereby exceedingly multiply and increase in Number.

Observ. 2. That those Parts of the Blood and other Fluids, in Persons sick of the Plague, which are transmuted into the pestilential Nature, may be called pestilential Particles, and are what I mean by that Expression.

Observ. 3. That these pestilential Particles are continually emitted from Bodies fick of the Plague with their Breath, with the infenfible Perspiration, with their Urines and Stools; and sometimes by Sweat, and **fometimes**

Of pestilential Infection,

fometimes by pestilential Tumors, and Ulcers or Sores.

Observ. 4. That pestilential Particles are infectious, and have a Power of producing the Plague in most human Bodies that receive them before they are much diluted. This is evident from the Spreading of the Sickness in Cities visited with it.

Observ. 5. That pestilential Particles are exceedingly minute, volatile, diffusible, and of greater Levity than the Air.

This will appear, if we confider, 1. That variolous Particles have a greater Levity than the Air, as may be concluded from the Afcent of them in the Air; evident by their fenfibly affecting the olfactory Nerves of any Person that shall go and stand by the Bedside of such as are sick of the Small-Pox.

2. That the peftilential Particles are of greater Subtilty and Levity than the vario-lous Particles; because, commonly, tho' they do not so sensibly affect the olfactory Nerves, yet are more quick and violent in producing their Effects, and putting a Period to Life.

Observ. 6. That, therefore, pestilential Particles naturally ascend (or rise upwards, from every Substance which emits them)

in the Air into which they are emitted; according to §. 4 Observ. 3.

Observ. 7. That the pestilential Particles emitted from the Body of a Person sick of the Plague, into the Air of the Room circumambient to him, are diffused in it, and conveyed with that Air, whitherfoever it goes.

§. 6. Having made these Remarks concerning the pestilential Infection, I should in the next Place confider the principal WAYS by which it is conveyed thro' the Air to human Bodies: But, for the better Understanding this important Affair, I shall premife the following Observations.

Observ. 1. That there is commonly a Flux, or Current of Air, thro' the Chimnies of Houses: In some Chimnies it is always upwards, but in others the Courfe of the Air is fometimes upwards, and fometimes downwards.

Observ. 2. That the Current of the Air in Chimnies is downwards, while the Smoke of the Fire is blown down into the Room, instead of passing upwards thro' the Chimnies.

Observ. 3. That, while the Current of the Air in Chimnies is downwards, all Sorts of B 4 Particles

Particles of Matter diffused in the Air of the Atmosphere near the Tops of such Chimnies, and which by the Motion of the Wind are brought to them, will, with the Air, pass down such Chimnies into the Houses: And therefore by this Way pestilential Infection may be brought into Families, when a City is visited with the Plague; as I shall shew hereafter.

Observ. 4. That the Making a Fire in the Chimney of a Room forces the Current of the Air thro' it to be upwards, except it be such a Chimney as throws down the Smoke into the Room: And, as the Fire is greater or lesser, so the Current of the Air up thro' the Chimney will be quicker and stronger, or slower and weaker.

§. 7. This is evident from the Effect of Fire on the SMOKE-JACK: For, while there is no Fire in the Chimney, it has but little, or no Motion; but, if a Fire is made under it, a Motion is presently communicated to it, which Motion is quicker or slower, as the Fire below it is greater or less; and it continues in Motion so long as the Fire is maintained, unless it be intentionally stopped, or some Obstacle happens to restrain it.

Observ. 5.

Observ. 5. That the Repulsion of the fuper-incumbent Air up a Chimney, by the Action of the Fire, will make the Air of the Room to flow into the Chimney, and to pass up thro' it into the Air of the Atmosphere above it.

Observ. 6. That the Particles of Matter diffused in the Air of a Room in which a Fire is kept, of what Kind foever, will pass with that Air thro' the Chimney into the Air of the Atmosphere above it.

Observ. 7. That therefore infectious Particles, and difagreeable Scents, emitted from the Bodies of Persons sick under any contagious Distemper, may be made continually to flow and pass off thro' the Chimnies of the Rooms in which they lodge to the Air of the Atmosphere, by keeping Fires continually in them.

Observ. 8. That therefore good Fires should be kept continually in the Rooms of Persons sick, either of the Plague, or of any other contagious Distemper, and the Doors of them open; which will render the Air of the Rooms more free from offensive Scents, and less infectious, as Dr. MORTIMER experienced when he had the

10 Of pestilential Infection,

the Small-Pox at Paris; — vid. his Account of it.*

Observ. 9. That the Flowing of the Air of the Room out of it thro' the Chimney, where a Fire is kept, will occasion other Air, from the Door, and every Crevice thro' which it can pass, to enter into it, for filling the Spaces that were occupied by the Air that passes away thro' the Chimney. Consequently, that there is a continual Changing of the Air of a Room, while a Fire is kept in it; which will be a great Advantage to the Sick, and those who shall attend or visit them.

* " I was feized with the Small-Pox at Paris in June 1723, the Season being very fultry; wherefore, to avoid " the bad Scents which usually attend the Chambers of such " as are ill of that Distemper, I caused a brisk Wood Fire " to be kept Day and Night in the Chimney, and the Door " and Windows to be kept open in the Day-time; by which " Means I neither perceived any difagreeable Smell myfelf, " nor those who came to see me were at all annoyed from " those Stenches so usual in this Distemper, which they often expressed their Wonder at : But, when I recovered, I heard " that the Infection was carried to feveral of the Family in " the House adjoining on that Side where the Chimney was, " but to none in the House on the other Side, tho' their "Windows were as near as the other's; whence I conclude, " that many of the infectious variolous Particles were not " destroyed or altered by the Smoke, but were carried up. " and conveyed into the House adjoining.

Sept. 27, 1743.

" C. Mortimer."
Observ. 10.

Observ. 10. That, if Fires are made in some of the Chimnies of a House only, they will occasion the Current of the Air in the Chimnies which have no Fires to be down-wards; and consequently, that whatever Particles of Matter are diffused in the Air of the Atmosphere, near adjacent, may pass down them into the Houses,--according to what was observed §. 6. Obs. 3.

Observ. 11. That, if Fires are kept in all the Chimnies of a House, the Current of the Air thro' them will be upwards; and, while it is fo, no Particles of Matter of any Kind, diffused in the Air of the Atmosphere above them, can pass down those Chimnies into the House. Consequently, the Family dwelling in it will so long be secure from receiving pestilential Infection that Way; and, if Persons sick of the Plague in such a House are lodged in the uppermost Rooms of it, I apprehend that the infectious Particles emitted from their Bodies will be carried away thro' the Chimnies into the Air of the Atmosphere above them, and that the Family below is pretty fafe from that Infection, while the Wind and Air are not in a depreffing State.

12 Of pestilential Infection,

Observ. 12. That, if Fires are kept in all the Chimnies of a House, tho' no Air can pass down them into the House, yet Air, equal in Quantity to what passes away thro' the Chimnies, will be drawn continually into it from the Doors and Windows, and any other Inlets of Air; by which any noxious Particles of Matter, diffused in the Air near adjacent to such Inlets, may be brought into the House.

Observ. 13. That, if but one Fire be made in a House, and if the Doors of the other Rooms are open, that Fire, by rarefying, and forcing the Current of the Air upwards thro' the Chimney where it is, may occasion the Current of the Air to be downwards in the other Chimnies, and a Flux of Air from the other Rooms into that where the Fire is. So that, if a Person lies sick of the Plague in one of the uppermost Rooms of the House, without a Fire in it, the pestilential Particles will descend with the Air to the Room where the Fire is kept; and this may be a Means of spreading the Sickness in that House.

§. 8. This is a Point which deserves the Notice of every Family, and shews the Importance

and Means of Safety from it. 13 portance of keeping a Fire continually in the Room where the fick Person lodges.

§. 9. I shall conclude this Paper with observing two Things in Relation to the State of the Air.

Observ. 1. That all the Air in Streets, and circumambient to Houses, in every City, by the Motion or Action of the Wind, is always changing its Place.

Observ. 2. That all Houses, and Persons, walking in the Streets of a City visited with the Plague, are safe from receiving pestilential Infection by Means of the Air, unless when pestilential Particles, from sick Persons, or infected Things, are brought by the Wind, or some other Means, into the Air circumambient to them.

I am, with very great Esteem,

SIR,

Read to the ROYAL SOCIETY OA. 27, 1743.

Your most humble Servant,

THEOPHILUS LOBB.

LETTER II.

Relating to the PLAGUE.

Containing an Account of three Ways by which the pestilential Infection may be conveyed to the Propagation of the Sickness, viz. 1. With Goods from infected Places. 2. By the Emission of pestilential Particles from the Bodies of Persons sick of the Plague.

3. From their Urines and Stools. With some Methods proper to prevent the Spreading the Distemper by those Ways. §. 10. to §. 31.

To MARTIN FOLKES, Efq.

President of the ROYAL SOCIETY

of LONDON.

SIR,

London, Nov. 3, 1743.

§. 10. I Am in the next Place to confider the principal Ways by which the pestilential Infection may be conveyed to human Bodies, and some proper Methods of Safety from it.

- §. 11. The Importance of this Subject requires me to be as accurate and particular in my Observations as I am capable of, that fo, if possible, no Way of Danger, or Means of Security from it, may escape Notice. In treating these Matters, I may be obliged, on different Occasions, and for different Purposes, sometimes to mention a Thing more than once; but, as my Remarks are intended for Usefulness to all Sorts of People, to the Unlearned as well as others, in a peftilential Seafon, I hope to be excused; and likewife, if, fometimes, I shall use a few more Words, than otherwife would be needful: And, confidering that the little Time I have for Study, only in the Evenings, is frequently interrupted, candid Persons will forgive the other Faults, that are confiftent with Truth and the Good of Mankind.
 - §. 12. III. The principal Ways, by which the pestilential Infection may be conveyed to human Bodies, may be comprised in the following Particulars.
 - 1. The pestilential Infection may be conveyed to very distant Countries in Goods close packed up after pestilential Particles had made a Lodgment in them. This Opinion is confirmed by every Instance wherein

§. 13. When the infected Goods are opened, the peftilential Particles are removed from their Lodgment by the Motion of the Air to which they are exposed, and are carried along with the Current of it, and enter into any human Body that is near in the Way of their Currency; and, if there be a sufficient Quantity of 'em, that unhappy Person soon falls sick of the Plague.

§. 14. Thus has the Pestilence begun in divers Places; and, by the Transmutation of many Parts of the Blood of the first sick Person into a pestilential Nature, Multitudes of infectious Particles are generated or produced; the Conveyance of which to other Persons and Families, and from them to others, spreads Sickness and Death thro' the Cities into which the righteous God sends this dreadful Distemper.

§. 15. It may be an useful Caution (when Goods are imported from Countries where the *Plague* frequently happens) for the Perfons, employed in unpacking them, to have the Wind on their Backs, and the Goods before

before 'em, if it be done in the open Air: Or, if the Goods are to be open'd in any Building, to do it in a Room where there is a Chimney; then to have a Fire in it, the Door of the Room open, their Backs towards it, and the Goods between them and the Chimney; because, by this Means, the pestilential Particles (if such be in the Goods) may be carried away from them, and they thereby escape the Danger.

§. 16. 2. The continual Emission of peftilential Particles, from the Bodies of Perfons fick of the Plague, into the Air of the Rooms in which they lodge, is another Way by which the Infection is communicated; and Nurses, Physicians, Surgeons, Apothecaries, and all who visit the Sick, are hereby in Danger of receiving the Diftemper.

§. 17. Here it should be remember'd, that Keeping good Fires continually in the Rooms of the Sick, and the Doors of them open, will greatly leffen the Danger, as was shewed in my former Letter; and therefore is a Method which ought always to be used in the Time of fuch Sickness.

§. 18. I may add, that it will likewise be of great Advantage to the fick Perfons; because,

18 Of pestilential Infection,

cause, by the Means of it, they will continually have fresh Air to breathe in, and not be under the Necessity of drawing into their Lungs perpetually an Air replete with pestilential Steams.

- §. 19. Hence it appears, that Using the Method recommended §. 17, 18. is a Matter of vast Importance to the Recovery of Persons sick of the Plague, as well as to the Safety of those who shall attend or visit them.
- §. 20. 3. The Carrying of the Stools and Urines of Persons sick of the Plague, in this, and such like Cities, from their Rooms to the Vault or Sink, and there Emptying them, is another Way by which the Infection and Sickness may be spread in Families, and convey'd to other Places: Because pestilential Effluvia are continually slying off from those excrementatious and morbid Substances, and will be diffused in the Air of the Houses as they are carried down to the Place of emptying, and may infect others of the Family.
- §. 21. There is another Inconvenience of emptying those Excrements into the Vaults; for, if the Vaults do not discharge themfelves into a common-Sewer, but are such

prehend, from the Subtilty, and Levity of the pestilential Particles, that many of them will ascend, and return into such Houses, and that Persons in Health, who shall use those Vaults for Easement of themselves, will be exposed to great Danger of being there insected; and therefore, as the dreadful Sickness, by such a Practice, may easily spread in Families, it ought carefully to be avoided.

§. 22. And, if the Vaults run into Common-Sewers, yet no little Hazard will attend the Emptying the Excrements of the Sick into them; because the pestilential Particles (mixed abundantly with their Excrements) will partly return into fuch Houses, being aided by a Currency of Air, which generally is upwards in fuch Places, especially when the Cover of the Hole is removed; and then a great Part of them will be diffused in the Air, which is always circulating, and commonly with a pretty ftrong Current, one Way or other in the Common-Sewers, and will ascend into the Air of the Streets thro' those Grates by which Water runs out of the Streets into them. This any one may easily be convinced of, who will C2

will observe, as I have often done, the Steams ascending thro' such Grates, from the hot Liquors running in the Common-Sewers from the Houses of Distillers, Dyers, &c. And this Way Insection may be conveyed to People as they are walking along the Streets.

- §. 23. There is, yet, another ill Consequence of such a Practice (§. 20.) viz. that many of the pestilential Particles conveyed into the Common-Sewers will ascend thro' other Vaults, which communicate with them, into other Houses, and may produce the Sickness in other Families.
- §. 24. The Pouring the URINES of the Sick of the Plague into the Sinks, whether they run down into the Channels of the the Streets, or directly into the Common-Sewer, is a pernicious Practice; as may be concluded from the Reasons mention'd §. 20, &c. and therefore ought to be restrain'd.
- §. 25. It appears very manifest to me, from the Considerations suggested, that, in such a City as this, where there are so many Common-Sewers, and many Privies continually emptying into them, the *Plague* may be carried hither and thither, and dreadfully

of Conveyance (§. 20.); and, therefore, I apprehend it a Matter of great Moment, to contrive Means to prevent its Propagation by it.

§. 26. For this Purpose I propose, to be considered, the following Method, viz.

Let EARTHEN VESSELS, that will contain about two Gallons each, more or lefs, according to different Occasions, and very well glazed, and made big-bellied, with a large Mouth, be provided; and every such Vessel sitted with a Cork, that will go in easily, and stop it close.

§. 27. Then let every fick Family be furnished with a sufficient Number of these Vessels. Into such a Vessel let the Nurse empty the Stools and Urines of the Sick; and, when she does this Work, she should set the Vessel near the Fire before the Chimney, and, with the Chamber-Door open, keep as much as she can between the Door and the Receiving-Vessel; by which Means she will be least troubled with the Esserements.

§. 28. Then some Persons with a CART should, about Eleven o'Clock every Night, call at the infected Houses for these Vessels,

C 3

and carry and empty them into a Pit prepared for this Use, and cover the Excrements with a sufficient Quantity of Earth.

§. 29. There should also be provided, close by fuch a Pit, a Shed with a large Chimney (built with a high Funnel) containing a large Copper fufficiently full of Water, made boiling against its being wanted, into which the emptied Vessels, and the Corks belonging to each (fastened with a String or fmall Chain) should be put, and boiled about a Quarter of an Hour; by which Means all the pestilential Particles may be discharged from the Vesfels, and made to afcend with the Steam from the Water up the Chimney into the Air of the Atmosphere, where they may be diluted and rendered innocuous: And, after the Vessels have been thus purified, they may be taken out, rinsed in cold Water, and the next Night carried back to the Houses to which they belong, and exchanged for others, that shall want to be emptied.

§. 30. I may add, that fuch a Shed should be built square, with four Doors into it; a Door on each Side, to face the opposite capital Point of the Compass; and that the

Men,

Men, who do this Service, should be careful to stand with their Backs to the Wind when they empty the Vessels into the Pit, and then carry them to the Copper by that Door in which the Wind will be on their Backs.

§. 31. There are feveral other Ways by which the peftilential Infection may be conveyed to human Bodies: But, that I may not take up too much of your Time, I shall only add at present, that, with very great Respect, I am,

SIR,

Read to the ROYAL SOCIETY, Nov. 9, 1743. Your most obedient,

bumble Servant,

THEOPHILUS LOBB.

LETTER III.

Relating to the PLAGUE.

Containing an Account of other principal Ways by which the Infection may be conveyed to the Propagation of the Distemper, viz. 4. By the Nurses, who attend the Sick. 5. By Lodging Perfons fick of the Plague in Rooms on the Ground-Floor. 6. By a Depressing State of the Wind and Air. 7. By Burning Rags, Plaisters, &c. taken from Bodies under the Sickness. 8. By Exhalations from Bodies dead of it. 9. By pestilential Particles passing into Houses, ab extra, through the Doors or Windows, if open, when the Infection is in the circumambient Air. 10. By the Emission of infectious Effluvia from Persons seeming to be in Health. §. 32. to §. 62.

To MARTIN FOLKES, Esq.

President of the ROYAL SOCIETY

of LONDON.

S I R, London, Nov. 17, 1743.

§. 32. Beg Leave to proceed with confidering the principal Ways by which pestilential Infection may be communicated to human Bodies.

I have

I have already taken Notice of three of them, and shall now mention some others; and therefore observe,

- §. 33. 4. That Nurses, who constantly attend Persons sick of the Plague, by coming down among the Family, and also by walking in the Streets, with the same Clothes wherein they ferve the Sick, may communicate the Distemper to others: Because there is Reason to think, not only that the Surface of their Garments have pestilential Particles adhering to it, but that all the Interstitia of 'em are replete with them; and that fuch Particles (partly by Means of their natural Levity and Volatility, partly by the Motion of the Air circumambient to them, and partly by the Motion of the Nurses in walking) are continually flying off from them, and may infect Persons that happen to pass near them.
- §. 34. It will prevent the Spreading Infection this Way, if Nurses are not suffer'd to go out of the Houses, nor to come among the People of the Families, where they serve.
- §. 35. They should be furnished with all Conveniencies on the same Floor where the Sick lodge, and have every Thing carried

up to that Floor for them, and for the Sick, that shall be wanted.

- §. 36. Thus Matters should be managed in all private Houses, Hospitals, and Prisons, when visited with the Plague.
- §. 37. Nurses, who serve the Poor in other Distempers, do sometimes go out on Errands, at least for some Things wanted for the Sick; but they who attend the Sick of the Plague should not be permitted to walk in the Streets, at least, not 'till after a certain Hour in the Evening, to be fixed for the People in Health to be at their several Homes, except those who shall be employed abroad in the Service of the Sick, or in burying the Dead.
- §. 38. It may be of some Use to observe the Difference between the Case of Physicians and Nurses, as to the Carrying Infection.

The Physician, who only stays a few Minutes in the sick Room, must, in Proportion to the Shortness of the Time he is there (compared with the Days and Nights which the Nurse passes with the Sick) receive proportionally less of the infectious Particles: Nay, much less than in Proportion to the Littleness of the Time; because the Nurse

is very frequently employed close to the Person of the Sick, handling the Body on divers Occasions, and the Bed-Clothes, Linnens, &c. as well as in giving the Food, and Medicines.

- §. 39. It feems to me very reasonable to think, that the pestilential Particles, which shall be carried to the Surface of the Physician's Clothes during this short Visit, will be dislodged and removed by the Motion of the Air, and of his Body, in as short a Time as was spent in receiving them.
- §. 40. The Case of the Physician's Clothes, and that of the Nurse's, may be better understood, if we consider the Difference of the Case of a Man's being a sew Minutes in a small misty Rain, the watery Particles of which are presently gone from his Garments (tho' of less Levity and Volatility than pestilential Particles) and the Case of another that is out in it 'till his Clothes are thorough wet.
- §. 41. There will appear, on mature Confideration, that there is no Reason for any to be afraid of conversing with, or of using Physicians in other Diseases, on the Account of the Visits they make to Persons sick of the Plague; especially, if Physicians

shall observe some Rules hereafter to be mentioned.

§. 42. 5. Another Way, by which the pestilential Infection may be propagated, and the Number of the Sick increased, is the Lodging Persons sick of the Plague in Rooms on the Ground-Floor, and next the Street, Court, or Alley, in which the Houses are situated: And, two Ways, the doing so may spread the Distemper.

§. 43. It may spread it in the same House; because, by the Opening and Shutting of the Door of the sick Room (more especially, if a Fire be not constantly kept in it) many pestilential Particles will pass with the Air from the sick Room, not only to other Parts of the House on the same Floor, but ascend to the upper Stories, and may convey the Sickness to others in the Family.

§. 44. The Infection may likewise by this Means (§. 42.) be sometimes conveyed to Passengers, as they go by the infected House, if the Window of the sick Room be open, if the Chimney be such as throws down the Smoke, and there happen Holes in the Windows, or Crevices that will admit Smoke or Air to pass from the sick

Room

and Means of Safety from it. 29
Room out of the House into the Way of Passengers.

§. 45. The Lodging fick Persons on a Ground-Floor, I apprehend, is chiefly used among poor People; but, in a pestilential Season, it should never be done.

§. 46. I would propose, as an effectual Means of preventing the Propagation of the Plague this Way, that, when any City shall be visited with it, the uppermost Rooms in all private Houses, Hospitals, Pest-Houses and Prisons, be sitted up for the Use of the Sick; and also, that, while they shall lodge in them, a Fire be constantly kept in them, and the Doors open, as before recommended.

§. 47. If this Method (§. 46.) be obferved, it may fecure the Conveyance of the
infectious Particles from the fick Bodies,
thro' the Chimnies to the Air of the Atmofphere, and prevent their Descending into
the Houses, to the Prejudice of those in
Health; and likewise prevent the Infection
from going into the Streets, to the Endangering of Passengers: And People then
may with Sasety, and without Fear, walk
even thro' those Streets where the insected
Houses are situated, except at such Times
when

when the Air and Wind are in a depressing State.

§. 48. 6. That State, or Quality of the Air and Wind, which depresses and beats the Smoke (which afcends out of the Chimnies) downwards to the Ground, may very much spread the PLAGUE in Cities: Because, by this Means, many pestilential Particles, carried up from the fick Rooms to the Air of the Atmosphere, may be thrown down the neighbouring Chimnies of those Houses which stand in the Course of the Air's Current at fuch Times, and have the Current of the Air thro' them downwards, and may produce the Distemper among the Families that inhabit them; and, likewife, they may be blown down into neighbouring Streets, and infect fuch as are then walking thro' them.

§. 49. The Steams of peftilential Particles, continually fent forth from the Bodies fick of the Plague, prefently pass thro' the Chimnies of their Rooms' to the Air of the Atmosphere, where, if they continue ascending and diffusing, they soon become innocuous, and no Body is in Danger from them; but that Safety is suspended, and imminent

and Means of Safety from it. 31 imminent Danger of increasing the Mortality always attends, when the Air and Wind fall into a depressing State.

§. 50. This, I apprehend, is the chief Means of spreading the Sickness.

§. 51. When the Plague is in any City, it will be worth While to observe, whether the Sickness does not remarkably spread more upon such a State of the Air and Wind, than at other Times? And, whether the new-infected Houses be not such as stand in the Air's Current at such Seasons? And also to take Notice, how the Mercury in the Barometer stands when the Plague is increasing, and whether the Infection does not spread most when the Barometer is low, et vice versa?

§. 52. 7. The Burning Rags or Plais-Ters, or any other Things, taken from the Bodies of Persons sick of the Plague, tho' done in the Chimney of the sick Room, may propagate the Insection and Distemper to others in the Neighbourhood, if the Air and Wind be in a depressing State; and more surely than the other pestilential Particles (exhaled with the Breath, and perspired by the Bodies of the Sick, diffused in the Air of their Rooms, and conveyed up

the Chimnies) can do: Because such Things are replete with the contagious Effluvia, which are abundantly less diluted than the others. And, therefore, when fuch Things are thrown on the Fire, the infectious Particles, which adhered to them, being forced (by the Action of the Fire) immediately to fly off from them, and to mix and pass with the Smoke up the Chimney, less diluted than the other pestilential Particles, will be carried down into other Places of the Neighbourhood (if the Wind be in a depreffing State) and, confequently, may then prove more pernicious and destructive, as they are more numerous and less diluted.

§. 53. 8. The EXHALATION, or the Flying-off of pestilential Particles into the Air from Bodies dead of the Plague, as they are carried from the sick Rooms to the Places of their Burial, is another Way by which the Infection may be propagated to human Bodies: Because, very often, the Cossins are not made so close as to prevent the Passing of all volatile Particles into the circumambient Air from the Bodies inclosed in them; and because, from the dead Carts (which carry Bodies not inclosed with Cossins) Multitudes

fitudes of infectious Particles will be continually flying-off from them, and the more fo, by Means of the Motion of the Carts as they are carried to their Interment.

- §. 54. This Way (§. 53.) peftilential Particles are often diffused in the Air, within the Houses out of which the dead Bodies are carried, and into the Streets thro' which they are conveyed for Burial.
- §. 55. It will therefore be always dangerous to walk thro' the Streets, when such Funerals are moving; more especially so, on that Side of them against which the Wind carries the Particles of Matter diffused in the Air.
- §. 56. Here it should be remembered that, as the Air is always in Motion one Way or other, and giving Place to succeeding Quantities of it; and, as the pestilential Particles are always ascending, except when the Wind is in a depressing State; so that the Air of the Streets, in a short Time after the Funerals shall be over, will become healthy, as before, and it will then be safe for People to walk in them.
- §. 57. 9. Another Way, by which the Infection may be conveyed into Families, is, thro' the Doors and Windows of their

D Houses,

34 Of pestilential Infection,

Houses, if open or broken, and indeed thro' all Crevices, which are Inlets of Air into them.

- §. 58. This Way pestilential Particles may pass into Houses, when, by a depressing State of the Air and Wind, or by carrying the Dead to be buried, they are brought into the Air circumambient to them.
- §. 59. 10. PESTILENTIAL infecting Particles may be emitted from the Bodies of infected Persons, seeming to themselves, and others, to be in Health; and may be communicated to others they nearly converse with, and produce the Sickness in them.
- §. 60. Instances of this Kind happened in this City during the late dreadful Pestilence, as appears from the Journal of the Plague Year, 1665, printed 1722. p. 225, 226. And this Way of Meeting with the Insection seems unavoidable, when the Providence of God afflicts any with the Distemper in such a Manner.
- §. 61. All that can be done for Safety from being infected, this Way, is to use those Means which may, with the divine Blessing, render the Body not susceptible

and Means of Safety from it. 35 of the Distemper: I mean such as have proved effectual to the Preservation of many Physicians and Nurses from it, notwithstanding they had so much daily to do with the pestilential Insection.—Vid. §. 180, &c.

§. 62. I am, in the next Place, to propose fome proper Means of Safety from the pestilential Infection, in Regard to the fix last Ways of its Conveyance; but I will not take up any more of your Time at present.

I am, with much Esteem,

SIR,

Read to the ROYAL SOCIETY, Nov.17, 1743. Your very obedient,

humble Servant,

THEOPHILUS LOBB.

LETTER IV.

Relating to the PLAGUE.

Containing Directions bow to avoid the pestilential Infection, when the Air and Wind are in a depressing State; and to prevent the Burning Things taken from Persons under the Sickness; and to obviate the Spreading that Infection which exhales from the Bodies of People dead of the Plague: And an Account of the Preservation of Families, by shutting themselves up in their Houses: And likewise some effectual and expeditious Methods for freeing Clothes, &c. from pestilential Particles. §. 63. to §. 97.

To MARTIN FOLKES, Efg. President of the ROYAL SOCIETY of LONDON.

SIR.

LONDON, April 19, 1744.

§. 63. Have taken Notice in my former Papers of ten different Ways by which pestilential infecting Particles may be conveyed

conveyed to the Propagation of that terrible Distemper in human Bodies, and, under the first five of them, mentioned some proper Means of Safety: I shall now observe some Things in Relation to the others.

§. 64. 6. I shewed, §. 48, &c. that such a DEPRESSING State of the Air and Wind, as makes the Smoke from Chimnies to descend towards the Ground, is one Way by which the pestilential Infection may be communicated; and that this seems to be the chief Means of spreading the Plague in Cities.

§. 65. Such a State of the Air I apprehend may be known, not only by feeing the Smoke defcend, but also by the Lowness of the Mercury in the Barometer, which therefore should frequently be observed: And, to avoid the Danger of Infection this Way as much as may be, I would propose the following Rules; viz.

§. 66. Rule 1. That the infected Houses (tho' they should not be shut up, yet) should have some visible Mark, by which they may be known to all Passengers, while the Sickness is in them; and that an Account, in what Streets, Squares, Courts, Lanes, and Alleys they are situated, be published every Morning in some of the Daily

News-Papers, that so the Passing by them may be avoided, when a depressing State of the Wind and Air makes it dangerous.

- §. 67. Rule 2. That those Persons, who must go abroad, when the Air is in a depreffing State, should carefully observe from what Point of the Compass the Wind blows, and which Way the Smoke is carried, and then go on the contrary Side of the infected Houses: Thus; if the Wind blows from the South, and depresses the Smoke Northwards, then to go by fuch Houses, thro' Streets, or other Passages on the South-Side of 'em, et vice versa. The same Rule is to be observed, when the Wind blows from any other Point of the Compass. People should be very careful, in going by infected Houses, to pass thro' Ways to the Windward of them.
- §. 68. Rule 3. That Families should keep continual Fires, Night and Day, in those Chimnies which are not stopped up, to prevent pestilential Particles from being blown down thro' them into their Houses, when the Plague is near in their Neighbourhood.
- §. 69. I shewed in §. 52, that the Burning Rags or Plaisters, or any other Things taken

and Means of Safety from it. 39 taken from the Bodies of Persons sick of the Plague, may communicate the Infection to Families adjoining, and to Passengers near, if the Air and Wind be in a depressing State.

§. 70. It will effectually prevent Spreading this dreadful Distemper this Way, if the Rags and Plaisters taken from the Bodies of the Sick be put to their Stools and Urine, and buried in some such Manner as hath been proposed. §. 26. ad §. 30.

§. 71. And it may deferve the Confideration of the MAGISTRATES, whether it will not be needful, in a pestilential Season, that a Penalty be inslicted on Nurses, or any other Person, that shall burn Rags, Plaisters, Clothes, or any Thing taken from infected Bodies; and likewise on every one that shall empty any of the Stools or Urines of the Sick into any Vault or Sink.

§. 72. 8. I observed (§. 53.) that the Exhalation, or the Flying-off of pestilential Particles into the Air, from Bodies dead of the Plague, as they are carried from the Places where they died to their Interment, is another Way by which the Insection may be communicated to others.

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§. 73. I propose now, for preventing, as much as possible, all Danger by this Way, I. That all Coffins should be made so close, that no Air shall be capable of passing into, or out of them, when the Lids are fixed on them over the Dead: And, likewise, when the Dead become so numerous as to make it necessary to bury them without Cossins, that the Dead Carts be made so exceeding close, that no Air may pass thro' the Bottoms, Sides, or Ends, and with Covers over to be open'd for Putting in the dead Bodies, which, when shut, will let no Air pass in or out.

§. 74. 2. That the Families, by whose Houses the Dead are carried, should be very careful, especially if the Air and Wind are in a depressing State, to have the Windows, Door, Key-Hole, and every Inlet of Air in that Side of their Houses by which the Funerals pass, close stopped 'till some Time after the Funerals are gone. This Caution seems necessary, because those Families cannot be sure, that the former Rule (§. 73.) is exactly regarded.

§. 75. The Means of Safety from the peftilential Infection, when conveyed in the 9th and 10th Ways mentioned by me

(§. 57, 59.) I propose to lay before you in another Paper, in which I shall consider what may rationally be done to preserve the Healthiness of the Air in Houses, and to secure those Persons from falling sick of the Plague, whose Duty obliges them, by their Attendance on the Sick, to be daily in the Midst of pestilential Insection.

§. 76. I apprehend that there are Means, which, with the Bleffing of Almighty God, have been, and may be, effectual for these Purposes. (§. 75.)

§. 77. It appears to me, as a certain Fact, that peftilential Particles have plentifully entered into the Bodies of many, who never fell fick of the Plague: Particularly it was so in many of the Nurses, Divines, Physicians, and Surgeons, who attended the Sick of the Plague in 1665, and in those who handled the Bodies of them that died of it in order to their Burial, many of whom, nevertheless, escaped having the Distemper.

§. 78. I need not fay, that every One who shall be so happy as to discover any Means conducive to the Safety of those who must be employed among the Sick, or who are like to meet with pestilential Infection,

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will be greatly useful to Mankind; but I may affirm, that the Pleasure and Satisfaction, which they will have whom God shall make thus useful, has been a cogent Motive to excite me to Diligence in proper Refearches.

§. 79. In the Papers already laid before you, I have confidered the Plague as an infectious Disease, tho' I am fenfible fome have different Sentiments, which I may take a little Notice of hereafter.

§. 80. I have likewise considered Persons fick of the Plague as fo many Fountains of pestilential, infecting Particles, and have carefully traced the various Ways thro' which the Infection may be conveyed from the Sick to others; and have observed that the pestilential Particles are not carried far in the Air before they become so divided, and fubdivided, and diluted with that Element, as to be innocuous, and incapable of producing the Sickness in any. And the Truth of this Observation will be manifest, not only from the Confideration of what has been said in a former Letter, but also from FACTS, which happened in and about this City in the Year 1665, viz.

- §. 81. 1. That one died of the Plague, in the Parish of St. Giles in the Fields, in the Week ending Dec. 27, 1664. at which Time of the Year, we have Reason to think that a Fire was kept in the Chamber where the sick Person lodged; and that by the Action of the Fire pestilential Particles were plentifully carried up the Chimney into the Air of the Atmosphere; yet we do not find any Thing of the Sickness thro' the next following six Weeks.
- 2. That another died in the same Parish, in the Week ending February the 14th; and, after that, we hear nothing of the Plague thro' the next following nine Weeks.
- 3. That two died in the same Parish in the Week ending May 25, and none the next Week after; which induces me to think, that the Infection was conveyed to those who afterwards received it, by Means of some Apparel, or other Things, which had been in the infected Places, and there imbibed pestilential Particles.
- 4. That the Plague did not come into the City of London 'till the Week ending May 9, when one died of it; and no more 'till June 13, in which four died of it.

5. That

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5. That it did not come into Islington Parish 'till the Week ending June 20, when only one died of it.

6. That it did not get into Stepney Parish 'till the Week ending June 27, when only one died of it,

7. That it did not get into the Parish of St. Mary, Newington, 'till the Week ending July 18, in which four died of it.

8. That it did not enter the Parish of Hackney 'till the Week ending July 25, in which five died of it.

§. 82. If we confider these Particulars, and the various Changes of the Wind thro' the Course of so many Weeks, and the slow Advances the Sickness made, even in the most populous Parishes, thro' the first Weeks after its Entrance into them, it may convince us that the pestilential infectious Particles are not carried far in the open Air before they become so diluted as to lose their infecting Quality. See the Bills of Mortality for the Year 1665.

§. 83. The Truth of these Sentiments appears confirmed, by the Sasety which many Families have enjoyed thro' pestilential Seasons in several Cities, by Means of shutting themselves up in their Houses.

§. 84 T----s R-----n, Esq. of St. Mary-Axe, in this City, was at Aleppo when a terrible Plague raged, which carried off near 80000 in about Half a Year's Time.

§. 85. This Gentleman informed me, that the Plague began in Aleppo in February, 1718-19, which increased so much in fix Weeks, that the English, French, and other Families were obliged to shut themselves up in their Houses, and to continue shut up four Months; that the Houses shut up were within the Walls of the City, and though in Squares, yet intermixed, and at no great Distance from others; and that the Families shut up freely opened their Windows, and walked on the Tarras on the Top of their Houses, and without Fear talked from their Windows with the People without: That they apprehended Bread and Flesh did not take Infection, which with other fresh Provisions, as the Family had Occasion, were constantly brought every Day, and drawn up with a Cord, or little Chain and Hook, into their Windows: That they were careful to smoke their Letters, and not to admit any Thing of Feathers, Linnen, or Woollen to be received; and and that the English Families were pre-

§. 86. Dr. MEAD fays, that "when the "Plague was last in England, while it was "in the Town of Cambridge, the Colleges" remained intirely free by using this Pre-"caution." In the Plague at Rome, in the Years 1656 and 1657, the Monasteries and Nunneries for the most Part defended themfelves by the same Means. Vide Dr. Mead's Discourse on the Plague, Edit. 9. p. 19.

§. 87. We may now draw some useful Conclusions from what has been observed. Viz.

Coroll. 1. That there is no Occasion for Pest-Houses to be three or four Miles from a City, and that a very much smaller Distance will suffice for the Sasety of it.

Coroll. 2. That Families in this City, by shutting themselves up in their Houses, may live as safe from the Plague, during a pestilential Season, as many Families have done in Aleppo and other Cities by that Means,* except that their Houses be situated

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^{*} Particularly in London, as the Author of the Journal of the Plague, 1665, testifies. He says, "Many Families "foreseeing the Approach of the Distemper, laid up Stores of Provisions sufficient for their whole Families, and shut themselves

in very narrow Streets or Alleys, and the Plague happens into Houses contiguous to them, and the other Methods of Safety I have recommended, and shall propose, be neglected.

Coroll. 3. That People, when they shall hear the Plague is come into the City, have no Reason to be in those Frights and Hurries, which will not suffer them to deliberate duly on what they ought to do, and prudently to settle their Assairs before their Flight.

Coroll. 4. That, if the proper Precautions shall be observed, there will be no great Occasion for People to be afraid of going about the Streets, on the Account that the

themselves up, and that so intirely, that they were nei-" ther feen or heard of till the Infection was quite ceased, " and then came abroad found and well. I might recollect " feveral fuch as these, and give you the particulars of their " Management; for doubtless it was the most effectual secure " Step that could be taken for fuch whose Circumstance " would not admit them to remove, or who had no Retreats " abroad proper for the Case; for, in being thus shut up, "they were as if they had been an hundred Miles off: " Nor do I remember that any one of those Families mis-" carried; among these, several Dutch Merchants were par-" ticularly remarkable, who kept their Houses like little " Garrisons besieged, suffering none to go in or out or come " near them, particularly one in a Court in Throgmorton-" freet, whose House looked into rapers-Garden." p. 66, 67.

Pestilence is in many Houses of the Inhabitants, especially if the Wind be not in a depressing State.

- §. 88. I will take up no more of your Time at present, than to mention two Methods for removing and conveying away safely the pestilential Particles from infected Goods or Apparel, which may prove both effectual and expeditious.
- I. One is by AIRING them before brisk Fires made in Chimnies: We know by abundant Experience, that the Current of the Air, made more quick and strong by the Action of such Fires, will carry off all the Particles of Water, at first in the Form of a visible Steam, from any Garment or other Thing ever so wet, set before the Fire for Drying.
- §. 89. Hence I conclude, that the pestilential Particles (fince they are abundantly more minute, and of a much greater Levity and Volatility than those Globules of Water which make the visible Steam) will soon be effectually removed from infected Garments and other Things, by airing them before a brisk Fire made in a Chimney; which Method, therefore, will be of vast Service in a pestilential Season.

§. 90. I grant, that the Opening and Exposing infected Goods to the open Air will, in a sufficient Time, thoroughly cleanse them from pestilential Infection; but the Means, I have proposed, is like to do more in one Hour, than the other, it may be, in several Days.

§. 91. There is another Advantage attending the Way recommended (§. 88.) viz. that the pestilential Particles will thereby be conveyed into the Chimney, and, with the Smoke, to the Air of the Atmosphere above the Houses, which is the most certain Means to prevent their infecting People.

§. 92. I may here fitly observe, that Perfons employed in Airing of infected Things should, immediately before they do so, wet their Hands with Vinegar, and manage so, as to have the Door of the Room open behind them, and the Things they handle to be between them and the Chimney; which Care may very much secure their Safety.

§. 93. I would likewise recommend it as a good Rule in a pestilential Season, that Persons, after they have visited any Sick of the Plague, take the first Opportunity to air themselves before a brisk Fire, turning every Side towards it; which, very probably, will

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carry off (up the Chimney before which they stand) whatever Infection was received by their Garments, while in the sick Chamber; and thereby may prove a happy Means of Safety to themselves, and to others, that may have Occasion afterwards to converse with them.*

§. 94. This, therefore, deserves the Confideration of those Divines, Physicians, Surgeons, and of all others, that may be obliged to visit Persons sick of the Plague.

§. 95. 2. The other Way of Removing pestilential Particles from infected Things, is the Putting them into boiling Water in Kettles placed in Chimnies: Because, by this Means, those noxious Particles will be forced to recede from the infected Things, and to ascend with the Steam and Smoke up the Chimnies into the Air of the Atmosphere.

§. 96. This, indeed, is a Means which cannot be used with all Sorts of Things; yet it may be of great Service: For, in pri-

^{*} Supposing any pestilential Particles to adhere so strongly to Garments, or other Things, as to be inseparable from them by the Force of the Air, quickened in its Current by the Action of a brisk Fire in the Chimney, I apprehend we may conclude that there is very little Danger from them.

vate Families, Hospitals, and other Dwellings, when visited by the *Plague*, the Linnen used about the sick Persons, by being boiled a While in Water, may be cleared of all Insection, and afterwards be as safely washed and used as any other Linnen.

§. 97. I may add, that any other Things, which will not be spoiled by Boiling in Water, may by this Means be freed from all Infection: And then, this Boiling, being done in a Chimney, secures the Conveyance of the pestilential Particles up into the Air of the Atmosphere; which is the most effectual Method to prevent the pestilential Infection, emitted by the Bodies of the Sick, from spreading among the Inhabitants of any City or Neighbourhood.

I am, with very great Respect,

SIR,

Read to the ROYAL SOCIETY, May 3, 1744. Your most obedient,

humble Servant,

THEOPHILUS LOBB.

LETTER V.

Relating to the PLAGUE.

Containing Considerations respecting the Air in a pestilential Season: Of the open, unconfined Air, and of the Fruitlesness of using any Means to render it more pure and healthy: Of the Air in Houses, and that the Qualities of it are alterable by proper Means, and of the Alterations obtainable in it for the Safety of Persons from the Plague; and of the Nature of the pestilential Minsimata: Likewise general Rules to be observed for purifying the Air in Houses; with Remarks on Gun-Powder, and its Usefulness against the Plague, and an Account of four Sorts of it medicated for fumigating infected Houses. §. 98. to §. 123.

To MARTIN FOLKES, Esq.

President of the ROYAL SOCIETY

of LONDON.

S I R, May 10, 1744.

§. 98. Proceed now to lay before this learned and illustrious Society, fome other Means of Safety from the Plague,

PLAGUE, which, with the divine Bleffing, may be of great Service in any City, when vifited by that dreadful Calamity.

§. 99. These I shall distribute into two Sorts, viz. those which respect the AIR, and those which conduce to the Preservation of the Divines, Physicians, Surgeons, and Nurses, whose Duty shall oblige them, by their Attendance on the Sick, to be daily in the Midst of pestilential Infection: From which, all others may know the proper Means of Safety for themselves.

§. 100. I. I shall first-consider the Things which may be useful in respect to the Air.

As to the AIR of a Country in general, I would observe, that it may admit of a great Variety of Alterations, as to its Temperature and Qualities; and it may, by various incidental Causes (which Men can never foresee, nor ever know, but by their Effects) have a morbisic Quality: As I think it had, when the SICKNESS, called the Dunkirk Fever, was epidemical in this Nation: And so I apprehend it had in January and February, 1732-3; and again in March and April, 1743.

§. 101. I may add, that the general State of the Air in a Country may be healthy,

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even when the Plague is raging in some of its Cities and Towns.

§. 102. It feems to have been so in the Year 1665, when the PLAGUE made fuch dreadful Destruction in this City, and other Towns. Dr. Hodges takes Notice of the Temperature of the Weather, and that the Spring and Summer that Year were healthy; that the Air was agitated with gentle Winds, preventing the Stagnation of it, and conducive to diffipate the peftilential Particles; and likewise that the Heat was moderate, and fit to subserve the Healthiness of the animal Fluids: * And, in p. 24, he mentions, that some Physicians disapproved the Making Fires in the Streets, as expensive, needless, and unprofitable, on the Account of the Wholesomeness of the Air. Words are these, quoniam Aer omnino purus putus, et illibatus extitit.

^{*} Si enim spectanda Cæli Temperies, nescio an æqualior, et salubrior Tempestas verna, quam æstiva, eò quòd Venti leniores amicè Auram castigantes perstarent, putrefactivam ejus prohibentes Stagnationem, et Semina pestifera utcunque subtilia, et occultiora dissipantes, et excutientes, nec non Calor mitis, et moderatus tum inordinatarum, et anomolarum Exercitationi Fermentationum obstaret, tum Succos in Corpore humano depurandos debito Gradu et Statu ad amussim conservaret, ac regeret. Hodges Λοιμολογία, p. 16, 17.

§. 103. But, supposing the AIR to have a pestilential Quality, yet the Using any Attempts for Correcting or Destroying that Quality in the open, unconfined Air, by firing of great Guns, making Fires, or by firing Trains of Gun-Powder in the Streets, or any other Means, appears to me as fruitless and vain, as it would be for People to endeavour Clarifying the Water of the Thames between London and Southwark, when great Rains have made it muddy.

§. 104. If any Thing was found out that could prefently precipitate the earthy Particles in muddy Water to the Bottom, when the Water is in a State of Rest; yet, what would be the Advantage in Running-Water, while the Water that is purifying is continually passing away, and succeeded by other Quantities as muddy as the former?

§. 105. All Attempts, indeed, to purify the open, unconfined Air, which is conftantly flowing one Way or other, and of an immense Quantity, are like Attempts to alter the faline Quality of the Water of the Ocean. And, supposing a morbific Quality of any Kind, pestilential, or other, to be in the Air of a Country, yet, what could any

Means Me regeret. Hody Bernesoyla, p. 16, 174

8. 103.

Means to alter it avail? Since the open Air, in every City, is continually paffing away towards the East, or the West, or fome other Point of the Compass, as the Wind happens to carry it, and is continually fucceeded by other Quantities of Air of the fame Quality.

§. 106. I have taken Notice of these Things to remove a groundless Opinion, and to prevent Expences, which can never produce any Advantage, but may be laid

out for better Purposes.

§. 107. The AIR in Houses inhabited, is a Matter of a very different Confideration: For, tho' there is always fome Motion in it, yet the Current of it is so much slower than that of the Air without, especially if the Doors and Windows are shut, that various different Qualities may be introduced into it by Means of Fumigations, Evaporations, and Exhalations, made from different Sorts of Substances; as may rationally be concluded from the Scent of the Smoke of Tobacco, Gun-Powder, and other Things, which may be perceived some considerable Time after Fumigations have been made with them. 801 . So I all proceed to lay before

§. 108. It deserves Notice therefore, that, when the Air in Houses has any Quality prejudicial to Health, that Quality may be alter'd: If the Air is too moist, there are proper Means to render it drier; or, if it be too dry, it may be rendered moister: If it is too bot, it may be made cooler; or, if too cool, it may be made warmer. And I think it may be added, that if, in a pestilential Season, pestilential Particles happen to be brought into it, there are proper Means, with the Blessing of God, for these following Purposes, viz.

- of the pestilential infectious Particles, and to render them effete.
- 2. To divide, fubdivide, and to dilute them fo much with the Air in the Houses as to render them innocuous.
- 3. To diffuse in the Air within Houses an Abundance of such Particles of Matter, as may render the Bodies of those who inhabit them not easily susceptible of the Sickness from the pestilential Insection brought into it.
- §. 109. These are Points of great Importance, and I shall proceed to lay before

you some Means which I apprehend may rationally subserve these Ends (§. 108.) after I have observed to you, that the pestilential Miasmata appear to have a saline, dissolvent, putrefying Quality: If we may, from the Nature of Effects, deduce the Nature or Quality of the Cause which produced them; and if we may argue from the Quality of those Remedies which, by Experience, have been found effectual to preserve many People from suffering by pestilential Insection, and to recover others from that terrible sickness.

§. 110. And, fince the pestilential Particles are of such a Nature (§. 109.) we may conclude, that every Thing, which can conduce to preserve the animal Fluids and Solids from Putresaction, to prevent an inflammatory State of the Blood, and to maintain the muscular Fibres and the animal Vessels in a due Firmness and Strength, is proper, and may prove beneficial.

§. 111. Many Things here deserve to be mentioned and considered; but, for the Sake of Brevity, I shall only take Notice of a few Particulars, after I have laid down some general Rules to be observed in the

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and Means of Safety from it. 59 Use of the Means which may be proposed; viz. these following:

§. 112. Rule 1. That the Fumigations should be made chiefly in the lower Rooms; because the Fumes naturally ascend in the Air of the Room where the Fumigations are made, and may spread into other Rooms, and pass to the upper Stories, if the Door is open.

Rule 2. When the Sickness is in any Family, or very near in the Neighbourhood, as soon as the Scent of the Substance used in fumigating intirely ceases, the Fumigation should be repeated.

This Rule relates to those Substances whose Effluvia sensibly affect the olfactory Nerves.

Rule 3. If the Temperature of the Air, in a peftilential Season, be too bot, and too dry, those Substances should be chiefly used in this Service which tend to keep the Blood in its natural Temperament, and from Inflaming. Such are acid and nitrous Substances.

+ Likewise the Dissusing in the Air of a Room Partieles of Water, which may be done in great Abundance by decocting it in a Florence Flask on a Fire in a portable Furnace, (vid. §. 167.) may render that Air moister to any Degree that shall be wanted.

Rule 4. If the Air is too cool, and too moist, those Substances should chiefly be used, at least in a sufficient Quantity, which conduce to dissipate the watery Particles dissused in the Air, to render it warmer, and to prevent the muscular Fibres and animal Vessels from becoming too lax. Such are aromatic, sulphureous, and resinous Substances.

Rule 5. If any Inconvenience, as Headach, Faintness, or other ill Symptom be found by the People of the Family, from the Effluvia of any Substance used in Fumigations or Exhalations, such Fumigation or Exhalation should be made in such a lower Degree as will not bring on the Inconvenience, or the Use of it should be intermitted; or else it should be changed for some other, whose Effluvia will not be attended with such Effects.

Rule 6. The Fumigations should not be made near the Chimnies, because, if they are so made, the Fumes will be carried up the Chimney to the Air of the Atmosphere, and not diffused in the Air of the House; as I have sound it by several Experiments.

§. 113. Having premised these general Rules, I shall enter on the Consideration of some Substances proper for the Purposes which have been mentioned, §. 108.

I. The first, I shall take Notice of, is Gun-Powder.

This, by Experience, has been found of great Service against the Effects of the pestilential Infection. The Account sent from Messina in a Letter, an Abstract of which has been lately read to this Society, is an Evidence of it.

§. 114. And I may here observe that two of the three constituent Parts of this Powder are exceeding proper, even for compounding internal Medicines for Persons sick of the Plague: And there are Reasons to apprehend, that the acid Particles of the Nitre and Sulphur, if they are brought into Contact with the faline, pestilential Particles, may alter their Figuration, and render them effete, both in the Air and in the Bodies of Men.

§. 115. As to the Use of Gun-Powder for purifying the Air in Houses, it deserves Notice, that, on firing this Powder, the Smoke with

with great Celerity ascends, and spreads against the Ceiling of the Room, and then descends again pretty low, and disfuses in the Air of the Room; which shews the great Probability of its coming into Contact with the pestilential Particles, and rendering them esset, if such Particles be in the Air so sumigated.

§. 116. I have likewise considered, that Firing Trains of it made on the Floor of a Room will spoil it, and therefore contrived a Machine commodious for the Purpose; the Use of which may be shewn before you.

§. 117. And, on the Account that the Smell of fired Gun-Powder is disagreeable to many, I have with it, and other Substances (conducive to the same End, and which yield a grateful Scent) made some Variety of explosive Powders, out of which People may choose according to their Pleafure.

§. 118. I shall only mention four Sorts.

§. 119. 1. Gun-Powder campborated whole; made by wetting it three or four Times with campborated Spirit of Wine,

and Means of Safety from it. 63 and letting the Spirits exhale, and the Grains to become dry, after each Time of wetting them. In this Manner Gun-Powder may be medicated with the Parts of any other Substance, by wetting it with the Tinctures of 'em, made with rectified Spirit of Wine.

- §. 120. 2. The Powder of Gun-Powder campborised by mixing fix Parts of such Gun-Powder with one of finely pulverised Campbire, or with three Parts of Gun-Powder, and one of Campbire.
- §. 121. 3. GUN-POWDER medicated with the Cortex Eleutheriæ, by mixing eight Parts of pulverised Gun-Powder with one of finely powdered Cortex Eleutheriæ.
- §. 122. 4. GUN-POWDER medicated with Frankincense; made by mixing ten Parts of pulverised Gun-Powder with one of finely powdered Frankincense.
- §. 123. I will only add one Observation at present, viz. That the Scent of the Things mixed with the Gun-Powder is much more perceivable in the Descent of the Smoke from the Ceiling of the Room.

Room, than by the Ascent of it on the Deflagration.

I am, with very great Esteem,

SIR,

Your most obedient,

P.S. If it will be humble Servant, agreeable to any of the Gentlemen of Theophilus Lobb. the Society, the Deflagration of the Powders mention'd shall be made before them.

[Which was done]

Read to the ROYAL SOCIETY
May 10, 1744.

LETTER

LETTER VI.

Relating to the PLAGUE.

Containing an Account of some other Substances proper for purifying and medicating the Air in Houses during a pestilential Season; particularly, of the Cortex Eleutheriæ, Camphire, Tobacco, Brimstone, Gas Sulphuris, Spirits of Wine rectified; and of the Ways of using them. §. 124, to §. 152.

To MARTIN FOLKES, Efq.

President of the ROYAL SOCIETY

of LONDON.

SIR,

London, May 24, 1744.

§. 124. I Proceed now to mention some other Substances wherewith Fumigations may be made in Houses against the Effects of pestilential Infection; and the next Thing I shall recommend is,

§. 125. 2. The CORTEX ELEUTHERIÆ, which is the Bark of a Tree growing in Eleutheria, one of the Bahama Islands. This yields

yields a very grateful Seent, and the Particles of it, by Fumigation, diffused in the Air of a Room into which pestilential Particles had been conveyed, may perhaps in their Motion cause those morbific Particles fo to divide, and fubdivide, as to become effete; or, by passing with them into the Bodies of fuch Persons as shall be in the infected Room, may strengthen the Cohesion of the constituent Parts of the animal Solids, which the pestilential Matter might otherwife weaken, and may confirm the Confiftence of the animal Fluids, which that Infection otherwise might dissolve.

- §. 126. EXPERIENCE, however, has proved, that Fumes made of this Bark are very ferviceable to abolish disagreeable Scents, and to strengthen the Nerves and muscular Fibres; and to be a fufficient Means of Safety, when infectious Fevers have rendered fuch a Preservative needful.
- §. 127. Fumigations made with it were the only Means Dr. MORTIMER used, in the Infirmary of Bloomsbury, against the contagious Distempers, which happened there, while he had the Care of it: Whereas two Physicians, who preceded him in that Service, died of malignant Fevers from In-

fection taken in that Infirmary; as did also

feveral Apothecaries, and fome of the Surgeons Men, before this Sort of Fumigation was used: But Dr. Mortimer, who acquainted me therewith, escaped, notwiths standing his constant Attending that Infirmary above ten Years together.

§. 128. 3. CAMPHIRE is another proper Thing for fumigating Houses in a pestilential Season.

§. 129. This makes a good Medicine for internal Use against malignant, contagious Fevers of various Kinds; and has been much esteemed and used by several eminent Physicians, as Sennertus, Riverius, Etmullerus, and others.

§. 130. The Effluvia, or subtile Particles of it, internally taken, when conveyed into the Blood, conduce not a little to strengthen the Action of the vital Organs, to promote the insensible Perspiration; and often a sensible Sweating; and likewise to prevent Obstructions in the capillary Vessels, which bring on those Mortifications that constitute the deep Petechiæ, or purple, or livid Spors, called the Tokens in the Plague.

§. 131. This (§. 128.) affords an agreeable Fume to those who like the Smell of Camphire:

phire: But there is another Way of using it for medicating the Air in Houses, as it consists of very volatile Parts, which will all sly off, and diffuse in the ambient Air, viz. by putting proper Quantities of it, grosly powdered, into open Vessels, and setting them in convenient Places on the Floor of a Room for Exhalation.

§. 132. 4. Tobacco may likewise be fitly used in fumigating Houses, by burning it on a red-hot Iron, or live Coals; and the Fume will have the same Effect in the Air as if made by People's smoaking it.

§. 133. I mention this (§. 132.) because of the great Advantage which, in Experience, has been found from it in a pestilential Season.

§.134. Dr. DIERMERBROECK recommends the Smoaking it as a *Prefervative* from the *Plague* *; and very particularly describes the Effects of it in the Body.+

^{*} Inter Simplicia —: Primum erat Tabacum, nempe illius Fumus per Tubulum seu Fistulam Ore attractus, et post paucam Retentionem inde rursus dimissus, quemadmodum ordinarie à Fumisuctoribus sumi solet. Illius usum in hac Pestetam in me ipso, quam in plurimis aliis, insigniter profuisse observavimus. Diermerbroeck de Peste, p. 157.

⁺ Ibid. p. 162, 163.

§. 135. He made Use of this Means; Smoaking five or fix Pipes a Day; and esteemed it his principal Preservative from the Sickness, while the Plague was in Nimme-guen. He visited all Sorts of People sick of it, the Poor as well as the Rich; ‡ and, if at any Time he found himself out of Order by offensive Smells, in visiting the Insected, whatever Time of the Day it happened, he immediately laid aside all Business, and smoaked two or three Pipes of Tobacco, which removed his Disorder. †

§. 136. He relates, that, in visiting one of his Patients, he met with such a horrid Stink as greatly affected him; that thereupon he was seized with a Vertigo, Sickness at his Stomach, and Anxiety at his Heart, and sound himself insected with the Pestilence: That, therefore, he presently went

[†] Diermerbroeck de Peste, p. 179.

[†] Si verò ab ægrorum vel ædium infectarum Fætore me vel tantillum alteratum fentirem, statim postpositis omnibus Negotiis quantumvis necessariis, qualicunque Diei Hora foret, duarum triumve Tabaci Fistularum Fumum Suctione trahebam: nam, ut verum fatear, Tabacum pro primario Præservativo in Peste semper habui, et re vera tale esse, non sola Ratione ductus, sed Experientia edoctus, comperi.— Quapropter ego solo Tabaco contentus, nullis aliis Sussumigiis, Morsellis odoratis, similibusve utebar. ibid. p. 180.

out of the House, returned Home, and, as a Remedy, smoaked five or fix Pipes of Tobacco, by Means of which all the mentioned Symptoms vanished; and, finding himself well, he took a Drachm of Venice-Treacle, and went out again and visited the Rest of his Patients.*

§. 137. He says further, that, during the pestilential Season, the same happened to him three or sour Times; but that, when he perceived he had taken Infection, by having Recourse to a more plentiful Use of Tobacco, he became well, excepting one Time when he was hindered from smoaking it soon enough; and that then he was necessitated to take a Dose of an Antidote, by which, and a plentiful Smoaking of Tobacco, his Disorders went off; and he went out the same Day visiting his Patients, and sweated very much in Walking; but returned Home about Ten at Night, very well, with a good Stomach to his Supper.

§. 138. I thought the Giving this Account might be of Service, and hope therefore it will be excused. Many, indeed,

^{*} Diermerbroeck de Peste, p. 273. hist. 17. † Ibid. p. 274.

cannot smoak Tobacco, and others dislike the Custom, but these may have the Advantage by sumigating their Houses with it.

§. 139. Fumigations may also be made of Rosin, Pitch, Tar, Storax, Benjamin, and divers other Materials, recommended in the Advice of the College of Physicians, published in May 1665. But, besides these already mentioned, I should recommend Compositions made of Rosin or Pitch, with Salt-Petre and Brimstone, brought to an agreeable Scent by a just Proportion of Camphire, or the Cortex Eleutheriae, and have contrived Balls made with these Ingredients for medicating the Air in Houses.

§. 140. The Fumes of Brimstone, by itfelf, or mixed with a third Part of Camphire, burnt on an hot Iron in so low a Degree as will not incommode the People of the Family, may be of great Service.

§. 141. II. I shall now take Notice of some liquid Substances which may be beneficially used for medicating the Air in Houses, e.g.

§. 142. 1. The GAS SULPHURIS is a Thing which, I apprehend, may be very useful in a pestilential Season; because all its acid *Particles*, both the more and the

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less volatile of them, have a Tendency to prevent the Putrefraction of animal Sub-stances, to strengthen the Cohesion of the constituent Parts of the muscular Fibres, and likewise to prevent a febrile State of the Blood: And therefore I would propose, that China or Glass Basons, made for this Purpose, be filled with it, and set in convenient Places on the Floor for Exhalation.

- §. 143. The acid Particles which will exhale or ascend from it, and diffuse in the Air, may alter the Figuration of the pestilential *Miasmata*, and render them effete: They will also pass with the Breath, and by the Pores, into the Bodies of the People of the Family, and for the Reasons mention'd (§. 142.) may render them less susceptive of the Sickness
- §. 144. This Means may likewise be conveniently used in the Chambers of the Sick, and prove useful to the Infected, and those who shall attend them.
- §. 145. 2. The rectified Spirits of Wine, or from Brandies made of malted Liquors, have a Probability of being useful for the Purposes (§. 108.) under Consideration, because of their well-known Quality and Efficacy in preserving animal Substances from

and Means of Safety from it. 73 from Putrefaction, and in maintaining the Cohesion of the constituent Parts of the animal Solids.

- §. 146. I have tried EXPERIMENTS of Digesting these Spirits with Milk (a Substance most analogous to Blood) in Heat of the same Degree we call vital; and they produced no Coagulation in it. The same I can say as to Brandy and Rum; and I see no Reason to apprehend any Inconvenience from a moderate Diffusion of these Spirits in the Air of Houses.
- §. 147. Basons, therefore, as mentioned (§.142) may be filled with them, and placed as there directed.
- §. 148. The SPIRITS will be continually and plentifully ascending upwards, and diffusing in the Air of the Rooms wherein they are placed; and, if they do not alter the Figure of the pestilential *Miasmata*, and cause them to divide and subdivide so as to become innocuous, they will, however, conduce to prevent Putrefaction in the Bodies of Persons that shall be much in such Rooms, and, as I apprehend, may render them less susceptive of the Effects of the pestilential Insection.

- §. 149. This Means may also be used in the sick Chambers, and prove of some Service both to the Patients and those that attend them.
- §. 150. I have tried Experiments, in order to know what Quantity of the rectified Spirits will evaporate in a Day.
- §. 151. I put an Ounce of them by Weight into a well-glazed earthen Plate, where the Diameter of the circular Surface of the Spirit was four Inches and half, and the Spirits were all evaporated, and the Plate left dry, within twenty-four Hours. I made the like Experiment with an Ounce of them by Measure, and the Effect was the fame; and in Proportion to the Surface of the Spirits will be the Quantity evaporated, cæteris paribus : But, in warm or hot Weather, the Quantity evaporated will be greater in Proportion to the Degree of Heat in the Air. And by an artificial Heat we may, in a very short Time, vastly increase the Diffusion of these Spirits in the Air of Houses, when any Occasion shall render it needful fo to do.

§. 152. What remains I shall defer to another Opportunity.

I am, with very great Esteem,

SIR,

Read to the ROYAL SOCIETY, May 24, 1744. Your most obedient, bumble Servant,

THEOPHILUS LOBE.

LETTER

LETTER VII.

Relating to the PLAGUE.

Containing an Account of some other liquid SUBSTANCES, particularly of Vinegar, distilled Vinegar, the Juice of Lemons, &c. and their Usefulness against the pestilential Infection: Likewise of Experiments made with them, and of Purifying and Medicating the Air in Houses by suitable Decoctions, with the Method of Decocting, and Rules of Management; and of the Advantages which may be obtained thereby. §. 153. to §. 177.

To MARTIN FOLKES, Elg. Prefident of the ROYAL SOCIETY of LONDON.

SIR,

LONDON, May 31, 1744.

§. 153. A S the PLAGUE still subsists in Calabria and Sicily, according to the Accounts from those Parts of the World, which may spread as the Summer advances,

advances, and be carried into other Countries, when least expected; and, as my Refearches and Experiments subserve the End for which this illustrious Society was instituted, and may be serviceable to People in a most distressing Time, under one of the greatest Calamities that can befall them; so I promise myself the Favour and Countenance of all Well-wishers to the Health of Mankind, and Lovers of useful Learning, and hope to be indulged in relating what remains to be delivered on the Subject of my former Letters.

§. 154. I proceed, therefore, with confidering fome other *liquid Substances*, which may be proper for medicating the *Air* in Houses during a pestilential Season. And

§. 155. 3. The next Thing I shall recommend is VINEGAR, which has various Ways been very profitably used in Times of the *Plague*.

§. 156. I apprehend, that the acid Particles of it, when diffused in the Air of Houses infected, may act upon the pestilential Particles, alter their Figuration, abolish their saline, putrefying Quality, and render them innocuous: They will also pass with the Breath, and by other Ways, into the Bodies

Bodies of the People of the Family, and may make them less susceptive of the Sickness.

- §. 157. 4. DISTILLED VINEGAR is another liquid Substance, which may be useful for the same Purposes, on the Account that the acid Particles of it are a proper Remedy against the Effects of the pestilential Infection, for the Reasons mentioned §. 156.
- §. 158. 5. The Juice of LIMONS has likewise a Probability of being serviceable against the Infection of the Plague, for the Reasons mentioned under the foregoing Articles (§. 155, 157.)
- §. 159. I might enumerate other vegetable Juices, as of the feveral Sorts of Oranges, and of the Sorrels, &c. which deferve Confideration; but, for the Sake of Brevity, I shall omit them.
- §. 160. That I might better understand the beneficial Ways of using acid Liquors for purifying the Air of infected Houses, and for preserving the Air of others from an infecting Quality, I have tried several Experiments.
- §. 161. About the Middle of October last, I wetted one Piece of Deal with Vinegar, and another with the Juice of Limons, by rubbing

and Means of Safety from it. 79 rubbing it with Part of a Limon cut into Pieces; and then dried them by the Fire, and afterwards put my Tongue to each of them, and found acid Particles from each of those Liquors remaining plentifully in the Wood, and very pungent. The acid Particles from the Vinegar were intirely gone out of the Deal in a few Days; but the acid Particles from the Juice of Limons remained, and are still pungent against the Tongue, tho' the Wood has been exposed to the Air in my Study above these six Months.

§. 162. The 10th of November last, I wetted two Pieces of Deal, one with Vinegar, and the other with the expressed Juice of Limons, and dried them well before the Fire, and then put my Tongue to each of them, and found the same Effects as in the forementioned Experiments. November the 11th I tasted them again, and found the acid Particles remaining in both, but a great deal more in that wetted with the Juice of Limons, than in the other. November the 12th, I tasted them again, and found the acid Particles of the Juice of Limons very sprightly, but those of the Vinegar very saint.

faint. November 14, I could hardly perceive any of the Acid of the Vinegar in the Wood, but the acid Particles of the Juice of Limons were very pungent, and are still very perceivable.

§ 163. These Experiments I have several Times repeated; and, as to the Vinegar, I have, in some Trials, sound the acid Taste lost from the Wood much sooner than in others; which I impute to a Difference in the Vinegars, some being more replete with the acid Salts than others.

§. 164. I have also made Experiments with Gas Sulphuris, and the Acetum distillatum, on Pieces of Deal in the same Manner, and observed that the acid Particles of these Liquors remained in the Wood after it was dry, and gradually exhaled, and were lost from the Wood in a very sew Days. Indeed the Acid of the Limon only was permanent in the Deal.

§. 165. From these Experiments we may observe the following Corollaries, viz.

• Coroll. 1. That many of the specific acid Particles of the Liquors mentioned remain in Wood wetted therewith, for a considerable Time after the Water of them is exhaled and the Wood become dry.

Coroll. 2. That, from the Floors of Rooms wetted with Vinegar, or distilled Vinegar, or with the Gas Sulphuris, acid Particles will be ascending, and diffusing in the Air above, 'till the Floors have none left in them.

Coroll. 3. That, therefore, in a pestilential Season, especially in Houses infected, it is a rational, and may prove a very beneficial Method, to rub Vinegar, or distilled Vinegar, or Gas Sulphuris, on the Floors of the Rooms every Morning and Evening.

§. 166. This Means (§. 165, Coroll. 3.) I apprehend, may also be used with Advantage in the Chambers of the Sick.

Coroll. 4. That the Juice of Limons (on the Account that the acid Particles of it are so permanent in the Wood, and their Ascent and Diffusion so slow) cannot be so proper a Thing for wetting the Floors of Rooms; but I may add, that the specific Particles of that Juice may, by other Means, be plentifully and quickly diffused in the Air of Houses, as I shall presently shew, § 168, 169.

§. 167. The METHOD I propose, for a quick and plentiful Disfusion of the specific Particles of any Liquor in the Air of a Room, is by BOILING it in a Florence Flask,

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§. 168. The specific Particles of the Sub-stance decocted (urged by the Action of the Fire) which would pass from it into a Receiver, in the common Way of Distillation, will, by Means of the long Neck of the Flask, be made to ascend not only in great Abundance, but with great Celerity, and disfuse in the Air of the Room: On which Account, this, as well as the Way of Fumigating with dry Substances, is a most expeditious Means of Purifying and Medicating the Air of infected Houses.

§. 169. I have made Experiments of this Method with Vinegar, distilled Vinegar, Gas Sulphuris, and the Juice of Limons, of each separately; and likewise with Vinegar and Rosemary, and Vinegar and Rue; and sound that the specific Particles of the Vinegar, and of the vegetable Substance put into it, ascended, and disfused well in the Air of the Room.

§.170. It may be proper here to give some Rules in Relation to the Use of this Means for Purifying and Medicating the Air in Houses, viz.

Rule 1. That fix or eight Ounces of either of the Liquors mentioned may be fufficient for a Diffusion of acid Fumes in the Air of a Room of a middling Size at one Time, which may be repeated three or four Times a Day, more or less, according to the Occasion.

Rule 2. That, for Medicating the Air of Rooms, correspondent to the incidental Indication, two Ounces of some suitable Herb, shred very small, should be put into fix or eight Ounces of the Liquor.

§. 171. When in the Flask, and decocted with it, the specific Parts of the Herb (which affect the olfactory Nerves, and by the Smell of which it is distinguished from all others) will, by this Means, be carried up, and diffused in the Air of the Room with the acid Particles of the Liquor in which it is decocted, and will afford a pleasant Sensation, if the natural Scent of it is agreeable.

Rule 3. That, when Herbs are added to any of the Liquors, the Decoction should not be continued 'till there arises an empyreumatic Smell.

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Rule 4. That, when Sea-Coal is used for the Fuel, it should be of such live Coals as have discharged their Smoke and Flame.

Rule 5. That, when Charcoals are used, it should be after the strong Scent is abated, and their Surfaces are somewhat covered with white Ashes.

§. 172. It deserves to be noted, that, altho' the Fumes of Brimstone and Charcoal in a certain Quantity will most furely suffocate and put an End to Life (by so strongly constringing the muscular Fibres used in Respiration, and diftended at the Inspirations of Air in Breathing, as to render it impossible for the Lungs to be dilated for taking in Air) yet that, in a much fmaller Quantity, and diluted fo much with Air, as not to incommode the Respiration, or occasion Headachs, the fulphureous and acid Particles of the Brimstone and Charcoal are so far from being prejudicial to Health, that they conduce to strengthen the natural Cohesion of the Parts of animal Substances, and to prevent their Putrefaction; and fo are a proper, tho', it may be, not the most grateful Remedy, against the Effects of the pestilential Infection.

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§. 173. We may, from what has been observed, deduce the following Corollaries, viz. (§. 167.)

Coroll. 1. That this Way of medicating the Air may be of great Use in the Chambers of Persons sick of the Plague, or of any other malignant Fever, both in Regard to the Patients, and those about them.

§. 174. A cooling, sub-acid Quality may by this Means be communicated to the Air; and this medicated Air, by passing into the Bodies of People who breathe in it, may contribute much to preserve those that are in Health from falling sick of the Pestilence, and to abate the Fever and Putrefaction of the Blood in those afflicted with it.

§. 175. I may add, that various Intentions may be obtained by thus medicating the Air with different Substances; e.g.

I. When the Pulse and the Spirits are lower than in Health, and when Persons are faint, they may be relieved, their Spirits refreshed, and their Pulse, consequently, strengthened, by diffusing in the Air of the Room the fragrant Scent of Rosemary, Angelica-Sage, or Mint, decocted in Vinegar, or distilled Vinegar, or in a Mixture of Water and the Spirit of Wine.

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§. 176. 2. And, when the Air is too dry, it may quickly be rendered moister, by diffusing in the same Manner a sufficient Quantity of Water.

Coroll 2. That it may prove very beneficial to keep some or other of the Decoctions recommended going on in the sick Chamber, while the Divine, the Physician, and the Surgeon, or any others are there visiting.

Coroll. 3. That several portable Furnaces, with Florence Flasks, and proper Liquors boiling in them, may be conveniently set in the Places of public Worship, and the Decoctions continued, while the People are assembled; which may be of great Service to preserve them from Infection at such solution and necessary Meetings together.

§. 177. This Method may likewise be useful in Courts of Judicature, &c.

I shall add no more at present, but that I am, with great Respect,

SIR,

Your very obedient,

Read to the ROYAL SOCIETY, May 31, 1744.

and most bumble Servant,

THEOPHILUS LOBB.

LETTER

LETTER VIII.

Concerning the PLAGUE.

Containing an Account of the Ways by which pestilential Infection may enter the Body; viz. through the Nostrils, the Mouth, and the Pores of the Epidermis; and of Means of Safety, in Regard to those Passages, for Persons who must go into infected Places, particularly of medicated Spunges and Linnens, &c. and how to manage them; and of the principal Means of all, viz. daily Prayer to God, and an holy Life. §. 178, to §. 200.

To MARTIN FOLKES, Esq. President of the ROYAL SOCIETY of LONDON.

SIR,

London, June 7, 1744.

§. 178. Take this Opportunity to conclude the Subject I have been upon in some Letters, which have been read to this learned Society; and am now to consider what may be proper Means of G4 Safety

Safety from the Effects of the pestilential Infection, in Respect to the Bodies of Persons, who must attend People sick of the Plague, or be employed about Burying those that die of it.

§. 179. Here it must be observed, that, when pestilential Particles enter the human Body, they do so, either thro' the Nostriles into the Lungs with the inspired Air in Respiration; or thro' the Mouth, where they mix with the Saliva, and pass with it into the Stomach, when that is swallowed; or else thro' some Pores of the Epidermis, and so, by Means of Vessels terminating in the exterior Superficies of the Body, pass on ad intra, mix with the Blood, and, by assimilating some Parts of it into their own Quality, insect and produce the dreadful Distemper.

§. 180. The important Things, therefore, remaining to be endeavoured, are to find out Means of Safety in Regard to these Passages or *Inlets* into the Body.

§. 181. I apprehend that a Spunge, moistened with some suitable Liquor, and kept close to the Nostrils, while Persons are encompassed with infectious Air, as in the Chambers of the Sick, may be of great Service.

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Service, because this Means will not hinder Respiration; but, if pestilential Particles (notwithstanding the Use of Methods for medicating the Air already related) should pass thro' the Spunge into the Lungs, other Particles, of a contrary Quality from the Liquor wherewith the Spunge is medicated, may pass with them, and render them effete.

- §. 182. I have therefore contrived two Ways for Keeping a medicated Spunge to the Nostrils, so long as there shall be Occasion: And I may observe, that proper Liquors may easily be contrived to medicate Spunges for the Intention under Consideration: Such are the following, viz. a Mixture made with Vinegar, and so much of Hungary-Water, or of campborated Spirits of Wine, as will make a pleasing Smell; or a Mixture of distilled Vinegar, with or without Water, and so much of the Spirits of Lavender, or of the Spirits of Mint, as will give it a grateful Scent; and many others which might be mentioned.
- §. 183. And if Lozenges, agreeable to the Taste, and made of Ingredients proper to alter the Quality of the pestilential Mias-mata, be held in the Mouth, and swallowed

as they dissolve, while Persons are in the fick Chamber, or elsewhere in Places infected, it may be one Means of preserving them from falling fick of the Plague.

§. 184. Such Lozenges may be compounded of Balfam of Tolu, fine Loaf-Sugar, after it has been wetted with the Tincture of the Virginian Snake-Root once, twice, or thrice (letting the Spirits totally evaporate each Time) and a sufficient Quantity of the Mucilage of Gum Tragacanth, prepared with the Juice of Limons: Or, they may be made only with the Balfam of Tolu, Sugar, and Mucilage: Or Lozenges may be composed of Elecampane Root finely pulverised, Sugar, and a Mucilage of the same Gum, prepared with Vinegar.

§. 185. Or, if any Persons would not fwallow their Saliva, while in the fick Chamber, or other Places of Danger, they may use Masticatories of Frankincense, or Myrrb, or of Rue, or Tobacco, and spit out the Saliva as it shall abound in the Mouth.

§. 186. And, as for the SUPERFICIES of the Body, there are Means, which probably may either prevent the pestilential Miasmata from entering thro' the Pores and Means of Safety from it. 91 of the Epidermis inwards, or which may join such other Particles with them as may render them innocuous.

§. 187. I have confidered how the LIN-NEN we wear next our Bodies may be medicated for this Purpose, and have tried various Experiments for finding out Means which may be of Service. I shall not take up any Time in relating those Experiments, but only mention, in the General, that many Particles of several liquid Substances will remain in Linnens a fufficient Time for answering the Occasion, after they have been wetted therewith, and dried again; and that a hafty Drying, and Ironing them with a very hot Iron immediately after they have been wetted with the medicating Liquor, will diffipate the acid and other Particles of it intirely from them; and, therefore, that they should be dried slowly, and not iron'd at all, or at least not till they are near dry, and then iron'd with a Heater but moderately hot.

§. 188. I apprehend that Linnens may be fo medicated as to conduce somewhat to the Safety of those who shall wear them, when visiting Persons sick of the *Plague*; as may reasonably be concluded from the Case of the

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Sexton's Wife in Coleman-Street, who was Nurse to many sick of it in the Year 1665, and yet never was infected.

§. 189. Her Remedy was, "Washing "her Head in Vinegar, and sprinkling her "Head-Clothes so with Vinegar as to keep "them always moist; and, if the Smell of any of those she waited on was more than ordinary offensive, she snuffed Vinegar upon ther Nose, and sprinkled Vinegar upon her Head-Clothes, and held a Handker- chief wetted with Vinegar to her Mouth." (Vid. Journal of the Plague Year 1665, p, 105.)

§. 190. But Vinegar will give Linnen a Colour a little towards the Yellow; and therefore they, who shall dislike it on that Account, may have their Linnen medicated with a Mixture of distilled Vinegar, or with the Juice of Limons depurated, and so much Hungary-Water, or simple Spirits of Lavender, as will give it an agreeable Scent.

§. 191. As for those Parts of the Body which are exposed to the Air, as the Hands, Face, Neck, &c. the Wetting them with Water mixed with the Juice of Limons, or with Vinegar, or with distilled Vinegar, and

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fo much Hungary-Water, or Rose-Water, as will give an agreeable Scent, may be of Service.

- §. 192. And, as for Persons who must handle the Bodies that die of the Plague (be-fides using such Means as have been recommended) it may contribute to their Safety, if they wear Wash-Leather Gloves wetted with Vinegar, mixed with a little camphorated Spirits of Wine, and kept moist therewith, while they are employed about that melancholy and hazardous Service.
- §. 193. There are other Things I might take Notice of; but I have omitted them, that I may not be further tedious.
- §. 194. I will only mention one Means more of Safety, and that is, daily PRAYER to God, with a Life correspondent to the Rules of his Word.
- §. 195. They that defire to be preferved from the Vengeance of God, provoked by Sin, should seek Peace with Him in the Way of Repentance, Faith, and Obedience to his Laws; and should daily pray, that he will direct and bless the Means for their Security from the terrible Sickness.

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§. 196. PRAYER was the Practice of Dr. DIERMERBROECK. In the Mornings, by pious Prayers, he committed himself and his Health to the great and good God, and then went out to visit his Patients.*

§. 197. Dr. Hodges, in his AOIMO-AOIIA, recommends the Use of this Means: He thought it necessary, in his first Visits to his Patients, to press them to it; and herein he was an Example worthy of Imitation. And that he himself performed religious Duties to God, every Morning, seems plainly intimated in Page 241 of his Book. ‡

* Manè ægros invisurus, . . . præmissis piis Precibus, me meamque Sanitatem Deo Opt. Max. commendabam, et solummodo aliquot grana Cardamomi minoris masticando, jejunus primos ægros invisebam. Vid. DIER-MERBROECK de Peste, p. 179, 180.

† Methodi Therapeuticæ aditum, et vestibulum ingressurus, paucis hortari correptos necesse habeo, qui imprimis submonendi, ut Numen omnimodâ supplicatione venerentur, et precum holocausta immolantes, ab Illo tot, tantisque sceleribus violato, auxilium supernè petant, nec non pari devotione implorent Cælum, quò remediis dextrè præscriptis saveat, et benedicat. Ibid. p. 164, 165.

† Diluculo lectum egressus, . . . exin rebus, quæ privati hominis erant, præstitis, in ædium mearum aulam prodii, &c. Ibid. p. 241.

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§. 198. But, to close this Subject, I defire it may be remembered, that I have not been difcourfing on any Methods or Remedies for the Cure of the Plague, but tracing the principal Ways by which (when the Plague has been brought into a City) the pestilential Infection may be conveyed to the Propagation of it; and have been confidering what Methods and Means may be proper and conducive to the Safety of Persons in any Place under fo great a Calamity.

§. 199. How ferviceable the Things laid before you may prove in the Time of a Pestilence, I do not pretend to say; but I would hope, that, in a careful Observance of them, many Dangers may be escaped, and many Persons and Families, thro' the Bleffing of God, be preserved from it.

§. 200. I will only add, that I have taken fome Pains in my Refearches for the Good of Mankind, and have fpent many Hours in the Night, because I had no Time in the Day, to find out fome Means, more than had been before discovered, for the Safety of Persons in the distressing and amazing Time of a raging PESTILENCE: And those who have heard my Papers read, I believe,

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lieve, are convinced that I aim at no fecular Advantage to myself; and I apprehend my Endeavours to promote, by Experiments, that Branch of natural Knowledge which is most subservient to the Health of People need no Apology.

I am, with very great Esteem,

SIR,

Your much obliged,

Read to the RGYAL SOCIETY June 14, 1744. and most humble Servant,

THEOPHILUS LOBB.

PART II.

PART II.

LETTER I.

Relating to the PLAGUE.

Wherein the Case of Flying from, or Staying in a CITY, on the Entrance of the PLAGUE into it, is considered; and general Rules proposed for a proper Management when that Sickness shall be brought into any City, Army, fingle Ships, or Navy: Likewife for the Safety of Magistrates in the Administration of Justice, and of Divines, &c. when Visiting the Sick; and of Nurses; and for the Preservation of People in the Places of public Worship during the Time they are assembled together. §. 201. to 406.

SIR.

Propose now to deliver my Thoughts concerning People's Removing from, or Remaining in the CITY, if the Plague shall be brought into it; which I pray God, in his infinite Mercy, to prevent; and then shall submit to Consideration some general Rules, the Observance of

98 Who may not leave the City

which, I apprehend, may be of great Service in a pestilential Season.

§. 202. It appears to me very lawful for those Persons, and Families, who customarily spend one Part of the Year in the Country, and whose Circumstances will admit of their living distant from the City, and who are under no Obligations to abide in it, that is, whose Stay will not be wanted; I fay, it appears very lawful for them to leave the Town, and remove to what distant Places they shall choose. But then it must be observed, that there are several Hundred Thousand People whose Circumstances will not allow of their Removal; no! they will be under the Necessity of staying, whatever Hazards may attend their doing so. In the Year 1665, by Estimation, 200,000 People fled from the City, and about 500,000, who remained and furvived that Year, either were preserved from having the Plague, or were recovered from it.

§. 203. This vast Multitude of People must not be abandoned or neglected; and their Condition shews, that there is an Obligation on many, who otherwise might remove, to abide in the City through the calamitous Time.

§. 204. I. It shews that it is the Duty of MAGISTRATES, and all civil Officers, superior, or subordinate, to keep their Stations, and remain in the City; for, if these should fly, all the Government of the City would be at an End, and the Lives, and Properties of the People, who remain, would be exposed to Murther and Rapine.

§. 205. The Trust which God, by his Providence, has committed to Magistrates, and all civil Officers, and the Duty they owe to the People under their Government, do oblige them not to leave the City, while they remain in their respective Offices: Their Powers and Authorities are ordained of God; as may justly be inferred from what the Apostle Paul says in Rom. xiii. 1, &c.

§. 206. Governors are sent by the Lord for the Punishment of Evil-Doers, and for the Praise of them that do well.* But, if Governors sly from the Governed, How can they fulfil this Service, to which the supreme Governor of the whole World has appointed them? Or, be able to justify before God their Neglect of it?

* - 1 Pet. ii, 13, 14.

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§. 207. The gracious Notice which God took of the Zeal, which Phinehas shewed for his Glory, and the Safety and Good of the Children of Ifrael, may well encourage Magistrates to abide in their Stations, and to use their best Endeavours for the Honour of the supreme Governor, by putting the Laws in Execution against Sin, and for the Safety and Health of the People under their Care.

§. 208. The Lord spake unto Moses, saying, Phinehas the Son of Eleazar, the Son of Aaron the Priest, hath turned my Wrath away from the Children of Israel (while he was zealous for my Sake among them) that I consumed not the Children of Israel in my Jealousy. Wherefore say, Behold, I give unto him my Covenant of Peace,—because he was zealous for his God.*

§. 209. And God is well pleased with all pious Magistrates, who faithfully perform the Duties incumbent on them; and, as they are great Blessings to the People, they will find great Favour with their God.

^{*} Numb. xxv. 10,-13.

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§. 210. 2. All MINISTERS, of every Denomination, who have the Care of Souls committed to them, feem manifestly, and strongly obliged to continue with their several Flocks, notwithstanding the Coming of a Pestilence among them.

§. 211. PEOPLE never more want Instructions about their everlafting Concerns; about the Nature and Necessity of Repentance towards God, and of Faith in the Lord Jesus; about Regeneration, and the Way of a Sinner's Justification from all his Iniquities; and about the Adoption and Sanctification of them who truly believe: They never more want Instructions concerning Peace and Reconciliation with God, and the Way of Salvation thro' Christ crucified; they never more need to be instructed in the manifold precious Promises God has made to Believers, to all that love and faithfully ferve him: People never more want the personal Visits, Prayers, and Counfels of their Ministers, than in the distressing Time of a raging PLAGUE, when vast Numbers of them are like to be vifited with the Sickness.

§. 212. And therefore the Labours, and Services, both public, and private, of the H₃ Ministers

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Ministers of the Gospel are never more wanted, never more necessary and important, and never more likely to be useful than in the Time of such a dreadful Calamity; and, consequently, it is never more their Duty to abide with their Flocks than in such a perilous Season.

§. 213. It deserves the Consideration of all the Ministers of Christ, how they shall be able to answer it to the great Shepherd, and Bishop of Souls, if they, instead of feeding and taking Care of the Flocks divine Providence has committed to them, shall defert and leave them in a Time that they have most Need of their Labours.

§. 214. 3. All Physicians, Surgeons and Apothecaries, Nurses and Midwives, as I apprehend, are likewise bound in Duty to stay in Town, and do the best Service they can in a pestilential Season.

§. 215. The EMPLOYMENTS they have voluntarily chosen and undertaken, and in which the divine Providence has put them, oblige them to use their best Endeavours for the Preservation or Recovery of Health to those that shall desire their Assistance. Their professed Business is to serve the Sick, and to attend those who shall want their Help;

and therefore they are bound in Duty to perform the Service as well as they can, when called to it, let the Distemper or Occasion be what it will. And, if they fly from an infected City, and neglect their Duty, they trangress that divine Law, which says, All Things what soever ye would that Men should do to you, do ye even so to them *

§. 216. 4. It appears to be the Duty of all Persons to abide in a City visited with the Plague, whose Stay is wanted, and who may be useful in it; particularly Brewers, Bakers, Butchers, &c. It is the Duty of all whose Employments are needful for the Sick, or for furnishing Food, and other Necessaries for those, who are in Health, and cannot remove, either on the Account of their Circumstances, or Duty.

§. 217. The Apostle Paul says, Let us not be weary in Well-doing; for in due Season we shall reap, if we faint not. As we have therefore Opportunity, let us do Good unto all Men, especially unto them who are of the Houshold of Faith.

§. 218. It is plainly the Will of God, our fupreme Lord, and Law-Giver, that we contribute to the Supply of the Needy, and

^{*} Matth. vii. 12. + Gal. vi. 9, 10.

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to the Comfort of the Afflicted, and to the Recovery of the Sick, and to the Succour and Relief of the Distressed, when our Asfistance is wanted, tho' it be attended with Danger to ourselves. This seems evidently implied in 1 John iii. 16. where that Apostle says, Hereby perceive we the Love of God, because he laid down his Life for us: And we ought to lay down our Lives for the Brethren. And, doubtless, therefore we are bound, when the Providence of God calls us to it, to do what shall be in our Power for the Relief and Recovery of Perfons visited with the SICKNESS, tho' there may be Hazard in fo doing: And this alfo may be concluded from that Command in Matt. xxii. 39. Thou shalt love thy Neighbour as thyself.

§. 219. I may add, that Husbands must not sly from their Wives, nor Wives from their Husbands; nor Parents from their Children, nor Children from their Parents: Nor may Masters or Mistresses desert their Servants, nor Servants their Masters and Mistresses, when visited with the Sickness. For a mutual Care of each other's Sasety and Welfare is a moral Duty incumbent on these

in the Time of a Plague. 105 these natural, and civil Relatives; the Obligation to which probable Dangers cannot make void.

§. 220. I do not mean by this, that Hufbands or Wives, or Parents or Children, or Masters or Servants, are obliged to go unnecessarily into the Rooms of their Relatives sick of the Plague, or to act as Nurses, when there are others whose peculiar Business it is to attend and serve Persons under this Sickness; but yet they are bound to continue the mutual Care of each other's Welfare, and to person every Office, which shall become needful for them to do for the Recovery of the Sick.

§. 221. Every one should consider what is the Will of God, and their Duty, and resolve, with the Aid of the holy Spirit, to act according to it. It is better for Persons to meet with Sickness, and Death in the Way of their Duty, than to be seized by them, when they are walking in a Way of Disobedience.

§.222. The Time of a raging PESTILENCE is, indeed, a Time of Terrors, no less than of Dangers; but the most safe, and peaceful, and comfortable Course is to keep close with

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with God, and do all those Things which are pleasing to him: And the sincere Christian, who walks circumspectly, may thus address himself to God, viz.

§. 223. "Oh my gracious God! who delightest in Mercy, and whose Word tes-

" tifies, that with the Merciful thou wilt shew

" thyself merciful: * I humbly beseech

"Thee to establish and increase in me a

" merciful Disposition, and work in me a

" strong and prevailing Inclination to be

" useful to others on all Occasions; and

" let no Danger deter me from acting ac-

" cording to thy holy Will!

§. 224. "Oh my God! free me from

" all uneasy Thoughts of Death, and the

" Grave! Make me always fit for Death,

" and willing to die!

§. 225. " If I shall live to see the awful

" Time, when Thou shall send the Pesti-

" lence into the Neighbourhood where

" Thou hast set my Habitation, grant that

" I may not be afraid, but have my Heart

" fixed, trusting in Thee, whose Name is

" a strong Tower, + into which the Righ-

" teous may run, and be fafe!

* Pfal. xviii. 25. + Prov. xviii. 10.

§. 225. " Grant that I may not be afraid

" for the Terror by Night, nor for the

" Arrow that (invifibly) flieth by Day;

" nor for the Pestilence, that walketh in

" Darkness, nor for the Destruction, that

" wasteth at Noon-Day!

§. 226. " And, with Submission to thy

"Will, I humbly pray, that, when a

" Thousand shall fall at my Side, and ten

" Thousand at my right Hand, it may not

" come nigh me! Only with mine Eyes

" let me behold and see the Reward of the

" Wicked: For I have chosen Thee, the

" Lord Almighty, for my Refuge; and

" Thee, the most high God, for my Ha-

" bitation. Therefore, let no Evil befall

" me, neither let any Plague come nigh

" my Dwelling; but give thy Angels

" Charge over me, to keep me in all THY

" WAYS! Help me in all Cases to un-

" derstand my Duty rightly, and faithfully

" to perform it! In the perilous Time, in

" the Day of thy terrible Visitation for Sin,

" direct and prosper me in the Use of pro-

" per Means for my own Safety! and guide

" and fucceed my Endeavours for the

" Good of others.

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§. 227. "O cleanse me from all my "Sins with the precious Blood of the holy

" Jesus! blot out all my Trangressions as

" a thick Cloud. I fly to thy pardoning

" Mercy in Christ! I commit myself to thy

" Protection, and refign myfelf to thy Dif-

" pofal!

§. 228. "Oh my God! Oh my Love!

" Oh my heavenly Father, whom my Soul

" loveth! enable me with a ferene Mind,

" with a Mind free from all disquieting

" Apprehensions, to behave myself in an

" exemplary Manner, according to thy

" Will, and to thy Glory!

§. 229. " Hast Thou not said in thy

" Word? Because he hath set his Love upon

" me, therefore will I deliver him: He shall

" call upon me, and I will answer him. I

" will be with him in Trouble: I will deliver

" bim, and bonour bim: With long Life

" will I satisfy him, and shew him my Sal-

" vation.* Oh! fulfil thy Word unto

" thy Servant, by which Thou haft en-

" couraged me to hope, and grant my Pe-

" titions, for the Sake of Jesus Christ.

" Amen.

^{*} Pfal. xci, 14, 15, 16.

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§. 230. Serious Christians should consider, that, in the Way of their Duty, they have solid Ground to hope for the divine Protection: And they may be consident that God will either keep them alive in the Time of a Pestilence, or give them a Life far better among the Saints in Heaven. Yet very remarkable has been the Protection of God to those who have been faithful in the Way of their Duty. I will here relate the Conduct of some Ladies in the Time of the great Pestilence 1665, as an Example worthy of Imitation.

§. 231. The AUTHOR of the Journal of the Plague Year 1665, speaking of the Charities administer'd to the Poor in that calamitous Time, fays, " Some pious LADIES " were fo transported with Zeal in so good " a Work, and fo confident in the Pro-" tection of Providence in Discharge of the " great Duty of CHARITY, that they went " about in Person distributing Alms to the " Poor, and even vifiting poor Families, " tho' fick, and infected in their Houses, " appointing Nurses to attend those that " wanted Attending, and ordering Apothe-" caries and Surgeons, the first to supply " them with Drugs or Plaisters, and such " Things

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"Things as they wanted; and the last to

" lance and dress the Swellings and Tu-

" mours, where fuch were wanting; giv-

" ing their Bleffing to the Poor in fubstan-

" tial Relief to them, as well as hearty

" Prayers for them.

§. 232. He afterwards adds, "This I "may fay, that I never knew any one of them that miscarried, which I men-

" tion for the Encouragement of others in

" Case of the like Distress; and, doubtless,

" if they that give to the Poor lend to the

" Lord, and he will repay them, those that

" hazard their Lives to give to the Poor,

" and to comfort and affift the Poor in

" fuch a Misery as this, may hope to be

" protected in the Work." Journal, &c.

242, 243.

§. 233. It appears from his Account, that, thro' the Course of the Plague to the Beginning of September, there died within this great City and Liberties but sixteen Clergymen, two Aldermen, five Physicians, and thirteen Surgeons; * which, considering their Numbers, shews very manifestly God's special, and gracious Protection of

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Persons in the Discharge of their Duty.
All which may well encourage others to act according to the Will of God, and commit the Keeping of their Souls (and Bodies) to him in Well-doing, as unto a faithful Creator.*

§. 234. HAVING thus confidered who may, and who ought not to leave the CITY, on the Occasion of a Pestilence coming into it, I shall in the next Place propose to Consideration some general Rules as Preservatives from the Spreading the dreadful Insection, the Observance of which I apprehend may be of Service.

Rule 1. That, when the Danger of the Plague's being brought into a City becomes imminent, Houses be prepared, by the Order of the Magistrates to whom it shall belong, for the Reception of such Persons as shall be sick of it, and who must be provided for at the Expence of the Public.

§. 235. These Dwellings, when used for the Sick of the Plague, may be called Pest-Houses.

§. 236. I do not propose the Building Hospitals (improperly called Lazarettoes,

^{* 1} Pet. iv. 19.

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which are Hospitals for Lepers) near to our feveral Ports, for the Reception of Persons infected with the Plague, returning from their Voyages; because that would be a vast and indeed a needless Expence, to the Nation, on the Account that it is uncertain at what Port infected Ships may arrive; and very likely, when that Distemper shall be brought into Great-Britain, it may have its Entrance only at one Port, tho' afterwards it should spread thro' the whole Land. But the Providing Houses already built, for the Reception of infected Persons or Goods, is a Method may be put in Practice any where, pro re natâ, as Occasion shall call for them. I may add, that there is not like to be Time for building Hospitals for the Service of a City after the Plague is brought into it.

§. 237. These Houses (§. 234. Rule 1.) should be chosen at some Distance from the Town into which the Infection may be brought; but, I apprehend, that less than a Quarter of a Mile is a Distance sufficient for the Security of a City, and that the pestilential Particles from the Chimnies of such Pest-Houses are so much diluted, when mixed with the Air of the Atmosphere, that

General Rules preservative for Cities. 113 that they soon become innocuous; which I think has been made evident in the Letters read to the ROYAL SOCIETY.

§. 238. I may add, that Care should be taken that these Pest-Houses be not so distant from the City as to render impracticable the Attendance of Physicians, Surgeons, and Apothecaries.

Rule 2. The Number of the Pest-Houses should be increased, as the Occasion for them shall increase.

§. 239. It seems a very much mistaken Conduct in the Year 1665, that there was but one Pest-House for the City of West-minster, and that the City of London had but one, which was beyond Bunbill-Fields, where, at most, they could receive, perhaps, 200 or 300 People.*

Rule 3. That, in these Pest-Houses, the Sick be lodged only in the upper Stories, and but one in a Bed, and but one Bed in a Room; and that there be Rooms below the sick Stories reserved, sufficient for the Use of the Families entrusted with the Management of such Houses, as to Food, Attendance, &c.

^{*} Vide Journal p. 88.

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§ 240. The Advantage of such a separate Lodging of Persons sick of the Plague will be very great, both as to the Sick and those employed about them; because, by this Means, the Air of the Rooms will be less replete with Insection, and the Sick will have, consequently, a better Air to breathe in; and no sick Person will have another dying by his Side, to sink his Spirits, and hasten his Death.

Rule 4. That to one of these Pest-Houses every Master of a Family, if his Servant be taken sick of the Plague (and is willing to go) may send him; but, if able, allowing a certain Sum of Money per Week, as the Magistrate shall think reasonable for his Maintenance.

§. 241. And those Servants and poor People, who consider Things rightly, will be so far from having a Reluctancy to the being carried to a Pest-House, that they will rather rejoice that there are such Places provided, where they may have all proper Attendance, Advice, and Help of Physicians and Surgeons, and likewise Food and Medicines suitable to their Condition.

§. 242. And, for the Encouragement of People to consent to be carried to Pest-Houses,

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Houses, when infected with the Plague,
I would observe, that in the London PestHouse, thro' the Course of the Plague Year,
there only died 156, and in that of Westminster but 159 *; which shews that Abundance of People were cured in the PestHouses, thro' the Blessing of God, on the
Means there used for their Recovery.

§. 243. Rule 5. That good Physicians and Surgeons, with suitable Stipends, be provided, to take Care of the Sick in the Pest-Houses.

§. 244. Rule 6. That, when any Person in a Family shall be known to have the Plague, those that remain in Health, if willing, be removed out of the House (if the Sick continue in it) and such only left whose Attendance shall be needful.

§. 245. This (§. 244) appears to be a prudent Conduct, because thereby the healthy Persons may be put at a greater Distance from the Infection; tho' there is a Probability, that, in the Observance of the Methods recommended, they may escape the Distemper without Removing.

§. 246. Rule 7. That those Families, who can bear the Expence, be provided with

^{*} Vid. Journal, p. 209.

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other Houses, fitted for their Reception, as Places of Retreat in Case of Need; and, it may be, the empty Houses within the Bills of Mortality may be sufficient for such Occasions.

§. 247. Rule 8. That no Houses be shut-up, as in the Time of the Plague in the Year 1665.

§. 248. In that peftilential Season, after the 1st Day of July, when any Person was discovered to be sick of the Plague, the House was shut-up, by Order of the Magistrates, and marked with a red Cross of a Foot long in the Middle of the Door, evident to be seen, and with these usual printed Words, that is to say, Lord have Mercy upon us, set close over the same Cross. And the Magistrates ordered the Constables to see every House shut-up, and attended with Watchmen to keep them in: And this Shutting-up to be for the Space of sour Weeks after all be whole.*

§. 249. The manifest Tendency of this Method was the Destruction of the whole Family, where any one fell sick of the Plague: It confined the sound People of it near to the Infection; it made them Pri-

^{*} Vid. Journal, p. 52.

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foners; it fill'd their Minds with Terror, Grief, Anguish, and Vexation; it produced all the depressing Passions, which abate the Force of the vital Organs, and diminish the vital Strength to that Degree, that there could be no Probability of their Recovery, who, under such Depressures, fell sick of the Distemper.

- §. 250. Another great Inconvenience from this Course was, that the Persons recovered (when such Recoveries happened) were restrained for a whole Month after their Recovery from the Benefit of taking the Air.*
- §. 251. These (§. 249, 250) are natural Effects of Shutting-up a House, when any one of a Family sickens of the Pesti-Lence.
- §. 252. There are many Reasons against the Shutting-up infected Houses (§. 248.) deducible from the Facts or Events which happened in this Town, 1665, and which deserve Consideration.
- §. 253. 1. That the Shutting-up Houses (§. 251.) did often, if not always, occasion the Death of the whole Family.

§. 254. The Journal fays, " Many

" People perished in these miserable Con-

" finements, which, 'tis reasonable to be-

" lieve, would not have been distempered,

" if they had had their Liberty, tho' the

" Plague was in the House." p. 57, 58.

"§. 255. And, in p. 63, he fays, "Here

" were just so many Prisons in Town,

" as there were Houses shut-up; and, as

" the People shut-up, or imprisoned so,

" were guilty of no Crime, only shut-up

" because miserable, it was really the more

" intolerable to them.

" §. 256. 2. " This Shutting-up Houses

" occasioned much Mischief: Several

" Violences were committed, and Injuries

" offered to the Men who were fet to

" watch the Houses so shut-up. p. 58.

" §. 257. And, p. 63, he fays, " I be-

" lieve that, from the Beginning of the Vi-

" fitation to the End, there was not less

" than eighteen or twenty of them killed,

" or fo wounded, as to be taken up for

" dead; which was supposed to be done by

" the People in the infected Houses which

" were shut-up, and where they attempted

to come out, and were opposed.

§. 258. The Journal relates a melancholy Instance of the sad Effects of the Shutting-up of Houses in a Family that dwelt in Whitechapel, into which, after several unreasonable Prolongings of their Confinement, the Plague was brought with the Visitors. Vid. p. 182, 113. "And this (he fays) was a Thing which frequently hapment, and was indeed one of the worst Consequences of Shutting Houses up. ibid.

§. 259. 3. The Method of Shutting-up Houses was ineffectual: Several People broke out by Force in many Places (ibid. p. 58.) This Author gives an Instance of a Family in which the Sister of the Mistress died of the Sickness. He says, "The "Man of the House, his Wife, several Chil-"dren, and Servants being all gone and "fled, whether sick, or sound, that I "could never learn; and many such "Escapes were made out of insected

§. 260. And, in p. 62, he relates another Instance of it.

" Houses. ibid. p. 60.

§. 261. He likewise observes, "that many Houses were so situated, as that they had several Ways out, some more, I 4 some

" fome less, and some into several Streets:

" It was impossible for one Man so to guard

" all the Paffages, as to prevent the Escape

" of People made desperate, &c. ibid.

" p. 63. So that, in short, (he says) the

" Shutting-up of Houses was in no wife

" to be depended upon; neither did it an-

" fwer the End at all, ferving more to

" make the People desperate, and drive

" them to fuch Extremities as that they

" would break out at all Adventures. p.64.

§. 262. He likewise shews, that it was a Means of Spreading the Infection. ibid. et p. 64, &c.

§. 263. And, p. 67, speaking of Families infected, and shut-up by the MAGISTRATES, he fays, " The Misery of those Families is " not to be expressed; and it was generally

" in fuch Houses that we heard the most

" dismal Shrieks and Outcries of the poor

" People, terrified, and even frighted to

" Death, by the Sight of the Condition of

" their dearest Relations, and by the Ter-

" ror of being imprisoned, as they were:" It might be added, --- and of fuffering the

fame Distemper.

§. 264. He likewises takes Notice, that, as several People got out of their Houses, after

General Rules preservative for Cities. 121 after they were shut up, by Stratagem, so others got out by Bribing the Watchmen. p. 68.

§. 265 And it may be further observed, that the *Plague* continued to increase, and at length with great Swiftness, notwithstanding the *Shutting-up* the infected Houses, and did not abate till after it was left off.

§. 266. It is a Law of the great GOD, who is Law-Giver to all Nations, to do unto others as we would be done unto: And the Obligation of this Law is perpetual, and on People of all Ranks. And Justice and Equity forbid the *Imprisoning* any Persons who have been guilty of no Offence, and much more the Confining them in Houses infected with the Plague.

§. 267. And it deserves Consideration, whether the Shutting-up sound People, and Making them Prisoners with Persons sick of the Plague, be not inconsistent with the Laws of God, and with that Justice, Equity, and Compassion, which every Man should exercise towards his Fellow-Creatures.

§. 268. Rule 9. That, when any one in a Family falls fick of the Plague, those that

122 General Rules preservative for Cities. are in Health, if they desire it, have Leave to remain in the House.

§. 269. I apprehend, that, if the Means of Safety from the Pestilence, which have been considered in the first Part of these Letters, and those which shall hereafter be recommended, be duly used, the Sickness may but seldom, at least much less, spread in Families, than it has done in Time past; especially, if the People are freed from the Terror of a miserable Consinement.

§. 270. Rule 10. That the found People, who voluntarily remain in a House, where any one lies sick of the Plague, have free Egress and Ingress; provided they have in their Hand, while from Home, a white Stick of a Foot long, to signify that the Sickness is in the House where they dwell, that so others may keep at what Distance from them they shall think sit.

§. 271. Persons seemingly in Health, and walking about the Streets, or sitting in Company, may be distempered, and have the Plague upon them, unknown to themselves as much as to others, and may insect others, if near enough to receive their Breath, or the Efsuvia of their Bodies; but it does not seem probable, that the Sick can insect

General Rules preservative for Cities. 123 infect the Sound at any great Distance. If there is Distance enough from their Breath and the Essuria of their Bodies, to have them much diluted with the Air, I apprehend the Danger cannot be great.

§. 272. But it will be prudent for those who must be much abroad, to observe the Rules proposed to *Divines* and others, who are obliged to go into Places of Insection.

§. 273. Rule 11. That a visible Mark, e.g. the Word PLAGUE, in great Letters, or some other, be set on every House into which the Pestilence shall enter, and not be removed 'till sixteen Days after the Sickness is out of it. It being a Matter of great Importance to all People, who must go abroad, and walk about the Town, to know what Houses are visited, that so they may regulate their Conduct, and be better enabled to avoid going too near them; and that Acquaintance may not inadvertently visit the Sick.

§. 274. I mention but fixteen Days for the Continuance of the Mark on the House after the Sickness is out of it, because I apprehend that, by proper Methods, any House, that has had the Plague in it, may in that

that Space of Time be fufficiently purified, aired, and rendered again fit for the Use of Persons in Health.

- §. 275. Rule 12. That great Care should be taken to hinder Persons sick of the Plague from coming out of their Houses, because they unavoidably carry Insection with them, and may communicate it to those that shall come nigh them.
- §. 276. It should be remembered that the last great *Pestilence* was very much spread, by People distempered with it getting out of their Houses, walking the Streets, or going into neighbouring Villages.
- §. 277. It may be requisite for preventing this Mischief (§. 276.) 1. That the Windows of the sick Rooms be so secured, that no sick Person shall be able to get out at them.
- 2. That, if one Nurse be not sufficient, more should be employed, when the Sick are delirious, robust, and ungovernable.
- 3. That Watchmen be appointed (when there is Danger of fick Persons getting out) to stand at every Door of such Houses, or

General Rules preservative for Cities. 125 at the Bottom of the Stairs by Night and by Day, to prevent such dangerous Excursions.

§. 278. Rule 13. That the HEADS of Families be required, as soon as they know the Sickness is come among them, to give Notice of it to such Officer as shall be appointed to receive it, that so the Mark, which the Magistrates shall direct for distinguishing infected Houses, may be affixed to their Houses.

This Rule People will more readily obferve, when their Doing fo shall not expose them to the dreadful Inconveniencies, and Terrors, which attended the Shutting-up Houses.

§. 279. Rule 14. That some Penalty, or Forseiture, be inflicted on such Heads of Families as shall neglect to give Notice, (§. 278.) according to the Order of the Magistrate, that the Mark of Distinction (§. 278.) may be put on their Houses.

§. 280. Rule 15. That all Persons, who have been visiting the Sick of the Plague, be obliged, all that Day after, to carry in their Hands the same visible Token, as if they lived in infected Houses, that so the

People in Health may keep at what Distance from them they shall think fit.

§. 281. Rule 16. That only Physicians, SURGEONS, or APOTHECARIES be employed as Examiners, to know whether the Persons taken sick have the Plague, and whether the Dead died of it; because some of these are called in to give their Opinion, whenever the Case is doubtful, and are indeed the most competent Judges, and are otherwise conversant in Places infected; and because, by this Method, a Number of Perfons called Examiners and Searchers will be freed from the Danger that attends this Service; and many mistaken Reports will hereby likewise be prevented. It seems likewise proper, that all Physicians, Apothecaries, and Surgeons be obliged, if, in the Course of their Practice, they find any one fick of the Plague, to discover it immediately to fuch Persons, as by Authority shall be appointed to receive the Information.

§. 282. Rule 17. That, when the Plague comes into a City, they, whose Circumstances will allow it, and whose Duty does not oblige them to stay, remove

early

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early into the Country: Because, by this
Means, much Danger of carrying the Sickness into the Towns and Villages of the
Country may be prevented.

§. 283. Rule 18. That the MAGISTRATES, whose Duty obliges them to stay in the City, should early resolve, declare, and publish their Resolution of continuing in it.

This will be a great Comfort to those who cannot remove themselves, and Families; and encourage others to stay more chearfully, whose Duty obliges them not to quit the Town; and it may likewise lay a Restraint on many from committing Injuries, when they know that Justice will be administered as usual, notwithstanding the Dangers of such a Time of Calamity.

§. 284. Rule 19. That Constables, Church-Wardens, and all Parish Officers, &c. be obliged to remain in the City; that so Riots and Tumults may be prevented, and that due Care be taken of the Poor.

§ 285. Rule 20. That Butchers, Brewers, and Bakers, and all Trades furnishing Aliments, be obliged to continue in the City, and carry on their respective Employments, or engage others to do so in their Stead.

§. 286. Rule 21. That the COUNTRY People be encouraged to bring Provisions for the Supply of the City; and Methods taken for their Doing so with Safety.

The Observance of these two last Rules seems necessary to prevent a Famine, which sometimes follows the Pestilence into Cities, tho' situated in a Land of Plenty.

§. 287. The Case of the City Messina in Sicily, under the late dreadful Plague (which carried off the greatest Part of the Inhabitants) is an affecting Instance of the Misery of any Place, that at the same Time suffers both by the Pestilence and Famine. I apprehend the Grievousness of the Calamity there is not publickly known, and therefore will give some Account of it.

§. 288. April 19, 1744, I was present at a Meeting of the ROYAL SOCIETY, when a Paper, communicated by Dr. MEAD, was read to it, which was an Extract of a Letter from Messina, dated, I think, the 15th of Jan. 1744. which in Substance contained the sollowing Particulars, among others, viz.

§. 289. That, while the Fury of the Plague lasted, never was any before so fierce: That,

That, from the Beginning of June to the End of July, of forty Thousand Souls within the Walls, above two Thirds perished.

§. 290. That the DISORDERS in the City were incredible; that all the Bakers died, and no Bread was baked for many Days; that the Streets were full of dead Bodies; and, at one Time, from twelve to fifteen Thousand remaining in the open Air, Men and Women, Rich and Poor, all dragged together to the Church Doors.

§. 291. That, as the Vaults were full, and the Living not sufficient to carry the Dead out of the City, they were obliged to put them promiscuously upon several Funeral Piles, where they were all burnt.

§. 292. That this *Plague* was attended with many Circumstances all at once in that City, where the Judgments of God appeared in all their direful Forms.

§. 293. That nothing was more shocking than to see Persons, far above the common People, go begging about the Streets for a Loaf of Bread, when they could hardly walk, and had their Tumors still upon them, and sew People were in a State to help them; and that all these Calamities did not hinder all Sorts of the most execrable

Villanies

Villanies, which were committed every Moment; and that, altho' so few survived, the Governor was obliged to make public Examples of several.

§. 294. The Terribleness of a Famine joined with the Pestilence is evident from the Misery of the Inhabitants of Messina, when under both those Judgments at the same Time; and should excite in every City a proper Care to prevent a Scarcity of Provisions in a pestilential Season.

§. 295. Rule 22. That, when the PLAGUE is come into a CITY, all the CLERGY, who have Cures, should fend in their Names to fuch Office as the Magistrates shall direct, together with the Names of the Parishes in which they ferve; adding, whether they are willing to stay in the City, and perform the Duties of their Function during the Visitation, or design to remove into the Country: And that those Ministers of Parishes, who resolve to leave the City, do certify, whether they have provided other Clergymen to officiate in their Stead, by publick Administrations, and private Visitations of the Sick, during the Time of their Absence: That so the Magistrates or Bi-Thop may know whether any Parishes will

be left destitute of Ministers, in a Time when they will be most wanted; and that some Care may be taken, by those to whom it shall belong, to have every Parish supplied with proper Ministers; and that the lamentable Cries of the Sick, for the Prayers and Counsels of Ministers in Times of extreme Need and Distress, may not be fruitless.

§. 296. Rule 23. That the DISSENTING MINISTERS, the Pastors of Churches, and their Assistant Ministers of every Denomination, as soon as the Plague shall be in the City, immediately consider the Case, and acquaint the respective Congregations, which they serve, with their Resolution of staying with them, and performing all ministerial Duties, publick and private, or of removing into the Country, that so the Congregations, that are like to be left destitute, may use proper Means to get themselves supplied.

§. 297. Rule 24. That all Physicians, Surgeons, Apothecaries, and Midwives be obliged to fend in their Names, and the Name of their respective Employments, and of the Place of their Abode, to such Office as the Magistrates shall direct;

K 2

adding

adding to each Name, whether they are willing to stay in the City, and serve the Sick, or design to leave it.

§. 298. Rule 25. That in every Parish there be four REGISTRIES, one of the Physicians, another of the Surgeons, a third of the Apothecaries, and the fourth of the Midwives, who purpose to stay in Town, and be as useful as they can in the Time of the Pestilence; and in each Registry to be entered not only the Names of the Perfons, but also an Account of the Places of their Abode.

I propose the two last Rules for these Ends, viz.

- 1. That the MAGISTRATES, who have the Care of the Health of the City, may be able to judge whether the Number of the Voluntiers for this important Service be fufficient.
- 2. That, if their Number be not sufficient for the Occasion, the Magistrates may consider of Means to supply that Desiciency.
- 3. That it may be known who are willing to ferve the Publick in fuch a Time of Diftress, and that People may know where

General Rules preservative for Cities. 133 where to send for them, when they shall want their Affistance.

§. 299. Rule 26. That in every Parish (as foon as the Plague comes into the City) the Church-Wardens inquire out Women of known Honesty, and Sobriety, and of a due Capacity, who shall be willing to serve as Nurses to Persons under the Sickness; and that a Registry of their Names, and Places of Abode be kept in every Parish; that so no Family or Person may be at any Difficulty in getting Nurses when they shall want them; as the Occasions for them will be sudden and pressing.

§. 300. Rule 27. That, in every Parish, the Church-Wardens likewise inquire out Men of known Honesty, Sobriety, and Capacity, who shall be willing to be Assistants to Persons sick of the Plague; and that a Registry of their Names and Places of Abode be kept in every Parish; that so every one may know where to seek for such Helps, when they shall stand in Need of them, as there will be frequent Occasions for them; sometimes to sit up with sick Men in the Night; sometimes to keep them within due Bounds, when they prove delirious, and unmanageable by the Nurses;

K 3

and

and for various other Services that may require their Aid; and that no Family may be ever at a Loss where to find such Men, as the Occasions for them are like to be always sudden, and urgent.

§. 301. Rule 28. That proper Wages for Nurses, and Rates for occasional and short Services, be considered of, and settled by the Magistrates.

And, as the Danger of ferving and attending Persons visited with this Sickness is much greater than when they have any other Disease that is not contagious, so their Pay should be greater; but it ought to be limitted within reasonable Bounds, that so avaricious Nurses, or other Helpers, may not have it in their Power to take Advantage, from the Necessity of Persons in Distress, to extort extravagant Wages.

§. 302. Rule 29. That, as foon as the Plague comes into a City, Masters and Mistresses do immediately confider, and determine what Servants they will discharge, and then difmifs them early; that fo they may have Opportunity for feeking an Employment, and a Maintenance elfewhere.

§. 303. Rule 30. That SERVANTS do likewise soon consider and determine whether to continue in their Service, and take their Lot there, as the Providence of God shall order it, or quit their Places; that fo the Servants, which remove, may remove in Time.

§. 304. I propose these two last Rules, (§. 302, 303.) to the End, that the miferable State into which feveral Thousands of Servants were reduced, and in which many of them perished in the Year 1665, may be avoided.

§. 305. In the JOURNAL of that Year it is related, " that the Case of poor Servants

" was very difmal: --- It was apparent, a

" prodigious Number of them would be

" turned away, and it was fo; and of them

" Abundance perished :--- And, had not the

" publick Charity provided for these poor

"Creatures, whose Number was exceed-

" ing great, they would have been in the

" worst Condition of any People in the

" City. Vid. p. 34.

§. 306. Rule 31. That there be WATCH-MEN in all Parts of the Town continually, Day and Night; to the End, that all tumultuous Affemblings of People and Riots

may be prevented. The Importance of this Rule, and likewise of having the Militia of the City in such Order as to be capable of answering the Ends of their Institution, may appear from considering the vast Numbers of the lower Ranks of Men who, in the Time of a Pestilence, will be dismissed from their several Employments, and fall into the utmost Distress; and thereby under strong Temptations to take violent Measures to supply their own Wants, if not relieved by charitable Contributions, (vid. 321, to §. 325.) or restrained from it by a superior Force.

§. 307. Rule 32. That the WATCHMEN be obliged, whenever they see any Persons abroad with Symptoms of Sickness, to conduct them to the Houses to which they belong; or, if they are delirious, or not capable of giving an Account of the Places of their Abode, then to take them to some Hospital, or Pest-House as the Magistrate shall order.

§. 308. Rule 33. That Care be taken not only to keep all Streets, Squares, Courts, and Alleys clean, but also to remove out of Sight every frightful Object.

§. 309. The prudent Management that was in this CITY, 1665, deferves Imitation. In the Journal of that Year it is faid, " It was indeed one admirable Piece of " Conduct in the Magistrates, that the "Streets were kept constantly clear, and " free from all Manner of frightful Objects, " dead Bodies, or any fuch Things as were " indecent or unpleasant .--- All the need-" ful Works, that carried Terror with " them, that were both difmal and dan-" gerous, were done in the Night: --- So " that in the Day-Time there was not the " least Signal of the Calamity to be feen " or heard of, except what was to be ob-" ferved from the Emptiness of the Streets, " and fometimes from the paffionate Out-" cries and Lamentations of the People " out at their Windows, and from the " Number of the Houses and Shops shut-" up: Nor was the Silence and Empti-" ness of the Streets so much in the City " as in the Out-Parts. p. 214.

§. 310. Rule 34. That, after the Plague is brought into the Town, no Bell be tolled for the Dead; but that a faithful Account of the Number of those

that shall die of the Sickness be published every Week in the Bills of Mortality.

§. 311. The Observance of this Rule (§. 309.) may be of Service, because the continual Tolling of Bells for the Dead will sink the Spirits of Thousands, increase their Fears, and render them less capable of that sedate and serious Consideration, which is necessary to a due Performance of religious Duties, and a prudent Management of their secular Affairs.

§ 312. And I propose the Publishing Weekly the Number of the Dead, that all People may thereby be informed of the Increases and Decreases of the Mortality; and thereby be directed as to their Supplications and Thanksgivings to God in Publick, in Family, and Secret Worship, as well as quickened in their Preparations for an happy Departure out of this World, when the Time God has appointed for their Death shall come.

S. 313. Rule 35. That Families, whose Circumstances will allow the Expence, do furnish themselves with good Store of Provisions, at least for five or six Months; e.g. Biskets of various Sorts, Wheat Flour, Oatmeal,

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meal, Rice, Millet, Pearl-Barley, Chocolate,
Coffee, Tea, Cocoa Shells, Sugar, Cheese,
Butter, Beef, Veal, Mutton and Lamb salted as Beef; Salt-Fish, Cod, Ling, &c. if there
shall appear any Probability that a Scarcity
of Provisions may happen in the City; likewise Oranges, Limons, Vinegar, Verjuice, Salt,
Oil, Wine of various Sorts, Brandy, Rum, rectified Spirits of Wine, Oil, &c. This I propose, that so Families may have wherewith
to subsist, in Case of a Scarcity.

S. 314. Rule 36. That the MAGISTRATES, if they shall think it proper, may, at the public Expence, lay-up in Store-Houses Quantities of Provisions sufficient for the Subsistence of the Inhabitants, who shall remain in the City, for so many Months as shall appear to them needful; and then sell them to the People, when they shall be wanted, as Joseph sold the Corn in Egypt in the Time of the Famine.

§.315. This Precaution (§.314) appears to me of some Importance to be observed in every City that is in Danger of being visited with the *Plague*; more especially, indeed, in those Countries, which are a Seat of War, and when the Cities in Danger of the Pesti-

lence have potent Enemies that may intercept the Supplies intended for them: But in Countries where there is no War, and where there is a Plenty of Provisions, People may not be willing to bring them to infected Places.

§. 316. Rule 37. That, as a Guide to the MAGISTRATES of the Cities of London and Westminster, in Laying-up Stores of Provisions, it may be proper for all Heads of Families, who refolve to leave the Town in a pestilential Season, to send in their Names, with an Account of the Number of their Children and Servants they shall take with them, to the Church-Wardens, or fome other Officers of the Parishes where they are Inhabitants, as the Magistrates shall direct; and that all fingle Persons who have no Family, and are Members of none, do likewise send in their Names, if they determine to remove: Because, by this Means, the Number of those that quit the Town may be known; and, confequently, pretty near the Number of those that shall remain, and thereby the Number of Mouths to be provided for.

§. 317. Rule 38. That timely Care be taken, not only for the Poor, who are on Parish-

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Parish-Books, but likewise for the Subsistence of those Persons, and their Families, whose Labours for earning their Maintenance will be made to cease when the Plague shall come into the City.

§. 318. There is like to be a vast Number of this Sort of People, in the Time of a raging *Pestilence*, which must perish, if not subsisted by the voluntary Contributions of charitable Persons.

§. 319. This was the Case of Thousands in 1665, and the AUTHOR of the forementioned Journal says, "that, by the "Care of the Lord-Mayor and Aldermen" at that Time, in distributing Weekly "great Sums of Money for the Relief of "the Poor, a Multitude of People, who "would otherwise have perished, were "relieved, and their Lives preserved; (p. 110.) --- A happy Fruit of Charity in that calamitous Time! And it should be a prevalent Motive with all that are able to abound in such Charity, if ever the like Occasion shall happen.

§. 320. This AUTHOR observes, when the *Plague* did spread, and the whole City was like to be visited, that "all Trade, except

" except fuch as related to immediate Sub-

" fistence, was, as it were, at a full Stop.

p. 110.

§. 321. And he sets down the several Classes of People who sell into immediate Distress upon that sad Occasion, p. 111, 112, particularly.

§. 322. 1. " All Master Workmen in

" Manufactures, especially such as belonged

" to Ornament, and the less necessary

" Parts of the People's Drefs, Cloths, and

" Furniture for Houses; such as Ribband

" Weavers, and other Weavers, Gold and

" Silver-Lace-Makers, and Gold and Silver

" Wire-Drawers, Seamstresses, Milleners,

" Shoe-Makers, Hat-Makers, and Glove-

" Makers; also Upholdsterers, Joyners, Ca-

" binet-Makers, Looking-Glass-Makers, and

" innumerable Trades which depend upon

" fuch as these: I say, the Master Work-

"men in such stopp'd their Work, dif-

"in missed their Journeymen and Work-

" men, and all their Dependants.

§. 323. 2. " As Merchandizing was at

" a full Stop, for very few Ships ventured

" to come up the River, and none at all

" went out; fo all the extraordinary Offi-

cc cers

General Rules preservative for Cities. 143 " cers of the Customs, likewise the Water-" men, Carmen, Porters, and all the Poor " whose Labour depended upon the Mer-" chants, were at once dismissed, and put " out of Bufiness. §. 324. 3. " ALL the Tradesmen usual-" ly employed in building, or repairing " Houses, were at a full Stop; for the Peo-" ple were far from wanting to build Hou-" fes, when fo many thousand Houses were " at once stripp'd of their Inhabitants: So " that this one Article turned all the ordi-" nary Workmen of that Kind out of Bufi-" ness; fuch as Bricklayers, Masons, Car-" penters, Joiners, Plaisterers, Painters, " Glaziers, Smiths, Plumbers; and all the " Labourers depending on fuch." §. 325. 4. " As Navigation was at a " Stop, our Ships neither coming in or going " out as before, so the Seamen were all out " of Employment, and many of them in " the last and lowest Degree of Distress; " and with the Seamen were all the feveral " Tradesmen and Workmen belonging to, " and depending upon the building and fit-" ting out Ships; fuch as Ship-Carpenters, " Caulkers, Rope-makers, Dry-Coopers, Sail-

" makers,

" makers, Anchor-Smiths, and other Smiths;

" Block-makers, Carvers, Gun-Smiths, Ship-

" Chandlers, Ship-Carvers, and the like ;---

" the Traders were univerfally at a Stop,

" and confequently all their Workmen dif-

" charged: Add to these, that the River

" was in a manner without Boats, and all,

" or most Part of the Watermen, Lighter-

" men, Boat-Builders, and Lighter-Builders

" in like Manner idle, and laid by."

§. 326. 5. "ALL FAMILIES retrenched

" their Living as much as possible, as well

" those that fled as those that stayed; so

" that an innumerable Multitude of Footmen,

" Serving-Men, Shop-keepers, Journey-men,

" Merchants-Book-keepers, and fuch Sort of

" People, and especially poor Maid-Servants

" were turn'd off, and left Friendless and

" Helpless, without Employment and with-

" out Habitation; and this was really a dif-

" mal Article."

§. 327. It is evident from these Events in 1665, that, whenever the righteous God shall send the Pestilence into this Town, vast Numbers of People will be discharged from their Employments, and a Stop put to those Labours, by which they earned Bread for themselves and Families; and consequently

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quently, that Multitudes will immediately
fall into a most necessitous and deplorable
Condition, and must starve and perish, if
there be not Contributions sufficient for
their Subsistence.

§. 328. This is a Matter of great Importance, and should be considered, and provided for in Time.

§. 329. I may observe one Thing more, viz. that the Straights and Distresses, which naturally and unavoidably happen to those, who get their Maintenance by their Labour, when a Stop is put to it, should excite them to Frugality in their Expences, and to lay-up as much as they can against a Time, when they may be disabled for Labour, or turned out of their Employments.

§. 330. Rule 39. THAT Provision should be made, not only for such Poor as are Parishioners within the Bills of Mortality, but for such Strangers, or Foreigners, who have come out of several Countries to earn their Bread in this Town; where many of 'em have lived many Years as Lodgers or Inmates.

§. 331. There are many Thousands of this Sort; many Journeymen, or Workmen, to L Taylors,

Taylors, Barbers, and a great Variety of other Trades.

§. 332. And these (§. 330.) can have no Share in the Distributions of any Charities given for the Relief of poor Parishioners, or poor Citizens; and therefore their Case is more deplorable, and their Misery, in the distressing Time of a raging Pestilence, should excite a general Compassion.

§. 333. And, as they are like to be the most destitute, and helpless in such a calamitous Time, so they should be thought of, pitied, and provided for.

§. 334. This deserves the Notice of those in whose Power it shall be to contrive, and promote their Relief.

§. 335. Rule 40. That FAMILIES, whose Circumstances will not admit of their Removing into the Country, tho' Duty to the Publick does not oblige them to stay in the City, may, for their better Security, shut themselves up in their Houses.

§. 336. Many Families were preserved by this Means in the Time of the last great Pestilence. The Author of the Journal, &c. says, "Many that got away (that is by Stratagem or Force, out of Houses shut-up)

" shut-up) had other Houses, where they

" lock'd themselves up, and kept hid 'till

" the Plague was over; and many Fami-

" lies, forefeeing the Approach of the Dif-

" temper, laid-up Stores of Provisions suf-

" ficient for their whole Families, and shut

" themselves up, and that so intirely, that

"they were neither feen nor heard of 'till

" the Infection was quite ceased, and then

" came abroad found and well. p. 66.

§. 337. Rule 41. That many fuch Families (§. 335.) may find Safety by retiring into Ships on the River.

§. 338. The AUTHOR of the Journal, having been down the River to Greenwich, and from the Top of the adjoining Hill took a View, fays, "It was a furprizing "Sight to fee the Number of Ships which

" lay in Rows, &c. and I could not but

" applaud the Contrivance, for ten Thou-

" fand People, and more, were certainly

" sheltered here from the Violence of the

" Contagion, and lived very fafe and very

" eafy. p. 129. vid. p. 132, 174.

§. 339. It must be observed here, that, altho' some Families may, consistently with the Duty they owe to others, shut them-

L2

felves

felves up in their own Houses, or retire into Ships, yet they cannot, consistently with the Duty they owe to God, on whom they depend for Life, Breath, and all Things, neglect Attending on his public Worship, which is a moral Duty incumbent on all Persons, who are not hindered by Sickness, or some Work of Necessity or Mercy.

§. 340. Rule 42. FAMILIES, who do not shut themselves up, should contrive their Affairs so, as very seldom to have Occasion for sending their Servants out on Errands; because, in the Year 1665, the Infection of the Plague generally was brought into the Houses of the Citizens by Means of their Servants.

§. 341. The Author of the Journal, as an Observation of his own, says, "The "Infection generally came into the Houses "of the Citizens by the Means of their Ser-"vants, whom they were obliged to send up and down the Streets for Necessaries, "that is to say, for Food or Physick, to Bakehouses, Brewhouses, Shops, &c. and who going necessarily thro' the "Streets into Shops, Markets, and the like,

" like, it was impossible but that they

" should one Way or other meet with dif-

" tempered People, who conveyed the fa-

" tal Breath into them, and they brought

" it Home to the Families to which they

" belonged. p. 87, 88.

§. 342. Rule 43. That those HEADS of Families, whose Circumstances can afford it, will act prudently, if they take each a a supernumerary House, into which the well Part of the Family may remove when any fall sick. This (says our Author) was in many Cases the Saving a whole Family, ibid. p. 87.

§. 343. Rule 44. Coaches, used for carrying the Sick to Pest-Houses, should be painted with some particular Colour to distinguish them from all others, and not be used for any other Service 'till the pestilential Season is over, and they have been sufficiently purified.

§. 344. Rule 45. That, when the Plague is near to a Family, Fires should be kept in all the Rooms of the House, for Reasons given in the first Part of this Book.

§. 345. The Author of the Journal, speaking of Fires kept in Houses, says, L 3 "Many

" Many Houses, which had constant Fires

" kept in the Rooms, having never been

" infected at all; and I must join my Ex-

" perience to it, for I found the Keeping

" good Fires kept our Rooms sweet and

" wholesome, and, I do verily believe,

" made our whole Family fo, more than

" would otherwise have been. p. 253.

§. 346. I may add, that the *Heat* of the Weather at any Time will be no Objection to the Keeping Fires in the Rooms of a House; because, by setting Screens before the Fires at a proper Distance, with the Windows, or Doors open, the Course of the Air thro' the Rooms to and up the Chimnies will be quickened, the Flowing of the Heat from the Fires into the Rooms prevented, and returned into the Chimnies, and carried away upwards with the Smoke to the Air of the Atmosphere above.

§. 347. Rule 45. That, for Preserving the healthy Quality of the Air in Houses, it is requisite to ventilate them, by daily Opening the Windows, and keeping them so for three or four Hours in the Middle of the Day, except in soul Weather,

General Rules preservative for Armies. 151 and when the Wind and Air be in a depressing State.

- RULES for Management, when the Plague, or any other contagious Distemper, happens in an ARMY.
- §. 348. Many of the general Rules prefervative for *Cities* may be useful to direct a proper Management, when the *Plague*, or any other contagious Distemper, happens into an Army.
- §. 349. Rule 1. When fuch a Calamity happens, let there be two Camps, viz. one of the Infected, and the other of the Sound. This Separation of the Sick from the Sound, is a Method of absolute Necessity to prevent the Spreading of the contagious Distemper.
- §. 350. Rule 2. Let the CAMP of the Sick be, at least, a Quarter of a Mile diftant from the other.
- §. 351. Rule 3. Let the CAMP of the People in Health, as much as possible, be to the Windward of the Sick. And, as to other Rules of Conduct, they are easily L4 deduced

deduced from what has already been obferved, and from what shall be further recommended in the following Papers.

- RULES for Management in single Ships, in Regard to the PES-TILENCE, and any other contagious Sicknesses.
- §. 352. Rule 1. Let an APARTMENT fufficiently large, according to the Bulk of the Ship (which may be called the INFIR-MARY) be fitted for Lodging the Sick, as near as it can conveniently be to the Head of the Ship.
- §. 353. Rule 2. Let this Apartment be separated from the Rest of the Ship by a Partition made of Boards, or other Materials, but so close that no Air shall be able to pass through it; and with a Door, which may be opened or shut, as Occasion fhall require; yet generally to be kept open.
- §. 354. Rule 3. That, if it can be done, a FIRE-PLACE be made in it for Burning of Charcoal, with a Funnel thro' the Side

of the Ship, bearing towards the Head of it, to carry off the Fumes of the Charcoal, and to obtain and preferve a Current of Air thro' the Infirmary and Funnel ad extra out of the Ship. But, on the Account, that, when a Ship lies at Anchor, its Head generally bears against the Wind, it seems necessary that there should be another Fire-Place, with a Funnel running out obliquely thro' the Side of the Ship towards the Stern, to be made Use of when the Ship is at Anchor; and, when this Fire-Place is used, the other should not be used, but have its Funnel stopp'd.

S. 355. Rule 4. That, in this Charcoal Chimney, if I may so call it, a Fire be continually kept Night and Day, which may be done safely, if the Fire-Place have an Iron Cover sull of small Holes, for the Fumes, Heat, and Air to pass through, ascend, and go off through the Funnel; and if an Iron Door, sull of small Holes for the Air, be made, for the Mouth of the Fire-Place to admit Air into it, and prevent live Coals from falling out of it; and, if a close Iron Door be sitted to the Mouth of the Place into which the Ashes fall, to

keep them, and Sparks of Fire from being thrown out by any Motion of the Ship, when under Sail. And there should also be an *Iron Register* in some Part of the Funnel, for stopping the Current of the Air through it, if any Incident should render it needful.

§. 356. I may observe, that the Having Fire-Places in the *Insirmary*, and a Fire constantly kept in it during the Sickness, may be attended with the same Advantage we hope for from a constant Fire in a sick Chamber on Land.

§. 357. Rule 5. That, if no Fire-Places can be made in the Infirmary, as proposed §. 354, &c. then let two Sets of Funnels be formed of Tin with Registers, for leffening, or stopping the Course of the Air, when needful. Let these Funnels be of a larger, or lesser Diameter, according to the Size of the Infirmary: Then let one Set of these Funnels, of a sufficient Length to pass trho' the Side of the Ship, be fixed obliquely thro' the Side of it, looking towards its Head; and the other Set fixed obliquely in the hinder Part of the Infirmary, looking towards the Stern: And the other Funnels

to be stopped, and these to be used, when the Head of the Ship bears against the Wind.

§. 358. Rule 6. When the Ship is under Sail, the Funnels pointing towards the Head should be kept open, and the others stopped with the Registers.

§. 359. Rule 7. When the Ship lies at Anchor, and its Head bears against the Wind, those Funnels which point towards the Stern should be kept open, and the others stopped by the Registers: Thus to keep those Funnels open which may convey the Air, and morbisic Particles of the Infirmary, into that Current of the Wind, which will carry them away from the Ship.

§. 360. A FLUX of Air, by this Means (§, 354, &c.) will be always maintained thro' the Infirmary ad extra to the ambient Air, and in a Course from the Ship; even when under Sail, because the Motion of the Air and Wind is much quicker than that of the Ship.

§. 361. This constant Flux of Air (§. 360) through the Infirmary ad extra, may happily prevent the infectious Particles, emit-

to the endangering of those that remain in Health; and the continual Course of fresh Air thro' the Insirmary will be not only refreshing to People under the Sickness, but advantageous to those who shall attend them, yielding a sensible Refreshment to their Bodies, and diluting greatly, and carrying away quickly the contagious Matter arising from the Bodies of the Sick, and thus will very much lessen their Danger.

§. 362. Rule 8. Let the Sides, the Ceiling, and the Floor of the Infirmary be rubbed with hot Vinegar twice a Day.

§. 363. Rule 9. Let EVAPORATIONS be made once or twice a Day, or oftener, in the Infirmary, from Florence Flasks set on Fires in portable Furnaces, as before described, by decocting in them proper Ingredients with suitable Liquors, or suitable Liquors by themselves. This Means of Medicating the Air may also be used in other Parts of the Ship, as there shall be Occasion.

§. 364. It will be necessary, when the Ship is under Sail, to have the portable Furnaces suspended so, that they, and the Flasks

Flasks in them, may keep their perpendicular Posture, whatever Motion the Wind, or the Waves may give to the Ship: The Contrivance of which is so easy as to need no Description.

- §. 365. Rule 10. Let EXHALATIONS be used, by tacking in proper Places a sufficient Number of large Spunges, wetted with Vinegar alone, or mixed with campborated Spirit of Wine. And Fumigations may likewise be used, when the Ship lies quiet at Anchor.
- §. 366. Rule 11. Let the Men appointed to nurse the Sick, for their own Safety, obferve the Directions given for the Conduct of Nurses in a City.
- §. 367. Rule 12. Let those of the Ship's Crew who remain in Health, and are not employed about the Sick, keep as distant from the *Infirmary* as their several Businesses will allow, and observe the Rules given for healthy Persons in a Family visited with the Sickness.

RULES for a NAVY, or Fleet of Ships.

§. 368. Rule 1. When there is Danger of the Plague, or any other contagious Sickness, being brought into a Navy, it feems very needful (if it be not done already) that some Signal be directed by those to whom it does belong; which the Commander of every Ship shall be obliged to make, when the Plague, or other contagious Sickness, happens in the Ship under his Command, for Making it known to all other Ships, in order to their Keeping at a due Distance.

§. 369. Rule 2. That, as foon as it shall be discovered that the Plague, or other contagious Sickness, is in any Ship, Care be taken to supply it plentifully with what further Provisions of Food shall be wanted for the Healthy, and with Remedies for the Sick.

§. 370. Rule 3. That, if it has no Phyfician or Surgeon, one be immediately fent to take Care of the Sick.

- §. 371. Rule 4. That the Boat, employed to carry Supplies to the infected Ship, be to the Windward of the Boat that is to receive them.
- §. 372. Rule 5. That, in Sailing, the infected Ship keep always first, at a proper Distance, which will secure the Fleet, to which it belongs, from all Danger of Receiving Infection.
- §. 373. Rule 6. That (if the Plague, or any other contagious Fever, be got into a Navy, and like to spread) there be an Hospital-Ship provided on Purpose for the Reception and Care of the People taken sick of the contagious Distemper. It is a very prudent Conduct to separate the Sick from the Sound; but they should not be sent into the Hospital-Ship appointed for the Wounded, and Persons sick of Diseases that are not contagious; because the Doing so might endanger the Lives of the other sick People.
- §. 374. Rule 7. That, in the Hospital-Ship appointed for the Sick of the Plague, the Rules given for fingle Ships be obferved.
- §. 375. Rule 8. That the Hospital-Ship appointed for the Sick of the Plague have

two Physicians, as well as a sufficient Number of Surgeons. I propose there being two, that so, in Case one of them should die, the other may direct for the Sick; and, if one or other of the Physicians shall die, his Place should be supplied with another as soon as it can be done, that so the Sick may not be destitute.

RULES for the Safety of MA-GISTRATES in the Administration of Justice.

§. 376. Rule 1. It will be prudent for Magistrates, in Administring Justice, not to be seated higher above those that come before them than is necessary to hear what shall be spoken; because, if insectious Particles are emitted from the Bodies, or the Garments of any in the Company, they naturally ascend and diffuse in the Air: And, therefore, the higher in a Room, or Court of Judicature, the Magistrate sits above the People, the more he will be exposed to Danger, when there happens to be Insection in the Company.

§. 377. Rule 2. It will be proper, in the Room where the Magistrate sits to do Bufiness, to have a Rail for keeping the People at a due Distance.

§. 378. Rule 3. The Air of the Room for Business should first be medicated, by Firing Trains of one or other of the explosive Powders recommended §. 119, 120, 121, 122, or else by Fumigations with one or other Sort of medicating Trochisks deficibed hereafter, as the Magistrate shall direct.

§. 379. Rule 4. It may be of Service, if two, or more (according to the Size of the Room) portable Furnaces are placed on the Floor between the Magistrate, and the Company, with Decoctions of such of the medicating Liquors recommended as shall be most agreeable, while the Company are together.

§. 380. Rule 5. It is likewise adviseable for the Magistrate to take a Dose of some preservative Remedy, and his Breakfast, before he enters on Business.*

M

RULES

* At an Affizes at Oxford in the Reign of Queen Ell.

**EABETH, in the Year 1577, so destructive an Infection

(most probably brought into the Court of Judicature with the

Prisoners)

RULES for the Preservation of DIVINES, and others, in their VISITS to Persons sick of the PLAGUE, or any other contagious Fever.

§. 381. Rule 1. Let the DIVINES, and others obliged to visit the Sick, observe the Direction proposed to Magistrates in §. 380.

§. 382. Rule 2. They should carefully avoid going into infected Houses, when they

are in a Sweat.

Prisoners) was communicated to the People there present, that Robert Bell, Lord Chief Baron of the Exchequer, Sir Robert D'Oiley, Sir William Babington, D'Oiley, Sheriff of Oxfordshire, Harcourt, Weneman, Fettiplace, Men of great Note in those Parts, Barham, an excellent Lawyer, almost all the Jury, and others to the Number of three Hundred, or thereabouts, were taken in such a Manner, that they died almost every one of them within forty Days, or thereabouts. Vid. Cambden's Hist. of Q. Elizabeth, printed 1675. p. 223.

I would hereupon remark, that a due Observance of the Rules proposed §. 375, to §. 380, is a probable Means either totally to prevent, or at least greatly to lessen the Mortality, which naturally follows such a Contagion. And it will be prudent to use this Means at any Assizes, when

a contagious Distemper is in the Jail.

for Divines, other Visitors, and Nurses. 163

- §. 383. Rule 3. There should be a Medicating the Air of the Houses where they visit, by Firing Trains of one or other of the explosive Powders, and by proper Fumigations made in the lower Rooms before they enter them.
- §. 384. Rule 4. As foon as they enter the infected House, let them affix a medicated Spunge to their Nostrils, and put a Lozenge into their Mouths, which should be continued 'till they return into the open Air.
- §. 385. Rule 5. Let a continual Evaporation of some medicating Substance be made in the Chamber of the Sick, while the Visitors are in it.
- §. 386. Rule 6. Let the Door of the fick Chamber be kept open, from which to the Chimney there will then be a Current of Air; and let the Visitors be on the Side of that Current, which is remotest from the Sick, and make their Visits no longer than shall be needful.
- §. 387. Rule 7. Let them, as foon as their Visits are ended, go down to a Room that has a good Fire, and stand before it, and turn every Side towards the Fire for M 2 a little

a little While, for Reasons given §. 88, 89, 93.

§. 388. As for GENTLEMEN who practife Physick, it is needless for me to give any particular Directions; only I may observe, that the Rules proposed for Divines and Nurses may be useful to them.

RULES for the Nurses.

§. 389. Rule 1. Let them Morning and Evening take a Dose of some preservative Remedy; a Variety of which will be described in the following Papers.

§. 390. Rule 2. Let them keep the fick Chamber airy, that is, carefully maintain a quick Current of the Air thro' it, which will dilute, or divide, and subdivide the pestilential Particles emitted from the Body of the Sick, and abate their infecting Power.

§. 391. Rule 3. Let them rub the Floors, Sides, and Ceiling of the Chamber Morning and Evening with hot Vinegar.

§. 392. Rule 4. If it prove not offensive to the Sick, let them make a Deflagration of some or other of the explosive Powders.

for Divines, other Visitors, and Nurses. 165

§. 393. Rule 5. Let them make fuitable Evaporations daily in the fick Chambers, for the Benefit of themselves, and of the Patients, according to the Directions which shall be given.

§. 394. Rule 6. Let Nurses wear medicated Linnen, and have a medicated Spunge always at Hand to apply to their Nostrils, whenever they find Occasion.

§.395. Rule 7. Let Nurses have a Bason always by them with a Mixture of Water, Vinegar, and Rose-Water, or Hungary-Water, wherewith to wet their Hands and Arms, and wipe them with a Towel, both before and after they handle the Bodies of the Sick.

§. 396. Rule 8. Let the Nurses be allowed a Wine Glass full of some suitable spirituous Liquor three or sour Times a Day, as Occasion shall require; but always keeping within the Bounds of Sobriety.

- RULES for Management in Places of public Worship, during the Time of divine Service.
- §. 397. Rule 1. That the Doors of the Church or Meeting-House be kept open all the Time the People are coming in, and while affembled together, and 'till they shall be all gone away after the public Worship be ended.
- §. 398. Rule 2. That Casements be opened in the uppermost Parts of the highest Windows in the Places of public Worship, and kept open all the Time that the Doors are open below.
- §. 399. The Observance of these Rules (§. 397, 398) will generally secure a Course of the Air from the Doors thro' the Place of Worship, and out at the Windows above; which will carry away all Particles of a greater Levity emitted into it from the Bodies of the People present, and prove a happy Means of leffening the Danger, if any infected Persons shall happen to be there: For the Pressure of the Atmosphere will make a greater Quantity of Air flow into

§. 400. It may here be observed, that, as the Plague generally rages only in warm Months, so there is like to be very little Inconvenience from Keeping open the Doors, and Windows in the Manner proposed.

§. 401. Rule 3. That Ministers should not, in a pestilential Season, preach from the Pulpits, but standing in the most convenient Pew, or, at highest, in the Clerk's

Desk, for the Reason given §. 376.

§. 402. Rule 4. That, as the People in the Front of the Galleries in Churches and Meeting-Houses will be most exposed to Danger, if infected Persons should be among the People below; so it will be a prudent Method to have portable Furnaces sixed in Iron Hoops at proper Distances on the Outside of the Galleries with Florence Flasks, and suitable Evaporations continued from them, 'till the Assembly is retired.

§. 403. These Furnaces (§. 402) should be situated so low, that the Steams from the Flasks may spread before they reach the People in the Galleries.

§. 404. Rule 5. It may be of Service likewife to have Evaporations made from Furnaces, fet in convenient Places on the Floor below.

§. 405. But I would observe, that these Precautions are necessary, only when the Plague spreads in a City, and many are sick of it

§. 406. I hope the general Rules contained in the foregoing Sections will be useful in the Time of a Pestilence.

I am, SIR,

Your very bumble Servant,

THEOPHILUS LOBB.

LETTER

LETTER II.

Relating to the PLAGUE.

Wherein the Sin and Vanity of Trusting in human Securities for Safety from the Pestilence, and other destroying Judgments of the righteous God, are shewed; with Remarks on the Difference of some Plagues: Likewise the Manner of God's Dealing with Nations and Cities in this World, and the surest Methods for Escaping publick Calamities, are considered. §. 407, to §. 547.

To ****.

SIR,

§. 407. I Have, in the first Part of these Letters, considered and proposed some Means of Safety from the Pestilence, in Respect to the principal Ways by which the Infection of it is conveyed; and I hope that, with the Direction and Blessing of God, infinitely merciful, they may

may be of great Service, when his awful Providence shall render the Use of them needful.

§. 408. I must, however, observe, that all Trust and Hope in human Helps, and in any Thing besides the Almighty, the fupreme Governor and Orderer of all Things, is finful and vain. Thus faith the LORD, Cursed be the Man that trusteth in Man, and maketh Flesh bis Arm, and whose Heart departeth from the LORD.*

§. 409. The great GOD can fend the PESTILENCE where, and when he pleases; and no Quarantaines, nor Lines of Barrier, nor the greatest Circumspection of Men, will be able to keep it out of any Place, when he gives it a Commission to enter into it.

§. 410 And, when he has brought the dreadful Calamity into any City, he can put the AIR into a depressing State, and make the Streams of pestilential Particles (which ascend continually from the Chimnies of the fick Chambers) immediately to descend into the adjacent Streets or Alleys, and can mix the infectious Miasmata with

^{*} Jer. xvii. 5.

the Air circumambient to any Houses, and blow the Infection into them; and make Death come into their Windows *; and likewife to enter the Bodies of People then paffing by. He can fuddenly change the Course of the Wind, and turn about the Current of the Air, when filled with infecting Particles, and cause them unexpectedly to meet with fuch Perfons as he hath appointed for Destruction. For Man also knoweth not his Time, as the Fishes are taken in an evil Net, and as Birds that are caught in a Snare; so are the Sons of Men snared in an evil Time, when it falleth suddenly upon them.+

§. 411. All DISTEMPERS are under the Government of the infinitely wife, and holy God: When he calls for them, they come; and, when he bids them go, they go. As a Sparrow does not fall to the Ground; as no Evil happens to the most inconfiderable Animals, without the Will of God, fo no Sickness, no Distress, no Calamity befalls any Man, or City, or Country, without his Order.

^{*} Jer. ix. 21. + Ecclef. ix. 12.

§. 412. Shall there be Evil in the City, and the LORD bath not done it?* I am the LORD, and there is none else (says the glorious Jehovah) there is no God besides me: -- I form the Light, and create Darkness: I make Peace, and create Evil: I the Lord do all these Things. And the LORD is known by the Judgment which he executeth. And the Hand of the LORD shall be known (that is, his Kindness) towards his Servants, and his Indignation towards his Enemies.

§. 413. And, therefore, whenever a Plague enters into any Country, or City, it must be acknowledged, and considered, that it comes from God, and that the tremendous Entrance of it is the Lord's Doing: That, as it is a terrible Executioner of the Wrath of the Almighty, so it comes charged with Destruction, and Vengeance against incorrigible Sinners, his hated Enemies.

§. 414. Here, I desire it may be remember'd, that by the Word Pestilence, or Plague, I understand some morbid Altera-

^{*} Amos iii. 6. + Ifa. xlv. 5. † Pfal. ix. 16. || Ifa. lxvi. 14.

of Trusting in human Securities. 173
tion in the human Body, which, in a very
few Days, or Hours, or Minutes, puts a Period to Life: And that there may be different Kinds of the Pestilence: Some of
them have been inslicted by the Agency of
an Angel, sent by the great Judge to
put to Death particular Persons appointed
thereunto. These, as I apprehend, were
not insectious.

§. 415. We have Instances recorded in the facred History of this Sort; e.g. The Death of the First-born of all the Egyptians, in one Night, appears to be effected by this Kind of Judgment.

§. 416. Thus faith the LORD, About Midnight will I go out into the Midst of Egypt: And all the First-born in the Land of Egypt shall die; from the First-born of Pharaoh, that sitteth upon his Throne, even unto the First-born of the Maid-Servant, that is behind the Mill.* And the Blood (of the Lamb, v. 7.) shall be to you for a Token upon the Houses where you are; and when I see the Blood, I will pass over you, and the Plague shall not be upon you to destroy you, when I smite the Land of Egypt. For the LORD

^{*} Exod. xi. 4, 5.

will pass through to smite the Egyptians, and when he seeth the Blood upon the Lintel, and on the two Side-Posts, the LORD will pass over the Door, and will not suffer the (Angel, who is to be the) Destroyer to come in unto your Houses to smite you.*

§. 417. And of this Sort seems to have been that Plague in the Congregation of the Children of Israel, by which fourteen Thousand and seven Hundred died for Murmuring against Moses and Aaron.

§, 418. And likewise that Plague, by which twenty and four Thousand died for their Whoredoms, and Idolatry.‡ And also that related in 2 Sam. xxiv. 15. where it is said, The LORD sent a Pestilence upon Israel from the Morning even to the Time appointed; and there died of the People from Dan even to Beersheba seventy Thousand Men. And that this Plague was effected by the Acting of an Angel, is evident from Verse 17. where it is said, And David spake unto the LORD, when he saw the Angel that smote the People.

^{*} Exod. xii. 13, 23. + Numb. xvi. 46, 49. † Numb. xxv. 8, 9.

§. 419. It must be granted, that this Sort of Plague was not infectious; because the Mortality was at End, and the Plague was stayed, when the destroying Angel ceased to act. But it cannot hence be concluded that no Pestilence is contagious.

§. 420. Numberless Facts, indeed, have proved the contrary; and I apprehend they have done so in most pestilential Seasons, that have happened thro' many of the last Centuries.

§ 421. If many Thousands die in one Day in any City or Army; as in the Army of Sennacherib, King of Affyria, concerning which it is faid, It came to pass in that Night, that the ANGEL of the LORD went out and smote in the Camp of the Assyrians an bundred fourscore and five Thousand.*

§. 422. We have Reason, in such like Cases, to think the Plague is inflicted by fome destroying Angel.

§. 423. If the PESTILENCE is only in one City, or in some particular Towns of a Country, while the others remain healthy; and, if it proceeds gradually thro' the

^{* 2} Kings xix. 37.

Course of several Months, we may reasonably draw these Conclusions, viz.

I. That the Sickness does not proceed from any peftilential or morbid Quality of the Air. of Motsers

2. That it is not inflicted by the Agency of an Angel, but propagated by Infection.

§. 424. But every Kind of Pestilence is a direful Demonstration of the Wrath and Vengeance of the holy God on the Wicked among whom he fends it; and he can as furely determine every particular Person that shall have it, every one that shall die, and every one that shall recover, and every one who shall be preserved from it, when he makes Infection the Means of its Propagation, as when he fends an Angel to inflict it.

§. 425. When the PLAGUE comes into any City, it will make its Progress according to his Order; and will destroy Multitudes of People, and most certainly will do what he determines shall be done by it; and no Contrivances of Art, no Methods of Safety, no preservative Remedies, will be able to hinder its fulfilling his Will.

\$. 426. When it comes, it is with a dreadful Commission from the righteous and

and supreme JUDGE against the People, who have long provoked his Anger, and gone on in their Trespasses, notwithstanding the Voice of lesser Judgments.

§. 427. The Commission to it, for putting an End to Life, may indeed, as to some Persons, be absolute; and it may be conditional as to others, like the Threatning of Destruction against the Ninevites: But it concerns every one to regard the Sickness as a tremendous Manifestation of divine Wrath, and an Instrument of the Almighty's Vengeance on Sinners who will not turn from their evil Ways.

§. 428. It should be seriously considered, that, as the great God is merciful, and long-suffering, so he is likewise holy and just, and knows how to find out his Adversaries, and is able to bassle all their Defence, and to shew them the Vanity of Relying on human Securities.

§. 429. It likewise deserves Notice, that, as the allwise God has permitted Physicians and other Practisers of Physick to differ in their Opinions, to act on contrary Principles, and recommend opposite Methods, and Medicines (some of which therefore must be false, and pernicious) so he has the

Minds of all Men under his Influence: He inclines some to use those Physicians, whose Endeavours he will direct and bless to the Preservation of their Health; and permits others, whom he has appointed for Destruction, to deride the Physicians by whom their Health might be preserved; and to refuse those Methods, and Medicines, which might secure them from the Plague; and, in their Sickness, to use those Practisers of Physick, whose Mismanagement will render their Death certain.

§. 430. We may, and ought to use all proper Means for our own Sasety, tho' we should never trust in them.

§. 431. People should, by serious Prayer, seek to God, that he will influence their Inclinations, and direct them in the Choice of a *Physician*, and then direct and bless his Endeavours for their Good.

§. 432. We should, in the Use of Means, seek unto, and trust in the sovereign Lord of Life and Death for Protection: And, when the sacred Scriptures, and the divine Providence, threaten desolating Judgments, we should consider that it is a fearful Thing to fall into the Hands of the living

God.* For our God is a consuming Fire.+

§. 433. It is an awful Time, when the Almighty God cometh out of his Place to punish the Inhabitants of the Earth for their Iniquities. And is not the present fuch a Time? Are not the fore Judgments of the LORD God, the SWORD, and the FAMINE, and the PESTILENCE, ravaging and destroying in divers Places? ‡ And does not the just and holy God thereby give merciful Warning to all wicked Nations and Cities, that hear of those Calamities? Does he not now speak unto them, as the bleffed Jesus did to the Jews, who, (when some told him of the Galileans, whose Blood Pilate had mingled with their Sacrifices) said, Suppose ye that these Galileans were Sinners above all the Galileans? I tell you, Nay: But, except ye repent, ye shall all likewise perish. Or, those eighteen on whom the Tower of Siloam fell, and flew them, think ye that they were Sinners above all Men that dwelt in Jerusalem? I tell you, Nay: But, except ye repent, ye shall all likewise perish.

^{*} Heb. x. 31. + Heb. xii. 24. ‡ Ezek. xiv. 21. || Luke xiii. 1-5.

§. 434. When God is inflicting his destroying Judgments on some Sinners, all others. that know it should take Warning. What tho' the dreadful Calamities are laying wafte distant Cities and Countries, the same Providence can foon bring them home to other guilty Places, notwithstanding the Diftance.

§. 435. It therefore concerns all Countries and Cities, that hear of the Defolations abroad, to enquire after MEANS for their own Safety, and what they must do to

escape the Wrath of the great God.

§. 436. THESE THINGS I shall consider, but previously I would observe, that it is in this WORLD God deals with Nations as Nations, and with Cities as Cities. this World that, according to his Promifes, he bestows national Rewards on Nations that fear, and love and ferve him, by faithfully observing all his Ordinances and Statutes, and keeping all his Commandments of white bear

\$. 437. YE shall make you no Idols (fays the holy and jealous God) nor graven Images, neither rear you up a standing Image; neither shall ye set up any Image of Stone in your

Land,

with Nations and Cities considered. 181 Land, to bow down unto it; for I am the LORD your GOD: Ye shall keep my Sabbaths, and reverence my Sanctuary: I am the LORD. If ye walk in my Statutes, and keep my Commandments, and do them, then I will give you Rain in due Season, and your Land shall yield her Increase, and the Trees of the Field shall yield their Fruit. And your Threshing Shall reach unto the Vintage, and the Vintage Shall reach unto the Sowing-Time: And ye shall eat your Bread to the full, and dwell in your Land safely. And I will give Peace in the Land, and ye shall lie down, and none Shall make you afraid, And I will rid evil Beafts out of the Land; neither shall the SWORD go through your Land. And ye Shall chace your Enemies, and they Shall fall before you by the Sword. And five of you shall chace an Hundred, and an Hundred of you shall put ten Thousand to Flight; and your Enemies Shall fall before you by the Sword. For I will have Respect unto you, and make you fruitful, and multiply you, and establish my COVENANT with you .--- And I will set my Tabernacle among st you; and my

N 3 among

Lands

Soul Shall not abbor you. And I will walk

among you, and will be your God, and ye shall be my People.*

§. 438. These Promises were made to the Children of Israel as a Nation; and were abundantly fulfilled to them, while they were true and faithful in keeping Covenant with their God, and walked in his Statutes, and kept his Commandments according to their Duty. And every godly Nation may expect, and assuredly will receive the like Blessings mentioned in the Promises cited.

§. 439. But, as the righteous God rewards pious Nations and Cities in this World, fo it is in this World that he punishes and takes Vengeance on wicked Nations and Cities, as such: And therefore God denounced, or threatened, even the Nation and Cities of his own peculiar People with destroying Judgments, and many fearful Calamities to be inflicted on them in this World, in Case they revolted from him, and walked contrary to his Will, disregarding his Ordinances, and breaking his Commandments.

^{*} Levit. xxvi. 1,-12.

§. 440. If ye will not bearken unto me (fays the holy God) and will not do all these Commandments. And if ye shall despise my Statutes, or if your Soul abbor my Judgments, fo that ye will not do all my Commandments, but that ye break my Covenant : I also will do this unto you, I will even appoint over you Terror, Consumption, and the burning Ague, that shall consume the Eyes, and cause Sorrow of Heart; and ye shall fow your Seed in vain, for your Enemies shall eat it. And I will set my Face against you, and ye shall be slain before your Enemies: They that hate you shall reign over you, and ye shall flee when none pursueth you. And, if ye will not yet for all this hearken unto me, then will I punish you seven Times more for your Sins. And I will break the Pride of your Power; and 1 will make your Heaven as Iron, and your Earth as Brass. And your Strength shall be Spent in vain; for your Land Shall not yield ber Increase, neither shall the Trees of the Land yield their Fruits. And if ye walk contrary unto me, and will not bearken unto me, I will bring seven Times more Plagues upon you, according to your Sins. I will also send wild Beasts among you, which shall rob N4 y026

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you of your Children, and destroy your Cattle, and make you few in Number, and your High-ways shall be desolate. And if ye will not be reformed by me, by these Things, but will walk contrary unto me; then will I also walk contrary unto you, and will punish you yet seven Times for your Sins. And I will bring a Sword upon you, that shall avenge the Quarrel of my Covenant: And, when ye are gathered together within your CITIES, I will send the Pettilence among you, and ye shall be delivered into the Hand of the Enemy, &c. *

§. 441. CITIES are expressly mentioned in various Threatnings of destroying Judgments for Sin. Yet the defenced City shall be desolate, and the Habitation for saken, and left like a Wilderness, says the Prophet Isaiah, Chap. xxvii. 10.

§. 442. THE holy God fays, Ifrael bath forgotten bis Maker, and buildeth Temples; and Judah bath multiplied fenced Cities: But I will send a Fire upon his Cities, and it shall devour the Palaces thereof. + The Sword shall abide on his Cities, and shall consume his

stoponds.

^{*} Levit. xxvi. 14,-25. + Hof. viii. 14.

Branches, and devour them, because of their own Counsels.* And I will cut off the Cities of thy Land, and throw down all thy strong Holds.+

§. 443. That Day, says the Prophet Zephaniah (namely, of God's Visitation for
Sin) is a Day of Wrath, a Day of Trouble
and Distress, a Day of Wastness and Desolation, a Day of Darkness and Gloomings, a
Day of Clouds and thick Darkness, a Day
of the Trumpet and Alarm against the fenced
Cities, and against the high Towers.

†

§. 444. And the threatened Judgments have been executed. In Jer. ii. 14, 15. it is faid, Is Ifrael a Servant? is he a home-born Slave? why is he spoiled? The young Lions roared upon him, and yelled, and they made his Land waste: His Cities are burnt without Inhabitants. || The Prophet Isaiah said to the People of Judah and Jerusalem, to the Children of Israel, Your Country is desolate, your Cities are burnt with Fire; your Land, Strangers devour it in your Presence, and it is desolate as over-

Ball abide on his Cities, and

^{*} Hof. xi. 6. + Mic. v. 11. ‡ Zeph. i. 15, 16. - | Jer. ii. 14, 15.

thrown by Strangers.* O! ye Children of Israel, saith the LORD GOD; and I also have given you Cleanness of Teeth in all your CITIES, and Want of Bread in all your Places; yet have ye not returned unto me, saith the LORD.

§.445. Hence (§. 444) it appears, that the divine Threatnings were inflicted in a terrible Manner on the Nation, and Cities of the Children of Ifrael, after their Revolts from God, and Rebellions against him: And they have likewise been executed on many other Nations and Cities, for their Impieties, and Stubbornness in Ways of Disobedience to God. And, these last Years, Europe again affords many lamentable Examples of God's Indignation against Sin.

§. 446. When God's Judgments are in the Earth; when the Sword, and the Famine, and the Pestilence are in divers Countries, destroying the Wicked, all other sinful Nations and Towns are not only under the Threatnings of the divine Revelation, but under the Threatnings of the divine Providence: And, how much soe-

^{*} Ifa. i. 7. § Amos iv. 5, 6.

ver the LORD, who is long-fuffering, may exercise Patience towards them; yet there will be no escaping his Wrath and Vengeance in this World, without using those Means which he has directed in his Word.

§. 447. I shall therefore lay them before you. They are indeed the best and surest Preservatives from the Pestilence, and other destroying Judgments, and are the following, viz.

§. 448. I. Public Fasting, Humili-Liation, and Prayer. These God requires of every *Nation*, and *City* that has revolted from him, and walked in Ways of Disobedience to his Laws.

§. 449. SANCTIFY ye a Fast (says God to a sinful People) call a solemn Assembly, gather the Elders, and all the Inhabitants of the Land into the House of the LORD your God, and cry unto the LORD. Alas! for the Day: For the Day of the LORD is at Hand, and as a Destruction from the Almighty shall it come.* Blow ye the Trumpet in Zion, and sound an Alarm in

^{*} Joel i. 14, 15.

my holy Mountain: Let all the Inhabitants of the Land tremble: For the Day of the LORD cometh, for it is nigh at Hand. * ---Therefore, also now, faith the LORD, turn ye even to me with all your Heart, and with FASTING, and with WEEPING, and with Mourning. And rend your Heart, and not your Garments, and turn unto the LORD your God: For he is gracious and merciful, flow to Anger, and of great Kindness, and repenteth him of the Evil. Who knoweth if he will return, and repent, and leave a Blessing behind bim? Blow the Trumpet in Zion, fanctify a FAST, call a folemn Affembly: Gather the People; sanctify the Congregation; assemble the Elders; gather the CHILDREN, and THOSE THAT SUCK THE BREASTS: Let the Bridegroom go forth of his Chamber, and the Bride out of her Closet. Let the Priests, the Ministers of the LORD, weep between the Porch, and the Altar, and let them say, Spare thy People, O! LORD, and give not thine Heritage to Reproach.+

§. 450. HENCE (§. 449) it evidently appears, that publick Fasting, and the Assem-

^{1 *} Joel ii. 1. + Ibid. verse 12,-17.

bling of the People together, with Humiliation and Prayers, are important Duties incumbent on Nations and Cities that have departed from their Obedience to God, and have long provoked his Wrath, especially when divine Judgments are impending: And likewise, that in the solemn Assemblies, on such sad Occasions, all Ranks and Degrees of Men and Women, and even Children, and Infants, ought to be present: And that the serious Performance of these Duties are necessary Means of Escaping the Wrath of Almighty God.

§. 451. I may add, that the due Practice of these Duties, with the others commanded, will be an effectual Means of Sasety; as may be concluded from Verse 18, where it is said, Then will the LORD be jealous for his Land, and pity his People.

§. 452. But the Performance of the Duties mentioned (§. 448) implies, that People feriously reslect on their past Lives, and enquire what Duties they have lived in the Neglect of, and what Things they have done, which God has forbidden. Let us fearch and try our Ways, and turn again to the LORD,

LORD,* faid the Prophet in a Time of great Calamities. And, as for those who will not do fo, let it be known unto them, that the LORD fearcheth all Hearts, and understandeth all the Imaginations of the Thoughts.+

§. 453. AND, that People may know wherein they have transgressed, and by what they have provoked the divine Anger, it is necessary for them to consider what are the Statutes, the Ordinances, and Commandments of the Lord; and then call themfelves to an Account how they have obferved them.

§.454. IT deserves to be taken Notice of, that, when the Children of Israel were assembled with Fasting, and with Sackcloth and Earth upon them; and the Seed of Israel separated themselves from all Strangers, and stood and confessed their Sins, and the Iniquities of their Fathers, --- they --- READ in the Book of the Law of the LORD their God one fourth Part of the Day. ‡

§. 455. This READING of the Law of the LORD was a very proper Method to

^{*} Lament. iii. 40. † 1 Chron. xxviii. 9. † Neh. ix. 1, 2, 3.

Remembrance; to raise a godly Sorrow in their Hearts, by shewing them what they had done to be repented of; It was a fit Means to convince them how shamefully they had provoked the Indignation of the holy God against them, and thereby to make them sensible of the Equity of his Judgments; and also to direct their Confessions of Sin; to render them more apprehensive of their own Guiltiness, and of the Terribleness of the divine Wrath, and more urgent in their Prayers to God for his Grace and pardoning Mercy.

§. 456. And it is to be lamented, that this Reading of the Laws of God is not practifed in every worshiping Assembly of Christians, especially in the Days of their Fasting, Humiliation, and Prayer; since we have such an Example to direct us to the Use of this Means, and so many cogent Reasons for the Imitation of it.

§. 457. It ought likewise to be observed, that, when God (provoked by multiplied Sins) gave the Command to sanctify a Fast, to call a solemn Assembly, and to gather the People, and to sanctify the Congrega-

tion, he also commanded, saying, Gather the Children, and those that suck the Breasts :* And, in the Celebration of the folemn FAST (proclaimed by King Jehoshaphat throughout all Judab, on the Account of the Invasion of their Country by numerous, and potent Enemies) all Judah stood before the LORD, with their LITTLE-ONES, their Wives, and their CHILDREN.+ We are also informed that Joshua READ all the Words of the Law, the Bleffings and Curfings, according to all that is written in the Book of the Law. There was not a Word of all that Moses commanded, which Joshua read not before all the Congregation of Ifrael, with the Women, and the LITTLE-ONES, and the Strangers that were conversant among them. + And Moses commanded the PRIESTS, faying, Thou Shalt READ this Law before all Ifrael in their Hearing. Gather the People together, Men, Women, and CHILDREN, and the Stranger that is within thy Gates, that they may bear, and that they may learn, and fear the Lord your God, and observe to do all the Words of this Law: And

^{*} Joel ii. 16. † 2 Chron. x. 13. ‡ Josh. viii. 34, 35.

that their CHILDREN, which have not known any Thing, may hear, and learn to fear the LORD your God, as long as ye live in the Land.*

§. 458. HENCE (§. 457) two Points are manifest, viz. 1. That God will have Children and Infants brought before him into the publick Assemblies on the Days of folemn Fasting: And we may easily understand that Doing so is conducive to important Ends, whether the destroying Judgments of God are only impending, and near at Hand, or actually brought upon them. For, when the People are in the folemn Presence of God with their Children, and confidering their own Sins, and the Miseries and Death to which they have exposed themselves, and their Offspring, their Souls may be led to fuch Thoughts as thefe viz. " LORD, I have finned; I have done " wickedly! my Crimes have provoked thy "Wrath, and deferve the most dreadful " Vengeance: But these Children of mine, " these tender Lambs, what have they " done! Yet are they exposed to the Pesti-" lence, to the Sword, and to the Famine,

^{*} Deut. xxxi. 11, 12, 13.

" in the tremendous Day of thy Vifitation " for Sin! Oh, righteous God! I fee, " I feel, that it is a dreadful Thing to de-" part from Thee, to break thy Command-" ments, and walk contrary unto Thee! " Oh! the bitter Fruits of my evil Doings! "What Calamities, what Distresses have "I brought, not only upon myself, but " upon these Children, who are Bone of " my Bone, and Flesh of my Flesh. My " Bowels, my Bowels! I am pained at my " very Heart, because, O my Soul! thou hast " incurred the Judgments of God against "thee, and thy Offspring! Wretched " Man that I am! to expose, not only my-" felf, but my Little-Ones, to be destroyed in " the common Calamity! Oh! merciful God,

" work in me Repentance unto Life, and

" grant me thy Forgiveness: Spare me,

" and spare the dear Fruit of my Body.

" Amen, for Christ's Sake."

§. 459. The PARENTS, having their Children and Infants with them in the publick Assemblies, on Days of solemn Fasting and Humiliation, may thus be one Means of leading them to penitent Reflexions on their past Iniquities, and may excite them ottept at Home on their Account

to greater Earnestness in seeking Reconciliation and Peace with God, not only for their own Sakes, but also for the Sake of their Posterity,

§.460. 2. ANOTHER Thing evident from the Texts cited (§. 449, 454, 457) is, that CHILDREN, as well as Men and Women, ought to be present in the Congregation, when the Law of the Lord is publickly read; and to the End that they may hear, and learn to fear the Lord their God. At first, it may be, they are incapable of understanding what they hear; but then, as the Use of their Understanding increases, they will be enquiring of their Parents the Meaning of what they hear; and, if they should not prove inquisitive, their Parents should instruct them in those divine Laws, which are read in their Hearing.

§. 461. ANOTHER great Advantage of Bringing Children constantly to the publick Worship of God will be, the Giving the Mothers, or Servants, who have the Care of them, the Opportunity of enjoying the Ordinances of the Gospel, those happy Means of Conversion, Edification, and of the best Comfort; and no one will then be kept at Home on their Account.

§. 462. II. A necessary Means of Safety from the *Pestilence*, and other destroying Judgments, is the CEASING to do EVIL.

§. 463. God himself directs hereunto, in Isa. i. 16. where he says to his trangressing and rebellious People, Wash ye, make you clean, put away the Evil of your Doings from before mine Eyes, cease to do Evil. In Psal. xxxiv. 14. Depart from Evil: And, in Isa. lv. 7. Let the Wicked for sake his Way, and the unrighteous Man his Thoughts.

§. 464. THERE must be a Forsaking all Sin, a Departing from all Iniquity, if People would be preserved from the Pestilence, and other publick Calamities.

§. 465. III. An excellent Means of Safety is a Learning, and Practifing all the Duties which God has commanded. Learn to do well (faith the Lord, Ifa. i. 17.) feek Judgment, relieve the Oppressed, judge the Fatherless, plead for the Widow. This is what the holy God requires, viz. that People, who have lived in the Neglect of his Laws, should learn, and obey them. Do all my Commandments, and be holy unto your God,* saith the Lord. It is also said,

^{*} Numb. xv. 40.

Take diligent Heed to do the Commandment, and the Law, -- to love the LORD your God, and to walk in all bis Ways, and to keep bis Commandments, and to cleave unto bim, and to serve bim with all your Heart, and with all your Soul.* And, that People may obtain the Grace, which is necessary to incline and enable them to forfake their Sins, and keep the Commandments of the divine Law, they must make serious Application by Faith to the Lord Jesus Christ; they must accept of him as offered to them in the Gospel, and trust in him. This is the Way to Holiness as well as Happiness. Look unto me, and be ye faved, all ye Ends of the Earth, faith our gracious Redeemer, in Ifa. xlv. 22. There shall be a Root of Jesse, and he that shall rise to reign over the Gentiles, in him shall the Gentiles TRUST; it is faid Rom. xv. 12. And the confcientious Performance of the Duties mentioned (§. 448, 462, &c.) with the following, is the Way to escape the Stroke of publick Judgments, and to enjoy the Favour and Protection of God here, and to become more holy, more like to God, and more fit for Admission into his blissful, and ever-

^{*} Josh. xxii. 5.

lasting Presence in Mansions of Glory at Death.

§. 466. IV. THE serious and daily Practice of secret PRAYER is another Means of Safety from the PESTILENCE.

The merciful God has faid, If I fend Pestilence among my People; if my People, which are called by my Name, shall bumble themselves, and pray, and seek my Face, and turn from their wicked Ways, then will I hear from Heaven, and will forgive their Sin, and will heal their Land.* Ye shall go, and pray unto me (saith the Lord) and I will hearken unto you. And ye shall seek me, and find me, when ye shall search for me with all your Heart.† Pray without ceasing,‡ says the Apostle Paul: And he likewise says, I will, therefore, that Men pray every where, lifting up holy Hands without Wrath and Doubting.

§. 467. And the bleffed Jesus, our Mafter and Lord, fays, But thou, when thou prayest (that is, in thy personal Capacity) enter into thy Closet, and, when thou hast shut thy Door, pray to thy Father, which is in se-

^{* 2} Chron. vii. 13, 14. † Jer. xxix. 12, 13. ‡ 1 Theff. v. 17: || 1 Tim. ii. 8.

- § 468. It is very manifest from these Texts (§. 466, 467.) of holy Scripture, I. That it is the Duty of all Men to pray to God in all convenient Opportunities, and on all Occasions.
- 2. That, therefore, it is incumbent on all Persons not only to join in the publick Worship of God, and in Family Prayers, but also to pray every Person apart. If we must pray every where, doubtless we must pray in our Closets; every one alone, in some secret Place, as well as with others. And our great Redeemer, in whom alone we can trust for Salvation, plainly teaches us the Duty of secret Prayer, and with great Encouragement to the Practice of it. Thy Father, which seeth in secret, shall reward thee openly.
- 3. That, if Persons would escape any threatned Calamity, or be preserved in the Time of a Pestilence, or any other destroying Judgment, they must seek the divine Protection by Prayer.

^{*} Matt. vi. 6.

§. 469. How often Christians should pray alone, is not expresly specified; but I may observe, 1. That the Number of Times in a Day for this Duty is not limited, because some Days there may be Occasion for a more frequent Performance of it than on others.

§. 470. 2. THAT, fince God commanded and required of his People, in the Old Teftament, daily, a Morning and an Evening Sacrifice, which was a Part of the folemn Worship of him, we may conclude that it is his Will, and our Duty, every Morning and Evening, to worship or pay our Homage to him by Prayer.

§. 471. If we rightly confider Things, we shall find Reason to acknowledge, that the Liberty of Praying to God is an inestimable PRIVILEGE, and that we ought to rejoice in it, and with Thankfulness make Use of it.

§. 472. THOSE Persons have sad Cause to be ashamed, who shall say, Where is it commanded in the Scriptures to pray to God every Morning and Evening? If a King gives a Man Leave to bring a Petition to him, whenever he has Occasion, will he

not be thankful for it? Will he not esteem it a great Honour, and make Use of that Liberty, whenever he wants a Favour from his Prince? It is a Privilege inconceivably more valuable, which the Kings of Kings, the most high God, bestows upon all Men, in giving them Leave to pray unto him. And they, doubtless, are vile and profane Persons who shall despise so great a Blessing, and neglect it, as Esau did his Birth-Right.

§. 473. In PRAYER we speak to, and converse with God; and therefore should highly esteem all Opportunities for it.

§. 474. Is there any Man that will fay, Where is it commanded for me to vifit my Friend, in whom I delight? Does any one need a Precept to oblige him to vifit one he dearly loves? Is not the Pleafure of his Company a fufficient Motive? They that are acquainted with God, and fincerely love him, will not cavil or object to the Duty of Prayer.

§. 475. Every Person has Occasion, Morning and Evening, to render Thanks-givings to God for Mercies received; and every one hath as frequent Occasions to of-

fer up *Petitions* and Supplications for Mercies wanted. And, doubtless, in a Time of Affliction, in a Time of Danger or Calamity, they have special and very urgent Reasons for Prayer.

§. 476. PRAYER is a most important Means for obtaining whatever Blessings we stand in Need of: It is the Way to obtain the holy Spirit (Luke xi. 13.) to work in us both to will and to do; the Way to obtain the Grace of sincere Repentance, and of Faith unseigned; the Way to obtain Peace and Reconciliation with God, and the Forgiveness of our Sins: It is the Way to obtain the Protection of the Almighty, and his Direction and Blessing on our commendable Endeavours for our own Welfare and the Good of others.

§. 477. But if Persons will neglect this Duty, and live regardless of God, and will not render Thanks to him for the Benefits they receive from him; nor ask of him in Prayer the Mercies they need, and which indeed he only can give them; they have no Ground to hope he will preserve them from the Pestilence, or any other destroying Judgment, or Reason to expect he will shew them any Favour.

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§. 478. V. FAMILY-WORSHIP of the great God, who has the Power over all Plagues, seriously practifed, is another Means of Safety from them.

§. 479. Every FAMILY is a Society, and the Members of it have a Relation to each other; and manifold Mercies and Bleffings are needful to the Welfare, Comfort, and Happiness of it. And, as Family Blesfings come from God, and as he only can bestow them, and can likewise take them away at his Pleasure; so it appears evident, from the Nature of Things, that it is the Duty of the Members of every Family to join together in rendering Thanks to God for the Family Bleffings received from his Providence; and in making Confessions of Sin, with Supplications, for the Pardon of Sin, for divine Grace, and for all Bleffings that are wanted and defired.

§. 480. AND, as there are new Occasions every Morning and Evening for Thankfgivings and Petitions, fo it appears a very reasonable Service, and an important Duty, for the Members of every Family to join together every Morning and Evening in Worshiping God, and Offering to him their Praises, and Prayers.

§. 481. Joshua set an admirable Example of this domestick, or Family Religion or Worship; as appears from his Saying to all the People of Israel: Choose you this Day whom you will serve (that is, worship) whether the Gods (that is, the Idols) which your Fathers served: ---But as for me, and my House, we will serve (that is, worship) the LORD.*

§. 482. Joshua and his Family had worshiped God in Time past; and the Words signify their Resolution of continuing to worship the great Jehovah, the one only living and true God, the God of Israel.

§. 483. It is a Matter of great Importance for the Heads of Families to keep up religious Order, and the Worship of God in their Houses; and to have the holy Scriptures daily read unto their Families, and Prayers daily made to God by them; and it is their Duty to instruct their Children, and Servants, in those Things, which he would have them taught.

§. 484. God was well pleased with Abraham, because he was faithful in this

^{*} Josh. xxiv. 15.

pious Practice. The LORD faid, Shall I bide from Abraham that Thing which I do? --- For I know him, that he will command his Children and his Houshold (that is, his Servants, and all under his Authority) and they shall keep the Way of the Lord, to do Justice and Judgment.*

§. 485. It was by the Inspiration of the HOLY SPIRIT that the Prophet Jeremiah prayed, saying, O! LORD,---pour out thy Fury upon the Heathen, and upon the Families that call not on thy Name, † (i.e. who do not worship thee.) This Prayer shews, that God is provoked, and angry with irreligious Families, who live regardless of him, and will not give him that Worship which is due unto him.

§. 486. And how can Families, with any Reason, hope that God will keep the Pestilence from coming into their Houses in the Day of his Visitation for Sin, who will not serve him, and keep his Commandments? Indeed, while Families are destitute of religious Order, and neglect to pay that Homage which is due to the Almighty, in whom they live, and move, and have

^{*} Gen. xviii. 17, 19. † Jer. x. 25.

their Beings, they have no Ground to imagine they shall escape his Wrath: There remains nothing to them, while they neglect to live soberly, righteously, and godly, but a fearful Looking for of Judgment; nothing but a dreadful Expectation of the Lord's pouring out his Fury upon them, when he shall be executing his Vengeance on stubborn Sinners. The Curse of the Lord is in the House of the Wicked: But he blesseth the Habitation of the Just.* And they that be cursed of him shall be cut off.

§. 487. It appears, from what has been observed, that Family Worship, and Piety, are Means of great Importance to the Safety of Families in a pestilential Season, and in Times of any other destroying Calamities, and to the Obtaining and Enjoying the Blessing of God.

§.488. THERE is one Thing more which I ought to take Notice of, in Faithfulness to Mankind, which is, that the Frequenting Plays, and Spending all the Evenings in Taverns, or some Places of Diversion, is inconsistent with the Practice of the Duties (§. 466, 467.) under our Consideration.

^{*} Prov. iii. 33. + Pfal. xxxvii. 22.

It is not to be thought that they, who are abroad indulging themselves in sensual Pleafures, when they ought to be at Home worshiping God with the Families to which they belong; or in their Closets performing the fecret Duties of Religion incumbent on them: It cannot, I fay, with any Reason be thought, that these Persons make Conscience of performing the Duties mentioned (§. 466, 478.) Neither is it to be imagined, that the Hours they spend in the Evenings, in fuch a Manner, are any Preparation for Converse with the holy God in religious Exercifes.

§. 489. It is a very plain Case that such are Lovers of Pleasures more than Lovers of God; that they prefer Gratifying the Defires of their depraved Minds to the Pleafing of their God and Saviour, and choose rather to give their Senses a Gratification, than their Souls the rational Delight which pious Persons find in the Practice of religious Duties, and which they know by Experience to be incomparably more excellent, more defireable, and more fatisfying, than any sensual Pleasure that the Wicked ever enjoyed. ... 490.

§. 490. And, therefore, voluptuous Perfons have no Ground to hope for Favour from God, while they go on in their Trefpasses.

§. 491. VI. THE Keeping holy the SAB-BATH, or the LORD'S DAY, is another Means of Safety from the *Pestilence*, and other destroying Judgments.

§. 492. It is a Matter of great Moment to fanctify and employ these holy Days in religious Exercises. Indeed Works of Necessity, and of Mercy, God allows to be done; but nothing of our secular Affairs may be transacted.

§. 493. REMEMBER, fays God, the Sabbath-Day, to keep it holy; in it thou shalt not do any Work, thou, nor thy Son, nor thy Daughter, thy Man-Servant, nor thy Maid-Servant, thy Cattle, nor the Stranger that is within thy Gates.**

§. 494. This Law (§. 493.) feems in a special Manner to be given to the *Heads* of Families, and directs and obliges them not only to sanctify the Sabbath themselves, but, as much as in them lies, to restrain their *Children*, and *Servants*, and their

^{*} Exod. xx. 8.

Guest, the Stranger that shall happen to be in their Families, from profaning, or violating the Precepts relating to the Sabbath.

§. 495. In Ifa. lviii. 13, 14. God fays, If thou turn away thy Foot from the Sabbath, (that is, from breaking it) from doing thy PLEASURE on my boly Day, and call the Sabbath a Delight (esteem it a delightful Day) the holy (Day) of the LORD, honourable, and shalt bonour bim, (by) not doing thy own Ways, nor finding thine own PLEASURE, nor speaking thine own Words: Then shalt thou delight thyself in the LORD.

§. 496 HENCE (§. 495.) it appears, that it is unlawful for People to take their Diversions, or to talk of their own worldly Bufiness on the Sabbath-Days.

§. 497. Thus faith the LORD unto the Eunuchs that keep my Sabbaths, and choose the Things that please me, and take Hold of my Covenant: Even unto them will I give in mine House, and within my Walls, a Place, and a Name better than of Sons and of Daughters: I will give them an everlasting Name, that shall not be cut off. Also the Sons of the Stranger, that join themselves to the LORD to serve him, and to love the Name of the LORD, to be his Servants, every one that keepeth

keepeth the Sabbath from polluting it, and taketh Hold of my Covenant: Even them will I bring to my holy Mountain, and make them joyful in my House of Prayer.*

§. 498. HENCE (§. 497.) it is evident, that all Persons whatever, who shall fincerely enter into Covenant with God, and choose, and do the Things that please him; whatever they have been in Time past, if they renounce their evil Ways, and willingly join themselves to the Lord, to be his Servants, and love him, his Ordinances and Commandments; and love and keep his Sabbaths from polluting them, by doing Things forbidden, or neglecting the Duties required to be done on those Days, God will make them happy; he will give them a Place in his Church, and Family; he will accept their Persons, and Services; he will make them joyful, and bleffed for ever; and manifest the Truth of his own Word, that Blessed is the Man--- that keepeth the Sabbath from polluting it, and keepeth his Hand from doing any Evil.+

§. 499. But Breaking the Sabbath, provokes the Wrath of God, and is the Way

^{*} Ifa. lvi. 4, 5, 6, 7. + Ibid. verse 2.

to bring down his terrible Judgments on any Nation, when the Sin becomes national, and is persisted in.

§. 500. Nehemiah fays, In those Days saw I in Judah some treading Wine-Presses on the Sabbath, and bringing in Sheaves, and lading Asses; as also Wine-Grapes and Figs, and all Manner of Burdens, which they brought into Jerusalem on the Sabbath-Day: And I testified against them in the Day wherein they sold Victuals.--Then I contended with the Nobles of Judah, and said unto them, What evil Thing is this that ye do, and profane the Sabbath-Day? Did not your Fathers thus? --- and did not our God bring all this Evil upon us, and upon this CITY? Yet ye bring more Wrath upon Israel, by profaning the Sabbath.*

§. 501. WE may therefore conclude that, as Profaning the Sabbath is a provoking Impiety, so God will bring dreadful Evils on those Nations and Cities that will continue guilty of it. Consequently, the Keeping holy the Sabbath, or the Lord's Day, is one necessary Means for

^{*} Neh. xiii. 15, 17, 18.

escaping the Pestilence, and other desolating Calamities.

§. 502 HERE I must observe, that the Sanctifying the Sabbath includes in it not only religious Exercises in secret, and in the Families to which People belong, but also a due Attendance on the publick Worship of God.

§. 503. It is commanded, that on these Days (§. 491.) there shall be an holy Convocation,* that is, an Assembling of People together for the publick Worship and Service of God.

S. 504. Publick Worship is a divine Ordinance, not profitable to the Almighty, but greatly advantageous and comfortable to those that seriously perform it. We should therefore prize, and improve the Opportunities of a publick Waiting on God. I was glad when they said unto me, Let us go into the House of the LORD, writeth the royal Psalmist. Let us imitate his Example: Let us serve the Lord with Gladness, and come (together) before his Presence with Singing. t-Enter into his Gates with Thanksgiving, and into his Courts with Praise; be

^{*} Levit. xxiii. 2, 3. + Pfal. cxxii. 1. ‡ Pfal. c. 2, 4, 5.

thankful unto him, and bless his Name. For the LORD is good, his Mercy is everlafting, and his Truth endureth to all Generations.

§. 505. THE Ordinances of publick Worship were appointed for the Conversion of Sinners; to bring them to repent of their Sin, and believe in the crucified, and rifen Jesus; and as Means of Holiness and Comfort to the Saints: And the holy Spirit makes them effectual to these Ends.

§. 506. TRUE Believers are born again by the Word of God, which liveth and abideth for ever: * They are born of the Spirit,+ and by the fincere Milk of the Word, are they made to grow in Grace. +

§. 507. ALL People stand in Need of the Ordinances of God's publick Worship, and the Reasons for their Duty of Attending on them are always strong and cogent; but never more fo, than when destroying Judgments are either impending or pouring out on a finful Nation, or City.

§. 508. And it deserves to be remembered, that thro' the Time of the last great Plague, 1665, the publick Worship of God

^{* 1} Pet. i. 23. + John iii. 5. ‡ 1 Pet. ii. 2.

was constantly performed, and the Places of it attended by People.

§. 509. The WRITER of the Journal of the Plague-Year, 1665, relates, that "the "Government --- appointed publick Prayers, " and Days of Fasting and Humiliation, to " make Confession of Sin, and implore the " Mercy of God to avert the dreadful " Judgments, which hung over their Heads; " and it is not to be expressed with what " Alacrity the People of all Perfuafions " embraced the Occasion; how they " flocked to the Churches, and Meetings, " and they were all fo thronged, that there " was no Coming near, no, not to the " very Doors of the largest Churches. Also " there were daily Prayers appointed Morn-" ing and Evening at feveral Churches, " and Days of private Praying at other " Places; at all which People attended " with an uncommon Devotion: Several " private Families also, as well of one Opi-" nion as another, kept Family Fasts, to " which they admitted their near Relations only. So that, in a Word, those People, "who were really ferious, and religious, " applied themselves in a truly Christian " Manner to the proper Work of Repent-

ance

" ance and Humiliation, as a Christian " People ought to do. Vid. p. 34, 35.

§. 510. And this Practice of Christians, in the Time of that VISITATION, well deferves to be imitated under fuch awful Difpensations of the divine Providence.

§. 511. In Page 121 he fays, " there " were some People who, notwithstanding " the Danger, did not omit publickly to " attend the Worship of God, even in the

" most dangerous Times. §. 512. This Author further fays, "the " Zeal, which they (that is, People who " crowded into the Churches) shewed in " Coming, and the Earnestness and Affec-" tion they shewed in their Attention to " what they heard, made it manifest what " a Value People would all put upon the " Worship of God, if they thought every " Day they attended at the Church that it " would be their last. p. 201.

§. 513. AND, p. 239, he observed, that " after the People were possessed with the " Belief --- of the Infection being --- carried " on by Persons apparently in Health, the " Churches and Meeting-Houses were much " thinner of People than at other Times, " before that, they used to be; for this is " to be faid of the People of London,

" that, during the Pestilence, the Churches

" or Meetings were never wholly shut up,

" nor did People decline Coming out to the

" publick Worship of God, except only in

" fome Parishes, when the Violence of the

" Distemper was more particularly in that

" Parish at that Time, and even then no

" longer than it continued to be fo.

§. 514. "INDEED nothing was more

" strange, than to see with what Cou-

" rage the People went to the publick

" Service of God, even at that Time, when

" they were afraid to stir out of their own

" Houses upon any other Occasion .--- When

" we came to fee the Crowds and Throngs

" of People which appeared on the Sab-

" bath-Days at the Churches, and efpe-

" cially in those Parts of the Town where

" the Plague was abated, or where it was

" not yet come to its Height, it was

" amazing." And, I may add, a good Token it was, that God would moderate the Mortality, and shorten its Duration, as

the Event shewed.

§. 515. For not much more than one Tenth of the People died by this Calamity; and, fays the Author of the Journal, " there

" there was 500,000 left that lived all the " Time in Town." (p. 248.) And God made the Judgment to abate, and the Number of the Dead of the Plague to decrease the last Week in September, and to continue greatly decreasing, except one Week in November, when it had a Rife of near 400 more than in the Week preceeding.

§. 516. If we reckon that the Plague was not violent when less than 1000 per Week died, and that it was violent when a greater Number died of it, the Plague was violent only from July 11, to November 14, that is, thro' the Space of fifteen Weeks.

§. 517. And the Number of the Dead of the Plague exceeded 2000 per Week, only from July 25, to October 17, that is, twelve Weeks.

§. 518. THE Number of the Dead of the Plague exceeded 3000 per Week, only from August 8, to October 10, that is, nine Weeks.

§. 519. THE Number of the Dead of the Plague exceeded 4000 per Week, only from August 15, to October 10, that is, eight Weeks.

§. 520. THE Number of the Dead of the Plague exceeded 6000 per Week, only from August 22, to September 19, that is, four Weeks, And the Number of the Dead of the Plague exceeded 7000 only one Week, from September 12 to the 19th.

§. 521. AND, if we consider how plentitifully the Town was supplied with all Sorts of Provisions, and the Charities which were abundantly given for the Subfiftence of the Poor (who were cut off from their Labours) and for the Relief of the Sick, it must be acknowledged that God graciously heard the Cries of the People, and mixed much Mercy with the Judgment; and these Things should be had in a thankful Remembrance, and as Encouragements for a finful People to humble themselves to repent of their Sins, and in the Way of Faith, and by earnest Supplications, to seek Peace with God, and the Manifestations of his Favour.

. §. 522. I will only add, that the Reasons for keeping holy the Sabbath, or the Lord's Day, are the fame in all Ages, and extend to all People; which shews that the Obligation, to obey the Laws of it, is perpetual, and upon all People. I may truly fay, that

the Observance of those Laws is the special Means for obtaining that holy Change in our Natures, which only can render us like to God, and fit for the Enjoyment of him; the Means for increasing our Knowledge of divine Things, our Faith, our Sanctification, and our Confolation; and thus may prepare us to keep an eternal Sabbath with our God and Saviour in Mansions of Glory. And there is Ground to fear, that those Persons are very much Strangers to the spiritual, divine Life, and to the rational Satisfaction and Delight, which ferious Christians find in religious Exercises, who think one Day in feven too much to be fpent in the Service and Worship of God, and cavil against employing the Whole of the Sabbath in the Duties of Piety, except what is to be taken up in Works of Neceffity and Mercy.

§. 523. VII. THE Care of MAGIS-TRATES to promote, as much as in them lies, the Observance of the divine Precepts, and to put in Execution the Laws of their Country against the Violations of them, is another Means of Safety from the Pestilence, and other destroying Judgments. Because a pious Zeal, and Faithfulness herein,

shew a Regard to the Glory of God, and will contribute much to the Suppressing of Vice, Immorality, and Profaness, and to the Reformation of a wicked People; and, consequently, to the Removal of those accursed Things, which provoke the Vengeance of the holy God. Vid. §. 207, 208, 209.

209.

§. 524. Thus I have confidered the most excellent, the most important, and the surest Means for Obtaining the divine Protection from the Pestilence, and from the Sword, and from the Famine, and every other Calamity; but the Rules mentioned must be jointly, and sincerely observed with all the Heart.

§. 525. If a NATION, or the Inhabitants of a CITY, who have revolted from God, and have long walked contrary to his Laws, regardless of his Authority, abusing his Mercies, will still go on in their Trespasses, thoughtless and fearless of the divine Vengeance, they have no Reason to hope they shall escape the dreadful Judgments of the Almighty Jehovah.

§. 526. When they will not be reclaimed from their evil Doings by lesser Judgments; when the Measure of their Iniquities comes

to be full, destroying Calamities must be expected.

§. 527. God will not always wait to be gracious; his holy Spirit will not always strive with Men; his Patience will not always be exercised towards stubborn and incorrigible Sinners: If these Enemies of God will still persist in their Rebellion against him, there remains nothing for them but a certain fearful Looking for of Judgment, and siery Indignation, which shall devour the Adversaries.

§. 528. FASTING and PRAYING, without a thorough Reformation, will avail nothing; but with it, that is, with a Ceasing to do Evil, and a Learning to do well, they will be prevalent; as we may infer from feveral Passages of the holy Scripture, e. g.

§. 529. WHEN God charged his Prophet ISAIAH, faying, Cry aloud, spare not, lift up thy Voice like a Trumpet, and shew my People their Trangressions, and the House of Jacob their Sins.*

§. 530. He adds, Yet they seek me daily, and delight to know my Ways, as a Nation, that did Righteousness, and for sook not the Ordinances of their God: They ask of me

^{*} Ifa, lviii. 1.

the Ordinances of Justice; they take Delight in approaching to God, that is,*

§. 531. They made a Profession of the Religion God had taught them, and did daily feek him in the Way of his Worship, and delighted to know his Will, and took Delight in drawing nigh to him, and fasted, and humbled themselves before him; as is manifestly implied in the Passages cited §. 529. and also in the next Verse, where they are represented as expostulating with God, faying, Wherefore have we fasted, and Thou feest not? Wherefore have we afflicted our Soul, and Thou takest no Knowledge? Behold, in the Day of your Fast you find Pleafure, and exact all your Labours. Behold ye fast for Strife, and Debate, and to smite with the Fist of Wickedness.+ Which shews that it is contrary to the Will of God, and therefore finful for People to take their Recreations, or to mind their worldly Employments on Days of folemn Fasting and Humiliation; and that their allowing themfelves fuch Liberties, and neglecting to amend their Ways, will render their Fasting vain and fruitless, which was the Jews in the Prophets Time.

^{*} Isa. lviii. 2. + Ibid. v. 3, 4.

§. 532. Is not this the Fast that I have chosen? fays God, to loose the Bands of Wickedness, to undo the heavy Burdens, and to let the Oppressed go free, and that ye break every Yoke? Is it not to deal thy Bread to the Hungry, and that thou bring the Poor, that are cast out, to thy House? When thou seeft the Naked, that thou cover him, and that thou bide not thyself from thine own Flesh? Then Shall thy Light break forth as the Morning, and thine Health Shall spring forth speedily: And thy Righteousness shall go before thee; the Glory of the Lord shall be thy Rereward. Then shalt thou call, and the LORD Shall answer; thou shalt cry, and he shall say, Here I am.*

§. 533. HEREBY (§. 532) God shews, that a Forsaking of Sin, a Reforming their Lives, a Dealing justly, and Shewing Mercy to the Poor, are necessary to render their Fasting acceptable; and that, if People join to their Fasting and Prayers a thorough Reformation, he will hear their Prayers, and abundantly bless them.

§. 534. AND, in the fame pious Courfe, any finful Nation may hope to obtain Re-

^{*} Ifa. lviii: 6, 7, 8, 9.

conciliation and Peace with God, and for an happy Escape from his destroying Judgments.

- §. 535. The most high God has said, At what Instant, I shall speak concerning a Nation, and concerning a Kingdom, to pluck up, and to pull down, and to destroy it. If that Nation against whom I have pronounced turn from their Evil, I will repent of the Evil that I thought to do unto them.*
- §. 536. This gracious *Promife* was remarkably exemplified in the Experience of the NINEVITES.
- §. 537. When the Prophet Jonah proclaimed God's Threatning of Destruction on the City of Nineveh, viz. Yet forty Days, and Nineveh shall be overthrown. The People of Nineveh believed God, and proclaimed a Fast, and put on Sackcloth, from the greatest of them, even to the least of them. For Word came to the King of Nineveh, and he arose from his Throne, and he laid his Robe from him, and covered him with Sackcloth, and sat in Ashes. And he caused it to be proclaimed and published through Nineveh (by the Decree of the King and his Nobles) saying,

^{*} Jer. xviii. 7, 8.

Let neither Man, nor Beast, Herd, nor Flock, taste any Thing; let them not feed, nor drink Water. But let Man and Beast be covered with Sackcloth, and cry mightily unto God: Yea, let them turn every one from his evil Way, and from the Violence that is in their Hands. Who can tell if God will turn, and repent, and turn away from his sierce Anger, that we perish not? And God saw their Works, that they TURNED FROM THEIR EVIL WAYS; and God repented of the Evil that he had said, that he would do unto them, and he did it not.*

§. 538. And every wicked CITY under the Threatnings of the Word, and Providence of God, that shall repent, and fast, and pray, and turn from their evil Ways, and return to the LORD, may hope that he will spare and bless them; for he is a gracious God, and merciful, slow to Anger, and of great Kindness, and repenteth him of the Evil.

§. 539. WHEN the Lord passed by before Moses, he proclaimed, The LORD, the LORD God, merciful, and gracious, long-

^{*} Jonah iii. 4,-10. + Ibid. chap. iv. 2.

suffering, and abundant in Goodness and Truth. Keeping Mercy for Thousands, forgiving Iniquity, and Transgression, and Sin.*

§. 540. Thou, LORD, art good, (faid David) and ready to forgive, and plenteous in Mercy unto all them that call upon thee.

§. 541. HE is gracious and merciful, flow to Anger, and of great Kindness, and repenteth him of the Evil, + faid the Prophet Joel.

§. 542. THESE inestimable Truths are great Encouragements for every finful Nation, and City, to repent, and forfake their Sins, and amend their Doings: They are cogent Motives for People to turn to God with all their Heart, and with Fasting, and with Weeping, and with Mourning.

§. 543. It is very evident, from the foregoing Sections, what are the best and furest PRESERVATIVES from the Pestilence, and other destroying Judgments. And, indeed, without a ferious and diligent Obfervance of the Precepts and Directions re-

^{*} Exod. xxxiv: 6, 7. + Pfal. lxxxvi. 5. ‡ Joel ii. 13.

commended from the Word of God, there can be no rational, no well-grounded Hope of escaping the divine Vengeance.

§. 544. WHAT Reason can those Sinners have to expect a Preservation from the Plague, or any other publick Calamity, who will not join in the publick Fasts and Humiliations? Or who, though they appear in the folemn Assemblies, yet do not repent of their Sins, do not turn from their evil Ways, and amend their Lives? Can those Perfons who perfift in wilful Disobedience to the Commandments of God, notwithstanding the Authority of them, notwithstanding all Admonitions and Perfuasions to know, and fear, and love, and ferve the LORD; and notwithstanding the Voice of his Threatnings, and the Smart of leffer Calamities; can these, with Reason, think that any other Means will fecure them from the Plague? No!

§. 545. They are Rebels to God. Stubborn Sinners are fo called in Numb. xx. 10. They dare the divine Power, they difregard the Vengeance of the holy, and almighty God. But they will never be able to hide themselves from his Wrath,

Q 2

nor to shun the Pestilence that walketh in-Darkness, nor to avoid the Destruction that wasteth at Noon-Day, when the irrefistible God gives it a Charge to seize upon them. But God shall wound the Head of his Enemies, and the hairy Scalp of such a one as goeth on still in his Trespasses, it is faid in Pfal. lxviii. 21.

§. 546. THE righteous God has a Controverfy with incorrigible Sinners in the Day of his Visitation. Hear the Word of the LORD (fays the Prophet Hosea) ye Children of Ifrael: For the LORD hath a Controversy with the Inhabitants of the Land, because there is no Truth, nor Mercy, nor Knowledge of God in the Land.+ By Swearing, and Lying, and Killing, and Stealing, and Committing Adultery, they break out, and Blood toucheth Blood. -- Therefore Shall the Land mourn, and every one that dwelleth therein shall languish.+

. §. 547. NATIONAL SINS, unrepented of, and perfifted in, will affuredly bring on national Calamities and Distresses. And the Confideration hereof should induce

⁺ Hof. iv. 1, 2, 3.

[‡] Jer. xxxv. 29, 30, 31, 32, &c.

all People to use those excellent Means of Safety from the Pestilence, the Sword, and the Famine, which from the holy Scriptures have been confidered.

I am, SIR,

Your very bumble Servant,

THEOPHILUS LOBE.

the Contideration hereof thould induce

LETTER III.

Relating to the PLAGUE.

Containing an Account of some Reme-DIES proper for Preserving Persons from the Essects of pestilential Infection, and other Contagion.

To * * * * *

SIR,

§. 548. I Shall now propose some Reme-DIES, which, with the Blefsing of God, may be useful against the Effects of pestilential Insection, and any other Contagion. These I shall divide into two Classes, viz. external, and internal.

I. Of external REMEDIES.

§. 549. I have in the first Part of this Book, (§. 113, &c. 125, &c.) taken Notice of several Things of this Kind, and shall

shall here add other Formula's of Compositions for Fumigations, and for Evaporations.

§. 550. THE following TROCHISKS may be useful for Fumigations.

I. Campborated TROCHISKS.

Take Rosin grossly powdered half a Pound, melt it in an Iron Ladle, that will hold a Pint; and, as soon as it is melted, put into it, by little and little, the following Powder: Take Saltpetre, Cortex Eleutheriæ, of each finely powdered four Ounces, Camphire finely powdered, Flowers of Brimstone, of each half an Ounce; mix them well together, to be added to the melted Rosin; and, when well mixed with it, and the Mass is cool enough, let it be made into round, and flattish Balls, that will weigh one or two Drachms each.

§. 551. These Trochisks yield an agreeable Scent, and one, or two, or three of them, according to the Size of the Room, put successively into the Hollow of the Fumigator, made just red-hot, will be sufficient for one Fumigation.

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§. 552.

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§. 552. II. Aromatick TROCHISKS.

TAKE Rosin, and Frankincense, of each groffly powdered four Ounces; melt them together; then stir into the Mixture fo much pulverised Cortex Eleutheriæ as it will conveniently take, and make it into Trochisks, as directed §. 550. These make a grateful Fume.

§. 553. III. Sulphureous Trochisks.

TAKE Rosin, and Frankincense, of each four Ounces; melt them together; then add half an Ounce of the Flowers of Brimstone; mix them well, and, when cool enough, make the Mass into round and flattish BALLS, as directed §. 550.

§. 554. IV. Tobacco Trochisks.

TAKE Roun half a Pound, melt it, and then mix with it so much Tobacco as it will take for a Mass to be formed into BALLS, as before directed.

§, 555. TROCHISKS may in the same Manner be made with Pitch and Tobacco. And I may observe, that the Fumes of Tobacco managed this Way do not irritate a Cough, as they do in many Persons when they

they are made by People fmoking it, or when they arise from Tobacco being put alone on the Fumigator.

§. 556. CANDLES may be medicated fo as to diffuse in the Air of Rooms Particles, which may alter the Figure, or blunt the Spicula of the pestilential Atoms.

§. 557. I have contrived, and tried various Compositions for this Intention; and my Method was, when I had the Ingredients of a Composition melted, and well mixed together, then to dip Cotton-Yarn, doubled, about feven or eight Inches long, three or four Times into the Mixture, and fet it a cooling, and, when cold, to light it; and shall here describe three Sorts, according to the Proportion wherewith I made my Experiments.

Medicated CANDLES.

I. Campborated CANDLES.

§. 558. TAKE white Bees-Wax twelve Pounds; melt the Wax; and then add and mix well with it half a Pound of Camphire finely powdered; and berewith let Candles be made.

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§. 559. These Candles yield a soft, agreeable Scent of the Campbire while burning, but the Scent is stronger when they are blown out.

§. 560. II. CANDLES with Frankincense.

Take yellow Bees-Wax twelve Pounds, melt it, and add to it of powdered Frankincense six Pounds; and, when well mixed, the Candles may be made.

§ 561. The Scent of these is agreeable to those who like a soft Scent of Frankin-cense, and the Particles diffused in the Air from these Candles, I apprehend, have an obtunding or blunting Quality.

§. 562. III. Nitrous CANDLES.

Take yellow Bees-Wax twelve Pounds, melt it, and then mix with it three Pounds of Frankincense powdered, two Pounds of Saltpetre powdered, and one Pound of the Flowers of Brimstone; and, when all the Ingredients are thoroughly melted, and mixed together, Candles may be made with it.

§. 563. This Sort is composed of Ingredients, which, in various Ways, have been ferviceable

ferviceable against the pestilential Infection. The feveral Compositions burn well; but it will be best to have these medicated Candles made in a Mould.

Mixtures for EVAPORATIONS from the portable Furnace.

I. MIXTURE. §. 564.

TAKE two Ounces of the Cortex Eleutheriæ groffly powdered, put it into a Florence Flask that will hold a Quart; then add to it a Pint and half of the New-River, or Thames Water, and make it boil.

§. 565. This, in a short Time, diffuses a strong, pleasant, and extensive Scent of the Bark in the ambient Air.

§. 566. II. MIXTURE.

TAKE of the Leaves of Lavender cut very Small two Ounces, put them into a Quart Flask, and add a Pint and half of Vinegar to be decocted.

§. 567. OR Vinegar may be decocted by itself; and thereby an Abundance of the medicinal Parts of it will be diffused in the Air.

§ 568. III. MIXTURE.

TAKE two Ounces of Elecampane Root powdered, put it into a Florence Flask, add to it a Pint and half of Tar-Water, and make it boil.

§. 569. OR Tar-Water decocted by itself will communicate to the Air of the House a strong Scent of the Tar, and may justly be reckoned among proper Remedies against Contagion, on the Account of the Abundance of sulphureous and acid Particles wherewith Tar abounds, and which are plentifully diffused in the ambient Air by decocting it.

§. 570. OR a Decoction may be made by mixing four Ounces of *Tar* with a Pint and half of River Water.

§. 571. EVAPORATIONS, or Diffusions of the medicinal Parts of liquid Substances in the Air of Rooms, may be made by quenching the Fumigator, made red-hot, in any of them, e.g. Quench a red-hot Fumigator in a Pint, or Quart of Vinegar, put into an earthen glazed Pan, large enough for the Purpose, and immediately thick Clouds of Fumes will strongly ascend, yielding

yielding a brisk Scent both of the Vinegar and Iron.

§. 572. THE acid, and chalybeate Particles, thus diffused (§. 571) in the Air, and striking against those Parts of our Bodies, which are naked; and passing into the Lungs, will many of them go thro' the Vasa inhalantia, mix with the Blood, and circulate with it; and thereby contribute to prevent the Effects of Contagion in the animal Fluids, and to strengthen the Cohesion of the component Parts of the muscular Fibres, and animal Vessels, and to preserve the Strength of the vital Organs.

§. 573. It may likewise be of Service against the Effects of pestilential Insection, if those Parts of the Body, which are uncovered, and exposed to immediate Contact with the ambient Air, be rubbed, or washed with some suitable Liquor before Persons go into Places insected. For this Purpose the following Lotions are proper.

§. 574. I. LOTION.

TAKE of distilled Vinegar fourteen Ounces, of Hungary-Water two Ounces, and mix them for a Lotion.

§. 575. II. LOTION.

TAKE of Mint-Water ten Ounces, of distilled Vinegar six Ounces, and mix them for a Lotion.

§. 576. III. LOTION.

TAKE of Vinegar twelve Ounces, of the rectified Spirits of Wine campborated four Ounces, mix them for a LOTION.

§. 577. A Spoonful, or two, or three, of one or other of these Lotions, may be mixed with an equal Part of Water, or used alone, for Rinsing the Hands, Face, and Neck, after they have been washed: And the Mouth also may be washed with the same Mixture.

§. 578. THE following Liquors are proper for Medicating Spunges to be applied to the Nostrils.

§. 579. I. Liquor.

Take Vinegar twelve Ounces, Rose-Water four Ounces, mix them together. Or,

§. 580. II. Liquor.

TAKE distilled Vinegar seven Ounces, Hungary-Water one Ounce, and make a Mixture. Or, instead of the Hungary-Water, may be put the same Quantity of the rectified Spirits of Wine camphorated.

§. 581. III. The TINCTURE.

Take Rue, Sage, Mint, Rosemary, Wormwood, and Lavender, of each half an Ounce, cut them small, and put them into a large Glass Bottle, and add to them a Quart of the best Vinegar; then cork the Bottle lightly, and set them in a Bath near scalding-hot for eight or ten Hours, then strain the Vinegar thro' a Woollen Bag, and add to it of Camphire sinely powdered two Drachms, and keep it in a Bottle corked for Use.

§. 582. This Tincture is the same Medicine in Substance with that by which some Malefactors (executed for Robbing the infected Houses, and Murdering the People, during the Course of the Plague at Marseilles) said they had preserved themselves from the Contagion, and that they went from House to House without any Fear of the Distemper.

§. 583. The Direction for the Application of this Tincture was, to rub the Loins with it every Day, to wash the Mouth with

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it, and to fnuff a little up the Nostrils, when People are going into the Air, and to carry about with them a Bit of Spunge dipped in the same, in order to smell to upon all Occasions, especially when they are near any Place or Person that is infected.

- §. 584. Spunges intended to be kept to the Nostrils, after they have been wetted with one or other of the Liquors proposed (§. 579, &c.) should be kept in little Boxes made of Wood, 'till there is Occasion to apply them.
- §. 585. Issues also must be reckoned among the proper external Remedies against the Effects of pestilential Infection, as having been of great Service in this City in the Time of the Plague in the Year 1665, as well as in foreign Countries.
- §. 586. Dr. Hodges speaks of these artificial Ulcers as Out-lets, thro' which any Impurities or morbid Humours, together with any subtile Venom, might be discharged.* And, when his Body had im-

bibed

^{*} Ad remedia transeo efficaciora, . . . inter quæ Fontanelli eminent; per hos quascunque impuritates unà cum veneno subtili liquorum frequentèr comite, per apertas velut portas exire, communi omnium consensu fancitum habemus. Vid. Hodges's Λοιμολογία, p. 239, 240.

bibed pestilential Infection, he found a great Uneasiness in that Part of his Arm where his Issue was, and his Issue, soon after he had taken the Infection, emitted a thin, crude, and bloodyish Humour, with a lancing and pricking Pain; by which Symptoms he knew himself to be infected, and immediately thereupon had Recourse to the Use of alexipharmick Medicines.* He recommends the Having Issues that will hold several Peas, and that, if a Person will have two Issues, one of them should be on his left Arm, and the other on his right Leg.;

§. 587. Dr. DIERMERBROEK also obferved, when the *Plague* was at *Nimeguen*, that Issues were very serviceable; that they made them in many, and kept them open all the Time of the Pestilence; that thro'

^{*} Si quid hâc in re calculus noster, & experientia valeant, intrepidus assero, quòd quoties me in loca maximè contagiosa contuli, essuriis pestiferis, non minùs quàm aere ambiente conseptus, toties brachii pars, ubi situs sontanellus, pessimè cruciabatur, essurente mox sanie, cum dolore lancinante, & pungitivo, quæ ut plurimùm tenuis, cruda, & sanguinolenta, dato hoc invasionis pestilentialis indicio ad Medicamentorum Alexipharmacorum asylum illicò, consugere tutissimum duxi. Vid. Hedges's Λοιμολογία, p. 240, 241.

⁺ Ulcera hæc quò plura, eò res ægro securior, . . . ita ut fint soveæ iv. vi. vel viii. Sicerum capaces. ibid. p. 240. † Ibid.

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these Ulcers many corrupt and setid Humours were, by little and little, excreted: That, by this Means, many were preserved from the Distemper; and that some who had Issues, perceiving by them when they had taken Insection, immediately in the Beginning took a sudorifick Medicine, and soon became well, Nature expelling by the Issues a black filthy Matter.*

§. 588. He relates the Case of a Man, who, as a Preservative, had in the Beginning of the Spring an Issue made in his left Leg, and who, the November sollowing, visited a Relation sick of the Plague, attended with a Looseness, and took the Insection. The Man sirst perceived a Vertigo, and Heaviness of his Head, and soon after a great Anxiety, and Sickness at his Stomach. The Doctor ordered him a Draught made of four Scruples of Venice-Treacle, half

^{*} Fonticulos multis fecimus, atque illos toto Pestis tempore apertos servavimus, per quos multi, supersui, acres, noxii, corrupti, ac fætidi humores paulatim essureriunt. Tali ratione multi præservati sunt, imò vidimus aliquos his præmunitos, qui Pestis invasionem sentientes, statim in ipso principio antidotum sudoriferum assumpserunt, atque ita citissimè liberati sunt, natura expellente per sonticulos atrum quendam ac venenatum tabum. Vid. DIERMER-BROEK de Peste, p. 150, 151.

a Drachm of the Salt of Carduus Benedictus, mixed with Treacle-Water, and Bezoartic Vinegar, of each one Ounce; by the Means of which he sweated almost the whole Night, and with so great Advantage, that all the Symptoms vanished; and that the Day after he complained of a great Pain of the Issue of his Leg. The Doctor saw a blackish Ichor slowing from it, and that, in the Circumference, it was turning black; but that, by the Application of proper Topicks, the Margin of the Issue separated like a Carbuncle, and that the Patient happily recovered.*

* Joachimus Nauta, qui præservationis gratia in crure sinistro sonticulum in principio Veris sibi sieri curaverat, mense Novembri quendam ex suis consanguineis peste cum diarrhœa laborantem circa vesperam invisens, contagio infectus est. Sensit primo vertiginem & capitis gravitatem, ac paulo post magnam anxietatem cum nausea. Statim meo consilio assumpsit hoc alexipharmacum:

R. Thériacæ androm. Scrup. iiij. Saliscardui bened. Scrup. j. s. aquæ Theriacalis, aceti bezoartici, ana unc. j. Misce, siat potio.

Hinc tota fere nocte sudavit, cum tanto levamine, ut omnia symptomata evanuerint. Postridie de magno sonticuli cruris dolore conquestus est, è quo vidi ichorem quendam nigricantem essluxisse, ipsumque sonticulum in circumferentia nigricantem colorem contraxisse, hujus sonticuli margines a topicis convenientibus impositis, instar carbunculi, separati fuerunt, & æger deinceps optime valuit. Diermerbroek de Peste, p. 356, 357.

R2

§. 589.

§. 589. The Doctor hereupon acquaints us, that they often observed that, if any Infection had been taken, it was either by the Strength of Nature, or Assistance of Medicines, remarkably, and quickly discharged; and that such Benefit from Issues was attested, upon Experience, by several eminent Physicians, whom he mentions.*

§. 590. Dr. Jo. Bapt. Alprænus says, "Not only for myself, but for two other "Friends (as a Preservative from the "Plague) I made Incision with a Lancet "in Inguine dextro, et sinistro, and put in "a Cetum to the End, that by this artificial "Way the Venom might find a Passage. "This I often tried with good Success, "great Quantity of Matter always voiding that Way; but more especially when "I was any Way touched with pestilential "Strokes, or Alterations. By the Help of

" which I kept myself in good Health,

Diermerbroek de Pefte, p. 356, 357.

^{*} Si quid veneni jam intus conceptum esset, illud per eosdem vel sponte naturæ, vel medicamentorum ope insigniter et cito evacuatum suisse; quod ex prædicta Historia manisesse liquet. Illud ipsum de sonticulis ab experientia testantur etiam, Mercurialis, Hercules Saxonia, Georgius Garnerus, Hildanus, Joannes Arculanus, aliique magni Practici.

"during the Contagion, which raged here at PRAGUE 1680. (Vid. Philof. Trans.

vol. 3. p. 275.

§. 591. I have related the Experience and Observations of these Physicians (§. 586, 587, &c.) more clearly to shew the Benefit which may be hoped for from the Use of Issues in the Time of a Pestilence.

- §. 592. There are various Ways of Making these artificial Ulcers, viz. by the Cautery, by Caustick, and by Incision; but in the Time of a Pestilence I would recommend the Making Issues by Cutting them, because they sooner come to discharge a a digested Matter.
- §. 593. Issues made by Causticks seldom are brought to have digested Matter in less than seven or eight Days.
- §. 594. There is another Sort of artificial Ulcers called Setons, made by paffing a proper Needle a fufficient Length between the Cutis and the fubjacent Muscles, and drawing into the Wound, and leaving in it a Skein of Silk, or Thread.
- §. 595. Setons may be made almost on any Part of the Body; but, as a Preservative from the Plague, the most proper Places for them are under the Arms, as near

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§. 596. I propose Setons, not only as a Means of Safety from the pestilential Infection, but also as a proper Remedy for the Cure of Persons taken sick of the Plague.

§. 597. Dr. Hodges commends the Application of Blisters, and the Keeping them open a considerable Time, both for Preservation, and the Cure of the Sickness: But Setons I think are far preserable for both these Intentions.

§. 598. THEY (§. 595) folicit (if I may be allowed to use the Expression) a Discharge of morbid Humours to the Places, where they are fituated; and, for this Reafon, are a proper Remedy for Perfons under the Pestilence, when made in the Parts mentioned, (§. 595.) and they occasion no Discomposure in the animal Occonomy: Whereas Blisters strongly stimulate the Solids, increase the Force, and Celerity of the Pulse; on which Account they are often very serviceable in some Distempers where the vital Heat is too little, and the Pulse too languid; but, for these Reasons, they are improper, and may produce very ill Effects

Effects in fanguine and cholerick Bodies, and where the vital Heat is too great, and the Pulse too quick, and too strong.

§. 599. These (§. 598) are Things which deserve Notice, that so a useful Means may not be neglected, and that improper, and hurtful Applications may be avoided.

§. 600. I shall in the next Place consider some internal Remedies, by which People may be preserved from the Effects of pestilential Insection, when they go into the Chambers of Persons sick of the Plague.

II. Of internal REMEDIES.

§. 601. INTERNAL REMEDIES are either liquid or folid. I shall give some Formula's of both Kinds: But it is necessary for me here to observe, that the same Remedies can never suit all Constitutions, different Ages and Sexes, and the various Combinations of Symptoms in different People.

§. 602. IT will, therefore, be very needful for Persons in the Time of a Pestilence to consult with their Physicians, and be directed by them to those Remedies, which may be best adapted to their Habit of Body,

an an

- 248 Proper Remedies against the Effects and the other Circumstances of their Health.
- §. 603. I shall therefore only propose a few domestick REMEDIES, suited to the most general Differences of the Constitutions of People, and the different Temperature of the Air.
- or cholerick Constitution, whose Flesh is firm, whose Vessels are tense, and who are in the Youth or Vigour of Life: I would advise them to take one or other of the sollowing Draughts as a preservative Means in the Mornings before they go into Places insected.

I. DRAUGHT.

- §. 605. Take of Vinegar one, or two, or three Spoonfuls, of Canary Wine (called Sack) an equal Quantity; mix them well for a Draught. Or the Vinegar may be taken by itself.
- §. 606. THAT learned Physician, Dr. Fr. de le Boe Sylvius, when he daily visited many sick of the Plague, used no other preservative Remedy than one Spoonful of common Wine Vinegar, which he sopped up with some Crum of Bread, which

which he eat before he went to his Pa-

§. 607. This Preservative he used for eight whole Months, and never in all that Time found the least Harm from the Infection.

§. 608. But, after the Sickness was abated, he left off taking the *Vinegar*; and then he felt a Pain in his Head, almost as often as he went into an infected House.‡

§. 609. It appears to me, from various Experiments made by myfelf, and from the Trials, and Experience of others, that Vinegar has a Quality prefervative of animal Substances, both liquid and solid, from Putrefaction; and that it has been an effectual

* Ego sanè, ut ad rem accedam, ante novennium, cum quotidie plures visitarem Ægros peste insectos, præcautionis loco aliud non sumpsi medicamentum, quam vulgaris aceti Vini Cochleare unum. mica panis exceptum, et quidem manè antequam inviserem Ægros. Vid. Fr. D. Sylvii, Oper. Med. p. 652.

† Id remedii genus usurpavi per octo menses continuos, nec unquam minimam percepi toto illo tempore ab insectione noxam. *Ibid*.

† Postquam verò sublato sensim hoc malo, desissem ab illo aceto diutius assumendo, sensi postmodum ac serè semper, aliquem capitis dolorem mihi contingere, quoties infectam ingrediebar domum, licet id ignorarem, nec tamen mihi metuerem. Hoc mihi contigit. Ibid.

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Means of preserving Persons from the Effects of pestilential Infection.

- §. 610. The Confideration of these Things (§. 609) leads me to conclude, that Vinegar must also be a very proper Remedy for the Cure of the Plague.
- §. 611. It has been observed by Physicians, who have lived in Cities visited with the Pestilence, that Sweating Medicines have been effectual to the Recovery of many from the Sickness.
- §.612. DR.BOERHAAVE owns, that he did not know a more certain and efficacious Sudorifick; and it was his Opinion, that Vinegar, drank alone, or diluted, very powerfully promotes Sweat, even in the Plague.*
- §. 613. AND therefore I propose the following as a rational Method, which deserves to be tried, when the *Plague* comes into a Family, and the Physician cannot be had, viz.

Vid. Boerhaave Element. Chemiæ, tom. 2. p. 186.

^{*} Sudoriferum certius, efficaciusque, ignoramus: quum acetum dilutum, aut merum, si potatur, quam maxime sudores propellat, etiam in Peste, maximeque malignis in morbis, ubi alia vix respondent.

twice

- §. 614. Let a Surgeon be called immediately, and make Setons in proper Places of the fick Person's Body, (§. 595) and let him be put into Bed, and covered with Bed-Clothes according to his Custom.
 - §. 615. Then give him a warm Draught made with four Spoonfuls of Vinegar, and two Spoonfuls of Sack, mixed. Let this be repeated every eighth, or fixth Hour; or oftener, if needful, to bring on, or to continue the Sweating.
- §. 616. And, between the Times of Taking the Draughts, let the Sick be refreshed, and nourished with Ptisans, made of a small Decoction of Elecampane Root in Barley Water, or Sage, or Rosemary Tea, acidulated with the Juice of Lemons, or Seville Oranges, sweetened with fine Sugar to the Palate; and with Oatmeal Gruel, without, and sometimes with a little Sack; and drink every Thing pretty warm.
- §. 617. If the Sickness be attended with a Looseness, let Brandy, or Rum, be used instead of Wine, and let the Gruel be made with fine Wheat Flour instead of Oatmeal; and let Panada be made with white Sea-Bisket for his Food; and a Pint of Water (in which a red-hot Poker has been

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twice quenched) mixed with two Spoon-fuls of Brandy, and brought to a grateful Taste with a sufficient Quantity of the Sugar of Roses, be one Sort of Drink, of which he may take a Draught warm now and then as a Cordial.

§. 618. And in the same Manner the Juice of Limons may be used, instead of Vinegar, for a Person sick of the Plague.

§. 619. If the Pulse is too weak, or too slow, that is, if they are weaker and slower than in Time of Health, the Proportion of the Wine, or Brandy, whichever is used, may be increased.

§. 620. If the Pulse is too quick, or too strong, that is, quicker or stronger than in Health, the Proportion of the Acid should be increased, and that of the Wine or Brandy be diminished. For the Intention of Remedies is to bring the Pulse, and every other Thing in the animal System (that by any morbid Cause is varied from the Standard of Health) into their natural State.

§. 621. The Methods proposed (§. 613, &c.) are properly adapted to prevent that Corruption, or Putrefaction of the animal Fluids, which the pestilential Insection tends to produce in them, and to preserve

them

them in their healthful State; to strengthen the vital Organs, and promote an Excretion of any morbid Humours from the Blood; and cannot heighten any Symptom of the Disease.

- §. 622. What I have faid concerning the Cure of the *Plague* is foreign to the Defign of these Papers; but, as it may be useful in some Emergencies, the Digression I hope will be excused.
- §. 623. Another preservative Remedy against the Effects of pestilential Infection may be the following:

II. DRAUGHT.

TAKE common Salt one Drachm, disjolve it in four, or fix, or eight Spoonfuls of Water, as shall sit best on the Stomach, for a Draught to be taken in the Morning. Or,

III. DRAUGHT.

- §. 624. Take common Salt one Drachm, dissolve it in four Spoonfuls of Water, and add to it one or two Spoonfuls of Vinegar, or of the Juice of Limons, or of Seville Oranges, for a Morning preservative Draught.
- §. 625. The Fitness of these Draughts (§. 623, 624.) will appear, if the known Efficacy

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Efficacy of common Salt for Preserving animal Substances from Putrefaction, even after Death, be duly considered.

§. 626. EXPERIENCE has proved the Usefulness of these Remedies against the pestilential Insection; and consequently, against every other *Contagion*, which, like that of the Plague, has a putrefying Quality.

§. 627. Dr. DIERMERBROEK'S Advice to the Poor, for their Preservation from the Plague, was, to drink one, two, or three Spoonfuls of the best and strongest Wine Vinegar, with, or without, a few Grains of Salt, chewing after it a Piece of Bread; and this he observed was one of the best Preservatives.*

§. 628. He likewise takes Notice, that Augenius recommends Salt as an excellent Remedy, both to preserve Persons from the Plague, and to cure it; and that Joubertus, in his Treatise of this Distemper, agrees with him: And that J. WITTI-

Vid. Diermerbroek de Peste, p. 159.

^{*} Pauperibus etiam consuluimus ut quotidie mane unum, duo, vel tria Cochlearia Aceti Vini optimi, ac sortis biberent, vel sine, vel cum pauxillis granulis Salis supermasticando Frustulum Panis: atque illud in hac Peste animadvertimus suisse unum ex optimis præservativis.

CHIUS related that the Inhabitants of the Island of Mileta daily took a little Salt, as a Preservative from the Plague, saying it was the most efficacious Remedy against Contagion.*

- §. 629. AND that REINECCERUS affirms that common Salt, in Water drank, preferves from the Pestilence.
- §. 630. And that Brudus Lusitanus was of the same Opinion, and relates, that a certain Surgeon in England, with good Success, gave his Patients sick of the Plague Salted Fish for their Food.
- J. 631. Dr. BOERHAAVE mentions J. B. VAN HELMONT, as thinking that Vinegar,

* Salem esse Antidotum præstantissimum tam ad Præservationem, quam ad Curationem, scribit Augenius Lib. 9.
Epist. cum quo consentit Joubertus, Tract. de Peste, cap. 13.
Refert Joannes Wittichius, in Halilog. incolas Miletæ insulæ quotidie ad præservationem a Peste parum Salis usurpare
solere, dicentes hoc esse essicacissimum Remedium removendi

è se pestiserum Contagium. Diermerbroek de Peste, p. 170.

† Fidejustus Reineccerus, lib. 6. Thes. Chym. asserit Sal commune, in Aqua haustum, præservare à Lue pestifera. Ibid.

‡ Brudus Lusitanus, lib. 3. de vist. rat. in febr. cap. 19, et 20. pluribus docet, Sal esse efficacissimum Præservativum ac Curativum in Peste, et resert Chirurgum quendam in Anglia solitum esse Piscibus salitis Peste laborantes seliciter nutrire. Ibid.

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Sea-Salt, and Sulphur, were the principal
Remedies of Hippocrates against the
Plague.*

§. 632. DIASCORIDES is very particular and large in describing the many Virtues and various Uses of Salt, and, among other Things, its Efficacy against Putrefaction; which shews that this Quality of it has been long known. And as Salt, by large Experience, has been sound a sufficient Preservative of animal Substances from Putrefaction, we may rationally conclude that it is a proper Remedy against the Effects of pestilential Insection.

§. 633. I thought it proper to mention the Sentiments of the Authors cited, that it may appear I am not alone in my good Opinion of common Salt.

§. 634. THERE are other Sorts of Draughts which are proper Remedies against the Effects of the pestilential Infection, e.g.

Vid. Boerhaave Element. Chemiæ, vol. 2. p. 285.

^{*} Acetum ideo, Sal Maris, et Sulphur, in putridissima Febrium Peste, ab Helmontio putantur suisse summa Antiloimica Hippocratis cum Vino picato.

^{*} Είσὶ δὲ και σηπεδύνων εφεκτικοί. Diascorid. lib. 5, cap. 126.

Take of the Juice of Limons one Spoonful, of River Water three Spoonfuls, of Sack two Spoonfuls, and mix them for a Morning Draught. Or,

§. 635. TAR-WATER is another prefervative Remedy for those with whom it will agree; and the Draught should be larger or lesser, according to the Age of the Person, and as it shall best suit his Stomach.

§. 636. I propose Tar-Water as one proper Remedy against the Sickness, because the Medicinal Parts of it appear to have a Quality proper to preserve the animal Fluids and Solids in their natural State, and to alter the Figure of the pestilential Miasmata, or to prevent those Effects, which otherwise they might produce, when received into the Body.

§. 637. TAR-WATER has proved an useful Medicine in various Diseases, and to many Persons; but it is impossible it should be a suitable Remedy in all Distempers, or in Diseases of a contrary Nature, and depending on contrary Causes.

§. 638. And fince this Medicine (§. 637) abounds with acid Particles, in which great Part of its Virtue confifts; and fince several morbid Symptoms are produced by an acid

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Acrimony in the Contents of the Stomach and Intestines, it cannot be proper for all Persons; not for such Persons as are troubled with an acid Acrimony.

§. 639. TAR-WATER has produced in some of my Acquaintance very hurtful Effects, and therefore, when any ask my Opinion about their Drinking this medicated Water, I advise them to begin with two or three Spoonfuls, and to increase the Dose as they shall find it to agree with them.

§. 640. I have known Cases in which one Quarter of a Pint, nay two Spoonfuls of it, have had a violent Operation.

§. 641. I mention these Things, that People may proceed with Caution in the Use of it.

§. 642. TAR-WATER may be mixed with the Juice of Limons, or of Seville Oranges, and diluted with River-Water, and a little sweetened with fine Loaf Sugar.

§. 643. THE liquid internal Remedies, hitherto considered, are suited to People of a sanguine or cholerick Constitution.

§. 644. II. As to Persons of a cold Constitution, whose Bodies are commonly chilly, whose Flesh is flabby, and the muscular Fibres Fibres too lax, one or other of the following Remedies will be more proper.

§. 645. I. DRAUGHT.

Take of Vinegar, or Juice of Limons, two Spoonfuls, River-Water and Brandy (or Rum) of each one Spoonful, Tincture of Virginian Snake-Root twenty Drops, and mix them for a preservative Draught, to be taken in the Morning. Or

§ 646. II. DRAUGHT.

Take of Salt half a Drachm, or two Scruples, or one Drachm, dissolve it in four Spoonfuls of River-Water, then add four Spoonfuls of Sack; mix for a Draught. Or,

§. 647. III. DRAUGHT.

Take of the Gas Sulphuris one Spoonful,
River-Water two Spoonfuls, Brandy (or
Rum) one or two Spoonfuls, Tincture of
the Virginian Snake-Root twenty or
thirty Drops; mix them for a Draught.
Or,

§. 648. IV. DRAUGHT.

TAKE of Vinegar one Spoonful, of the first Peruvian Tincture, hereafter de-S 2 scribed, 260 Proper Remedies against the Effects

scribed, four Spoonfuls; mix for a

Draught.

§. 649. V. DRAUGHT.

TAKE of the Juice of Limons one or two Spoonfuls, of the first Eleutherian Tincture four Spoonfuls; mix for a Draught.

§. 650. These Draughts are fuited to Persons of a cold Constitution, and of a lax Habit of Body. I shall in the next Place give the Forms of some domestick Tinctures which may be made, and kept in Readiness for Use on any incidental Occasion in a Family.

§. 651.

I. The PERUVIAN TINCTURE with WINE.

powdered three Ounces, of Virginian Snake-Root half an Ounce, of the Flakes of Iron beat off on the Smith's Anvil, and powdered, one Ounce; mix them to gether, put them into a large Bottle, and add to them two Pints and half of the best Sack; then let the Bottle be corked and shaked, and let the Medicine stand in a cold Digestion six or seven Days, shaking the Bottle very well twice

a Day: Then pour off the clear Tincture, and bottle it for Use, keeping it close stopped, and a Label with its Title tied to the Neck of the Bottle.

§. 652. ONE Pint of Sack may be poured on the remaining Ingredients, and digefted, as before directed, for making a smaller Tincture of them for the same Purposes.

§. 653.

II. The PERUVIAN TINCTURE with BRANDY.

TAKE of the best Cortex of Peru powdered four Ounces, Snake-Root two Drachms, of the best Brandy one Quart; mix, and digest cold, in the Manner directed §. 649.

§. 654. The Peruvian Bark is a very proper Medicine for strengthening the animal Veffels, augmenting the Cohefion of their component Parts, preserving the Vigour of the vital Organs, and the natural Tenuity of the Blood, and to prevent, and cure internal Mortifications; which very frequently are Effects of pestilential Infection; and, confequently, is a most valuable Remedy against the Infection of the Plague.

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- §. 655. It may therefore be of great Service to Persons of a cold Constitution, and lax Habit of Body, if they took three or sour Spoonfuls of the first Peruvian Tincture (§. 651) three or four Times a Day, 'till they found themselves in a better State of Health.
- §. 656. The second Tincture of the Bark (§. 653) may be taken for the same Intentions, and in the same Manner as the first. The Bottle may be shaked before the Dose be poured out, which is the better Way of taking the Medicine, if it sits well on the Stomach; or the clear Tincture may be taken without the Powder.
- §. 657. I have proposed the second Tincture of the Bark, (§. 653) because I have found the Bark given in Brandy very effectual, after it has failed in the common Methods of giving it.
- §. 658. Two Sorts of Tincture may be made of the Cortex Eleutheriæ, in the same Manner as those before-mentioned, which may be very useful in a pestilential Season, and particularly adapted to the Occasions of the Persons (§. 644) now under our Consideration, and deserve to be kept in Fami-

lies, and may be given instead of the other Tincture.

§. 659. There are likewise solid Medicines which may be serviceable against the Effects of the pestilential Insection, and other Contagion; e. g. the Chewing Elecampane Root, and swallowing the Saliva tinctured with it in the Morning; or eating three or four Mouthfuls of it candied so, as not to lose its pungent Taste.

§. 660. THE yellow Part of the Peels of Seville Oranges candied so, as not to lose their volatile, aromatick Bitterness, is another preservative Remedy.

§. 661. Dr. DIERMERBROEK, in the Account of his Management of himself (while the Plague was in Nimeguen, the City where he dwelt) acquaints us, that he rose between Four and Five in the Morning to visit his Patients, and because he could neither eat nor drink, nor take any Medicine so early, after pious Prayers to God, and Committing himself to his Protection, he only chewed some Grains of the lesser Cardamums, and, sasting, made his first Visits 'till about Six o'Clock: Then he took a little Theriaca, or Diascordium, or candied Orange Peels, or at most three, or four Bits

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of candied *Elecampane*, and after Seven, or about Eight o'Clock, he went to Breakfast; and that often, tho' not every Day, between Eight and Nine, he took a Draught of *Wormwood Wine*.

- §. 662. Dr. Hodges, of this City, rose early in the Morning, and presently took the Quantity of a large Nutmeg of the antipestilential Electuary (described in his Book) as his Preservative; then, after the Performance of the Duties of Piety, he spent two or three Hours in examining, and advising for those Patients, who came to his House, before he went to Breakfast; and after that he went out to visit the Sick.
- §. 663. When he went into an infected House, he had a Fumigation made by Trochisks put on red-hot Coals, for medicating the Air, and kept Lozenges in his Mouth so long as he was in the sick Chamber, and had Conversation with the Patient.
- §. 664. HE was likewise very careful not to go into the sick Chamber, or near the Bed, while he was sweaty, or out of Breath.
- §. 665. I have related the Manner in which these celebrated Physicians conducted themselves as to their Morning Preservatives,

tives, and going into Places of Infection, apprehending it may be of Service, as well as a Satisfaction to several Persons.

- §. 666. There is one Thing, an Instrument indeed of Death and Destruction to Multitudes in the Time of War, and yet may prove a happy Means of preserving Life, and of curing Sickness in the Time of the Plague; and that is Gun-Powder, taken inwardly as a Medicine; for every Ingredient of this Composition has a Quality contrary to the Nature of the Causes productive of the Pestilence.
- §. 667. And therefore half a Scruple, one or two Scruples, or a Drachm of this Composition, made into a fine Powder for a Dose, may be taken in the Morning mixed with some of the balsamic Syrup, and washed down with a Draught of Water, mixed with so much Sack as will bring it to the Strength of small Beer. It is also a proper Medicine in pestilential, and other malignant Fevers, and in the Small-Pox.
- §. 668. I shall say nothing here about the Manner of giving it for the Cure of the Plague, because that is not the Subject of these Papers.

§. 669. Lozenges is another Sort of folid, or dry Medicines, of great Utility in a pestilential Season; and therefore I shall give some Formula's of them.

§. 670. I. Sort of Lozenges.

TAKE treble-refined Loaf-Sugar eight Ounces, wet it with the Tincture of Virginian Snake-Root, made with the rectified Spirit of Wine, (not with the Tincture of Salt of Tartar) let it stand 'till the Spirits are evaporated, and the Sugar become dry; then pound it in a marble Mortar with one Ounce of the finest Wheat Flour, and with a sufficient Quantity of the Mucilage of Gum-Tragacanth, or Gum-Arabic, extracted with the Juice of Limons, make a stiff Paste: Roll it out to the Thickness of a Crown-Piece, and cut it with a Knife, or a tin Lozenge-Cutter, into Lozenges; or with the Fingers make it into small, round, flattish Cakes, to be dried on the Bottom of a Sieve inverted, and placed within the Warmth of a Fire but not near it; or in bot Weather, in a Place perflated with the Air.

§. 671. II. Sort of Lozenges.

Take of the same Sugar (§. 670) eight Ounces, Virginian Snake-Root, and the Wheat Flour, of each one Ounce; mix them well together; then, with a sufficient Quantity of the Mucilage of Gum-Tragacanth prepared with the Juice of Limons, make a stiff Paste, and of that make Lozenges in the Manner directed §. 670.

§. 672. THE first Sort of these is the more grateful and temperate, the latter somewhat stronger of the Snake-Root, more bitter, and warmer.

6.673. III. Sort of Lozenges.

Take Sugar eight Ounces, Ginger finely powdered, and Wheat Flour, of each one Ounce; mix them well together; then, with a sufficient Quantity of the Mucilage of Gum-Arabic, extracted with the Juice of Limons, make a stiff Paste, and of that form Lozenges.

§. 674. IV. Sort of Lozenges.

Take Sugar eight Ounces, Ginger powdered one Ounce, Wheat Flour two Ounces; then, with a sufficient Quantity of the Mucilage of Gum-Tragacanth, 268 Proper Remedies against the Effects
canth, prepared with Vinegar, make a
stiff Paste, and Lozenges of it.

§. 675. V. Sort of Lozenges.

Take Sugar eight Ounces, Ginger powdered, and Wheat Flour, of each one Ounce; mix them well together; then, with the Juice of Limons alone, make a stiff Paste, and Lozenges of it.

§. 676. VI. Sort of Lozenges.

Take Sugar eight Ounces, Flowers of Brimstone, and Wheat Flour, of each two Ounces; mix them well; then, with a sufficient Quantity of the Mucilage of Gum-Arabic, prepared with the Juice of Limons, make a stiff Paste, and of that form Lozenges.

§. 677. I have had each Sort of these Lozenges made in my own Family, and tasted them, and their Taste is grateful: They are adapted to prevent the Effects of the pestilential Insection, to strengthen the Stomach, and refresh the Spirits: But I would advise Persons to use these Remedies only when they go into Places insected, or apprehend they shall meet with insected Persons.

§. 678. And, after they have been using this Kind of Remedy, I would advise them to drink a Draught of some small diluting Liquor.

§. 679. The five first Sorts of Lozenges are moderately warm, and have nearly one Grain of the Snake-Root, or Ginger, in ten of the Composition; but the Proportions of those Ingredients may be increased, or diminished, as shall best suit the Occasion. They will not be too warm for Perfons of cold Constitutions, and lax Fibres; and for those of a contrary Habit of Body, they may be lessened one half.

§. 680. Those, who shall not like them made with Wheat Flour, may have the Lozenges made with Starch in the Stead of it; and Persons of a very sanguine, or cholerick Constitution, may use the following instead of the former.

VII. Sort of LozENGES.

Take Sugar eight Ounces, Saltpetre powdered, and Starch, of each half an Ounce; mix them well; then, with the Mucilage of Gum-Tragacanth, or Gum-Arabic, prepared with the Juice 270 Proper Remedies against the Effects
of Limons, or with Vinegar, make the
Paste, and Lozenges.

VIII. Sort of Lozenges.

Take of Sugar eight Ounces, Tartar Vitriolated powdered, Sugar of Roses, of each half an Ounce; mix them well together; then, with a sufficient Quantity of the Mucilage of Gum Arabic, prepared with Vinegar, or the Juice of Limons, make a stiff Paste, to be formed into Lozenges.

- §. 681. A great Regard should be had to the Temperature of the AIR, as to Heat and Cold, Driness and Moisture, in Order to choose the most suitable preservative Remedies; because that which is most proper in a dry, hot, and sultry Season, will be less proper when the Air is cool and moist.
- §. 682. I shall therefore lay down the following general Rules, viz.
- §. 683. Rule 1. When the Air is hot, and fultry, let those preservative Remedies be used by all Persons which are recommended to People of a sanguine or cholerick

rick Constitution, because the Use of them is a necessary Means, while such Weather continues, to prevent that Inspissation of the Blood, and those Inslammations and Fevers, which frequently are the Effects of excessive Heat.

- §. 684. Rule 2. When the AIR is cool, and too moist, those of sanguine Constitutions may moderately use some of the Remedies directed for those of a cold Habit of Body.
- §. 685. It is impossible to give, with due Propriety, particular Rules suited to the Cases of Individuals, on the Account of the manifold Differences in different Bodies: It will therefore be a prudent Course for particular Persons to advise with some skilful Physician, and acquaint him with all the Circumstances of their Health, and take Directions from him.
- §. 686. WHAT has been faid may be fufficient for the Subject of REMEDIES preservative from the Effects of pestilential Infection, and other Contagion.

272 Proper Remedies against the Effects

I shall add no more to this Letter, but that, with fincere Desires of promoting the Good of Mankind,

I am, SIR,

Your obedient and.

very humble Servant,

THEOPHILUS LOBB.

LETTER

LETTER IV.

Relating to the PLAGUE.

Containing, I. General Rules, viz. 1. For the Diet of People in Cities, and other Places, when visited with the Plague, or other contagious Distempers. 2. For a proper Management, when the Sickness comes into a Family. 3. For Purifying the House, after the Plague has been in it. II. Considerations of some Things which should carefully be avoided in the Time of a Pestilence.

To * * * * *

SIR,

§. 687. IT is well known that Health very much depends on suitable Aliments, and a proper Use of them. Many Distempers have been, and may be cured, by a Diet adapted to the curative Indications; and many Diseases have been produced,

duced, by Living on improper Foods, and even by Irregularities and Excesses in the Use of those that are proper.

§. 688. It is therefore a Matter of Importance for People to know how to regulate themselves, and what Sorts of Aliment they should choose, and what they should avoid; especially in a pestilential Season.

§. 689. These Things I have confidered, and shall lay down some general Rules, which I hope will be useful to those who

shall observe them.

General Rules of DIET.

§. 690. Rule 1. LET Persons in Health keep nearly to their accustomed Way of Living, as to Aliments, only avoiding such as are improper in the Time of a Pestilence. Vid. §. 694, to 698.

§. 691. This Rule is supported with solid Reason; because any sudden, and great Change of the Sorts of Food used, tends to produce those Alterations in the Body which will render it more susceptive of Contagion, or else in a worse Condition for receiving the Sickness; e.g. If a Man that has been accustomed to feed heartily on Rye-Bread, Beef, Bacon, and other animal Food,

Food, and to drink freely of strong Liquors, should leave off the Use of this Diet, and confine himself to a spare Diet of Vegetables, with aqueous Liquors for his Drink, he would find himself grow sensibly faintish, and more feeble; his Vessels would become more lax, the Pores of his Body more open, and receptive of any insectious Particles dissufed in the Air; the Vigour of the vital Organs would be abated, and less able to keep out, or eject contagious Miasemata, if he should meet with them.

§. 692. And fo, on the other Hand, if a Person that used to live only on Vegetables, or on white Bread, and white Meats, and Things of easy Digestion, should change them for Rye-Bread, Beef, Pork, Beans, and Peas, and the like, the Consequence would be Indigestion, and the Accumulation of crude Humours, which will be a Pabulum for any incidental Distemper.

§. 693. GREAT Alterations of Diet therefore should be avoided; and those who are accustomed to animal Food, and live in the common Way, may feed on the following Sorts, viz. Veal, Beef, Lamb, Mutton, Chickens, Fowls, Capons, Turkies, Larks, Partridges, Pheasants, Sparrows, Rabbits,

and most Sorts of River Fish, and Crabs. These Dr. DIERMERBROEK* approved, and new-laid Hen's Eggs, and four Butter-Milk, (which he fays RHAZES much commended) He likewise esteem'd Capers, Barberries, four Morella Cherries, and the Herbs Succory, Pimpinel, Endive, Borrage, Sorrel, Lettuce, Baum, Asparagus, &c. and the aromatick Herbs; and of Spices the Cinnamon, Cloves, Mace, and Nutmegs.

§. 694. But Pork is a prejudicial Food in the Time of a Plague.

§. 695. Dr. DIERMERBROEK, + when the Sickness was at Nimeguen, observed, that many were prefently infected with the Plague upon eating of Hog's Flesh, which occasion'd the People there to forbear it, and to give it to the Dogs.

§. 696. HE likewise takes Notice, that pickled Herrings t was at that Time a very hurtful Sort of Food: He relates, that in the Months of June and July new pickled Herrings were brought to Town; that the Inhabitants eat of them raw, according to Custom; and that the Plague at that Time increased much, and that many took the Infection within twenty Hours after their eating them; which made others so cauti-

^{*} Vid. Dr. Diermerbrock de Peste, p. 137. + Ibid. p.141. 1 15.

ous, that they would not afterwards venture on this Kind of Food.

- §. 697. THE Doctor likewise disapproves of *Eels*, *Soles*, *Salmon*, and most Sorts of Sea-Fish.
- §. 698. He likewise disapproved of most Summer Fruits (except the acid) as Cucumbers, Pompions, Melons, Apricots, Plums, Peaches, sweet Cherries, sweet ripe Currants, Beans, and all Kinds of Pulse, Garlick, Onions, Lecks, &c.
- §. 699. I have related the Doctor's Opinion of the Aliments mentioned, because he lived through the Time of a Pestilence, and was a curious Observer of the Effects of the different Sorts of Food that were used.
- §. 700. There is Reason to think, that alcaline, and alcalescent vegetable Sorts of Food, and those animal Substances which may favour a Putrefaction of the Blood, are very improper, and ought carefully to be avoided in a Time of the Pestilence, or any other contagious Disease.
- §. 701. AND on this Account Mackerel, and fresh Herrings, no less than Pork, pickled Herrings, Salmon, and Eels, should be disused in a contagious Season.

§. 702. IT may deferve the Confideration of MAGISTRATES, whether it will not be a prudent Thing to forbid, in the Time of a Pestilence, the Sale of those Sorts of Food which are improper, and have proved hurtful.

§. 703. ONE grand Scope in Respect to Diet is, so to regulate the Use of Aliments as will best preserve the natural Vigour of the Heart, and other vital Organs, and prevent a morbid Putrefaction either of the animal Fluids, or Solids.

§. 704. A morbid Putrefaction is that continual Diffolution of the component Parts of the Blood, or other Liquors of the Body, or of the animal Vessels, which is inconfistent with the Existence of Life, or Health.

§. 705. THERE is in the Digestion of Aliments taken into our Bodies, a Diffolution of their component Parts, and a Dividing them into leffer, and leffer, 'till they come to a certain Degree of Minuteness, which renders them fit for the Office of Nutrition: But neither the Parts of the Chyle, nor the minuter Particles into which they are divided, have any Thing fœtid in them: Yet, if CHYLE was separated from

the Body, and exposed to a moist and warm Air, its Parts would continue dividing, and subdividing, 'till they become very volatile and setid, and ascend and diffuse in the Air, and are carried away with it.

§. 706. So that in a morbid Putrefaction there are more Sub-Divisions of the Parts putrefying, than occur in an healthful Digestion of our Food; that is, the putrefied Parts are rendered more minute than the Particles of the healthy nutritious Juice in an animal Body.

§. 707. Hence we may apprehend, that those Sorts of Food, whether vegetable, or animal, whose Parts are most easily disfolved, and divided into a greater Minuteness than is needful for Nutrition, and are liable to become volatile and setid, must be most improper for Use in Times when such Diseases are rife, as tend to introduce a morbid Putrefaction of the Blood.

§. 708. THE Aliments mention'd as improper, (§. 694, ad 698) appear to be of fuch a Nature: To which may be added, Hares, and Venison; especially, if killed after being hunted.

§. 709. Rule 2. LET People make their Breakfast soon after they are up in a Morning,

and at least before they go abroad on any Business; because, while the Stomach is empty, but little Chyle can be carried into the Blood, and the Action of the Heart will thence be more languid, and there will not be so vigorous a Propulsion of the superfluous, or morbid Humours to the excretory Passages: Whereas, on the other Hand, when the Body has been refreshed with suitable Aliments, all the vital and animal Functions will be performed with greater Strength, and the Admission of infectious Particles thro' the Vasa inhalantia into the Blood will be more difficult; and, confequently, the Person more safe from the Effects of Contagion.

§. 710. DIFFERENT People use different Sorts of Food for Breakfast. Those in low Life, and used to hard Labours, often eat Bread and Cheese, or Meat, and drink Ale, or strong Beer, for their Morning Meal; and a Sort of Beer, called Porter, I esteem the whole-fomest Liquor made of Malt in this City.

§. 711. This Sort of People (§. 710) may continue their Custom, but I would advise them to put into the first half Pint they drink so many Drops of the dulcified Spirit of Nitre, or of dulcified Spirit of Salt,

or dulcified Spirit of Vitriol, or of Ol. Sulphuris per Campanam, as will make it moderately sharp.

§. 712. Persons of a fedentary Life may breakfast on Coffee, or Green Tea, or Coco, or a small Tea made of the Sage of Vertue, with Bread and Butter, or on Chocolate, with a Slice of Bread toasted, with, or without a little Nutmeg.

§. 713. Coffee is a proper Liquor, as it has a Quality strengthening the Cohesion of the component Parts of the Solids, and thereby the Action of the Vessels on their contained Fluids; and, in Consequence of that, an Excretion of superfluous Humours from the Blood, and a Prevention of Putrefaction; and therefore is fit to be drank in a pestilential Season.

§. 714. This Quality (§. 713) is the Reason of its being esteemed an excellent Dryer, and shews that it is very suitable to Persons of too moist a Constitution, and lax Fibres, and to those who have Worms.

§. 715. EXPERIENCE has likewise proved, that in many it comforts the Brain and Nerves, and refreshes the Spirits; but it should always be drank soon after it is made.

§. 716. THERE are some Constitutions with which this Liquor will not agree, and such Persons, who find any ill Effects from it, should not use it. It is always improper for dry, and cholerick Habits of Body.

§.717. CHOCOLATE is not so drying a Liquor as the former, (§.713) the cold, nitrous Taste of the Nuts, of which Chocolate is made, shews that they have a cooling Quality; and large Experience manifests, that this Liquor is serviceable in consumptive Cases, and for Persons troubled with Coughs; that it is healing in its Operation, and useful against Gripings in the Bowels, and Fluxes; which shews that it is very proper in the Time of a Pestilence.

§. 718. GREEN TEA may fitly be drank, as it has been found useful for Cleanfing the Vessels, the Stomach and Bowels; as it helps Digestion, refreshes the Spirits, Nerves and Brain, removes unseasonable Propensities to Sleep, dilutes the Blood, and the scorbutic Salts in it.

§. 719. SAGE TEA strengthens the Solids, refreshes the Nerves and Brain, is useful to preserve the Vigour of the vital Organs, promotes insensible Perspiration,

and therefore is proper in a pestilential Season.

§. 720. Rule 3. It is best to begin Dinner with some Sort of Puddings, except those made with Sewet; because the Doing so will occasion the eating less animal Food, and, consequently, the Danger of too great Repletion, which sedentary People often incur by feeding only on Meats.

§. 721. Rule 4. LET Persons at Dinner eat only of one Sort of animal Food. Because different Kinds of Flesh, and different Kinds of Fish, have different Qualities; and, if a great Variety of any Substances be received into the Stomach at one Time, it will render the Chyle a more compound Mass: Neutral Qualities will be introduced into it, and it is an impossible Thing to attain the Knowledge of the Nature of them; but this is observable, that generally those, who accustom themselves to feed on a great Variety of Things at Dinner, are not fo healthy as those who live on a more simple Diet; and, if fuch Persons do not more frequently fall into Fevers, yet they often contract chronical Diseases.

§. 722. Rule 5. Persons should eat plentifully of Bread at their Dinners, and Pickles,

kles,* or the Juice of Limons, or Vinegar, as Sauce with their animal Food: Because the Observance of this Rule is a proper Means to prevent febrile Heats, Putrefactions, and the Effects of pestilential Insection.

§. 723. Rule 6. LET People always eat Salt with their animal Food, because it may prevent too hasty a Digestion of it, prevent Surfeits, and is a proper Remedy against the Effects of pestilential Insection.

IT may also be of Service, if the BAKERS did somewhat increase the usual Proportion

* Capers, Samphire, Walnuts, Barberries, pickled, are proper to be eaten with animal Food in the Time of a Plague, and especially Limons pickled in the following Manner, because every Ingredient is a Remedy against Contagion.

To pickle LIMONS.

Take a Dozen of Limons, rub them well with a coarse Cloth, cut them in four Quarters half Way, and filt each Limon with Salt, and lay them in a wooden Platter to dry, either in the Sun, or by the Fire; turn them often in the Liquor that will run from them 'till all is soak'd up; then put them into a stone Jar, and put to them half an Ounce of Ginger sliced thin; then fill the Jar with Vinegar near a Finger's Breadth above the Limons, and cover it with a Bladder and Leather tied close. It must be sometimes opened, that, as the Vinegar wastes, more may be added. The Limons will be near a Month a drying with the Salt. The Limons should not be eaten 'till a Month after they have been put into the Jar. I have given this Formula for the Reason abovementioned.

of Salt in making their Bread, during the Time of a Plague.

§. 724. Rule 7. LET Moderation be observed in the Use of the Eatables; because Excess in them will occasion a deficient Digestion of them, crude Humours in the Blood, obstruct the excretory Ducts, and may bring on various Difeases.

§. 725. Rule 8. LET acid, or acescent, or acidulated Liquors be used for Drink, e.g. Limmonade, Orange Water, Water mixed with Canary, or red Port Wine; or malt Liquors acidulated with the Juice of Seville Oranges; or the first half Pint acidulated as directed §. 711. Vid. also LOBB on the Stone, &c. §. 1412.

§. 726. Rule 9. Persons should carefully avoid having their Stomachs empty: Because Emptiness, or Inanition, tends to abate the Propulsion of the Humours to the Superficies of the Body ad extra.

§. 727. HUNGER lessens the Secretion of the nervous Fluid, diminishes the vital Strength, renders the Body languid, the excretory Vessels less full than they ought to be, and more disposed to admit infectious Miasmata, when they occur.

§. 728. Rule 10. PEOPLE in the Time of a Pestilence may drink so much Wine as shall be needful to preserve them from Sadness, and to maintain a sober Chearfulness of the animal Spirits, but no more.

§. 729. WINE is a proper Liquor to prevent Putrefactions both in the Vessels and Fluids of human Bodies, and to promote the Expulsion of noxious Humours from them; to maintain the vital Strength, to dispel Sadness, Terrors, and Fears, which arise from the Feebleness of the animal Spirits, or are occasioned by frightful Occurrences, and therefore is a proper Remedy against the Effects of pestilential Infection.

§. 730. Dr. Hodges, speaking of Sack, affures us, that he found nothing more refreshing and strengthening to the Nerves and Spirits*; that, when he returned Home from vifiting the Sick, he took a Glass of Wine to whet his Stomach, refresh his Spirits, and diffipate any Infection he might have received; that he feldom concluded his Dinner without Wine; that in the Evenings he drank it to Chearfulness; by Means

of which he had quiet Sleep, and a beneficial Perspiration.*

§. 731. And in the Day-Time, when he thought himself affected by the pestilential Particles; that is, when he found his Head out of Order, Stomach sick, or a sudden Lowness of his Spirits, or Abatement of Strength, he presently drank some Wine, which used to put him into a Sweat, and to carry off the pestilential Insection.

§. 732. THE Doctor very much commends his favourite Sack; but I think all Sorts of neat Wine may fitly be drank. I have tried many Experiments of Digesting animal Substances in different Liquors: I have digested one Drachm of Mutton in two Ounces of common Canary for feveral Weeks together, and have made the like Trial with Mutton and Palm Sack, and with Mutton and red Port Wine, and found the Mutton in every Trial preserved from Putrefying; and thence conclude that Wine has a Quality preservative of animal Substances from Putrefaction, and is a proper Means to prolong Life and Health, and may beneficially be used with Moderation in fickly Seasons.

^{*} Hodges, p 243.

And every particular Person should prefer that Wine which he finds most agreeable and beneficial to him. But those who have a fanguine, or cholerick Constitution of Body, should drink the most sparingly of fpirituous Liquors.

§. 733. A Variety of spirituous Liquors may be so compounded as to be serviceable against the Effects of pestilential Infection; e.g.

I. LIQUOR, or Punch.

TAKE Water two Quarts, Sugar four, or fix Ounces, Juice of Limons (or Seville Oranges) half a Pint, the yellow Part of Limon Peels one Ounce; steep the Peel in the Water and Juice 'till the Sugar is dissolved, and the Liquor tastes agreeably of the Peel; then add one Quart of Brandy, or Rum, or Arrack: When mixed together, bottle it for Use. Punch may also be made with Vinegar in the same Manner, instead of the fuice of Limons.

§. 734. A Wine Glass of one or other of these Liquors may be given at distant Times to a Nurse, or other Attendant on the Sick, two, or three, or four Times a Day.

J. 735. And Persons, who visit those that are sick of the *Plague*, may, in the same Manner, drink of such preservative spirituous Liquors.

§. 736. Liquors preservative from the Effects of Contagion may likewise be made in the following Manner, viz.

II. LIQUOR.

Take of Brandy, (or Rum) Vinegar, of each one Pint, of River Water two Pints, and mix them together. And four Spoonfuls of this Liquor may be taken for a Draught twice, or thrice a Day. Or,

§. 737. III. Liquor.

Take of Sack (or Mountain, or Madera, or Palm Wine) one Pint and half, Vinegar half a Pint, and mix them together. Four Spoonfuls of this may be taken at a Time, and repeated as the former, (§. 736.) Or,

§. 738. IV. LIQUOR.

TAKE of red Port Wine, and Water, of each one Pint, Vinegar half a Pint, mix them. A Wine Glass full of this Mixture may be taken, and repeated as the former, for a preservative Remedy U against

against the Effects of pestilential Infection, when the Weather is hot, and sultry.

§. 739. Rule II. PEOPLE, in regulating their Diet, should have a Regard to the Season of the Year, and the State of the Weather. Vid. Lobb on the Stone, &c. §. 1325.

§. 740. Rule 12. LET Suppers be made early, and without animal Food, especially by those who lead sedentary Lives.

§. 741. It will be prudent, for those whose Duty does not oblige them to the contrary, to stay at Home 'till about two Hours after the Sun is up.

General Rules for Management when the Plague comes into a Family.

§. 742. Rule 1. The uppermost Rooms of the House having been prepared for the Accommodation of the Sick, as proposed, (§. 46, 47, &c.) let those Parts of the Furniture, Apparel, and every Thing not necessary for the Use of the Patient, or Nurse, be removed out of it: Because by this Means the sewer Things will be exposed

when the Plague comes into a House. 291 posed to the Danger of Receiving Infection.

§. 743. There is Reason to apprehend that, thro' the Neglect of this Rule (§.742) the Apparel, Linnen, and Woollen, and other Things belonging to the Sick of the Plague in the Year 1665, in this Town, became infected; and that, after the Death of the Patient, when the infected Things were removed and distributed, the Distemper was conveyed with them to others. And the publick Accounts of the Manner in which the Plague has been propagated in foreign Countries, and particularly the Conveyance of it from Messina to Reggio in Calabria proves, that a Distribution of infected Goods will spread the Sickness.

§. 744. Rule 2. LET the Person taken sick be soon conducted to one of the uppermost Rooms, and immediately drink a Draught of Vinegar and Sack, mixed in equal Quantities, or one Third Vinegar, and two Thirds Sack. Let the whole Draught be sour, or six Spoonfuls, and taken very warm; which may be repeated every three, or two Hours, or oftener, if he sinds any Relief by the first Dose.

U 2

§. 745. THE Use of this Remedy, (§.743) if it proves beneficial, may be continued so long as the Person sinds Benefit by it, and has Occasion for it. Or,

§. 746. THE fick Person may drink Draughts of the following Mixture in the same Quantities, and in the same Manner as directed §. 744.

TAKE of a Tea made with Ginger, moderately strong, Vinegar, of each half a Pint, and make a Mixture.

§. 747. Rule 3. If the Person is a Smoker of Tobacco, let him do as Dr. Diermerbroek did whenever he found himself insected, and sick; that is, let him smoke Tobacco, one Pipe after another, so long as he can conveniently bear it. Or, if he is no Smoker, let a Fumigation be made for an Hour or two with Tobacco on the Fumigators.

§. 748. This Method (§. 744, &c.) may, with the divine Bleffing, carry off the Sickness in a few Hours after it has been received by the infected Person. The Advantage which Dr. Diermerbroek, Dr. Hodges, and others, have received from an immediate Use of proper Remedies, are a Reamediate

when the Plague comes into a House. 293 fon for Persons to hope for a speedy Recovery, who shall do as they did.

§. 749. Rule 4. When the Plague is come into a House, and a brisk Fire is kept in the sick Chamber, as proposed (§. 7, Obs. 8.) let there be no Fire in the Rooms below, except in the Kitchen, lest the Plurality of Fires below should occasion a Descent of pestilential Particles from the Sick to others of the Family.

§. 750. Rule 5. If the fick Person recovers, let him remain in his Chamber three or four Days after the Sickness has left him; and let the Air of the Room be daily purified, by firing Trains of campborated Gunpowder, and by Evaporations of medicated Vinegars, and Fumigations with the Cortex Eleutheriæ.

§. 751. Rule 6. Then let the Person recovered be clothed with fresh Apparel, after it has been sufficiently aired, and medicated; and let him be removed into another of the uppermost Rooms for sour, or sive Days more: After which short Quarantain, (and another Change of Apparel, as directed) if he has sufficient Strength to walk about the House, I think he may safely be admitted to come down into the Family;

U 3

the

294 Rules for Purifying a House,

the Air of the Room, where it is, having been first medicated.

§. 752. Rule 7. If the fick Person dies, let a brisk Fire be continued in the Chimney of the Room, and the Door and the Windows kept open: Let Trains of some explofive Powder be frequently fired; and Evaporations, or Fumigations be made in the fick Chamber, lower Rooms, and Stair-Case, 'till an Hour after the Corps has been carried away for Interment.

§. 753. Rule 8. LET all the well People of the Family, that are not necessarily employed about the Body of the Deceased, be in Bed, their Chamber-Doors shut, and no Fire in the Chimnies 'till the next Morning after the Body is removed out of the House.

Rules for Management in Purifying a House, when the Sickness is ceased in a Family.

§ 754. Rule 1. KEEP a brisk Fire in the Chamber, where the Plague has been, for fix Hours, the Windows and the Door being all the While open. All pestilential Particles diffused in that Part of the Room,

thro' which the Wind has a Current, will by this Means be carried up the Chimney into the Air of the Atmosphere.

§. 755. INDEED in the Corners of the Room, where there happens no Current of Air, pestilential Particles may possibly remain; and may likewise adhere to the Ceiling, and Walls in Places out of the Air's Current, and to the Sides of fuch Furniture against which the Stream of the Wind does not pass. Therefore,

§. 756. Rule 2. WHEN the first Rule (§. 754) has been observed, let the Fire be put out, and the Windows shut close, and an Ounce or two of Roll Brimstone, broke into fmall Pieces, be scattered on a Charcoal Fire, made in a portable Furnace, and placed on the Floor of the Room remote from the Chimney; then shut the Door, that the Room may be filled every where with the Fumes of the Sulpbur for two Hours, which will penetrate every Substance that is porous, and is a most likely Means to alter the Figure, and abolish the infecting Quality of the pestilential Miasmata.

§. 757. Rule 3. THEN open the Door, and when the Fumes of the Sulphur are U4 gone, gone, make Evaporations for two Hours, by decocting the Cortex Eleutheriæ with Vinegar, in a Florence Flask, on a portable Furnace.

- §. 758. Rule 4. LET Explosions be afterwards made of one or other of the campborated Gun-Powders, the Door and Windows being shut; and let this be repeated fo, as to keep the Room pretty full of the Fumes of the Gun-Powder for two Hours.
- §. 759. Rule 5. THEN the Ceiling, the Floor, and Sides of the Rooms should be washed with very hot Vinegar.
- §. 760. Rule 6. LET this Course be used three Times, intermitting a Day.
- §. 761. Rule 7. THOSE Days in which the forementioned purifying Means are not used, a brisk Fire should be kept in the Chimney, and the Windows and Door of the Room at the same Time open.
- §. 762. Rule 8. AFTER the foregoing Methods (§. 754, &c.) have been used, keep a good Fire in the Room for two Days, with the Windows and Door open, from an Hour after the Rifing of the Sun, 'till within an Hour of its Setting: And then I think the Room may be judged to

be as healthy as it was before the Plague came into it.

§.763. In this Manner may every Room and House be purified, and freed from pestilential Infection, and other Contagion.

§. 764. They, who cannot be at the Trouble, or Expence, or spare so much Time as the foregoing Method (§. 754) will take up, may possibly have their infected Rooms, and Houses, sufficiently purished by a shorter, and cheaper Course, viz.

§. 765. When the Person sick of the Plague is either dead, and the Corps carried away, or is recovered, and removed out of his Room, the following Means may be used; viz. 1. Let the Fire in the Chimney be made, and kept strong, the Windows and the Door open for two Hours. 2. Then put out the Fire, shut the Windows, and fill the Room with the Fumes of Brimstone for two Hours more. 3. And then make frequent Explosions of Gun-Powder, and keep the Room full of the Fumes of it for an Hour. 4. Make a brisk Evaporation of the Cortex Eleutheriæ and Vinegar for an Hour more. 5. Then wash the Ceiling, Walls, and Floor, and every Part of the Room (and every Thing in the Room

Room that will not take Damage by it) with hot Vinegar. 6. Keep a constant brisk Fire all the next Day in the Room, with the Windows and Door of it open. And possibly this Course may render the Room wholesome again, and fit for Use; but the Method first proposed is the surest.

§. 766. IT will be necessary for Purifying the Bed, to have it put into the Current of the Air and Wind before the Fire; frequently to move and turn it, and to expose it as much as possible to the purifying Fumes.

§. 767. BLANKETS, Quilts, Rugs, and Apparel, may be spread over Poles conveniently placed to receive the medicating

Fumes, and the flowing Air.

Things to be avoided, especially in the Time of a Pestilence, and other contagious Distempers.

. §. 768. I have in the preceding Papers confidered the proper Means of Safety from the Infection of the Plague, and other contagious Distempers, and Remedies against the Effects of the pestilential Miasmata; and I apprehend it will likewise be of Service to Mankind to take Notice of those Things which will render the Bodies of People more fusceptive of Infection, and less able to recover from the Sickness, when infected, than otherwise they would be. And the following Particulars deserve Consideration, and should be carefully avoided; especially in the Time of a Pestilence, or other Contagion.

§. 769. I. GREAT FATIGUES; or, that Degree of Exercise, and Labour, which would tire the Body. Violent Exercise increases the vital Heat, and sometimes produces Fevers, even in a healthy Seafon: But, tho' it be not violent, yet, if it be continued fo long as to make Persons very weary, it diminishes the vital Strength, renders the muscular Fibres, and the animal Vessels too lax, consumes the Spirits, renders the Admission of infecting Particles into the Body more easy, if they be diffused in the ambient Air, and therefore renders the tired Person not only more liable to the Sickness, but more unable to sustain it.

§. 770. Dr. DIERMERBROEK relates, (when the Plague was at Nimeguen) that they observed many, presently after hard Labour, Labour, were seized with it; which Event at Length became so obvious, that many of the common People did forbear the more laborious Works; and that even the Country-Men, for that Reason, in the Time of Hay-Making, would not cut their Grass.*

§. 771. C. Celsus advises, vitare Fatigationem, to avoid Fatigues in the Time of a Pestilence, p. 40. And the Importance of so Doing appears from what has been observed (§. 769.)

§. 772. II. ALL TERROR of Mind should be avoided as much as possible, because it renders the vital Functions irregular, sinks the Pulse, abates the animal Secretions, and disposes the Body to receive the Distemper.

§. 773. It was the Observation of Dr. Diermerbroek, that no Passion of the Mind contributed more to the Spreading this Dis-

^{*} Durante hac Peste sæpius observavimus, statim post graves exercitationes, & magnas desatigationes, multos peste correptos suisse; cujus rei eventus tandem adeo innotuit omnibus, ut multi etiam vulgares à gravioribus laboribus abstinerent; quin & rustici, tempore messis sæni, suum sænum metere & colligere nollent, edocti tristibus aliorum exemplis, qui graviter laborantes statim post peste corrupti suerant.

Vid. Dr. Diermerbroek de Peste, p. 149.

temper; and that this alone occasioned many to fall fick of it.*

§. 774. And the best Remedy is for People to seek Peace with God, thro' Faith in the crucified, and risen Saviour, and to make it sure that they are of that Sort of People whom God has made the Objects of his Love, and special Care; and so to live, as to be always found in the Way of their Duty.

§. 775. III. Excessive Anger, Joy, and Grief, must in a special Manner be guarded against. Because both the exalting, and depressing Passions, when violent, often bring on Diseases; and, in the Time of a Pestilence, the Recovery of Persons is more hopeless, if they are insected when the Mind is under great Perturbations.

§. 776. THE most effectual Course to keep the Mind calm and composed, is for the Christian to watch, and pray.

§. 777. IV. Purging Medicines should not be taken in the Time of a Pestilence, especially those which are strong; because

^{*} Nullus est animi motus qui pestilentis dominii limites longius & citius extendit, quam terror. . . . Hunc solum durante maligna hac constitutione pestem multis advocasse novimus. Diermerbroek de Peste, p. 149.

I wit

fuch Medicines, if they take Effect, and produce many Stools, will, in a Proportion to the Quantity of Humours evacuated by the intestinal Tube, inspissate the Blood, and other animal Fluids, diminish the vital Strength and Spirits, and make a Revulsion from the external Superficies of the Body ad intra; and, consequently, a Sort of Attraction thro' the Vasa inhalantia to the Blood, of such Particles dissufed in the ambient Air as are minute enough to pass thro' the Pores of the Body inwards.

§. 778. Whence (§. 777) it appears, that purging Medicines are very improper in the Time of a Pestilence, because they render the Bodies of People more susceptive of Infection, when they meet with it, and more unable to bear the Shock of the Distemper, if they fall sick of it.

§. 779. C. Celsus* (speaking of a pestilential Season) says, that the Belly is not to moved, but that, if the Stools were too many, they ought to be restrained.

C. Celsus, p. 40.

^{*} In pestilenti Constitutione] neque movenda Alvus, atque etiam, si per se mota est, comprimenda est.

§. 780. Dr. DIERMERBROEK* affures us, that in the Plague they used no purging Medicines: Reafon and Experience convinced them, that fuch Evacuations disposed the Body to the Sickness, because they observed feveral to be feized with it upon taking purgative Remedies.

§. 781. THE Consideration of these Things (§. 778, &c.) should make People forbear taking purgative Medicines in a contagious Seafon.

§. 782. V. BLEEDING, or the Taking away Blood, should not be used in the Time of a Plague by Persons who have not a fanguine Plethora, that is, a Quantity of Blood exceeding the Standard of Health.

§. 783. HERE I may fitly observe a few Things, viz. 1. That HEALTH depends much on a certain Quantity of the animal Fluids, which is the Mean between Excess, and Deficiency; and on a certain Quality,

^{*} Nos in hac Peste nullis cathar&icis usi sumus, ipsa ratione, experientiæ copulata, fatis docente, per fortiora purgantia humoribus violentius agitatis, spiritibusque exhaustis atque etiam confusis, corpora ad pestem præparari ac difponi ; quemadmodum hac tempestate catharcticorum assumptione varios hunc crudelissimum tyrannum citissimè ad penetralia fua advocasse vidimus. Diermerbroek de Peste, p. 153.

which is a Mean between the acrimonious, and the oleaginous. And that Difeases generally arise either from a Deficiency, or Excess in the Quantity of the Blood, or else from a morbid, or wrong Quality.

§. 784. 2. THAT, when the Quantity of Blood is excessive, it would be an absurd Thing to direct alterative Medicines; whereas Bleeding the Patient is the proper Remedy for curing the Diseases produced by a Plethora.

§ 785. 3. THAT it is equally abfurd to advise Bleeding, when the Quantity of Blood is not too great, and the only Thing wanted is the Alteration of some morbid Quality gotten into it.

§. 786. And it must be noted, that Tak? ing away Blood from Persons, who have not too much, does, in Proportion to the Quantity taken away, render the Quantity of the Blood, and the vital Strength, the Force of the Heart, and Arteries, and the Secretions less than they ought to be: And likewife makes a Revulsion from the Superficies of the Body, and disposes it to admit into the Blood, thro' the Vafa inhalantia, any infectious Particles that may happen to be in the ambient Air.

§. 787. And therefore taking away Blood from Persons, who have not too much, must be a pernicious Practice, especially in the Time of a Pestilence. And so it has proved in Experience.

§. 788. Dr. DIERMERBROEK * always observed, that Bleeding was very hurtful, even to the most healthy, and sanguine Constitutions; and that very many, even plethorick Persons, who would be blooded for Preservation Sake, presently thereupon sell sick of the Plague.

§. 789. Dr. Hodges † thought, that in a pestilential Season Evacuations, especially universal Ones, (that is, such as Bleeding, and Purging) ought very cautiously to be advised; and that, if a true sanguine Plethora required the Opening a Vein, the Orifice should be small, and the Blood taken

* Semper observavimus venæ sectiones, etiam in optimè sanis & plethoricis institutas, suisse damnosissimas: idque abunde docuerunt tristia plurimorum, etiam plethoricorum, exempla, qui cum præservationis gratia venam pertundi curaffent, statim post peste correpti sunt.

Diermerbroek de Peste, p. 151.

† Instante autem constitutione pestilentiali, evacuationes præcipuè universales cautè instituantur. Si plethora wera apertionem venæ suadeat, sanguis detrahatur, sed ex orificio angustiori, copià minori, vicibusque partitis essluat.

Hodges Λοιμολογία, p. 226, 227.

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away in a small Quantity, and not all at once, but at different Times.

§. 790. HAVING thus confidered the principal Things to be avoided in the Time of a *Plague*, I shall leave them to your. Confideration.

I am, SIR,

Your very humble Servant,

THEOPHILUS LOBB.

LETTERV.

LETTER V.

Relating to the PLAGUE.

Containing an Account of Events predicted in the holy Scriptures, and therefore to be expected in the Time of a raging Pestilence, and other destroying Judgments inflicted for Sin: Particularly, 1. That God will take a special Care for the Comfort, and Protection of the Righteous.

2. That horrible Fears shall fill the Minds of many wicked Persons.

3. That a Reformation among Sinners shall be accomplished.

4. That some of the Wicked will remain impenitent, become hardened, and blaspheme the Name of God. And, 5. That Multitudes of the Wicked will be destroyed.

To * * * * *

SIR,

§. 791. HE Time, when the Pestilence, or the Sword, or the Famine, is destroying, and laying Waste any City, or Country, may be called Days of the X 2 LORD's LORD's Visitation of it for Sin. The Prophet Hosea, speaking of God's terrible Judgments upon Israel for their Iniquities, fays, The Days of Visitation are come, the Days of Recompense are come; Israel shall know it.* It is also called, The Year of their Visitation.+ I will bring Evil upon them, even the Year of their Vifitation, faith the LORD. ‡

§, 792. And what Events are we to expect in the tremendous Time, when the righteous Judge of all Men shall visit a Nation, or City for Sin? Are any of them revealed in the holy Scriptures? And what . Influence should the Expectation of them have upon us?

§. 793. THESE are folemn Queries, and deserve the most serious Consideration.

§. 794. MEN are naturally defirous of knowing Futurities, and often are too curiously inquisitive about them; but, certainly, it is a Duty to get the Knowledge of those which God has predicted in his Word; because he has revealed them, that they may be foreknown, confidered, and

^{*} Hos. ix. 7. + Jer. ii. 23: ‡ Jer. xxiii. 12.

religiously regarded; and that People may be prepared for them.

§. 795. I propose therefore to take Notice of some of them; that People, who shall see the fearful Time, may observe the wonderful Harmony that there is between the Word, and Providence of the righteous God, and take Notice how the Almighty magnifies his Word, and how glorioufly and awfully he makes himself known by fulfilling the Declarations of his Will, published by his Servants, the Prophets; and may be convinced that the facred Writings were divinely inspired; and that they, thro' divine Grace, may be brought to know, and fear, and love God, and to believe in the Lord Jesus, to the Saving of their Souls.

§. 796. THE divine Providence, indeed, is always fulfilling the Scripture; but in a Day, or Year of publick Calamity, the Hand of the Lord is more visible.

§. 797. I am the LORD: (said the glorious Creator, and supreme Governor of the World) I will speak, and the Word that I shall speak shall come to pass.* The

^{*} Ezek. xii. 25.

Word of the Lord will affuredly be fulfilled, whether it denounces Judgments, or promises Blessings. So shall my Word be (says God) that goeth forth out of my Mouth; it shall not return unto me void; but it shall accomplish that which I please, and it shall prosper in the Thing whereto I sent it.* Heaven and Earth shall pass away; but my Words shall not pass away; said the holy Jesus.+

§. 798. I am God, and there is none else; I am God, and there is none like me.---My Counselshall stand, and I will do all my Plea-sure,‡ saith the LORD. The Counsel of the LORD standeth for ever, the Thoughts of his Heart to all Generations, it is said in Psalm xxxiii. II.

§. 799. Hence (§. 796, &c.) it is most certain, that those Events which the almighty God (always true to his Word) has foretold shall come to pass, in the Time of his Executing awful Judgments on ungodly Nations and Cities, will come to pass, and must assured be expected: And, by a due Reading of the holy Scriptures, we may know many of them; we may know much

^{*} Isa. ly. 11. + Mark xiii. 31. 1 Isa. xlvi. 9, 10.

of what is to be feared, and of what may be hoped; particularly,

- §. 800. I. THAT the LORD, infinitely gracious and faithful, has made known in his Word, that he will take special Care of the Righteous, of his own People, who walk closely and humbly with him in the Way of Faith and Holiness; that he will take Care for their Comfort and Protection, in the Time that he executes his Judgments for Sin.
- §. 801. It is very remarkable, that (when the Prophet Isaiah was employed to foretell grievous Calamities, then coming on Judab, and Jerusalem) a most comfortable Message and Affurance was first to be delivered to the pious Part of that People, and then Woe was to be proclaimed to the Wicked among them.
- §. 802. SAY ye to the Righteous, that it Shall be well with him; for they shall eat the Fruit of their Doings. Woe unto the Wicked, it shall be ill with him; for the Reward of his Hands shall be given him.*
- §. 803. THE People may be divided into two general Sorts, viz. the RIGHTEOUS,

and the Wicked. And the Wicked may be again distributed into two general Classes, viz. those that make some Profession of Religion, and careless Sinners, who make none.

§. 804. THE Sort now under my Confideration are the Righteous; by which Character I mean, those who have sincerely believed in Christ crucified, who have received him in all his Offices, as Prophet. Priest, and King; who have repented of their Sins, and devoted themselves to God, by a perpetual Covenant with him; and who fear, and love, and ferve him in Sincerity; whose Desire and Endeavour is to walk in all the Commandments and Ordinances of the Lord blameless; whose habitual Care is to have always a Conscience void of Offence, both towards God, and towards all Men; and who grieve not only for their own Trangressions, but also for the Sins of others.

. §. 805. These of every Denomination I esteem righteous, and of these God will take a special Care in the Day when he visits the Inhabitants of the Earth for their Iniquities.

§. 806. THEY (§.804) are that Sort of People whom God will spare and protect, and comfort in the Days of his Vengeance. This appears very evident from divers Declarations, and Promises of God, recorded in his Word.

§. 807. In that remarkable Vision (related in Ezek. ix.) whereby God shewed to that Prophet the dreadful Slaughter he would make of the Inhabitants of the City of Jerusalem for their Sins, he made it known that he had determined to preferve fome from that Destruction, which is represented thus; viz. The Glory of the God of Israel was gone up from the Cherub whereupon it was, to the Threshold of the House, and he called to the Man clothed with Linnen, which had the Writers Inkhorn by his Side. And the LORD faid unto him, Go through the Midst of the City, thro' the Midst of ferusalem, and set a Mark upon the Foreheads of the Men that figh, and that cry for all the Abominations that be done in the Midst thereof. And to the others he said in mine Hearing, Go ye after him, through the City, and smite: Let not your Eye spare, neither have ye Pity. Slay utterly old and young, both Maids and little Children, and Women; but

come not near any Man upon whom is the Mark. V. 3, to V. 6.

- §. 808. Hence (§. 807) it is manifest, that God had marked out for Sasety and Protection those Inhabitants of Jerusalem, who sincerely loved, and faithfully served him, and were grieved by the Sins of others wherewith the holy God was daily dishonoured, and provoked. And there are the same Reasons to believe that, in every Time of God's Visitation for Sin, this Sort of People are marked out as Objects of the divine Protection.
- §. 809. St. John said, I saw another Angel ascending from the East, having the Seal of the living God: And he cried with a loud Voice to the four Angels to whom it was given to hurt the Earth, and the Sea. Saying, Hurt not the Earth, nor the Sea, nor the Trees, 'till we have sealed the Servants of our God in their Foreheads.*
- §. 810. And it was commanded to the Instruments of God's Wrath, that they should not hurt,---but only those Men which have not the Seal of God in their Foreheads.

^{*} Rev. vii. 2, 3. + Ibid. chap. ix. v. 4.

§. 811. WHENCE (§. 809, &c.) it is manifest, that the faithful Servants of God, not only in the Times of the old Testament, not only among the Jews, but in the succeeding Ages of the World, and in other Nations also, are marked for Protection in Times wherein He taketh Vengeance on his Enemies.

§. 812. It is faid to fuch as dwell in the Secret Place of the most High, that is, to them that love and ferve God, and are the special Objects of his Love, that they shall abide under the Shadow of the Almighty;* that is, under the Protection of his Providence .-- To fuch as fay of the LORD, He is my Refuge, and my Fortress: My God, in bim will I trust; that is, to them that have chosen the Lord to be their God, and Portion, and to ferve him, and feek to him as their Refuge, and trust in him for Safety. Unto fuch it is faid, Surely be shall deliver thee from the Snare of the Fowler, and from the noisome PESTILENCE. He shall cover thee with his Feathers, and under his Wings shalt thou trust: His Truth (or Faithfulness in performing his Promises) Shall be thy Shield,

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and Buckler. Thou shalt not be afraid for the Terror by Night; nor for the Arrow, that flieth by Day; nor for the PESTILENCE, that walketh in Darkness; nor for the Destruction, that wasteth at Noon-Day. A Thousand Shall fall at thy Side, and ten Thousand at thy Right Hand; but it shall not come nigh thee. Only with thine Eyes Shalt thou behold, and fee the Reward of the Wicked. Because thou bast made the LORD, which is my Refuge. even the most High, thy Habitation: There Shall no Evil befall thee, neither shall any PLAGUE come nigh thy Dwelling.*

§. 813. It is faid concerning the Righteous: In FAMINE be (that is, God) shall redeem thee from Death; and in WAR from the Power of the Sword. Thou shalt be bid from the Scourge of the Tongue: Neither shalt thou be afraid of Destruction, when it cometh. At Destruction and Famine thou Shalt laugh.+

§. 814. In Pfal. xxxiii. 18, 19. it is written, Behold, the Eye of the LORD is upon them that fear him; upon them that hope in his Mercy; to deliver their Soul from Death, and to keep them alive in Famine.

^{*} Psal. xci. 4, &c. + Job v. 20, 21, 22, §. 815.

§. 815. In Pfal. xxxvii. it is declared, that the LORD knoweth the Days of the Upright; and their Inheritance shall be for ever. They shall not be ashamed in the evil Time; and in the Days of Famine they shall be satisfied. But the Wicked shall perish. (v. 18, 19, 20.) Wait on the LORD, and keep his Way, and he shall exalt thee to inherit the Land: When the Wicked are cut off, thou shalt see it. (v. 34.)

§. 816. It is very manifest from these Declarations of God (§. 807, to 815) that, when he shall send the Pestilence, or Famine, or the Sword into any Nation, or City, for the Punishment of Sin, he will shew a gracious Regard to the Righteous; that is, to Persons who sincerely love and ferve him, walking carefully before him in the Way of Faith, and of Obedience to all his Commandments; and that they are a Sort of People whom he has marked as Objects of his special Care and Protection; and not only that they shall be kept safe in the Midst of surrounding Dangers, but also be preserved very much from distressing Fears, and enjoy a fweet Serenity, and Tranquility of Mind, when all Things around them are in Confusion, and when the Wicked are filled with Terror and Amazement.

§. 817. It is indeed written in Ezek. xxi. 3. thus: Say to the Land of Israel, Thus saith the LORD, Behold, I am against thee, (O Land) and will draw forth my Sword out of his Sheath, and will cut off the Righteous, and the Wicked.

§. 818. Hence (§. 817) fome, perhaps, may imagine, that even the most pious Perfons have no Security from the Stroke of divine Judgments, and that the Sword and the Pestilence will destroy promiscuously Good and Bad.

§. 819. It might be so, if there was not an almighty Providence, which controuls, and guides those Arrows of the divine Vengeance. But that the Text cited gives no Countenance to such an Apprehension will appear, if the Context be consulted: Because it plainly shews, that by the Expression, the Righteous, is only meant Persons who made a Profession of Religion, and thought themselves righteous, and, it may be, were esteemed such by others; but, in Reality, were not righteous; tho' righteous in Profession, yet not in a suitable Practice.

- §. 820. This Opinion is evident from what is faid in v. 24. where the Reason is affigned for the Severity of the Slaughter threatened against the Land of Israel. Therefore thus saith the LORD GOD, Because ye have made your Iniquity to be remembred, in that your Transgressions are discovered; so that in all your Doings (which includes their religious Services) your Sins do appear. Because, I say, that ye are come to Remembrance, ye shall be taken with the Hand.
- §. 821. And in Chapter xxii. (which is the next following) there is a particular Recital of the Sins which had provoked God to fend the Judgment he had threatened; which shews that the Expression, the Righteous, was not intended to signify those that faithfully served God, and were careful to abstain from all Iniquity, and did not allow themselves in the Practice of any known Sin.
- §. 822. In this Chapter, Verse 26, God charges the Priests with their Iniquities, and Provocations, saying, Her Priests have violated my Law, and have profaned mine holy Things: They have put no Difference between

between the Holy and Profane; neither have they shewed Difference between the Unclean and the Clean; and have hid their Eyes from my Sabbaths, and I am profaned among them.

§. 823. Is it reasonable then to think that God, who was provoked by the Priests, because they put no Difference between the Holy and Profane, and because they did not shew Difference between the Unclean and the Clean, will himself put no Difference between the truly Righteous, who love and serve him, and the Wicked, who hate him, and continually rebel against his Authority?

§. 824. When God shall be visiting a Nation, or City, for the Iniquities of the Inhabitants, will he make no Difference between his beloved, and loving People, and his hated, and hating Enemies, in the Execution of his Judgments? Will he shew no tender Regard to his faithful Servants? Yes, assured to his faithful Servants? Yes, assured to his faithful Servants? Yes, assured to his faithful Servants? Yes, affuredly. They shall be mine, saith the LORD of Hosts, in that Day when I make up my Jewels; and I will spare them as a Man spareth his own Son, that serveth him. Then shall ye return, and discern between the Righteous

Righteous and the Wicked; between him that ferveth God, and him that ferveth him not.*

For, behold, the Day cometh that shall burn as an Oven, and all the Proud, yea, and all that do wickedly shall be Stubble, and the Day that cometh shall burn them up, saith the LORD of Hosts, that it shall leave them neither Root nor Branch. But unto you that fear my Name, shall the Sun of Righteousness arise with Healing in his Wings; and ye shall go forth, and grow up as Calves of the Stall. And ye shall tread down the Wicked; for they shall be Ashes under the Soles of your Feet, in the Day that I shall do this, saith the LORD of Hosts.+

§. 825. This shews that God, in the Day wherein he brings destroying Judgments upon the Wicked, will spare his own faithful People; and that the Dispensations of his Providence towards them shall be so gracious, and so remarkably different from his Dealings with ungodly Persons, that very easily it shall be discerned between the Righteous and the Wicked, between him that serveth God, and him that serveth him not.

^{*} Mal. iii. 17, 18. + Mal. iv. 1, 2, 3.

§. 826. True it is, that manifold grievous Calamities, and terrible Sufferings may fometimes befall the Righteous. And such Dispensations of divine Providence may be called Judgments, according to the Words of the Apostle Peter, when he says, For the Time is come that Judgment must begin at the House of God.* But, as to the Saints, it is a Judgment for Trial; a Trial of the Sincerity of their Love to their God and Saviour; Not for the Punishment of their Sins, which they have repented of, and forsaken; and for a compleat Salvation from which, they have, by a Faith unseigned, accepted of Christ as offered to them.

§. 827. And as to the Text cited, (§. 826) that Expression, the House of God, doubtless signifies the Church of God here on Earth, in which many of its Members, tho' they make a Profession of Religion, yet do not live according to the Gospel; and therefore the Meaning of the Words may be this, that God will, in the Day of his Visitation for Sin, deal first with his professing People, who allow themselves to live contrary to the holy Engagements they are under.

^{* 1} Pet. iv. 17.

§. 828. CHRIST, the Head of the Church, will throughly purge his Floor.* You only have I known of all the Families of the Earth, said God to the Children of Israel: Therefore will I punish you for all your Iniquities.+

§. 829. And indeed they who are Members of the Church of Christ, who belong to the House of God, and are under the Obligation of his Covenant, and have made a Profession of Religion, and yet allow themselves in any ungodly Practices, have Reason to expect that God will deal with them in a terrible Manner, when he cometh forth in the Way of his Providence to punish the Wickedness of Men.

§. 830. IT is granted, that many Saints, Christians eminent for Faith and Holiness, have been flain by the Sword; the Sword, not of the Lord, but of Anti-Christ, and his Agents. Those excellent Ones of the Earth have fuffered cruelly by the Hands of the Enemies of Christ, while God at the fame Time smiled on them, and filled their Souls with Joy unspeakable, and full of Glory. They were tortured, not accepting

^{*} Matt. iii. 12. + Amos iii. 1, 2.

Deliverance; that they might obtain a better Refurrection. And others had Trial of cruel Mockings, and Scourgings; yea, moreover of Bonds, and Imprisonment. They were stoned, they were sawn asunder, were tempted, were slain with the Sword: They wandered about in Sheep-Skins, and Goat-Skins, being destitute, afflicted, tormented. (Of whom the World was not worthy) they wandered in Deserts, and in Mountains, and in Dens, and Caves of the Earth.*

§. 831. But Times of Persecution, when God, for holy Ends, fuffered his Adversaries to torment his Saints, and put them to Death, and enabled them with Courage, and great Joy, to seal their holy Profession and Testimony with their Blood, are not the Subject of our present Consideration: No, but Times when God shall be persecuting his Enemies, who will not have him to reign over them; Times, when the just God shall be dealing with People that love to wander from the Way of his Commandments: Times, when God will remember their Iniquity, and visit their Sins;—and therefore says, I will consume them by

^{*} Heb. xi, 35, to 38.

the Sword, and by the Famine, and by the Pestilence.* And in fuch Times God will shew remarkable Favour to his faithful Servants, while he is executing his Vengeance on the Wicked.

§. 832. However, it is granted, that God has, and may remove forme of his Saints out of the World by the Pestilence, when it comes into a City: But, in these Cases, the Pestilence does not befall them as a Punishment, as a Token of the divine Anger; but only as a Means to open unto them the Passage into a glorious Eternity; to procure for their Souls an happy Outlet from their earthly House of this Tabernacle, into a Building of God, an House not made with Hands, eternal in the Heavens; † and to be more nearly, and intimately with Christ, which is far better for them than a longer Abode in this World.

§. 833. Serious Christians, therefore, who walk uprightly and closely with God, may use the Words of a pious *Poet*, ‡ and fay,

But if the Fire, or Plague, or Sword, Receive Commission from the Lord

^{*} Jer. xiv. 10, 12. + 2 Cor. v. i. ‡ Vid. Dr. WATTS's Imit. of the Psalms of David, Ps. 91.

To strike his Saints among the rest, Their very Pains, and Deaths are blest.

The Sword, or Pestilence, or Fire, Shall but fulfill their best Desire, From Sins, and Sorrows set them free, And bring thy Children Lord to Thee.

§. 834. Blessed then is the Condition of the Righteous, even in Times of the greatest publick Calamities, whether they shall live or die. Happy is that People that is in such a Case: Yea, happy is that People, whose God is the LORD.*

§, 835. And the forme particular Saints may die by the Pestilence, or Sword, yet it remains certain, from the holy Scriptures, that the Godly of every Denomination, who faithfully serve the Lord according to the Rules of his Word, are that Sort of People whom God will preserve in a pestilential Season, and in Times of other desolating Judgments inslicted on the Inhabitants of a City, or Country, for their Iniquities.

§. 836. It is evident therefore, from what has been observed, that pious Persons have Reason to lay aside all uneasy Fears.

^{*} Pfalm exliv. 15.

Whatever Calamities and Distresses may befall an ungodly Generation, the Almighty will take a special Care of them.

- §. 837. Godliness certainly has the Promise of the Life that now is,* as well as of that which is to come.
- §. 838. Come, my People (says our good God to the Righteous) enter thou into thy Chambers, and shut thy Doors about thee: Hide thyself, as it were, for a little Moment, until the Indignation be overpast. For behold, the LORD cometh out of his Place to punish the Inhabitants of the Earth for their Iniquity. These are comfortable Words, and Matter of great Consolation to serious Christians.
- §. 839. II. That FEARS shall fill the Minds of wicked Persons in the Day of the LORD's Visitation for Sin, is another Event foretold in the holy Scriptures.

FEAR is a tormenting Passion; and, according to the Degree of it, so will be the Distress and Misery of the Soul.

§. 840. Guilty, stubborn Sinners, may indeed, thro' the Course of many Years, speak Peace to themselves, and imagine

^{* 1} Tim. iv. 8. + Ifa. xxvi. 20, 21.

they enjoy a Tranquillity in their Minds, tho' in Reality it is no other than a Stupidity of Soul, from a Regardlesness and Inadvertency to the Guilt, which they are daily contracting, and to the Terrors of the divine Wrath, to which they are continually exposing themselves: But they are not like to be always easy.

§. 841. The great God, provoked by their Sins, can awaken their Consciences, and set before their Eyes the Crimes they have committed, and display to their Apprehensions the heinous Aggravations of their Sins, the Dreadfulness of his Indignation, and the inexpressible Miseries in this World, and in the next, to which they have rendered themselves obnoxious.

§. 842. AND when God shall do this, then Fear will fill their Hearts; then Fear will be on every Side: They were troubled, and basted away. Fear took Hold upon them there, and Pains as of a Woman in Travail.* Then may they use the Words of the Psalmist, and say, My Heart is sore pained within me; and the Terrors of Death are fallen upon me. Fearfulness and Trem-

^{*} Pfal. xlviii. 5, 6,

bling are come upon me, and Horror hath overwhelmed me.*

§. 843. The Time when the righteous God inflicts his destroying Judgments for Sin is very terrible. The Sinners in Zion are afraid, (says the Prophet) Fearfulness bath surprized the Hypocrites: Who among us shall dwell with the devouring Fire? Who amongst us shall dwell with evertasting Burnings? †

§. 844. Tho' Perfons are Members of God's Church here, and make a Profession of Religion, and would be thought righteous, yet, if they live wickedly, dreadful Fears may surprize them, when the Almighty shooteth forth his Arrows against the Workers of Iniquity: Fears, not only of the Stroke of those Judgments which surround them, but Fears of those everlasting Burnings into which an accursed Death will carry the Unbelieving, the Impenitent, and Disobedient.

§. 845. Those are awful Words of the most high God in Isa. lxvi. 4. where he says, I also will choose their Delusions, and will bring their Fears upon them; because

^{*} Psal, lv. 4, 5. + Isa. xxxiii, 14.

when I called, none did answer; when I spake, they did not bear : But they did Evil before mine Eyes, and chose that in which I delighted not.

- §. 846. And these Words (§. 845) deferve the Notice and Confideration of all those who have hitherto been regardless of the Voice of God, speaking by his Word, and by his Ministers, and by his Providence; by his Mercies, and by leffer Judgments.
- §. 847. THEREFORE (fays God to the Wicked) will I number you to the SWORD, and ye shall all bow down to the Slaughter; because when I called, ye did not answer; when I spake, ye did not bear; but did Evil before mine Eyes, and did choose that wherein I delighted not. (Ifa. lxv. 12.) Because I have called (fays God to stubborn Sinners) and ye refused, I have stretched out my Hand, and no Man regarded, but ye have set at nought all my Counsel, and would none of my Reproof. I also will laugh at your Calamity, I will mock when your FEAR cometh. When your FEAR cometh as Defolation, and your Destruction cometh as a Whirlwind; when Distress and Anguish cometh upon you; then shall they call upon me, but I will not answer;

answer; they shall seek me early, but they shall not find me: For that they hated Knowledge, and did not choose the Fear of the LORD. They would none of my Counsel; they despised all my Reproof. Therefore shall they eat of the Fruit of their own Way, and be filled with their own Devices. Prov. i. 24, to v. 31.

§. 848. These Words (§. 847) are full of Terror for those who despise the Admonitions, and refuse to obey the Commands, and follow the Counfels of the holy God; and, except they repent, and become obedient to his Voice, they will certainly find, fooner, or later, the Threatnings cited executed upon them.

§. 849. THAT was a dreadful Meffage to PASHUR, the Son of Immer the Priest, who was also chief Governor in the House of the LORD, recorded Jer. xx. 4. Thus faith the LORD, Behold I will make thee a TERROR to thyself, and to all thy Friends. And the just God has made many daring Sinners to feel those Horrors in their own Consciences, which have made them Terrors, not only to themselves, but to all about them,

§. 850. What has been observed, I apprehend, plainly shews, that horrible Fears in the Minds of many Sinners, now careless about the pleasing God, or escaping his Wrath, are an EVENT, which may reasonably be expected in the Time of a Pestilence, and other destroying Judgments.

§. 851. This Event was very remarkable in the Year 1665, when the Plague raged in this City, as appears from the Account given us in the Journal of that Year.

6.852. THE Writer of it says, "Tho' " there might be some Stupidity, and Dul-" ness of the Mind, and there was so a " great deal; yet there was a great deal of " just Alarm sounded into the very inmost " Soul, if I may so say, of others: Many " Consciences were awakened; many hard " Hearts melted into Tears; many a peni-" tent Confession was made of Crimes long " concealed: It would wound the Soul of " any Christian to have heard the dying " Groans of many a despairing Creature, and none durst come near to comfort "them: Many a Robbery, many a Mur-" der was then confessed aloud, and no " Body furviving to record the Accounts

of it. People might be heard even into " the Streets as we pass'd along, calling " upon God for Mercy thro' Jesus Christ, " and faying, I have been a Thief, I have " been an Adulterer, I have been a Mur-" derer, and the like; and none durst stop " to make the least Inquiry into such " Things, or to administer Comfort to the " poor Creatures, that in Anguish both of " Soul and Body thus cried out. p. 41. §. 853. AND, in p. 121, he fays, "It " was indeed a lamentable Thing to hear " the miserable Lamentations of poor dying " Creatures, calling out for MINISTERS to " comfort them, and pray with them; to " counsel them, and to direct them; call-" ing out to God for Pardon and Mercy, " and confessing aloud their past Sins. It " would make the stoutest Heart bleed to " hear how many Warnings were then given " by dying Penitents to others, not to put " off and delay their Repentance to the " Day of Distress: That such a Time of " Calamity as this, was no Time for Re-" pentance, was no Time to call upon "God. I wish I could repeat the very " Sound of those Groans, and of those " Exclamations, that I heard from fome

" poor

" poor dying Creatures, when in the Height

" of their Agonies and Distress; and that

" I could make him that reads this hear,

" as I imagine I now hear them, for the

" Sound feems still to ring in my Ears. If

" I could but tell this Part in fuch moving

" Accents as should alarm the very Soul of

" the Reader, I should rejoice that I re-

" corded those Things, however short and

" imperfect." p. 122.

§. 854. Thus terrible have been the Diftresses, the Fears and Agonies of the Souls of Sinners in the Time of a *Pestilence*; and when God shall again bring on any City such an awful Visitation, the same Event may justly be expected.

§. 855. And happy will it be for those Persons who shall consider these Things, and lay them to Heart, and in Time seek and obtain Peace and Reconciliation with their offended God, by believing in the Lord Jesus Christ, and repenting of their Sins.

Reformation among Sinners (as a happy Fruit of the Judgments of God inflicted for Sin) is another EVENT foretold in the holy Scriptures; and which therefore may reafonably be expected in a Time of publick Calamities.

Calamities, and what we may pray for with

Hope.

§. 857. We have Ground to hope, that the God of all Grace will, by his holy Spirit, bring many of the Wicked to take Notice of the awful Dispensations of his Providence, as so many Manisestations of his Abhorrence of Sin, and of his Indignation against stubborn Transgressors; to resect on their past ungodly Lives with Sorrow, and Shame, and to consider the Sinfulness, and Misery of their State, and that he will give them Repentance unto Life, and Faith in the Lord Jesus.

§. 858. In Hosea v. 15. the Lord fays, I will go, and return to my Place, till they acknowledge their Offence, and seek my Face: In their Affliction they will seek me early. So did the Children of Israel. When he slew them, then they sought him; and they returned, and enquired early after God. Pfal. lxxviii. 34.

§. 859. In Ezek. xx. 43. God says, There shall ye remember your Ways, and all your Doings, wherein ye have been defiled, and ye shall lothe yourselves in your own Sight, for all your Evils that ye have committed; which Words seem to be an implicit Promise of Repentance

Repentance, and Pardon. In HoseA vi. 1. it is written, Come, and let us return unto the LORD; for he hath torn, and he will heal us; he hath smitten, and he will hind us up. This is a Prophecy of what, thro' the gracious Working of the holy Spirit, will be the Language of many Sinners in a Time of publick Calamity, and Distress.

§. 860. THE LORD faid to the House of Israel (after he had threatened them, faying, I will bring a Sword upon you, v.8. and will execute Judgments among you, v. 9.) And I will give them one Heart, and I will put a new Spirit within you: And I will take away the stony Heart out of their Flesh, and will give them an Heart of Flesh: That they may walk in my Statutes, and keep mine Ordinances, and do them: And they shall be my People, and I will be their God. But as for them whose Heart walketh after the Heart of their detestable Things, and their Abominations, I will recompense their Way upon their own Head, saith the LORD GOD. Ezek. xi. 19, 20, 21.

§. 861. This Prophecy plainly shews, that God will fanctify his awful Judgments unto many, and accomplish an holy Change in their Hearts and Lives, and make them

to become a peculiar People to himself, and that he will be their God: And that, as for those who will persist in their ungodly Courfe, and still cleave to their detestable Things, and continue their Abominations, he will recompense their evil Ways.

§. 862. An happy Reformation among People God has often brought about by Means of his Judgments; and fuch an Event may reasonably again be expected. The Texts of the facred Scriptures cited are a folid Foundation of Hope, that God (if he shall bring on a Day of his awful Visitation) will glorify himself by the Converfion of Sinners, as well as by destroying many of the Wicked.

§. 863. THE very Threatning of Destruction has sometimes been effectual to prevail with the wicked Inhabitants of a City to repent, and humble themselves before the LORD, and to turn from their evil Ways. It was fo in the Case of the Ninevites.* And it would be well, if every City, and Nation, now under the Threatnings of God's Word, and Providence, did follow the Example of the People of Nineveb.

Jonah iii. 10. 10 anske the

§. 864. IV. ANOTHER EVENT, in the Time of God's inflicting his Judgments for Sin, foretold in the holy Scriptures, is, that some of the Wicked will remain impenitent, become bardened, and blaspheme the Name of God, who has Power over all Plagues.

§. 865. They bearkened not unto me, says God, nor inclined their Ear, but hardened their Neck; they did worse than their Fathers. Therefore shalt thou speak all these Words unto them, but they will not hearken to thee: Thou shalt also call unto them, but they will not answer thee.* But thou shalt say unto them, This is a Nation that obeyeth not the Voice of the LORD their God, nor receiveth Correction: Thus saith the LORD of Hosts, the God of Israel, Behold, I will bring upon this City, and upon all her Towns, all the Evil that I have pronounced against it; because they hardened their Necks, that they might not bear my Words.

§. 866. In Rev. xvi. 9, 10, 11, it is prophetically faid, And Men were scorched with great Heat, and blasphemed the Name of God, which hath Power over these Plagues:

And they repented not, to give him Glory.

^{*} Jer. vii. 26, 27, 28. † Jer. xix. 15.

And the fifth Angel poured out his Vial upon the Seat of the Beast; and his Kingdom was full of Darkness, and they gnawed their Tongues for Pain, and blasphemed the God of Heaven, because of their Pains, and their Sores, and repented not of their Deeds. And, in Verse 21, it is said, And there fell upon Men a great Hail out of Heaven, every Stone about the Weight of a Talent; and Men blasphemed God, because of the Plague of the Hail.

§. 867. THEREFORE, that many will remain impenitent, incorrigible, and hardened, in Times when terrible Judgments shall be inflicted; that many will speak blasphemoully of God, on the Account of his Plagues, is an Event foretold, and, confequently, to be expected. But dreadful will be the Condition of fuch desperate and daring Sinners; for, tho' the righteous God may fuffer them a While to escape, yet it will not be long before the divine Vengeance will overtake them, when their Torments will bear a Proportion to the Aggravations of their Crimes, and will be everlafting. Id song of a

§. 868. V. ANOTHER EVENT foretold in the holy Scriptures is, the Destruction

Anie

of Multitudes of the Wicked in the Day of the Lord's Visitation for Sin.

§. 869. It may be faid unto the Wicked, as in Ifa. x. 3. What will ye do in the Day of Visitation, which shall come from far? to whom will ye flee for Help? and where will ye leave your Glory? And who (among you) shall live when God does this? When he does his awful Work of Justice and Judgment.

§. 870. INCORRIGIBLE Sinners are the People against whom the Vengeance of the holy God is denounced: These are the Objects of his Indignation: He is angry with the Wicked every Day. If he turn not, he will whet his Sword; he hath bent bis Bow, and made it ready. He bath also prepared for bim the Instruments of Death; be ordaineth his Arrows against the Persecutors. + Upon the Wicked he shall rain Snares, Fire, and Brimstone, and an borrible Tempest: This shall be the Portion of their Cup. + Cut off thine Hair, O Jerusalem (says the Prophet Jeremiah) and cast it away, and take up a Lamentation on high Places; for the LORD hath rejected, and for saken the

† Pfal. vii. 11, 12, 13. ‡ Ibid. xi. 6.

Generation of his Wrath.* For by Fire, and by his Sword, will the LORD plead with all Flesh; and the Slain of the LORD shall be many, + says the Prophet.

§. 871. MULTITUDES, Multitudes in the Valley of Decision, said Joel (foel iii. 14.) that is, Multitudes would be destroyed in the Days of Vengeance on the Wicked.

§. 872. A Noise shall come, even to the Ends of the Earth; for the LORD hath a Controversy with the Nations: He will plead with all Flesh, he will give them that are wicked to the Sword, faith the LORD.

§. 873. HEAR the Word of the LORD, ye Children of Israel: For the LORD hath a Controversy with the Inhabitants of the Land, because there is no Truth, nor Mercy, nor Knowledge of God in the Land. By Swearing, and Lying, and Killing, and Stealing, and Committing Adultery, they break out, and Blood toucheth Blood. Therefore shall the Land, and every (guilty, and impenitent) One shall languish.

§. 874. THE LORD bath also a Controversy with Judah, and will punish Jacob ac-

^{*} Jer. vii. 29. † Isa. lxvi. 16. † Jer. xxv. 31. | Hos. iv. 1, 2, 3.

cording to his Ways; according to his Doings will be recompense him.*

§. 875. It is evident from the Texts cited (§. 870, &c.) and fuch like Declarations of the righteous God, recorded in the holy Scriptures, that the Wicked are that Sort of People which God has appointed for Suffering by his destroying Judgments; and that, when the Pestilence, or the Famine, or the Sword are sent forth to punish the stubborn Transgressors of the divine Laws, Multitudes will perish thereby.

§. 876. The almighty God, in the Day of his Visiting the Inhabitants of any Country or City for their Iniquities, is in a special, and terrible Manner dealing with those incorrigible Sinners, who have escaped Notice, or Punishment from Men: He then shooteth forth his Arrows against Extortioners, Thieves, and Murderers; against the Proud, the Covetous, and the Profane; against Whoremongers, and Adulterers; against Liars, Blasphemers, Scoffers, Sabbath-Breakers, and against many secret and stubborn Transgressors of his holy Commandments.

§. 877. MULTITUDES of incorrigible Sinners will be destroyed, when, and where, the just and irresistible God shall send his tremendous Judgments.

§. 878. Thus it was in the Times of the Peftilence, and of War, both among the Jews, and among heathen Nations; and fo it always will be, when the great God rifes out of his Place to punish the Inhabitants of the Earth for their Iniquities. But the distracting Fears, the Horrors of Conscience, the Anguish and Agonies of Soul, the Pains of the Body, and the Death brought on incorrigible, impenitent Sinners, in the Day of the LORD's Visitation for Sin, is not the worst of their Case: No, they are only the Beginnings of Sorrow to them, and can never bear a Comparison with those Miseries and Horrors, and Torments, which will feize upon their Souls, as foon as they shall be forced out of their Bodies into the World of Spirits; when they shall find themselves separated for ever from the gracious Presence of God, and Christ, whom they now despise, or at least neglect; and from the holy Angels, and the Spirits of just Men made perfect; and shall be banished for ever! for ever banished, from all Joy, Happiness, Z_4 Comfort,

Comfort, and Peace; and sent down as Prisoners, to be Companions with Devils, and reserved in Chains under Darkness against the Judgment of the great Day; sent into a Place where there is nothing but Weeping, and Wailing, and Gnashing of Teeth! O! that ungodly Sinners would in Time consider these Things! and sly by Faith to the crucified, and risen Jesus! sly to him for Resuge, and so lay Hold on the Hope now set before them, and escape the dreadful Wrath that is coming on the Children of Disobedience!

§. 879. THERE are several SORTS of the Wicked particularly marked in the Word of God for the Suffering his Vengeance, in the Time of his Visiting Nations or Cities for their Iniquities; which they who seriously and diligently read the holy Scriptures may take Notice of.

§. 880. Many individual Persons among the Wicked God will spare, and suffer them in this World to escape his righteous Judgments: Yet, not one of them (while they remain unbelieving, impenitent, and disobedient) has any Ground to hope for an Escape: They have not one Word of the divine Promises to comfort their Hearts in

the Day of Terrors and Confusion, when the sharp Arrows of the Almighty, when the invisible Instruments of Death shall fly thick, and destroy many on every Side of them: And no one ungodly Person can tell, whether God will spare or destroy him; therefore all have Reason to be horribly asraid of the Vengeance.

§. 881. THE Wicked, of all Ranks, high and low, rich and poor, in Cities, and out of them, are all exposed to, and defenceless from, the Justice of God. Riches profit not in the Day of Wrath; but Righteousness delivereth from Death, it is said in Prov. xi. 4. RICHES therefore can never fecure their Owners from the Pestilence, or the Sword. The Treasures of the Wicked will rather render them more obnoxious to the Spoilers. They shall cast their Silver in the Streets, and their Gold shall be removed, (fays the Prophet) their Silver and their Gold shall not be able to deliver them in the Day of the Wrath of the LORD: They shall not fatisfy their Souls, neither fill their Bowels; because it is the Stumbling-Block of their Iniquity.* The same Prophet says, They

^{*} Ezek. vii. 19.

Shall make a Spoil of thy Riches, and make a Prey of thy Merchandise, and shall break down thy Walls, and destroy thy pleasant Houses, and they shall lay thy Stones, and thy Timber, and thy Dust in the Midst of the Water.*

§. 882. WHEN those terrible Judgments of the Sword, and the Pestilence, and Famine, are at one Time inflicted on any Nation, there is no Place of Safety for the Wicked, whether they stay in the City, or flee from it. There will be no Refuge, no Shelter from the Storm, no Hiding-Place from Destruction, when the righteous God shall bring on any Land the deplorable State spoken of in Ezek. vii. 15. where the Prophet fays, The Sword is without, and the Pestilence and Famine within: He that is in the Field shall die with the Sword; and he that is in the City, the Famine and Pestilence shall devour him. The Sword without, and Terror within, shall destroy both the young Man, and the Virgin, the Suckling also, with the Man of gray Hairs; it is said in Deut. xxxii. 25.

^{*} Ezek. xxvi. 12.

§. 883. The Confideration of these Things should excite those Persons, whose Consciences testify against them that they are of the Sort justly called the Wicked; it should excite them without Delay to seek Peace and Reconciliation with God thro' Faith in Christ Jesus our Lord.

§. 884. ALAS! Wat will become of the Wicked, if they continue their Rebellion against the Almighty, and will not repent of their evil Doings, and believe on the Son of God? They cannot be admitted to Happiness in the next World. St. Paul says, Know ye not that the Unrighteous shall not inherit the Kingdom of God? Be not deceived; neither Fornicators, nor Idolaters, nor Adulterers, nor Effeminate, nor Abusers of themselves with Mankind, nor Thieves, nor Covetous, nor Drunkards, nor Revilers, nor Extortioners, shall inherit the Kingdom of God.*

§. 885. And what will they do, when God shall pour out the Vials of his Wrath for bringing such Sinners to Death, and after that to Judgment?

^{* 1} Cor. vi. 9, 10.

§. 886. Now the LORD waits, that he may be gracious; now fuch Sinners may be washed, and sanctified, and justified in the Name of our Lord Jesus, and by the Spirit of our God.*

§. 887. God, infinitely merciful, declares himself in the Gospel willing to be reconciled to all Sorts of Sinners; and happy would it be, if every unconverted Person was willing to be reconciled to him. Let bim take Hold of my Strength (fays our gracious LORD) that be may make Peace with me, and he shall make Peace with me. + Come unto me (fays our compaffionate and loving SAVIOUR) all ye that labour, and are heavy laden, and I will give you Rest. Take my Yoke upon you, and learn of me, for I am meek and lowly in Heart: And ye shall find Rest unto your Souls; for my Yoke is easy, and my Burden is light. + And he also said, Him that cometh to me, I will in no wife cast out. Then spake Jesus again unto them, Saying, I. am the Light of the World: He that followeth me shall not walk in Darkness, but shall have the Light of Life. In the last

^{* 1} Cor. vi. 11. + Isa. xxvii. 15. ‡ Matt. xi. 28, 29, 30. | John vi. 37. § John viii, 12.

Day, that great Day of the Feast, JESUS stood, and cried, saying, If any Man thirst, let him come unto me, and drink. He that believeth on me, as the Scripture hath said, out of his Belly shall flow Rivers of living Water. But this spake he of the Spirit, which they that believe on him should receive.* Believe on the LORD JESUS CHRIST, and thou shalt be saved, it is said in Acts xvi. 31.

§. 888. " O bleffed God! pity wretched

" Creatures, dead in Trespasses and Sins,

" who have no Pity for themselves; who

" are under dreadful Loads of Guilt, under

"thy Wrath and Curse, under a fearful

" Sentence of Condemnation; obnoxious to

" all Sorts of Miseries in this Life, and to

" everlasting Destruction in the next; and

" yet are insensible of the Deplorableness

" of their Condition!

§. 889. "O may it please Thee (who

" delightest not in the Death of a Sinner)

" to open their Understandings, to quicken

" them by thy Grace, to convince them

" of their Wretchedness; and to enlighten

" their Minds with the Knowledge of

^{*} John vii. 37, 38, 39.

" Christ, of his Excellencies and Glories,

" of his Power and Willingness to save

" even the chief of Sinners.

§. 890. O my God! is not Faith thy

"Gift? Be thou pleased to bestow it on

" many, who hitherto remain in Unbelief.

" Let this be a Day of thy Power, and do

" Thou make them a willing People! By

" the efficacious Working of thy holy Spi-

" rit renew their Wills, and prevail with

" them to accept of Christ as offered to

"them in the Gospel! Thou canst in a

" Moment scatter the Darkness that is on

" their Minds, and remove their Blind-

" ness, and fill them with divine Light!

"Thou canst in an Instant raise in them

" a just Sense of the sinful Depravity of

" their Natures, and of the Deplorableness

" of their State, and bring them bitterly

" to lament it.

§. 891. "Thou canst make them duly

" fenfible of the Heinousness, and Odious-

" ness of their Sins, and fill their Souls

" with an Abhorrence of them! id avail

§. 892. " And Thou canst in a Mo-

" ment reveal thy Son in them, as Thou

" didst in the Apostle Paul.

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§. 893. "Thou art able, notwithstand-

" ing their habitual Stubbornness in the

" Ways of Sin, and the Contrariety of

" their Natures to every Thing that is

" holy! and notwithstanding the Violence

" of their Love to this World, and its al-

" luring Objects, yet Thou art able to fub-

" due their Wills, and to change the Ob-

" jects of their Affections; and bring them

" to count all Things but Loss, for the Ex-

" cellency of the Knowledge of CHRIST

" JESUS my Lord; and to count them

" but Dung, that they may win Christ, and

" be found in him, not having their own

" Righteousness, which is of the Law, but

" that which is through the Faith of Christ,

" the Righteousness which is of God by

their Natures, and of the Dep * dtis Tel

§. 894. "O may it please Thee thus to

" do! O display the Energy of thy holy

"Spirit, and Efficacy of thy Grace, by

" converting Sinners from the Errors of

"their Ways, and making those who

" have hitherto been Slaves to their Lusts,

" and to the Devil, to become true Disci-

" ples of the holy Jesus, full of Faith in

^{*} Philip. iii. 8, 9.

" Christ, and of Love to Thee, to thy

" Gospel, to thy Statutes and Ordinances,

" and to all thy People of every Denomi-

" nation; and do Thou enable them to

" ferve Thee in Newness of Life, accord-

"ing to thy Word: And thus prepare

" them for all the Events of thy Provi-

" dence.

§. 895. " GRANT these Petitions, for the

" Sake of Jesus Christ, and for the Glory

" of thy great Name. Amen. And let

" him that readeth, fay Amen.

- §. 896. BLESSING, and Glory, and Wifdom, and Thanksgiving, and Honour, and Power, and Might, be unto our GOD for ever and ever. Amen.* And may all thy Saints, and all thy holy Angels, say Amen, for ever and ever.
- §. 897. THE Events taken Notice of in the foregoing Sections appear to me plainly revealed in the holy Scriptures, and are to be expected, when God shall inflict his terrible Judgments on any Nation, or City, for Sin.
- §. 898. And the Confideration of them may well administer Comfort to serious

^{*} Rev. vii. 12.

Christians, who believe in the Lord Jesus Christ, and whose Desire, and Endeavour is to be found faithful Servants of the most high God, and obedient Disciples of the holy Jesus: For the Lord's dreadful Controverfy is not with them; they are not the People of his Wrath. No! but they are the Objects of his tender Love, and most compaffionate Care; and they may be affured that, whatever Troubles and Trials they may meet with in a Time of publick Calamity and Diffress, all Things shall issue well unto them; fince the Word of God has said, That all Things work together for Good to them that love God, to them that are the Called according to his Purpose.*

§. 899. And the Declarations, which the just God has made, of the Manner of his Dealing with the Wicked in the Day of his Visitation of them for their Sins, may well make careless Sinners to tremble under the Apprehensions of the awful Day; and should render them studious how to escape that Wrath, which is coming on the Children of Disobedience.

* Rom, viii. 28.

Christians

§. 900. The Threatnings recorded in the holy Scriptures against stubborn Sinners, that go on still in their Trespasses, are terrible; and it should make them very thankful that a Way of Salvation, thro' Faith in Christ crucified, is set open before them; and it should excite them with Gladness to accept of Christ, as offered to them; to repent of their Sins, and devote themselves to God in Covenant; and then (in an humble Dependance on Christ, for Grace to incline, and enable them to live according to the Gospel) they should follow Peace with all Men, and Holiness, without which no Man shall see the Lord.*

§. 901. This (§. 900) will be a happy Preparation for the Time of a Pestilence, or of the Sword, or of Famine, and for a joyful Departure out of this World, and Entrance into that which is everlasting.

§. 902. I will only add, that I defire all pious Persons of every Denomination will pray that God will bless these my Endeavours for the Good of Mankind, as to the Sasety of their Bodies in Times of the Pestilence, and of any other contagious Dis-

^{*} Heb. xii. 14.

temper; but more especially as to the Welfare and eternal Happiness of their immortal Souls.

I am, SIR,

Your very humble Servant,

Bagnio-Court in Newgate-Street, London, April 11, 1745. THEOPHILUS LOBB.

P.S. The next Letter was published in the General Evening Post of Saturday September 17, 1743. that the Danger which attends the Burning infected Goods might be considered, and the Doing it for the future might be avoided; and I have Subjoined another in Confirmation of it.

LETTER VI.

Relating to the PLAGUE.

Wherein is shewed the Impropriety of Burning Things which have Infection, either from the Plague, or any other contagious Distemper.

To * * * * *

SIR,

S. 903. YOU, and feveral other Gentlemen (to whom I shewed the Impropriety of Burning Things, presumed to have a pestilential Infection in them, as a Means of Security from the Plague) persuaded me, it may be of Service if I communicate my Sentiments of it to the Publick: For this Reason I shall deliver my Thoughts, and with as much Brevity as the Subject will admit.

§. 904. THERE may, indeed, happen Pestilences, which are not infectious, as that

that mentioned in 2 Sam. xxiv. 13, 14, 15, 16. and others recorded in facred History, in which the Angel, the Executioner of God's awful Vengeance on those appointed for Death, made such a morbid Alteration, either in their Fluids, or Solids, or in both, as in a few Hours, or Minutes, put a Stop to the Circulation of their Blood, and a Period to their Life; but there is Reason to think, that some Pestilences are contagious, and propagated by Insection; and it is in Regard to these, that I make the following Observations, e. g.

§. 905. I. THAT pestilential, infecting Particles (whether Animalcula, or inanimate Matter, how minute, and how much soever divisible they are, yet) are solid Substances, capable of entering and adhering to a great Variety of other Substances, as may be concluded from their being carried in divers Sorts of Things to distant Places, and there producing the Plague.

§. 906. 2. THAT, when such pestilential Particles have made a Lodgement in any Sort of Goods, and those Goods are pack'd up so close, that the Current of the Air cannot pervade them, the pestilential Par-

ticles may abide feveral Years in them unaltered.

§. 907. 3. That, when infected Goods, fo packed up, come to be opened, and exposed to the Air (which, like the Sea, has always a Current, or Motion, one Way or other) the pestilential Particles will be washed off (if I may use the Expression metaphorically) by the Current of the Air to which they are exposed, and will be carried along with it, and may infect human Bodies that are near them, tho' they continually become more diluted with the Air, and their infecting Power, in all Probability, gradually becomes less, till it be intirely lost.

§. 908. 4. THAT the Air is the Medium by which the pestilential Particles are commonly communicated to human Bodies.

§. 909. 5. That, although the pestilential Particles are solid Substances, yet of great Levity; and, when the Air is infected with them, they are diffused in it, and carried hither and thither according to the Course of the Air's Current, and with greater, or lesser Force, according as the Force

Force of the Air's Motion is greater or leffer.

§. 910. 6. That, supposing Fire would destroy the Texture of pestilential Particles, and their Power of producing Sickness, if collected, and inclosed with it, yet it cannot reasonably be imagined Fire will produce such an Effect on pestilential Particles, which cannot be brought into it.

§. 911.7. THAT Fire has a Kind of Centrifugal Force, which constantly rarefies the Air, occasions it to recede from it, to expand, and the various Sorts of Particles of Matter disfused in it to be carried, quaquaversum, with the Air repelled by the Fire, as from a Center, and which are thereby impelled with greater Force against the Bodies of People that happen to be in their Way.

§. 912. 8. That the Firing of Guns puts the Air into a violent Motion, quaquaver
sum, tho' chiefly in a direct Line from the Mouths of the Guns that are fired; and that the violent Motion, communicated in this Manner to the Air, does not annihilate, or destroy any Particle of Matter floating, or diffused in the Air, but drives them with

a greater Impetus against every Body that happens to be in their Courfe.

§. 913. THE Confideration of these Particulars have induced me to think, that the Burning Ships, or Goods, &c. infected with any contagious Distemper, is so far from being a Means proper to fecure People from it, that it is one of the most probable Ways of communicating it to them; and that the Firing of Guns, or making Fires in the Streets of any City visited with the Plague, are so far from being a fit Method to abate the Sickness, that it is a very likely Means to increase it.

§. 914. THERE have been Facts which confirm this Opinion; for when the Plague was in this City of London, 1665, the Experiment was tried, whether making Fires in the Streets would abate its Violence, but the Event proved that they greatly increased it.

§ 915. Mr. Lyons (in his Book, entitled, A Prevention of the Plague, &c. p. 10. 11.) fays, " I must not omit one Caution " on the Observations on Burning some " Cloaths, &c. at St. Edmund's Bury, of " Persons who had been infected with the Small-Pox,

" Small-Pox, in order to prevent its further

" Spreading; which indeed fucceeded ac-

" cording to Expectation, in the House or

" Neighbourhood; but the Wind was ob-

" ferved to direct the Smoke to an oppo-

" posite Row of Houses, which suddenly

" affected them in a very furprizing and

" extraordinary Manner."

§. 916. IT feems to me a better Way to prevent the Pestilence, if infected Ships were funk to the Bottom of the Sea, and if infected Goods, or Apparel, &c. instead of being burnt, were buried deep in the Such Methods may be effectual in Earth. a thousand Instances; but yet infected Goods may (thro' the Carelefness, or Corruption of those that should prevent it, or by fome other Means unforeseen) be landed, and produce the Plague in a Country, where, and when it is least expected: And truly, the only fure Way for a Nation, or a City, to be preserved from that terrible Difease, is, for the Inhabitants to repent of, and forfake their Sins, which provoke the holy God to fend fuch a defolating Calamity upon them; to amend their Ways, and

and endeavour after that Holiness and Righteousness which are pleasing to him.

§. 917. The Providence of God, the supreme Governor of the Universe, is always suffilling his Word; and what is said in Levit. xxvi. 14, 15, 21, 22, 23, 24, 25. Deut. xxviii. 15, 21. Jer. xiv. 10, 12. will inform People, when a Nation has Reason to sear the Coming of a Pestilence; and what is written in Levit. xxvi. 3. to ver. 12. Deut. xxviii. 1. to ver. 14. Exod. xv. 26. chap. xxiii. 25. Jer. xviii. 7, 8. Jonah iii. 10. will acquaint them when to hope for Sasety from it, and for Health, Peace, and Prosperity.

I am, SIR,

Your very bumble Servant,

Sept. 14, 1743.

THEOPHILUS LOBB.

LETTER VII.

LETTER VII.

Relating to the PLAGUE.

Shewing the Impropriety of Burning Things infected with the Plague, or other contagious Sickness.

To * * * * *

SIR,

§. 918. OBSERVED in my former Letter, that FIRE has a Kind of Force which rarefies the Air, and makes the various Particles of Matter diffused in it to be repelled, and driven from the Fire, as from a Center of Motion.

§. 919. And the following Experiment will demonstrate the Truth of my Sentiments (§. 918.) Viz.

§. 920. Take a Stick of green Ash, or of any other Wood, newly cut from the Tree, three or four Feet long, put it on a Fire, and, as the Fire acts upon it, the Air,

the Water, the oily, and saline Parts contained in the Tubes, Cavities, and Substance of the Wood will be repelled, and pass out at the Extremities of the Stick; as will be manifest, by observing the watery Fluid, and Air-Bubbles, which there become visible; and by taking Notice how the Fumes, which are expelled out of the Stick, affect the Eyes, Nose, and Organs of Respiration, in those that are surrounded with them.

- §. 921. HENCE (§. 920.) we may conclude that pestilential, and the infectious Particles of other Distempers adhering to any combustible Substance (being exceedingly minute, and volatile) will immediately, by the Action of Fire, be made to recede from it, and fly off with the rarefied Air.
- §. 922. WE have therefore no Reason to think the Burning infected Ships or Goods a proper Means to prevent the Propagation of the Plague, or of any other contagious Disease; but there is solid Reason to believe it a very hazardous Expedient.
- §. 923. It is granted that in some Circumstances it may safely be used, e.g. if an infected

infected Ship lay off the South Coast of England, and the Wind blew from the North, and there was no Ship or Vessel to the Southward of the infected near enough to take the infectious Particles, before they were so much diluted as to become effete, the infected Ship may safely be burnt.

§. 924. And as to the Burning infected Goods on Land, if the Place where they are to be burnt is remote enough from inhabited Houses, and from all Passengers, to have the infectious Matter sufficiently diluted; and if the Persons employed to burn them keep to the Windward of the Fire, and if there be but a moderate Wind, and the Wind and Air be not in a depressing State, and does not fall into such a State, nor chop about while this Operation is performing, it may be safely done on Land.

§. 925. But, as it is always uncertain when the Wind will shift its Course, or fall into a depressing State, the Event of using this Means must be always uncertain; and, if such an Alteration should happen, and there be inhabited Houses, or People passing by near enough to receive the Infection,

fection, it is the most direct Course to produce the Sickness among them, and to spread it.

§. 926. THE Confideration of these Things (§. 925) may convince us, that it is very improper to burn insected Ships or Goods; and I may add, as improper to burn Cattle that die of a Murrain.

§. 927. THE Method I proposed (§. 916) of Sinking infected Ships to the Bottom of the Sea, and of Burying infected Goods deep in the Earth, is like to be very effectual for Preventing the Propagation of the Pestilence, or other contagious Sickness, by Means of such Ships, and Goods.

§. 928. The Objection from the Avarice of some Persons, which may prevail with them to dig up the infected Goods so buried, will be removed, if, when the infected Goods are put into the Earth, they be covered with unslack'd Lime, or if a Quantity of Aqua-fortis, or Oil of Vitriol, be poured in upon them sufficient to spoil them; because this will destroy the Motive to the Taking them up again.

§. 929. OR fuch Goods may in the Ships be funk in the Sea; or they may be funk

funk to the Bottom of some deep River, where the continued Stream may wash off, dilute, and render innocuous the infectious Particles.

I am, S 1 R,

Your very bumble Servant,

Bagnio Court in Newgate-Street, LONDON, April 18, 1745.

THEOPHILUS LOBB.

LETTER VIII.

LETTER VIII.

Relating to contagious Sicknesses among Cattle.

Containing, 1. An Enquiry into the Nature, or Quality of the Cause, by which the contagious Distemper is produced. 2. Rules for Management, with proper Remedies for Cattle taken sick of such a Disease.

3. Advices for the Management of the well Cattle, to preserve them from the Effects of Infection.

To JOHN MILNER, Esq; one of his Majesty's Justices of the Peace for the County of Middlesex, and first Commissioner appointed to make proper Examinations, &c. when the contagious Disease raged among the Milch-Cows, near LONDON, in 1714.

SIR,

§. 930. THE contagious Distemper, which has for some Time been among the larger CATTLE in foreign Countries, and which, as I have been informed,

of the contagious Sickness among the Cattle. 369 formed, appears now among that Sort of Cattle in Effex, in Scotland, and in Ireland, is a Subject not unworthy the Confideration of Physicians, who, on the Account of their peculiar Studies, and Knowledge of the Structure and Oeconomy of animal Bodies, and of the Nature of Medicines, are most capable to find out the Cause of such a Difeafe, and to contrive Remedies which, with the divine Bleffing, may cure it. The great HIPPOCRATES Rudied the Diseases of Beasts, as well as of Men, and Remedies against them; as appears from that Part of his Works called InnIATPIKA: And thereby he fet an Example worthy of Imitation.

§. 931. AND, if any Man shall be directed, and succeeded in such Researches, by Him, who only can give Knowledge and Wisdom, it will be a very important and extensive Service; as it may be an effectual Means of keeping much Cattle alive in a sickly Season, a Lessening the Losses of Farmers, and of Preventing many other calamitous Consequences of an increasing Contagion.

§. 932. A very ardent Defire of being useful to the Public prevailed with me to spend some late Hours in Study, to discover the Quality of the Cause that produced

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the

the contagious Disease, (which was among our Cattle in 1714. and, probably, that Distemper also, which has brought a vast Loss of Cattle in neighbouring Countries, and wherewith we seem to be threatened;) and to find out a proper Management, and suitable Remedies.

§.933. And, from an Apprehension, that it may prove of some Advantage to the Public, I shall communicate my Sentiments on these Things.

§. 934. Brute Creatures cannot describe their Sensations; and therefore we can never know all the Symptoms of their Distempers; and, consequently, have less to guide us in our Enquiries about the Origin of their Sicknesses, than of the Diseases in Men; but yet, by a careful and due Examination, I imagine, we may obtain the Knowledge we are seeking after.

§. 935. We should consider what Kinds of Causes can destroy the Health of animal Bodies, and bring on Sickness and Death.

§. 936. And, that we may form a right Notion of the Cause of the contagious Distemper, I would premise the following Obfervations, viz.

§. 937. Observ. 1. THAT, while the Blood in Cattle retains its healthful Confist-

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ence; while it is neither too thick, nor too thin; while the muscular Fibres, and animal Vessels, are neither too lax, nor too tense; and while the vital Strength, or the Force of the Action of the vital Organs remains undiminished, there cannot be much Sickness, at least there can be no Death: But, so long as these Particulars continue nearly in their natural State, so long will the Respiration of the Animal be performed, the Circulation of its Blood carried on, and its Life continued.

§. 938. Observ. 2. That, immediately before the Death of the animal Body, there precedes a Cessation of its Respiration, and of the Circulation of its Blood.

§. 939. Observ. 3. That the most frequent Causes which put a Period to the Circulation of the Blood, and the Respiration of the Animal, are the following, viz.

§. 940. Cause 1. That Inspissation, or Thickening of the Blood, which renders it unpassable through the Extremities of the capillary sanguine Arteries into the capillary sanguine Veins: And it is easy to apprehend how such a Thickness of the Blood stops the Circulation, and brings on Death.

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§. 941. AND I may observe, that a certain Excess or Degree of Heat can in a few Minutes so much inspissate the Blood, as to render it unpassable from the Arteries into the Veins; as appears from some Experiments made by the learned Dr. Boerhaave.*

§. 942. INTENSE Cold, and coagulating Poisons may also produce the like Effect.

§. 943. Cause 2. That Constriction of the muscular Fibres, and animal Vessels, which is inconsistent with their natural, vibrating Motion, will immediately stop the Respiration in an animal Body, and the Circulation of its Blood, and put an End to Life.

§. 944. Thus it is, when Persons die suffocated with the Fumes of burning Brimstone, or Charcoal; or with the Effluvia of any other Substance that has a like strong constringing Quality.

§. 945. WHILE Life continues, there is an alternate Contraction, and Dilatation, or Distention of the animal Vessels; or, a reciprocal Action, and Reaction: And that which constringes the Vessels so much as to

* Vid. Boerhaave Chemiæ, vol. 1. p. 236, 237. And in vol. 2. p. 307. he says, Hinc constat igne certi gradus, nec multo majoris centum graduum, humores nostros omnes, simul unitos cogi in Massas, per vasa immeabiles, concretas.

of the contagious Sickness among the Cattle. 373 put a Stop to these Motions, does at the same Time put a Period to Life.

§. 946. Cause 3. That general Relaxation of the muscular Fibres of the Heart, and Arteries, which renders them incapable of their natural contractile Motion, will make the Respiration of the Animal to cease, and put a Period to the Circulation of the Blood.

§. 947. And this (§. 946) indeed is a frequent, and immediate Cause of Death, both in Men, and Beasts.

§. 948. The Blood may be too thin; and it is abundantly so in *bydroprical* Bodies: Yet, while the muscular Fibres, and animal Vessels retain their contractile Force; while there remains Strength in the vital Organs to perform their Functions, so long will the Circulation of the Blood be carried on, and Life remain.

§. 949. This general Relaxation (§. 946) of the Fibres, and of the Vessels composed of them, may be effected by any Particles of Matter diffused in the Blood, which have a very strong dissolvent Quality.

§. 950. For such Particles of Matter (§. 949) may destroy the Consistence of the animal Fluids; and, by dividing and sub-

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dividing

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dividing their Globules, reduce them to that Minuteness, which will occasion Hæmorrhagies, or colliquative Stools, or Urines, or Sweats; and may so far diminish, and weaken the Cohesion of the component Parts of the muscular Fibres, that no contractile Power shall remain in the animal Vessels; which is the Case even among Men in the Progress of putrid Fevers, attended with a feeble, languid Pulse, a Diminution of the vital Heat, Languor, Hæmorrhagies, and colliquative Evacuations.

§, 951. It is a Matter of vast Importance to know whether a contagious Distemper among Men, and Cattle, is produced by a Cause, that has a dissolvent and putrefying Quality. And that it has such a Quality, I think, will be manifest from divers Confiderations. Vid. §, 956, infra.

§. 952. Observ. 4. That, when the Sickness and Death of Cattle are not synchronous, or very nearly at the same Time, we may make the following Conclusions, viz.

§. 953. Coroll. 1. THAT the Sickness and Mortality among them is not produced by any poisonous, coagulating Particles of Matter diffused in the Air, and received with

of the contagious Sickness among the Cattle. 375 with their Breath into their Bodies, and inspissating the animal Fluids, and occasioning Death in the Manner described §. 940. For, if such a Cause was existing in the Air, it must act on all animal Bodies that at the same Time had their Respiration in it: Tho', on the Account of different Temperaments of Bodies, the mortal Effect might be accomplished in a little less Time in some Bodies than in others.

§. 954. Corol. 2. THAT the Sickness, and Death of the Cattle, is not effected by any Particles of Matter of a strong, constringing Force, like the Fumes of Sulphur, diffused in the Air, and occasioning Death in the Manner related in §. 943. For, if fuch a Cause exists in the Air, all animal Bodies, even of different Species, that breathe in it, must at the same Time be affected by it; as they would be, if confined together in a Room, the Air of which was replete with the Fumes of Charcoal, or Brimstone. Some of the Bodies might furvive others, but that only could be for a few Minutes: Their Death would very nearly be at the fame Time.

§. 955. Corol. 3. THAT the Sickness, and Death of the Cattle, is not occasioned by Bb 4 any

any poisonous, destructive Quality of the Food they eat, or the Water they drink: For, if such a Quality was in their Aliment strong enough to produce Sickness and Death, it would make the Sickness of all the Cattle that live upon it to be very nearly at the same Time. As if a Company of People seed on Broth, in which some poisonous Herb has been boiled, the morbid Effects appear nearly at the same Time.

§. 956. Corol. 4. When the Sickness, and Death of the Cattle are not at the same Time, but happen successively; when there is Evidence, that the Distemper, in various Instances, is propagated by Infection, we may conclude, 1. That the Cause which produced it in the first Beast, which had it, was of a dissolvent, putrefying Nature, and terminates in Death, as related §. 946, 947. 2. That the dissolvent Particles (however they came into the Body of the first fick Beaft) like the variolous Humour in Perfons, who have the Small-Pox; and like the pestilential Infection in People, who have the Plague, assimilates, or transmutes Part of the animal Fluids into their own Kind; which is a Generation, and Multiplication

of the contagious Sickness among the Cattle. 377 plication of infectious Particles, some of which, emitted from the Body of the first sick Beast, is conveyed by Contact, or somehow, thro' the Air, into the Bodies of the Cattle infected by it, and so on.

§. 957. And indeed, if there was no Communication of Infection from the fick Cattle to the well, the Distemper could not justly be called contagious; and there would be no Advantage by separating the Well from the Sick; but Experience has abundantly proved the contrary.

§. 958. That the contagious Distemper, or Murrain, which has been among Cattle, is produced by a Cause that is of a dissolvent, putrefying Nature, appears not only from what has been observed in the foregoing Sections, (939, to 957) but also from the Effects of that Cause observed in the fick Beasts while living, (during the Time of the Contagion among the Cattle at Islington, &c. in the Year 1714) and which appeared after Death on Dissecting their Bodies.

§. 959. There occurred in the Time of their Sickness three Symptoms, which discovered, that the morbid Cause had a dissolvent Quality, viz.

§. 960.

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§. 960. I. SYMPTOM. "In a Day, or two (after their Sickening) there was a great Discharge of mucous Matter by the

" Nofe.*

§. 961. Whence (§. 960) it appears, 1. That there was a Relaxation of the Veffels, through which that mucous Matter was discharged; because, without a Relaxation of them, the Discharge could not have been made. And it is reasonable to think, that the same internal morbid Cause was at the same Time operating on the other Vesfels, to bring on that general Relaxation which terminates in Death, according to §. 946.

§. 962. 2. It appears likewise from the same Symptom (§. 960) that the morbid Cause had a dissolvent Quality; for such a Quality in adventitious Particles, mixed with the Blood, only could weaken the Cohesion of the component Parts of the Vessels; and, unless the natural Cohesion was weakened, they could not become more lax than in a Time of Health.

§. 963. 2. SYMPTOM. "Their Breath" smelled offensively.

^{*} Vid. Philos. Trans. Numb. 358. P. 873. + Ibid. §. 964.

of the contagious Sickness among the Cattle. 379

§. 964. This Effect (§. 963) only could be produced by a Putrefaction, similar to what happens in dead Bodies; in which, when the Parts, either of the Fluids, or Solids, are disunited, and divided into Particles of a certain Minuteness, and Volatility, they affect the olfactory Nerves in that disagreeable Manner, which occasions us to say it stinks. And this Symptom (§. 963) I reckon an Evidence of great Putrefaction in the Blood of the Beast that has it, and an Argument that the morbid Cause had a dissolvent Quality.

§. 965. 3. SYMPTOM. "Lastly [there was] a severe Purging (sometimes bloody) which terminated in Death.

§. 966. And as this Effect (§. 965) could not have been produced without a dissolvent Cause, dividing the component Parts of the animal Fluids into lesser, and relaxing the Vessels, it may justly be esteemed an Argument, that the morbid Cause of the Disease among the Cattle at Islington had a dissolvent Quality.

§. 967. THERE likewise appeared upon Opening the Bodies of the Beasts, which died of the Sickness, the following Effects

380 Enquiry into the Quality of the Cause of the morbid Cause, which demonstrate that it had a dissolvent Quality; e.g.

§. 968. 1. Effect. "A Putrefaction

" of the Viscera, which was found to increase

" in Proportion to the Time of the Illness.*

§. 969. 2. EFFECT. " In the Progress

" of the Distemper, or near the Death of the

" Cattle, their Intestines were the Colour of a

" Snake, their inner Coat excoriated by

" Purging.+

§. 970. 3. Effect. "Their Lungs

" much inflamed with several Cysts, con-

" taining a yellow purulent Matter, many

" of them as big as a Nutmeg. +

§. 971. HERE it may be observed, that an Inflammation of any particular Part of the Body is commonly the Consequence of a Relaxation of lymphatic Arteries in the Part inflamed, and of a Comminution of the Globules of Blood protruded into them. And therefore, when this Symptom happens in Cattle infected with a Murrain, we may reasonably conclude, that the Cause of their Sickness had a dissolvent Quality.

§ 972. But this dissolvent Quality in the Cause of the Murrain in the Cattle is evi-

dent, I think, beyond all Dispute, from the Putrefaction of their Viscera increasing in Proportion to the Time of their Sickness, §. 968. And from the Excoriation of the inner Coat of their Intestines, produced by the Acrimony of the Humours evacuated by Purging (§. 969); and from the several Cysts replete with purulent Matter, found in, or on their Lungs (§. 970.)

§. 973. It appears, from what has been observed, concerning the Murrain among the Cattle at Islington, in the Year 1714, that the Cause of that Distemper had a disfolvent Quality, destroying the Consistence of the Blood, producing Putrefactions, and a Relaxation of the Vessels, and Death as the Consequence, according to §. 946, &c.

§. 974. HENCE (§. 973) we may draw the following Corollaries, viz.

§. 975. Corol. 1. THAT Bleeding Cattle under fuch a Distemper is a pernicious Practice, because it diminishes the vital Strength, and will hasten that general Relaxation of the Vessels, which terminates in Death.

§. 976 Corol. 2. THAT Purging the fick Cattle is likewise a destructive Method, for the Reasons mentioned §. 975.

382 Enquiry into the Quality of the Caufe

§ 977. THESE Evacuations (§. 975, 976) are foreign to the Scope we should keep in View, and should never be made in Cattle, when infected with the Sickness under our present Consideration.

§. 978. It is very manifest from the Nature of the Cause productive of the Murrain among Cattle (§. 973) that the grand Intentions we should always have in our Thoughts, when we endeavour to cure Cattle sick of such a contagious Distemper, are these two following, viz.

§. 979. I. To alter the dissolvent Quality of those adventitious Particles wherewith the Blood is infected, to prevent any further Putrefaction in the Body, and remove that which is begun.

§. 980. 2. To strengthen the natural Cohesion of the component Parts of the animal Vessels, to maintain the Vigour of the vital Organs, and thus to prevent that general Relaxation of the Vessels, which would soon terminate in Death. §. 946.

§. 981. And these (§. 979, 980) also are the curative Indications for Men sick of the Plague.

§. 982. HAVING premised the foregoing Observations, I shall give some Advices for Cattle

of the contagious Sickness among the Cattle. 383 Cattle fick of a contagious Disease; and for Preserving the well Cattle from the Effects of the Infection.

- §. 983. I. RULES to FARMERS for the Management of fick Cattle infected with the Murrain, or contagious Diftemper.
- §. 984. Rule 1. The Owner of Cattle in a contagious Season should have a faithful Servant continually in the Day-Time with his Herd (as the FARMERS in Wilt-Shire, and other Countries, have Shepherds with their Flocks of Sheep) to watch, and observe when any of them begin to grow sick; which the Herdsman may discover by the Beast's falling off from its usual Feeding, and a Dulness of its Eyes.
- §. 985. Rule 2. As foon as the least Symptom of Illness appears in any Beast, separate it from the Herd, and convey it into some Place of Confinement; either into a BOOTH of Boards erected for this Service, or into some Inclosure.
- §. 986. The Observance of these Rules (§. 984. 985) is of great Importance; because little, or no Insection is emitted from the Body of the Beast immediately in the Beginning

Beginning of his Sickness; but, as the Distemper proceeds, more Parts of the Blood are transmuted into the Quality of those which produced it, and more infectious Particles will be emitted from the Body of the sick Beast, and the Danger of other Cattle near the Sick will daily very much increase.

§. 987. As for the BOOTH, it should be made larger, or smaller, as the Number of the sick Cattle is greater, or lesser; to be for the Use of the sick Beasts, as Insirmaries, or Hospitals, are for sick Men. And it should be furnished with strong Posts, contrived so, as to facilitate the Giving Drenches.

§. 988. Rule 3. LET the Booth be erected, if it can be, at least a Quarter of a Mile from other Cattle, and from Houses inhabited. This I propose as a Means of Safety to Men, and Beasts.

§. 989. Instead of a Booth, an Inclosure may be made with Hurdles five Feet deep, with strong Posts, to which the Beasts may be tied, for the Purpose mentioned (§ 987) but this Inclosure should be situated, according to Rule 3. §. 988.

§. 990. Rule 4. As soon as the sick Beast is put into its Place of Confinement, give it one, or other of the following Drenches, for Altering the dissolvent Quality of the infectious Matter, which produced the Sickness, and for Preventing or Removing any incipient Putrefaction.

§. 991. I. DRENCH.

Take of common Salt one Ounce, dissolve it in half a Pint of River-Water, then add to it six, or eight Ounces of White-Wine Vinegar, or of the best other Vinegar that can be got, and of Sack, or Mountain-Wine one Quarter, or half a Pint; mix for a Drench, to be given warm. Or,

§. 992. II. DRENCH.

Take of the Flowers of Brimstone half an Ounce, Anis Seeds finely powdered a Quarter of an Ounce, the best Vinegar and fine Ale, of each half a Pint; mix for a Drench, to be given warm; Or,

§. 993. III. DRENCH.

TAKE of Gun-Powder, beaten to a very fine Powder, half, or three Quarters of an Ounce, Anis-Seeds in a fine Powder, der

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and Sack, or Mountain-Wine, of each half a Pint; mix for a Drench, to be given as the former.

§. 994. Rule 5. LET one of these Drenches be given to the sick Beast every four Hours, Day and Night, 'till it either dies, or the morbid Symptoms disappear, and the Beast recovers an Appetite to Food. Or, instead of the foregoing medicated Drenches, give a Quart, or three Pints of TAR-WATER; and let the Tar-Water be made according to the Direction of the Bishop of Cloyne in his Book called Siris.

§. 995. Rule 6. And two Hours after every Drench give one or other of the following cordial and nutritive Drinks warm, as the former. But, if the Owners of Cattle shall think the Giving a Drench, or Cordial Drink, every two Hours too frequent, they may double the Quantities of them, and the Distance of Time between the Giving them.

§. 996. I. Cordial DRINK.

Take the Crum of white Bread two Ounces, one Nutmeg finely powdered, and boil them in a Pint of Water 'till the Bread is disjolved, and by stirring

it with a Spoon it becomes like Water-Gruel; then add to it one Pint of Ale, and one Ounce of white Sugar, and mix for a Drink. Or,

§. 997. II. Cordial DRINK.

TAKE of the Crum of white Bread three Ounces, of bruised Cinnamon one Drachm, boil them in a sufficient Quantity of Water 'till it comes to a Pint and half, and looks like Gruel; then strain it, and add a Quarter of a Pint of Sack, or Mountain-Wine, and one Ounce of white Sugar, for a Drink.

§. 998. Rule 7. Two or three Times a Day let the fick Beaft be tried whether it will feed, by fetting before it, pretty warm, a Pint of Barley, or Malt, boiled 'till the Grain fwell, become foft, and begin to break.

§. 999. Rule 8. Twice a Day foment the Tongue of the Beast with the following Lotion for four or five Minutes, by rubbing it with a Spunge wetted with it, made pretty warm.

§. 1000. The Lotion.

TAKE of Salt-Petre three Drachms, of common Salt five Drachms, dissolve them in six Ounces of Water, and add to it Cc2

ten Ounces of Vinegar, for a Lotion; and sometimes four Ounces of clarified Honey may be added to it.

ferviceable for Keeping the Tongue, and Mouth in its natural Temper, and free from Ulcers; but such Particles of the Liquor will pass thro' the Membranes, and be conveyed into the Blood, as are proper to counter-act the Agency of the morbific Matter.

f. 1002. Rule 9. Twice a Day let the Head, Breast, Region of the Heart, and Belly of the Beast, be rubbed well with a Spunge wetted with hot Vinegar.

of them wear a Linnen Garment, after it has been wetted with Vinegar, and dried, over all their Clothes, (like that which is used by some Country Carters for keeping off the Dashings of Dirt) to be buttoned close under their Chins, and at their Wrists, while

while they are among the fick Cattle, and put it off before they go to any other Business. And such Garments may be useful to Physicians, Surgeons, and others, when visiting People sick of the Plague; and may be decently made of Linnens dyed of blue, or of a Chocolate, or Snuff-Colour Brown, which will not at all, or very little, be altered by the Vinegar.

§. 1004. Rule 11. BOIL Rosemary in Vinegar, and set it a While under the Head of the Beast, so that it may draw into its Body some of the Fumes of it in Respiration. Or the Steam of Vinegar, which is made to arise by quenching red-hot Iron in it, may be used to the same Purpose.

§. 1005. Rule 12. LET a medicated BIT be put into the Mouth of the fick Beast, and kept there for an Hour, twice a Day. And for this Purpose the following Direction should be observed, viz.

§. 1006. LET the Bit of a Bridle be covered pretty thick with the following Paste, and the Paste inclosed with a Piece of Linnen-Cloth sewed together upon it, to keep it in its Place; and then, after it has been smeared with Tar, it should be put into the Mouth of the Beast.

§. 1007. The medicated PASTE.

Take Salt-Petre, and crude white Tartar, after they have been separately reduced into a fine Powder, of each four Ounces; Wheat Flour, not separated from the Bran, half a Pound; mix them well together; then add two Ounces of Tar, and but so much Vinegar as shall be necessary to make a stiff Paste; an Ounce of which may serve for one Application to the Bit.

§. 1008. A confiderable Advantage may be hoped from the Use of this Medicine, because many Particles of it will pass with the Breath into the Lungs, and there thro' the absorbent Vessels into the Blood; and many of them will also mix with the Saliva, and be conveyed into the Stomach with it, which may contribute much to alter the Quality of the morbisic Matter, and promote the Recovery of the Beast.

S. 1009. Rule 13. LET a ROWEL, or Seton, be made on the Infide of each Thigh, and another between the Fore-Legs towards the Region of the Heart, as foon as the Beast is found to be sick. These artificial Ulcers may be of great Service, by occasion-

ing a Discharge of morbid Humours from the Blood.

§. 1010. Rule 14. LET a little Vinegar be injected into each Nostril warm, once a Day.

§. 1011. Rule 15. Let a Pail of Water, made Milk-warm, with a Handful or two of Bran mixed with it, be offered to it to drink two or three Times a Day: Or the Water in which Barley or Malt has been boiled.

§. 1012. Rule 16. If, in the Progress of the Disease, a Purging should happen to the sick Beast, especially if the Stools are bloody, let the following Drench be given, and the Clyster injected Blood-warm every sixth Hour, or oftener, if the Symptom is violent, 'till it is removed.

§. 1013. The DRENCH.

Take one Drachm of Virginian SnakeRoot finely powdered, three Drachms
of fine Bole, a Pint and half of LimeWater, two Ounces of Brandy, or Rum;
mix for a Drench, to be given warm.

§. 1014. The CLYSTER.

Take Camomile Flowers, Anis-Seeds
bruised, Cortex Eleutheriæ bruised, of
each half an Ounce; sine Bole, or Chalk,
Cc4 (reduced

Smith's Forge-Water, two Quarts;
mix, and boil them, 'till the Liquor
comes to three Pints; then to the strained
Liquor add four Ounces of Brandy, or
Rum. Thus make a Clyster.

- §. 1015. Rule 17. If the fick Beast dies, let it be immediately buried with its Hide on, and with, or without Quick-Lime, in a Pit seven, or eight Feet deep, and the Earth filled in close upon it, that no Exhalations may pass from the dead Body thro' the Earth into the Air of the Atmosphere.
- §. 1016. II. RULES to FARMERS for the Management of the well Cattle, to preserve them from the Effects of the Infection.
- §. 1017. Rule 1. LET Rowels be immediately made in each of the well Cattle, as directed (§. 1010.) This Remedy may be as effectual to the Preservation of Cattle from the Contagion, as Issues have proved for the Sasety of Men from the Effects of the pestilential Insection.
- §. 1018. Rule 2. LET one, or other of the Drenches directed for the fick Cattle

(8. 991, &c.) be given to every well Beaft twice a Day for three Days. Or, instead of them, give a Quart, or three Pints of Tar-Water.

§. 1019. Rule 3. LET every Herd, immediately upon the first Sickening of any Beaft, be divided into very small Parcels, and fed in separate Fields.

§. 1020. THE Importance of this Rule (§. 1017) will appear from the great Advantage of it experienced when the Sickness was at Islington, &c. in the Year 1714, related by THOMAS BATES, Efq; Surgeon to his MAJESTY'S Houshold. He fays (speaking of the Cow-keepers) "They now " divided their Cows into small Parcels, by " which they loft only that in which the "Disease happened; whereas, before that " Method, when one Cow got this Dif-" ease, if she herded with one, two, or " three Hundred (the Contagion was fuch) " scarce one did escape." Phil. Trans. Numb. 358. p. 883.

6. 1021. Rule 4. WHEN a contagious Distemper is among Cattle, there should be Pits always ready to receive the Carcases of the Dead; and the well Cattle should carefully be kept from coming near the Places where any have been buried.

G. 1022. The proper Management of Calves may easily be deduced from the foregoing Rules: And when it is requisite to give them Drenches, a fourth, or fixth, or eighth Part of the Quantity directed for a full-grown Beast, more or less, may be given according to the Age, and Bulk of the Calf.

In 1023. The Directions given J. 754, Etc. for purifying Houses after the Plague has been in them, will sufficiently shew how Stables and Cow-Houses may be freed from Contagion, and rendered again sit for Use.

In the Rules and Remedies for fick Cattle, proposed in the foregoing Sections, will, I hope, be of great Service when any contagious Distemper shall happen among them, produced by Causes that have a dissolvent and putrefying Quality, as was the Case about London in 1714.

O. 1025. But epidemical, and mortal Diseases may happen among Cattle from very different, and, it may be, contrary Causes, which may require different Methods of Treatment, and Medicines of a different Nature.

§. 1026.

§. 1026. It therefore appears to me a Matter of great Importance in every Country, when a great Mortality happens among the Cattle, for the GOVERNORS of it to employ some skilful Physicians to search out, and discover the Quality of the morbific Particles, and thence deduce Rules for Management, and the proper Remedies.

§. 1027. And as to the Sickness now among the Cattle in Effex, in Scotland, and Ireland, I apprehend it may be of great Service, if the following METHOD shall be put into Practice, viz.

- 1. THAT in each Country an exact and particular Account be taken of all the Symptoms of the Disease.
- 2. THAT a sufficient Number of the Bodies of Beafts, in each Country, dying of it, be dissected, and an exact Account taken of every remarkable Particular that shall occur to Observation on Opening the Bodies.
- 3. THAT an Account be taken in each Country of the Methods of Management, and of the Medicines used for the Recovery of the fick Cattle; and for the Preservation of the Well; and likewise of the Effects of them

them; and each of these Accounts to be attested by proper Vouchers.

- 4. THAT these Accounts be transmitted to fuch Perfon, or Perfons, as those in the Government shall direct, and appoint to receive them. IndibodisM isda li baA ii lo
- 5. THAT some Physician, or Physicians, be employed to compare, and confider those feveral Accounts, and make what Discoveries they can by Means of them; of the Nature of the Distemper, or Quality of the Cause producing it, and of the Remedies by which it may be cured.
- 6. THAT, if feveral Physicians shall be employed in these Researches, each of them may have Copies of the forementioned Accounts, and separately consider the Case, and separately deliver in their Report; because, by this Means, the Sentiments of each Physician (whose Opinion is desired) will be known.
- §. 1028. WHEN those in Authority, to whom it belongs, shall have received the Reports of the Physicians, they will better judge what Measures are fittest to be taken in Respect to the Sickness among the Cattle. S. 1029.

6. 1029. THE Method (§. 1027) proposed to Confideration, appears to me the most probable for Discovering the Nature of any epidemical Distemper, and the Medicines proper to be given for the Cure of it. And if that Method shall be put into Practice, and the true Nature of the contagious Difease now among the Cattle be thereby discovered, and effectual Remedies found out, the Advantages, I need not fay, will be very great to the Farmers, to their Landlords, and to the Nation in general.

§. 1030. If it is uncertain whether the Disease is infectious, Experiments should be tried to bring this Point to a Certainty; because it is not manifest that every epidemical Distemper is contagious.

§. 1031. I do not apprehend that inflammatory Fevers, produced by excessive hot Weather, inspissating the Blood, are infectious.

§ 1032. And as to Diseases among Men, it may answer valuable Purposes, if (when any new epidemical Disease happens) PHYsicians were appointed by Authority to make Researches like those mentioned (6. 1027) and deliver their Reports thereupon, of what they judge to be the Quality of the CAUSE producing it, what the curative Indications, and what Kinds of Medicines will be the proper Remedies; and their Reports to be published for the Benefit of the Publick, if the Government shall think it proper.

§. 1033. I would now observe that, when a fickly Season begins to appear among Cattle, it will be useful to reflect on the Management and Medicines used in Time past on such calamitous Occasions, that so those Things, which were pernicious, or intirely useless, may be avoided in like occurrent Cases.

§. 1034. And here, SIR, I cannot but take Notice of the Observations you made, when the Contagion was among the Milch Cows at Islington; and of some Directions, which, with a great Deal of Reason, you think may be useful in such a suture Distemper.

§. 1035. You observed, that Bleeding and Purging the well Cows was so far from Preferving them in Health, that those Evacuations did weaken them, and disposed them more easily to take the Infection, and that they were of no Service for the Recovery of those that fell sick: And that the other

Medicines

Medicines did them Harm, or, at least, were ineffectual.

§. 1036. HENCE (§. 1035) we may reasonably conclude, that those Evacuations should not be used, if that Distemper should return again.

§. 1037. As to MILCH Cows, when the like Contagion happens, you recommend the following DIRECTIONS, viz. Direction 1. "To take away but little Milk, "and let them become dry as foon as poffible.

§. 1038. Direction 2. "To throw away the Milk of the fick Cows, if not also that of the well, where any of the Herd are infected. Because the Selling, or the Giving to Servants, or to Calves, the Milk of Cows infected with a contagious Distemper may be pernicious in its Effects.

§. 1039. Direction 3. "To give the Cows no Grains, nor other Food that tends to increase their Milk.

§. 1040. Direction 4. "To take the "Calves from them, and to keep them feparate from each other, as well as from the Cows.

. 1401. & that fell field with that the priver

§. 1041. Direction 5. "To kill both "the Cows and the Calves as foon as the

" Distemper appears in them, and to bury

" them as foon as dead, in their Hides,

or with unflack'd Lime, in deep Pits.

§. 1042. This Direction (§. 1041) you give on the Supposition, that there is no Method that can be effectual to recover them: And indeed, if this was the Case, if no Remedy could be found out, it would certainly be the wisest Course to kill every Beast that appears to fall sick of the contagious Disease; becouse the Doing so would prevent greatly the Multiplying of the Infection.

§. 1043. But it is to be wished, that some Physicians in every Age will employ their Thoughts (when a mortal Distemper shall spread among Cattle) to find out the Nature of it, and how it may be cured.

§. 1044. Direction 6. " THAT the Farm-

ers, or Cow-Keepers, who have the least

" Symptom of the Contagion among their

" Cattle, should not fell, or dispose of their

" Calves: Because, in the Year 1714, the

" Distemper was chiefly propagated and

" dispersed by selling them. And it de-

ferves

for Preserving the well Cattle. 401 "ferves Consideration, that, if they sell "none till the Sickness ceases, they will "fell their Calves for a much better Price."

§. 1045. THE PUBLIC was much obliged to you, SIR, for the important Service you did about thirty Years fince, when the contagious Distemper was among the Cattle about London; and you have added to that Obligation, by your Observations, and Directions which I have with Pleasure related.

I am, with very great Esteem,

SIR,

Your much obliged, and

very humble Servant,

Bagnio-Court in Newgate-Street, London, May 16, 1745.

THEOPHILUS LOBB.

POSTSCRIPT.

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that in 1714, will be proper. , R I &

S. 1046. It is a Pleasure to tell you, that since I wrote this Letter, I have been informed that the Mortality among the Cattle in Ireland was not propagated by any Contagion, but was occasioned by the Scarcity and Badness of their Food the last Winter, which therefore we may hope will soon cease, as their Food is now plentiful, and wholsome.

§. 1047. However, what I have discovered of the Quality of the Cause, which produced the contagious Sickness among the Cattle in the Year 1714, and the Remedies recommended by me, will, I hope, be greatly serviceable, whenever such a Distemper shall again appear.

J. 1048. DISEASES among Cattle produced by a Scarcity, or Badness of their Food, I apprehend, have an alcaline Acrimony, predominant in the Blood, as the immediate

immediate Cause of the morbid Symp-toms.

§. 1049. AND if this is true, then the Methods, and Medicines recommended by me in contagious Distempers of Cattle, like that in 1714, will be proper.

§. 1050. It appears to me, very prudent, in Regard to the present Sicknesses among the Cattle in Esex, Scotland, and Ireland, to have Researches made (according to the Method prosed. §. 1027.) in Order to find out the Nature, or Quality of the Causes, that produce them, and the proper Remedies.

§. 1051. But, befides the Accounts mentioned, §. 1027. there should be transmitted with them a particular Account of the Cases of the Cattle in the sickly Countries, as to the *Quantity* and *Qualities* of their Food.

§. 1052. THERE is in the London GA-ZETTE of Saturday May 25th, 1745, the following Paragraph, viz.

§. 1053. "Hambourg, May 19th, N. S.
"The Mortality among the Horned Cattle
has now reached within a German Mile
and half of the Balliage of Pinnenberg,
Dd 2 "contiguous

" contiguous to the Territory of Ham-

" bourg, which is of little Extent on the

" Side of Danish Holstein. The Appear-

" ance of this same Distemper at Ham-

" bourg, gives an Alarm lest it should gain

" further on that Side of the Country.

" Proper Precautions are used to prevent its

" Spreading, and to get the better of it in

" its Beginning; which is attributed to

" fome infected Cattle having passed through

" there. This Evil has communicated it-

" felf likewise to the Danish Islands of

" Zeeland and Fuhnen.

Mortality among the larger Cattle in so many Countries far distant from each other, and under different Governments, it seems a probable Means of great Advantage, if the Government of each Country, where the Calamity appears, would not only order the Accounts mentioned, (§. 1027,) to be taken; and, for Reasons given, (§. 930,) appoint Physicians to consider them, &c. but would likewise communicate those Accounts with the Report of the Physicians (employed in making the proper Researches)

to the Government of every Country that has the like Calamity.

§. 1055. As to the epidemical, and mortal Difeases, which now subfift among the CATTLE in different, and distant Countries, it is at present uncertain, whether they proceed from one, and the same Kind of Causes; and the Quality of those morbific Causes is not yet certainly known.

§. 1056. And the important Knowledge of these Things, (§. 1055.) only can be obtained by fuch Means as have been proposed. (6. 1027.) But if I may give my conjectural Opinion, it is this, viz. That the Sickness, and Mortality are produced either 1. By Causes of a dissolvent and putrefying Nature. Or, 2. By an inflammative acrimonious Quality of the Blood, of an alcaline Kind, however produced.

§. 1057. If the Sickness proceeds from the first of these Causes, (§. 1956.) I apprehend it may be known, by Feeling the Ears of the fick Cattle, and finding them not hotter than in a Time of Health. And in this Case the Drenches directed. §. 991. to §. 993. will be proper Remedies.

Dd 3 §. 1058.

§. 1058. If the Disease is produced by the second Cause assigned, (§. 1056.) I think it may likewise be known, by Feeling the Ears, which, in such a Case, will be found hotter than in a Time of Health. And for such sick Cattle, I would recommend one, or other of the following Drenches.

I. DRENCH.

Take Gun-Powder pulverised one Ounce,
Vinegar sour, or six, or eight Ounces, of
common Water-Gruel one Pint; mix for
a Drench to be given Warm, every sixth
Hour, Or,

ed bas and H. Drench. brown? and to

TAKE of Gun-Powder pulverifed one Ounce, Tar-Water one Pint, mix, with, or without an Ounce or two of Sugar, for a Drench to be given as the former.

J. 1059. But the Methods, and Medicines, which in former contagious Distempers of Cattle proved either pernicious, or ineffectual, ought carefully to be avoided.

God is to be acknowledged in the Mortality of Cattle, as well as of Men. The great God

God threatened his own peculiar People; the Children of Ifrael, if they walked contrary unto Him, (notwithstanding the Voice of previous Judgments,) that he would de-Stroy their Cattle +: and that, if they would not be reformed by the Destruction of their Cattle, and fuch Judgments, he would fend a Sword upon them, and the Pestilence, among them *, &c.

§. 1961. THE Order of the divine Threatnings recorded in Levit. Chapt. 26. shews plainly that, after mortal Diseases among Cattle, and other fuch leffer Judgments have been inflicted, (if they are not religiously improved by a Reformation,) the greater Calamities of the Sword and the Pestilence, and the Famine will follow. All which manifests that the most important Means to obtain Deliverance from any Tokens of the divine Anger, and to secure the Protection, and Favour of God, is for People to repent of their Sins, and return unto the LORD.

† Levit. xxvi. 22. * Vers. 25.

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May 30, 1745. Wender of of al both

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EXPLANATION of the FIGURES.

T A B. I.

Fig. 1. THE DEFLAGRATOR, being a Groove of Tin, twenty Inches long, three Quarters wide, and one Third deep, narrow at the Bottom, and gradually wider from it; fastened with Wood-Screws into a Frame of channelled Deal of the same Length, one Inch, and one Quarter wide, and an Inch and one Third thick; with a Touch-Pan at one End marked a.

b, c, Is the Handle of this Machine put into an Hole, bored obliquely thro' the Middle of the Frame, which may be taken out at Pleasure, and is fourteen Inches long.

AT d and b, is represented a Section of the Groove, and c d the Handle in its oblique Position.

THE Use of this Machine is for Firing Trains of Gun-Powder of any Sort; but the Trains should be made small.

Fig. 2. THE FUMIGATOR is a round folid Iron, weighing two Pounds, and se-

ven Ounces; with a round Cavity in its Surface, and supported with three round Knobs, passing thro' the Margin at equal Distances, and riveted.

Fig. 3. Is a Section of the Fumigator, with its Dimensions expressed.

THE Use of this Machine is to fill a Room with the Smoke of any dry Substance, by putting an eighth, or fixth, or fourth Part of an Ounce of any simple or compound Matter into its Cavity, after it has been made almost red hot: For, if it be made of a bright Red, it will cause the Substance to slame much, and the Smoke to be less.

Fig. 4. Shews the evaporating Fur-NACE, with its Apparatus, being feven Inches, and an half high, and feven Inches wide.

The Hole for Ashes is marked a. The Fire-Place b, and c, c, shews an Iron Hoop round the Bottom of it; and d d, another Hoop near the Top; e, e, are Rings by which, to lift up, and carry the Furnace from Place to Place, fastened to Iron Straps, riveted to the lower Hoop, c, c, and passing under, and riveted to the upper Hoop d, d.

410 An Explanation of the Figures.

THE Furnace has three Holes for Air, nearly at equal Distances, just below the upper Hoop, two of which, being visible to the front View, are marked i, i.

f, Shews a Florence Flask Bottle with Liquor in it evaporating. g, The long slender Neck of the Flask, and b, the Fumes, or Steam arising from it.

THE Use of this Machine is to diffuse, in the Air of any Room, those medicinal Parts of any Substance, which are separable from it, and may be collected into a Receiver by the common Method of Distillation with an Alembick. And by this Contrivance such medicinal Qualities may be communicated to the Air, as shall be wanted for Preventing, or curing various Sorts of Distempers.

TAB. II.

Fig. 1. Shews the Nafal Machine, whose Dimensions of Inches are marked in the Print.

a, Is the Arch to go over the Nose, b, b, the two Springs to press upon the Temples, and moving on Joints, marked c, c, so as to be folded flat like Spring-Spectacles. d, d, are Joints by which

An Explanation of the Figures. 411 turn the Wires d, e, that support the springing Forceps's e, f, which hold the Spunge close under both Nostrils. The Spring Forceps shut close by their own Springiness, and are to be opened by squeezing, between the Finger and Thumb, the Knobs, b, b.

Fig. 2. REPRESENTS a Person with the Nasal Machine on, as it is be worn.

Fig. 3. Shews a Spunge with proper Strings, by which it may be kept close to the Nostrils.

a, Is the Spunge, two Inches and half long, whose Ends are inclosed fast with Loops b, b, six Inches and half in Length, fastened to Strings of red Tape, thirteen Inches long; which are to be passed over the Ears, and, being brought down behind them, are to be tied under the Chin with a Bow-Knot.

Fig. 4. Is the Representation of a Perfon having a medicated Spunge thus fastened under his Nose.

N.B. Let the Book-binder place in their Order the Tables of Machines next after the Explanation of them THIP

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IN §. 531. line 24. after the, add Case of the.

In §. 1050. l. 5. instead of prosed, read proposed.

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P. ib. 1. 6. after Country, instead of a Comma, add a full
Point, and the next Word proper should begin with a Capital.

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