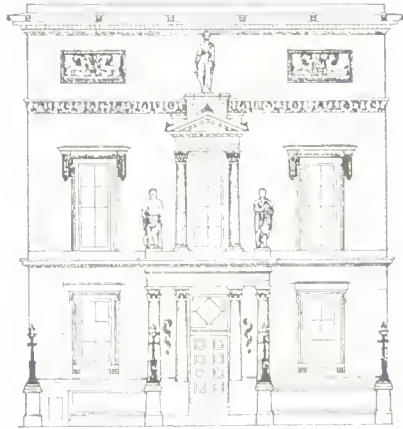


AN ACCOUNT
OF
THE GREAT PLAGUE OF LONDON

WILLIAM BOGHURST

*Epidemiological Society
of London*



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Dumfries.*

LOIMOGRAPHIA

AN ACCOUNT

OF

THE GREAT PLAGUE OF LONDON

IN THE YEAR 1665.

BY

WILLIAM BOGHURST,

APOTHECARY.

*NOW FIRST PRINTED FROM THE BRITISH MUSEUM SLOANE MS. 349,
FOR THE EPIDEMIOLOGICAL SOCIETY OF LONDON.*

EDITED BY

JOSEPH FRANK PAYNE, M.D.,

LATE PRESIDENT OF THE SOCIETY.

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INTRODUCTION.

By J. F. PAYNE, M.D.

THE treatise, which is now, by the liberality of the Epidemiological Society of London, printed for the first time, has long remained in manuscript in the library of the British Museum. It is a contemporary account of the last epidemic of Oriental Plague in this country, generally known as the Great Plague of London. In presenting it to the public, a few words of introduction seem required to explain the importance of this record in the history of epidemics, and to draw attention to some of the interesting points which it raises for discussion.

Our knowledge of the epidemic of 1665 is based more upon the official records, and the observations of laymen, than on medical reports. The latter, indeed, are few and unsatisfactory, partly because not many physicians remained to observe the epidemic, and partly because those who undertook to discuss the subject were, with one exception, very incompetent. The one exception was Nathanael Hodges, of whose well-known work I will only say here that it is far from rendering the account now published superfluous. Our author, Boghurst, gives a view of the subject, in important respects, entirely opposed to that of Hodges; he enters more fully into detail, and though inferior in his manner of presenting the subject, he must, as it seems to the present editor, be pronounced more instructive as regards the matter of his treatise.

His theme, though remote from us in time, will never lose its interest for students of epidemics. The features of the disease as recorded in the seventeenth century have been reproduced with striking uniformity on many occasions in other parts of the world; and last of all, in this

very year we have accounts from the British settlement of Hong Kong which furnish most instructive points of comparison with the Plague of London in 1665.

THE WRITER.

In the first place we may give such information as can be obtained respecting the writer himself.

William Boghurst was an apothecary, keeping a shop at the sign of the "White Hart", in the parish of St. Giles-in-the-Fields. Like many apothecaries both then and in later times, he practised also as a physician, or rather, perhaps, as a general practitioner, prescribing medicines and selling them himself. Some notion of his professional status may be gathered from an advertisement which has been quoted by Mr. E. W. Brayley, in his edition of Defoe's *Journal of the Plague Year*, from the *Intelligencer* newspaper for July 31st, 1665.*

"Whereas, Wm. Boghurst, Apothecary at the White Hart in St. Giles-in-the-Fields, hath administered a long time to such as have been infected with the Plague, to the number of 40, 50, or 60 patients a day, with wonderful success, by God's blessing upon certain excellent medicines which he hath, as a Water, a Lozenge, etc. Also an Electuary Antidote, of but 8d. the oz: price. This is to notify that the said Boghurst is willing to attend any person infected and desiring his attendance, either in City, Suburbs, or Country, upon reasonable terms, and that the remedies above mentioned are to be had at his house or shop, at the White Hart aforesaid."

Such an advertisement was not, it should be remembered, at that time so unprofessional as it would be now. From other sources we learn that he was at that time 34 years of age and already married.

Beside the present treatise, Boghurst was the author of a long poem in English, entitled "*Londinologia, Sive*

* Mr. Brayley seems to have been the first to draw attention to Boghurst's MS. It was drawn upon by the present writer for the article "Plague", in the *Encyclopædia Britannica*, and by Dr. Creighton, in his *History of Epidemics*; and it is even alluded to by Haeser, in his *Geschichte der Medizin*, vol. iii. The proposal to print it was brought before the Epidemiological Society in the Presidential Address, Session 1893-4.

Londini Encomium, The Antiquities and Excellencies of London," which also remains in MS. in the British Museum (*Sloane MSS.* 908, fol. 72-84). It shows the author to have been a most patriotic citizen, but would hardly repay quotation. From notes appended to this poem we learn that he died in London at the age of 54, and was buried at Ditton, in Kent. The notes give a copy of his epitaph at Ditton, which, as it includes all the other particulars that can be recovered about him, is here transcribed.

"Heer lyes Wm. Boghurst, citizen and apothecary of London, Sonne of William of the parish of Ditton [whose family are resident in this county]. He was an honest, just man, skillfull in his profession, and in the Greeke and Latine Tongue, delighting in the study of Antiquity; and plaid exceeding well upon the lute, which he took naturally. He left a sorrowfull widdow and six children, to whom hee afforded commendable Breeding. He died September 2nd, 1685, brought from London, according to his own desire, and heer buried."

Hoping, and indeed believing, that the tombstone eulogy was at least on this occasion well deserved, we leave the worthy apothecary and scholar and go on to speak of his book.

THE MANUSCRIPT.

The manuscript consists of eighty-five leaves, small quarto, neatly written, and evidently prepared for the press. The facsimile of the original title shows its general appearance. There is no evidence that it was ever printed; though it has been thought that the whole impression ready for publication may possibly have been burnt up in the Great Fire which destroyed, as is well known, the stocks of most of the city booksellers. It has been suggested, by Dr. Creighton, that the name at the foot of the title, which is torn off, may have been that of the intended or actual publisher. But it is not recorded in a way to imply this, and I have not been able to trace any known printer or bookseller of the time whose Christian name was Edmund; and it may have been merely the autograph of a former owner of the MS.* In preparing the text

* See, also, Note at end of Introduction, p. xxii.

for publication, some difficulty arose as to how far the eccentric and variable spelling of the original should be retained. Some of the peculiarities of orthography evidently arose from ignorance (as "plauge" for "plague"): others were mere slips of the pen, and others were individual eccentricities which would not have been respected by the printer. It seemed best, therefore, to correct the spelling, for the most part, so as to agree with what was usual in printed works of the period. But a certain number of peculiarities, which seem to have been specially affected by the author, have been retained, and will serve to give some individuality to the diction. The punctuation and the capricious use of capitals have been freely corrected.

Still greater difficulty has been experienced in presenting in an intelligible form the numerous and complicated prescriptions of the old apothecary, obscured as they are by wrong spelling, by puzzling contractions, and by crabbed handwriting. It may be thought, perhaps, that this obsolete pharmacology was hardly worth reprinting; but, on the other hand, a precise contemporary record of the medical practice of our forefathers will always have an historical value, independent of its relation to a particular epidemic; and this historical interest rather gains than loses with the lapse of time. These portions of the work have been carefully corrected by reference to the *Pharmacopœia Londinensis* (edition of 1662), and to contemporary medical works. It is hoped that they have been made tolerably clear; but if some obscurity still remains, the reader will kindly remember that the blame must, at all events, be divided between the author and the editor.

MEDICAL VALUE OF BOGHURST'S TREATISE.

This treatise contains undoubtedly the best medical account of the great epidemic, which has been preserved. In order to substantiate this statement, which constitutes the main reason for printing the document, it is necessary

briefly to speak of the other known medical treatises referring to the epidemic of 1665. The following list contains all which are in the possession of the editor, and appears to be more complete than any which has been published, though doubtless there are other works which have escaped notice. A few are referred to by Boghurst himself at the beginning of his treatise.

BOOKS PUBLISHED DURING OR IMMEDIATELY AFTER THE
EPIDEMIC (1665-6).

1. A Brief Treatise of the Pestilence. Collected by W. Kemp, M.A. 1665. 4to.
2. A Discourse of the Plague. By Gideon Harvey, M.D. 1665. 4to.
3. A Mite Cast into the Treasury of the City of London, a Discourse on the Plague. By Theophilus Garencières, Dr. in Physic. 1665. 4to.
4. *Loimotomia*, or the Pest Anatomized. By George Thomson, M.D. 1666. 8vo. (With a plate representing a post-mortem examination of a pestilential body.)
5. *Hygiene*, or a Discourse upon Air, with Cautionary Rules for the Preservation of People in this Time of Sickness. By Thomas Cock. 1665. 4to.
- 6 *Medela Pestilentie*. Theological Queries concerning the Plague ; also Method for curing that Epidemical Distemper. (By Richard Kephale.) 1665. 4to.
7. *Golgotha*, or a Looking-glass for London, shewing the Causes of the present Plagues, with an humble Witness against the Cruel Practice of Shutting up unto Destruction. By J. V. (printed for the Author). 1665. 4to.
8. London's Deliverance Predicted ; in a Short Discourse on Plagues in General. By John Gadbury (the Astrologer). Licensed August 25. 1665. 4to.
9. A Learned Treatise of the Plague, wherein the Two Questions: Whether it may be Infectious or no ; and whether it may be shunned of Christians by going aside are resolved. Written in Latine by the famous Theodore Beza Vezelian. (Edited by Edward Percivall.) 1665. 4to.
10. London's Dreadful Visitation, or a Collection of all the Bills of Mortality from Dec. 27, 1664, to Dec. 19, 1665. By the Company of Parish Clerks of London. 1665. 4to.

11. Directions for the Cure of the Plague, as for Preventing the Infection, etc., set down by the College of Physicians. By the King's Majesties Special Command. 1665. 4to. (Preface dated May 25th, 1665.)
12. Directions for the Prevention and Cure of the Plague Fitted for the Poorer sort. 1665. 4to.
Anonymus; but refers to Mr. Coniers, at the "Unicorn" in Fleet Street, probably an apothecary, and the author.
13. Several Choice Histories, etc., of the Plague. By Isbrandus Diemberbroick. Translated into English. Feb. 1st, 1666. 4to. (No translator's or editor's name.)
14. God's Terrible Voice in the City. By T. Vincent, some time Minister of Maudlin's, Milk Street. 5th ed. 1667. 8vo.
[Though chiefly theological and devotional, contains the most striking pictures of the state of the city at the time which have been preserved.]
15. Defoe's Journal of the Plague Year, written by "a citizen who continued all the while in London," published in 1722, should also be mentioned, because, though a fiction, it gives a wonderful picture, founded on printed accounts, and possibly on oral tradition, of the epidemic. It has been suggested by Mr. E. W. Brayley and Dr. Creighton that Defoe may have seen Boghurst's MS., but this is purely conjectural, and there is nothing special to confirm it.

Beside contemporary accounts there are some notices written by eminent physicians some time after the epidemic, and by Hodges, Sydenham, and Willis.

16. Nathaniel Hodges' *Loimologia, sive Pestis Nuperæ apud Populum Londinensem grassantis narratio*. 1672. 8vo.
This was translated into English by John Quincy, and published in 1720.
A smaller tract in English was written by Hodges in 1666 (dated May 8th), with the title, "An Account of the Plague in a letter to a Person of Quality." It must have been published then, but is only known by a reprint in "A Collection of Scarce Pieces relating to the Plague in 1665," published in 1721, the original edition having, apparently, entirely perished.
17. Sydenham's account is contained in his *Observationes Medicæ circa Morborum acutorum historiam et curationem*, London, 1676, 8vo (Sect. II, Cap. 2), reprinted in the Latin and English editions of his works. It is unfortunate that this great observer saw very little of the Plague, since he left London at the

beginning of June, when the epidemic was little advanced, and did not return till its decline. As his practice was chiefly among the rich, it is probable that he saw very few cases of "the Poor's Plague", as it was called.*

18. Willis's account of the disease in his treatise, "De Febribus" (first published in 1659), found in the Latin and English editions of his works, is based upon the epidemics in the time of the Civil Wars. A short tract with his name, "A Plain and Easie Method for the Plague, written in 1666 by T. Willis, M.D.," was published in 1691, professedly from Willis's papers, but I have seen a copy dated 1666, and it must have been really printed then. It is of little moment.

19. Of foreign works on the Plague only one need be specially mentioned, which Boghurst has made use of in the theoretical part of his work, viz. :—

Isbrandus Diemerbroeck; Tractatus de Peste. 1st ed., Arnheim, 1646. 4to. 2nd ed., Amsterdam, 1665. 4to.

This, one of the most scientific works on Plague in the 17th century, is remarkable for a number of histories of cases, which give a more exact notion of the disease than any systematic account. It was regarded as the great authority on the plague at this time, and some few cases were, as mentioned above (13) translated into English.

CRITICISM OF PLAGUE LITERATURE.

A few remarks will now be made on some of the above works, to show what relation, if any, they had to Boghurst's treatise. Kemp's treatise (1) is a mere commonplace compilation. The author seems to have been in medical practice, but gives no information as to the existing epidemic. Harvey's and Garencières' works are trivial catch-penny publications, intended to recommend the writers to practice. Harvey (2), writing about Midsummer, makes the unfortunate forecast that the present

* Of the one case which he reports from the beginning of May, he says he is uncertain whether it should be called plague or not; but since it lasted fourteen days, and there is no mention of buboes, it can hardly be so considered. The recorded mortality from plague at this time was very small (see Table at end).

epidemic portended no great mortality. Garencières (3) says: "the plague is one of the easiest diseases in the world to be cured, if it be taken within four hours after the first invasion; otherways and for the most part mortal." He dates his pamphlet September 14th, when the deaths were nearly 7,000 a week!

George Thomson (4) was a chemical physician, and claims great success for his method of treatment. He is the only writer of the time who gives an account of the *post-mortem* appearances of plague.

Cock's pamphlet (5) contains a strong protest, addressed to the Lord Mayor and the Aldermen, against the practice of shutting up infected houses. The rest of the book consists of cautions addressed to citizens returning to town. It probably appeared late in the year.

Richard Kephale (6) was a medical practitioner of some kind. Half his book is theological, half medical, containing a very fair though short account of the symptoms of plague from personal experience, which agrees in the main with Boghurst.

Golgotha (7) is a protest, in most unmeasured language, against the shutting up of infected houses. The writer was not a doctor, but probably a minister. He refers to medical tracts by Mr. Dixon and Dr. Middlethwite (Micklethwaite?), which I have not been able to trace.

Gadbury (8) deals chiefly with astrological matters, and pronounces that the month of October seems to promise well, which was doubtless suggested by the experience of previous epidemics, but hardly borne out. His most important statement is that he himself suffered from Plague at Christmas 1664, but recovered; and that his surgeon informed him he had many patients at that time with the same distemper; but few or none died, and it was kept quiet.

Beza's treatise (9) is theological, and intended to comfort the consciences of those who in such terrible epidemics sought safety in flight.

The collection of Bills of Mortality (10) furnish the most

authentic records of the progress of the epidemic, and have been used by all subsequent writers, especially by Defoe in his well-known narrative.

The Directions set down by the College of Physicians (11) are substantially the same as those issued in 1636 which were much fuller than any previously published. On this occasion, however, there is an appendix of *Chymical Medicines* for "those that were delighted only with such remedies".

The directions for the Poorer Sort (12) is an unofficial publication of somewhat the same kind.

The other publications enumerated call for no special comment till we come to the work of Hodges, which has always been accepted as the standard account of the epidemic of 1665. It will be instructive to compare it with Boghurst's work, first observing that among all the tracts already mentioned there is none which could have been of much use to Boghurst had he known them, and Hodges' book was evidently unknown to him, being published later; and it is therefore with justice that the apothecary claims to write from his own experience. Hodges gives a totally different account of the origin of the epidemic from that of Boghurst. He says it began with the introduction of certain packets of merchandise from Holland, which common fame asserted to have come from Turkey; and that the first deaths occurred in a house in Westminster (other accounts say with greater precision in Long Acre, and that the first sufferers were foreigners) at the close of 1664; and from there it spread through the city, just as in the next year a single spark caused a terrible conflagration. He also says that he saw a single case of plague about Christmas, which recovered.

Boghurst's account differs widely. He says that cases occurred at the close of 1664, and he was credibly informed that cases of plague had occurred for three or four years before in the parishes of St. Giles's or St. Clement's, St. Paul's, Covent Garden, and St. Martin's (cap. iv, p. 73).

The pestilence was checked by the cold of winter, but reared its head again in the spring; it crept slowly along from the west-end to the city, and through the city to the Eastern parishes (cap. iv, 90); also he says it did not spread from one centre, but fell on several parts at once, viz., on the Western suburbs, Southwark, Houndsditch, and certain places within the city (cap. iv, 92).

There can, I think, be no doubt that Boghurst's account is by far the more rational and probable. The gradual extension from east to west, is, as Dr. Creighton says in his *History of Epidemics*, clearly borne out by official statistics, and the point has been seized by Defoe in his reconstruction of the history. The statements of Hodges and others of the bales of cotton from Holland and so forth are not supported by any authentic data, and the mode in which the plague spread through the whole metropolis was not that which the theory of Hodges would require.

We should be led to conclude that the virus of the plague was in London for some years before, perhaps latent since the last epidemic, and now by certain circumstances, as has constantly been the case in the history of this strange disorder, stirred up into the extraordinary explosion of 1665.

In support of this view we may be permitted to give a brief retrospect of the history of bubonic plague in England.

HISTORY OF PLAGUE IN ENGLAND.

During the Middle Ages, though we often hear of pestilences, we have no authentic record of any outbreak of bubonic plague till the arrival of the great pestilence or Black Death in 1348. It is open to anyone to conjecture that some of the earlier mediæval pestilences may have been of this nature, but there is certainly no evidence of it. After this date, however, we have clear accounts of a succession of pestilences due to this disease, during the 15th, 16th, and 17th centuries. They are fully recorded (and

for the first time from original sources) in Dr. Creighton's *History of Epidemics in Britain*. The record shows the astonishing frequency and fatality of the disease. The authentic history of Plague in England, ending with 1666, is thus comprised within a period of about 300 years.

Passing over the earlier periods we come to the 17th century, which specially concerns us. The first great epidemic of this century was the terribly destructive one of 1603. It lingered on for some years, and even in 1609 the mortality was considerable. The second great plague was in 1625, causing great mortality, but almost limited to one year. The epidemic of 1636 was less destructive, but remarkable for its long continuance, considerable mortality being recorded every year up to 1647. After this year there was a sudden drop in the mortality, and the whole period of the Commonwealth and the Protectorate was practically exempt.* A few deaths are put down every year to plague, but the average hardly exceeded fifteen per annum, and the numbers are sometimes so small that it seems doubtful whether they had any significance whatever. Up to 1664 the recorded deaths continued to become fewer, and it must have seemed as if the great terror of London was finally disappearing. At all events, no one dreamt of danger. The proximity of plague at Amsterdam in 1664, and a few sporadic cases in London at the close of the year, may have caused some persons a little apprehension; but certainly no one expected that the epidemic would begin to show itself in May, take a sudden start in June, and produce, in

* The Puritans, not unnaturally perhaps, from their point of view, connected these events with political changes. Each of the great epidemics marked the accession of a new king, James and Charles; while the sudden decline coincided with the final overthrow of the Monarchy in 1648. Even Milton, pleading in 1660 for a "Free Commonwealth", speaks of "the frequent Plagues and Pestilences that *then* [in monarchical times] wasted this City, such as through God's mercy, we have never felt since." Perhaps, when leaving the city, five years later, to escape the pestilence, he may have felt confirmed in his reading of history. There are said to be extant some verses very doubtfully ascribed to Milton, in which the Plague of 1665 is spoken of as a divine judgment on the sins of Charles II. (Garnett's *Life of Milton*.)

the autumn months, a mortality beyond anything previously known in London. As Boghurst himself states, "all prognosticks were vain; and the prophets quite at fault" (p. 20).

The extraordinary fact which struck contemporaries, as it has later historians, with astonishment, is that just when the disease seemed to be spontaneously dying out it suddenly sprang up again in the terrible epidemic of 1665, only to decline almost as rapidly, and then to vanish altogether. Some (the *contagionist* school) believed like Hodges that it was imported from Holland. Others (the *localists*) like Boghurst, that it originated in the old poison still lurking in the soil. On looking into the question, we find that the same problem presented itself in other parts of Europe, and was everywhere solved in one or the other way by opposing schools.

CONTAGIONIST AND LOCALIST EXPLANATIONS OF PLAGUE.

It has always been a question whether the repeated recurrences of plague in Europe were to be attributed to reintroduction of the virus from the East, or to a fresh reawakening of a virus already endemic. Hirsch strongly asserts the former view, but there is much to be said on both sides. It is hardly necessary to consider the extreme *localist* view, that plague originated *de novo* in the insanitary conditions of European cities. London in 1665 was no doubt, according to modern notions, a dirty, ill-drained, unhealthy place; but was not a sinner in this respect above all other cities. There have been, and are, thousands of places equally dirty, where plague has never been heard of; and even supposing that specific diseases can thus originate spontaneously from local conditions, there is a special infelicity in explaining, by conditions present in so many parts of the world, the occurrence of a disease so remarkably limited and local in its distribution. That these conditions supplied a highly favour-

able, and perhaps the only possible *soil* for plague, is undoubted; but they can hardly explain its origin. Cadaveric infection again, upon which so much stress has been laid, is a special favouring condition, but not the original cause. The burial customs of old London were doubtless exceedingly bad, but they remained practically unchanged till the present century, when plague had long since ceased. The epidemic of 1665 did not originate in the City, with its numerous churchyards crowded into a small area, but in the suburbs, where the graveyards, however badly arranged, were few and far apart. These questions, however, are too large for discussion here.

In favour of Hirseh's view, there are the facts that the disease came originally from the East, that a general succession of epidemics from East to West was often observed, and its recession in the 17th and 18th centuries followed inversely the same law. In England, for instance, epidemics were often preceded by outbreaks in Holland, notably in 1625 and 1665, when destructive epidemics had occurred at Amsterdam in 1624 and 1664. In England, too, the incidence of the disease on seaport towns was far more severe than on those inland; and it is extraordinary how much more frequently and severely the East of England, which was in communication with the Continent, was affected than the West. Edinburgh and Leith, Newcastle, Yarmouth, Norwich, and Colchester, are names which recur with terrible frequency in the history of the Plague, while the western ports, Bristol and Plymouth, though they suffered severely, were less frequently affected, and became free from the disease earlier; the last outbreak at Bristol occurring in 1645, the last in Plymouth in 1626 and then from a special infection. There is no improbability in supposing that the eastern ports were often affected from Holland, or elsewhere on the Continent, when the plague was prevalent there in an epidemic form. In the then conditions of locomotion a contagion could more easily be carried over a hundred miles of sea than

over the same distance by land. The infection of Yarmouth before London, in the autumn of 1664, is a striking fact.

With regard to this epidemic of 1665, there is much to be said in favour of an importation from Holland. That was, at all events, the official belief, for in 1663, and early in 1664, great alarm was felt as to this source of danger, the disease being then very destructive in Amsterdam and other Dutch cities. Late in 1663 a lazaretto was established at Moll Haven, and in June 1664, quarantine against Holland was definitely proclaimed, though probably not efficiently maintained.* It does not seem impossible that while the indigenous disease was smouldering on in a mild fashion an importation of fresh virus from a focus of epidemic intensity might be sufficient to start a new outbreak.

On the other hand, there are strong arguments in favour of a local origin of the epidemic from an endemic virus. The frequent succession of epidemics in England during three centuries, the connection of the great epidemics by a few sporadic fatal cases almost every year (if the Bills of Mortality are to be trusted), and the persistence of conditions favourable to the conservation of the infection, are facts not to be overlooked, especially remembering the undoubted tendency of Plague, even in countries where it is quite at home, to recur in periodic waves.

It seems probable that London still contained sufficient plague virus to start a fresh epidemic, when the local and temporary conditions were favourable. The only temporary conditions of this kind that we know of are: first, the rapid growth of population in London, which caused terrible overcrowding, and must have overtasked the ordinary measures

* See the series of papers called "*Remembrancia: An Analytical Index to Records in the Archives of the City of London, 1579-1664.*" Published in 1878. The correspondence between the Lords of the Council and the Corporation is very curious: the central authority, as usual, advocating restrictions; the municipal authority, in the interests of trade, inclined to procrastinate. The declaration of war in February 1665 decided the question.

of sanitation ; and secondly, the long drought in the spring of 1665, which is referred to by Boghurst. The importance of this latter fact has been explained by Dr. Creighton, in accordance with Pettenkofer's laws, but, on the other hand, the great plague-year of 1625 was remarkably wet. The question is still one for discussion, and may be left to the judgment of the reader, guided by the valuable materials which Boghurst contributes.

MILD AND MALIGNANT FORMS OF PLAGUE.

Without pretending therefore to solve this difficult problem, I will point out one feature in the natural history of plague, only recently discriminated, on which our records throw some light. The disease Plague is clearly capable of existing in two forms, viz., the malignant epidemic form, communicable from place to place, and a mild non-febrile bubonic disease, rarely fatal and strictly endemic, not obviously transmissible from place to place. The latter form, *pestis minor*, or abortive plague, observed by Tholozan and others in the East, was recognised by the late Mr. Netten Radcliffe in his Reports and his article "Plague" in Quain's *Dictionary of Medicine*,* and probably has existed in other plague-countries without being regarded as true plague.

Now, in London we hear from Hodges and Gadbury (quoted above) and also from Boghurst, of cases of plague, *of which few or none died*, occurring at the close of 1664, as well as presumably in previous years. Probably, therefore, the few recorded *deaths* corresponded to a relatively large number of *cases* of the mild disease, set down as simple buboes, not as plague. If so, this affection would supply the missing link of continuity between different epidemics.

* See also *Transactions of the Epidemiological Society of London*, vol. iv, 362, and *Encyclopædia Britannica*, article "Plague", by the present writer.

EXISTENCE OF THE VIRUS OF PLAGUE IN THE SOIL.

Another important question connected with plague is the possibility of its being either primarily or secondarily an infection of the soil. This appears to be clearly indicated by the older and recent reports of plague in India and China, where one definite fact alleged is the poisoning of underground animals, such as rats, before human beings are affected. Similar observations are not recorded in any English epidemic, possibly in no contemporary Continental records, though statements of these occurrences as *signs of a coming plague* are met with in some old writers, which are evidently traditional, and derived from other conditions and climates than ours, as is shown by the animals said to be affected.* However, the existence of plague virus in the soil is a well ascertained fact in some countries, and hence more than one writer has spoken of the disease as *miasmatic* as well as *contagious* (Liebermeister, in Ziemmsen's *Handbuch*, article "Plague", as a probable view; and, tentatively, the present writer in the *Encyclopædia Britannica*). Still, in a disease so clearly transmissible as plague, the virus must have an existence also above the soil, and cannot be, like that of ague, purely miasmatic.

Dr. Creighton, in his *History of Epidemic Diseases*, has, for the first time, definitely and clearly formulated the theory of a virus existing in the soil, and applied it, with the aid

* Thus Gilbert Skene, in his *Description of the Pest*, written in Edinburgh or Aberdeen in 1568, speaks of *moles* and *serpents* leaving the earth (animals certainly not met with in the streets of Scottish cities); Lodge (1603), of rats and *moles*. Hodges goes still further afield, speaking of *serpents*, *conies*, *foxes*. But these writers never say that they saw such things themselves. I cannot, therefore, agree with Dr. Creighton that these statements show actual observation of the same facts so often recorded in the East. The origin of all these traditional stories seems to have been the chapter of Avicenna's "Canon" (lib. iv, fen 1, tract iv, eap. 3), from which so many of the commonplaces about the signs of a pestilence, in the European Plague-books were derived; and which may well have been founded on original observations in Arabia or Persia. No such fact is mentioned by Boghurst in London, or by Diemerbroeck in Holland. The former affirms that no brute animals were affected.

of Pettenkofer's theory of soil-water, to explain the origin and spread of the London plague of 1665, as described by Boghurst, whose history of the epidemic hardly bears any other interpretation than that of gradual infection, either of dwellings or of soil.*

Boghurst's own views as to the origin of plague in the soil may be left to the appreciation of the reader, but some of his speculations are curiously like Pettenkofer's theories of soil-infection, allowing for the absence of definite scientific observation; as when he speaks (cap. i) of time being necessary to produce a mature fermentation in the earth, and the resulting effluvia being drawn out of the soil by dry and hot weather.

RELATION OF PLAGUE TO FEVERS.

One other point seems worthy of notice, the relation of plague to the other "fevers", especially typhus or spotted fever. There is no doubt that typhus and other fevers prevailed largely (causing 5000 deaths) during the plague epidemic of 1665, as they had done elsewhere in similar conditions. The question is whether the fever turned into the plague, as some physicians, both then and later, have supposed. It is generally admitted that the aspect and general symptoms of the two diseases have much in common; but Boghurst denies the connection emphatically, saying, "that though plague is generally accompanied by fever, this is no essential part of it; there have been pestilences without a fever, or any signs of putrefaction,

* This view is singularly confirmed by recent observations reported from China; since it is alleged, on the authority of M. Yersin, that the bacillus met with in the bodies of plague-patients has also been detected in the soil. It is also affirmed that while in Hong Kong the epidemic broke out among the human population before attacking the rats, at Canton the epidemic broke out first among the rats; shewing, if true, that in Hong Kong the virus was recently imported, while in Canton it was endemic. It is curious to note that in Canton the population living in boats was unaffected, which is also stated by Defoe to have been the case in London in 1665. (*Brit. Med. Journal*, Oct. 6th, 1894, p. 786.)

and thousands have died of plague without any fever; and the remedies which do good in putrid fever are no use in plague" (cap. iv, etc.). He admits that many people had the spotted fever and plague together, and yet commonly lived! (cap. iv, par. 60). His statement that "all other diseases turned into the plague", seems a little inconsistent; but the same allegation has often been made, and since we know that the coincidence of two specific infections is a rare event, it seems likely enough that so powerful a virus as that of plague should overpower others. Boghurst also enumerates the prevalence of spotted fever, small-pox, and measles, as among the forerunners of a pestilence.

The relations in time of the "fevers" to plague were not constant. Ever since the decline of plague in 1648 (and perhaps before, but the records are imperfect) there had been a great mortality from fever, and this increased from 1658-9 onwards, so that during the fifteen years preceding 1665, in which the plague had all but vanished, the fevers were gaining ground. The mortality from fever in 1664, though high, was not above the average of seven preceding years, and it seems unreasonable to suppose that the prevalence of fever had anything to do with the sudden outburst of plague in 1665, or that there was anything approaching to a conversion of fever into plague, as some contemporary physicians believed. In 1665 a very large mortality from fevers is recorded, but this would only seem to show that the same seasonal conditions which fostered plague fostered fevers also. On the whole, the supposed change of one form of fever into another, or into plague, seems to have been an error, natural enough in the infancy of clinical diagnosis, but still an error; and the malignant epidemic plague was probably developed out of the mild endemic, which went on from year to year.

Considering that it is hardly more than half-a-century since three diseases so distinct as typhus, enteric, and relapsing fever have been clearly discriminated, it is not wonderful that two centuries ago the whole family of

fevers seemed, to even good observers, a sort of protean dance of misty forms, changing their shape under the influence of shadowy forces, like the "Epidemic Constitution."*

Only researches such as those which have been lately carried on in China by skilled observers are likely to bring this ancient disease within the ken of modern science, by isolating its living cause and studying the biology of the organism, both in and out of the body.

The following short chronological table of plague-years and mortality may be convenient for reference.

DEATHS FROM PLAGUE IN LONDON IN THE SEVENTEENTH CENTURY,
ACCORDING TO THE BILLS OF MORTALITY.

1603 (epidemic)	33,347	1648	611
1609 (minor epidemic) ...	4,240	1650-1662 (average) ...	15
1625 (epidemic)	41,313	1663	12
1636 (minor epidemic) ...	10,400	1664†	5
1637-1646 (average) ...	1,500	1665 (epidemic)	68,596
1647	3,597	1666	1,998

MONTHLY MORTALITY IN 1665.

January	0	July	6,137
February	1	August	17,036
March	0	September	26,230
April	2	October	14,373
May	43	November	3,449
June	590	December	734

The above statistics are taken from *London's Dreadful Visitation*, and Graunt's *Observations on the Bills of Mortality*. They present some trifling discrepancies, due to their being presented in a condensed form.

* In the Weekly Bills of Mortality for 1665, "Ague", "Fever", and "Spotted Fever" are clearly distinguished; but in the statistics here referred to all fevers are put together. The whole may be seen in Dr. Creighton's *History of Epidemics*, p. 533.

† At the close of 1664 some cases of mild plague, with very few deaths.

NOTE.

IT has been suggested to me that the name at the foot of the title-page of this MS. may be that of Edmund Curll, the well-known (or notorious) publisher in the eighteenth century, and what remains of the surname so precisely corresponds with this interpretation, that I have no doubt it is the correct one. As, however, Curll was not born till 1675, and did not begin to publish till 1706, his name could have had no relation to the projected original publication; and, as suggested above, probably denoted merely ownership. If Curll ever intended to bring out the tract, it would probably have been during the panic about the Plague, in 1721; and of such publication there is no trace. As he dealt largely in MSS., he most probably sold this one to Sir Hans Sloane, with whose library it passed to the British Museum. The name "Curll" may perhaps have been intentionally torn out, as being of bad odour, and one that Sir Hans Sloane would not have been pleased to see on his books.

J. F. P.

Edmund Curll

Λογιογραφία

Or an Experimentall Relation
of the Plague of what hath happned
Remarkable in the last Plauge in the
City of London. Demonstrating its
Generation Progressse forunning and
subsequant Diseases and Accidents (conten-
ting) Signes, Good and Evil, ^{Signes,} Meanes of Preser-
vation Method of Cure generall &
Particular, with a Collection of Choyce
and Tryed Medicines for preservation
and Cure by the practitall &
Experience and Observation

of
William Boockhurst
Apothecary in s^t Giles in y^e fields

London
Edmund 1666.

Λ Ο Ι Μ Ο Γ Ρ Α Φ Ι Α

Or an Experimentall Relation of the
Plague, of what hath happenèd Remarkable in
the last Plague in the City of
London ;

Demonstrating its Generation, Progresse, forerunning,
and subsequent Diseases and Accidents, Common Signes,
Good and Evill Signes, Meanes of Preservation, Method
of Cure, Generall and Particular, with a Collection of
Choice and Tried Medicines for preservation and
Cure by the practicall Experience and
Observation

OF

WILLIAM BOGHURST

APOTHECARY IN ST. GILES IN THE FIELDS

LONDON

1666

PREFACE.

TO THE READER.

HAVING collected a few scattered observations during my practise upon the Plague, which continued these eighteen months, viz., from the 7th of November 1664, to the latter end of this May last past, 1666, and some of my Acquaintance being desirous to see them; considering that none hath printed anything either since this Plague or that 40 yeare since (which I something wonder at); for those two or three bookes printed last yeare about the middle of the Plague or a little before, as Mr. Kemp's booke, and Gideon Harvey's, Mr. Garencière's, and three or four other small things, spoke nothing from experience.* Neither could they, for the Authors had not practized at all at that time or but very little, soe that they only discoursed a little upon plagues in generall, and gave a few directions of preservation and Cure. They wrote only Collections, Traditions, and Conceits, and the Colledge's booke* had nothing in it but a few directions for cure and cleanness to Magistrates, Searchers, Warders, etc., and a few odde medicines, inward and outward. That cure of Carbuncles they had out of Johannes Vigo his Opera Chirurgica (folio 62)†, which they appoint by burnings and defensatives, but it is altogether to bee condemned, as the ill successe of that way of cure have proved this yeare. Many able persons might have saved mee this labour, and have done it better, especially if they had not been timorous, and, like Foxes in a storme, run to the next borough. Among forraigne authors, Diemerbrooke the Dutchman deserves the greatest commendation.* In some things hee seemed too singular and credulous; hee hath, indeed, made a pretty bigge booke, and hath shewed a great deal of learning and reading and Experience alsoe, but hath filled it up with history and large annotations and multitudes of long, tedious medicines and Receipts. The rest, which is the Text, two sheets of paper would have held it. But I had much to say concerning this Plague which Diemerbrooke could say nothing

* For a notice of these books, see the list in the Introduction.

† *Works of Chirurgery*, by John Vigon. Eng. Trans., 1571, fols. 29-30.

of. Besides, many things fell out here cleane contrary to his doctrine and experience.

I have endeavoured to write with as much brevity as I could, though I could have writt much more of this disease, yet none of it superfluous. Neither have I suckt out of other bookes, but I confess I have been very much straitened in tyme, soe many businesses of other kinds having occurred, that I had noe more leisure than about half an houre in a day to write, soe that I have been neere three months penning this Treatise, which I could have finished in a fortnight had I been master of my tyme, and have found that true which Horace said of making verses, *Carmina secessum scribentes et otia quærent.* If any thinke it had been more credit to have writt in Latin, I answer, there are soe many Latin authors already, though few that have writt particularly (and done it well) concerning the Plague, most of them haveing inserted a little among their other workes; and generally all follow one another like sheepe through a gap, and therefore it would only have beene taken for a thing of course, and not minded, besides it had not beene soe good for generall reading and sale, and many have a desire to bee satisfied in many things concerning the Plague, which doe not understand Latin. I have omitted many things which I had collected on this subject, because I would not bee too tedious nor render the booke deare and bigge. I have writt nothing from hearsay or from bookes or from the testimony of others or my owne conceit, but all and onely from experience and triall; and I had the more advantage to doe this, being not at all fearefull, but rendering my selfe familiar to this disease as to any other, whereas many because of their fearefullnesse came not to close practise, but stood shivering at a distance, and profited the less both themselves and their patients, and commonly lost their lives to boot.

CHAPTER I.

OF THE PLAGUE AND ITS CAUSE, WITH SOMETHING CONCERNING FORMER PLAGUES.

As Death which is stiled by Job the King of Terrors, soe all diseases the precursors of it are the fruits of the first curse denounced upon man for his apostasy and disobedience to God, and noe disease in the great Army of diseases which assault our life is more dreadfull and deadly than that of the pestilence; hence it hath gained the name of Death in the Chaldee Paraphrase and version of the Septuagint, the name of mortality among Ecclesiasticall writers and fathers of the Church, and hath retained this name in our own mother tongue. This Disease hath raged and made sad havocke in the world, sometymes more universally spreading itselfe through most places of the known earth, sometymes more particularly fixeing upon one City or Region.

Of universall or œcumenicall Plagues the most spreading and destructive that I have met with in History are these four. First that of Athens, which fell out in the Peloponnesian War in the yeare of the world 3520, before Christ 428, described most fully by that eminent Historian Thucydides in his second booke, who had beene sick of it himself, but restored, and from him by that great promoter and enlightener of the Epicurean or Corpuscular Philosophy, the Poet Lucretius, in the last part of his last booke. This Plague, though it bee vulgarly called the Athenian Plague because it did great execution there in that City, yet indeed not on Athens alone, but as Thucydides tells us, beginning at Æthiopia, overran Affricke and transferred itself into Asia and thence into Europe.

The second furious or œcumenicall Plague which hath occurred in my Reading was in the Raigne of Vibius Gallus and Volusianus his sonne, according to Calvisius, in the year of the world 4302, of Christ 253. This Plague is also related to have its Originall in Æthiopia, and from thence to have diffused itself into all the Provinces of the Roman Empire, and to have lasted 15 yeares without intermission. How it raged in Alexandria and Ægypt wee understand from an Epistle of Dionysius, the bishop of that city at that tyme,

recorded by Eusebius in his 37th booke, Cap. 22. He tells us it fell promiscuously upon the Heathen and the Christians, though most heavily upon the former, that noe house was free from the dire effects of its rage. In other parts of Affrique wee understand from St. Cyprian, the bishop of Carthage, in his excellent sermon *de Mortalitate*, made on purpose to animate and strengthen the Christians who now joynt and fellow-sufferers with the Heathens *unde presentis mortalitatis copia*, as hee tearmes it, large measure of the then mortallity proceeded. And of its rage at Rome, wee find observed out of the Roman History by Calvisius that there dyed of it dayly to the number of five thousand, and therefore Brightman and Mead, both men sufficiently learned, in their Commentaries upon the Revelations interpret the plague to bee one of the fearfull Judgments foretold to breake forth upon the opening of the fourth Seale (Rev., Chap. vi, 8). And Justus Lipsius, a Critick of noe ordinary reading, saith of this Pestilence in his book *de Constantia*, lib. 2, *non alia nunquam major lues*, etc., that his reading did not afford him an example or precedent of a greater plague considering the many countries it infested or the severall yeares that it lasted.

The third universall Plague was that which happened in the Raigne of Justinian and tooke its beginning in the yeare of Christ 532, and this also as the former is sayd to have descended from Æthiopia. We have a copious description of it by Procopius in his *Persicorum*, lib. 2, and wee are informed by him that it raged very much in Byzantium or Constantinople for three months space, and that when it was in its height there dyed of it every day ten thousands and upwards; and this is the Pestilence related by Evagrius the Ecclesiastical Historian in his 4th booke, chap. 28, which lasted as he sayes 52 yeares, not continuall but by severall returnes and revolutions, and of this Pestilence hee was sicke himselve, and had a rising in his groins. And Greece shared not only in the contagion of it, but also Italy, as wee reade in Paulus Diaconus, and it swept away Pope Pelagius, the predecessor of Gregory the Greate, about the yeare 580, for I conceive this Plague to bee that in the raigne of Justinian propagated into remoter Countryes and lengthened out to this terme much according to the forementioned computation of Evagrius. It also overran France in the yeare 583 and robbed King Chilpericke of two sonnes, and Guntheraund, King of another part of France, of his wife (see Calvisius in the year 583). And this I conclude to bee that which plagued the Britaines here in that vacation betwixt the

Romans Government and Saxons in Vortigern's tyme, when the living could scarce bury the dead.

The 4th œcumenical Plague which I have taken notice of was in the yeare 1347, *quæ violentissima fuit et totum mundum pervasit in annis sex. Ita vastavit ut ne tertia pars hominum superesset* (they are the words of Calvisius). It was most violent and ran over the world in six yeares, and soe wasted Europe that not the third part of men were left alive. To omitt other parts and see what it did at home in our owne Country, Mr. Cambden reports in his *Britannia* that in the yeare 1348 this plague was so hott that in Wallinford in Barkshire it dispeopled the Towne, reducing their 12 churches to one or two which they now retayne. In London it had soe quick an edge that in the space of 12 monthes there was buried in one churchyard, commonly called the Cistertian or Charterhouse, above fifty thousand. They write further that through the kingdom it made such havocke that it tooke away more than halfe the people, and it is noted there dyed in London alone betweene the first of January and the first of July 57,374 (see Daniel in 22 Edw. 3).

Of the Particular Plagues (to passe by those in sacred story, as the death of every first born throughout the Land of Egypt in one night, the death of one hundred eighty-five thousand of Sennacherib's Army in the same Compasse of tyme,—to passe by these as supernaturall and miraculous), if wee looke into profane story wee shall find the Destroyer of mankind, the Pestilence, to have beene very remarkable in some countreyes and cityes when there was noe universall Contagion, as that at Rome in the Consulship of Quintilius Varus and P. Curiatius Tergeminus, about three hundred yeares from the first building of the City, wherein, according to Livy, one moiety of the Inhabitants, one of the Consuls, Quintil. Varus, and four Tribunes of the people perished.

I might give other instances out of Livy, but I omitt them, and recite only one more of a Pestilence in that City in the Raigne of Titus the sonne of Vespasian, mentioned by Suetonius in the life of this Emperor, and hee sayth it was *Pestilentia quanta non temere aliam*, etc., such a Pestilence as wee shall not easily meete with a parallel, and Eusebius saith it was so great that for some space of tyme neere upon ten thousand dyed daily, as by their Ephemerides or Bills of Mortality appeared. And it is reported of Grand Cairo in Ægypt that it is visited every seventh yeare with a dreadfull pestilence, and that it is conceived to bee in good health if there dye not above a thousand a day, or 300,000 within the

yeare, as Heylin saith in his Geography. And these things I have layd downe as a lover of History, in Confirmation of that saying of Solomon (Ecc. i, 10), "Is there anything whereof it may bee said, Loe this is new! It hath beene already of old tyme which was before us?" That wee may more clearely see that good men have fallen under this common scourge of mankind as well as bad, *Quid enim in hoc mundo non commune cum ceteris quam diu adhuc secundum legem primæ nativitatis manet caro ista communis?* saith St. Cyprian to the Christians who stumbled at this piece of providence in his tyme (*Sermo de mortalitate*). Nay, good men have beene sooner taken away than bad, as it was at the Plague at Athens, *Διεφθέροντο καὶ μάλιστα οἱ ἀρετῆς τι μεταποιούμενοι*, those dyed most that had any goodness or vertue in them, saith Thucydides, because they looked upon themselves obliged, as it followes in the same Historian, not to fly and leave their friends, but to helpe them in their misery. And Dionysius informes us that the same fate attended the Christians in the Plague at Alexandria. "The best of the brethren dyed because they did not separate themselves, but sedulously administered to the sicke in their necessityes." Hee that hath a minde to heare of more Plagues may reade a great catalogue of them in the latter end of Athanasius Kircher in his booke called *Scrutinium Pestis*, also in Diemerbrook his Booke of the Plague.

Now I shall make some short inquiry in the nature and causes of the Plague as a student in Physick; and as the essence and quiddity of all things, and soe of all diseases, are very abstruse partly in themselves and partly to our understandings, which with the Fox in the fable lick only the outside of the Glasse, as haveing noe intelligence but what they receive from the outward senses, which in most things are very dull and doubtful informers; soe among all diseases the nature of none is soe mysterious as that of the Pestilence, and therefore it is called by the psalmist the pestilence that walketh in darkness, *quiu causæ ejus latent*, as Grotius saith, and this disease hath beene the more a Riddle to us because men's feares have made them strangers to it and fly it, at least hindred them from those narrow, accurate, and watchfull observations upon its motions, which are requisite for the beginning of knowledge; as Diemerbrook saith, "noe man had writt particularly of many things happening in the plague before hee did, being frighted with the Disease it selfe." That of Helmont is too true in his Treatise, *De Peste; ipsimet doctores et scribentes primo*

aufugiunt.* The great Doctors and such as undertake to write about the disease are the first that run away from it, and soe as it followes, *omnis illorum doctrina fundamento putationis innititur*, and therefore all their learning about it can bee but opiniative and conjecturall. Now the first question that occurs in Moderne Physitians about this disease is *an sit morbus totius substantiæ*, how properly the question is worded I shall not dispute, let that rest upon Fernelius, who was the first coynor of it, but their meaning is this, whether the Pestilence is *Morbus intemperici*, a disease which proceedes from the excesse of some manifest quality as heat, moisture, or from some venomous quality, occult or unknowne to us which doth immediately prey upon the vitall spirits or principles of life, or, in a word, whether the disease may be reduced to some manifest quality or to some occult quality; and the latter writers, and those the most learned and judicious, generally agree in this, That the *Continens causa*, that I may use the words of Taurellus in *Methodo Medicæ Prædictionis*;—*nec putredo nec inflammatio sed occulta quædam et venenata vis*, neither the putrefaction nor inflammation of humors produced by the excesse of some manifest quality as heat, cold, moisture, etc., but the contagious influence of some peculiar poyson or venom, immediately seizing upon the heart and spirits. And this is the judgment of the learned Gregory Horstius in his *Centuria Problematum Therapeuticorum* (*Decad.* 10), and of Sennertus in his Treatise, *De Peste*, Riverius, *De febre pestilentiali*, of Saracenus, Valleriola, and Fernelius, *Omnis pestilentia cæca et delitescens est causa, et aliunde quam ex primis qualitatibus aut ex putredine profecta* (*De abditis verum causis*, lib. 2, cap. 12).

And those learned men, who will have the pestilence essentially and formally a fever, as they have been greatly divided among themselves in the explication of their opinion (as you may see in Horstius the place above quoted), soe they all greatly wandered from the truth, for there have beene pestilences without a fever or any signs of putrefaction. Wee receive it not only from the Testimony of Hippocrates in the third of his Epidemicks in sundry passages, and from the Testimony of Galen in his exposition of that booke, but from the experience of severall later physitians.

The effects of the Pestilence are soe strange and horrid, and raise such tragedyes, which cannot be reckoned meere effects of putrefaction, and of the exorbitancy of manifest qualities.

Those remedies which resist putrefaction and availe in

* Van Helmont, *Tumulus Pests*, 1644, p. 5.

meere putrid feavers are insignificant and of noe value in the pestilence.

Soe that the Pestilence is not a bare putrid feaver, though wee may fancy it is putrefaction in the highest degree of exaltation, yet this must not bee denied but that it is generally accompanied with a feaver, but this is not of the essence and constitution of it, but a consequent and effect flowing from it.

The essence then of the Pestilence is lodged in some peculiar venome that is contrary and destructive to the vitall principles of man. That this venome is a body or concretion of many little bodyes, though very subtle and invisible, can bee noe doubt for those that have outgrown Aristotle and are acquainted with the Epicurean or corpuscular philosophy; and for the nature of the pestiferous corpuscles and the manner of their propagation in the Air and humors of the body, light may bee had as from the Epicurean Hypothesis in generall, soe particularly from Lucretius in the end of his 6th booke and Gassendus in his *Philosophiæ Epicur. Syntag.* (cap. 17). But for the shape and figure of these Atomes or small bodyes, which is the foundation of their activity and of that power whereby they corrupt the texture, alter and change the motion of these corpuscles or particles which compose the spirits and blood, wee can say nothing to satisfaction; they fall not under the eyes' perception, though assisted with the best inventions in perspective wherein this last age hath furnished us with, or any other sense, and therefore wee may conclude with the words of Fernelius (*de abditis rerum causis*, libr. 2, cap. 12), "The seedes of the "Pestilence are soe hidden and removed from sense that wee "see them better in their effects than we can in themselves."

But another question there is, whence this venome or pestiferous corpuscles are derived, to what wombe do they owe their birth and originall, whether they are derived from the heavens or starrs, or secondly from some corruptions or Humors in man's body, and soe propagated from one to another, or thirdly from the Bowells or Cavities of the Earth? As for the first, though it hath beene a catholique and received opinion among Phylosophers and Physitians that the malignant conjunction of some heavenly bodyes have by their influence infested the Aire and soe engendered the Pestilence, yet could I never understand from anything I have read in them the manner how. Yet let me adde thus much, that if we suppose the universe, according to the Cartesian Hypothesis, to bee made up of severall Vortices and every one of them to bee furnished with his peculiar Sun and

Planets or illuminated Earths, and if wee suppose a Comet to bee nothing but the conflagrations of one of these earths or Planets from the eruption of its central fire, perhaps some fumes arising from this Conflagration may insinuate themselves into the neighbouring vortices to the polluting and contaminating the aire ; soe a comet may not only be a signe or forerunner as many would have it, but also the cause of a Pestilence. But if this conceite seems too romantique and fantastick let it passe for such ; for upon many considerations noe great weight is to bee layd upon it, yet it hath more of probability in it than the old received way of the Planets infecting and defiling the Aire.

For the Plague ariseing from the corruption of humors within us and soe spreading itselſe amongst others by contagion, though it bee asserted by Riverius (*de febre pestilenti*), by Pareus, and by Horstius (*Institut. Med. disputat.* 6, quest. 9), *humores in Corpore humano sæpius adeo corrumpi posse ut naturam veneni inducant*, And Horstius cites the Authority of Galen for it (libr. 6, *de locis affect.*, cap. 5, and in his Comment upon the third of the Epidemickes), yet hee explained it soe darkly that a criticall examiner of things can receive noe satisfaction from his explication ; and how the humors of the body under the notion of being hott, cold, dry, or moist, or endowed with such other elementary qualitiyes should produce such horrid symptoms and effects as we find in such malignant diseases I cannot understand, for it seems to be wholly beyond the sphere of their activity. Venoms may bee gendered in us I dare not deny, and it seemes also to bee the Judgement of that great Ornament of the University of Oxon., Dr. Willis, who in his booke *De Febribus* (cap. 12, *De feb. malign. seu pestilentiali*), where speaking of venomes and the strong effects they produce upon the spirits and humors of our bodyes hee tells us of such venoms, "*sæpe in corpore nostro gignuntur*, they are often engendered in our bodyes." And that illustrious Virtuoso Mr. Boyle, in his Usefulness of Experimentall Philosophy (Part 2, Essay 2, page 40) tells us that a very eminent person complained to him that in the fitt of a distemper, which almost as much puzzled her physitians as herselfe, she sometymes vomitted up something so sharpe and fretting that after it had burnt her throat in its passage almost like scalding water ; it did not only staine the silver vessels that received it, but also did work upon them as if it had beene a corrosive menstruum. And the same honorable person a little above (page 36) leads us into the discovery of the cause of such stupendious effects in the body. I shall give you his owne wordes.

“ Though I am unwilling to meddle with medical contro-
 “ versies, and am apt to think that Chymists are apt to speak
 “ somewhat too slightly of the humours of the humane
 “ body and allow them too little a share in the production of
 “ diseases, yet (to skip other reasons) the strange stories
 “ related by Skenkius and other eminent physitiens of the
 “ corrosiveness of some juices, which rejected by urine or
 “ vomits, have beene able to boyle on brass, fret linnen, and
 “ staine silver ; together with some odd observations of this
 “ nature ourselves have had opportunity to make, doe very
 “ much incline us to believe, that the generality of former
 “ physitiens have ascribed too much to the Humors, under
 “ the notion of their being hott, dry, cold, and moyst, or
 “ endowed with such other elementary qualities, and have
 “ taken a great deal too little notice of the saline (if I may
 “ so speake) and sulphureous properties of things. And in
 “ this opinion I am not a little confirmed by the authority of
 “ Hippocrates himself, both in other passages, and especially
 “ where hee saith, *Non calidum, frigidum, humidum aut siccum*
 “ *esse quod magnam agendi vim habet, sed amarum et salsum*
 “ *et dulce et acidum et insipidum et acerbum*, etc., are the
 “ things which, though inoffensive to the body whilst they
 “ duly allay each other, prove hurtfull to it, and distemper it
 “ when any of them comes to sever itself from the rest and
 “ grow predominant.”

Soe that it appeares from him that there are other agents
 in the body besides the humours and the first qualities, by
 which wee may solve the Phenomena above-mentioned, and
 others of the like nature, which agents and active particles,
 while severed and disjoyned, prove innocent and harmless,
 but when they fall into combinations and gett strength by
 their association they become authors of many Tragedies and
 wonderfull changes in the bodyes of man. Wee need go no
 further for an instance than to that common yet malignant
 disease of the small-pox, whose cause is connatural to us and
 born with us, according to the received opinion, as is owned
 and handsomely explicated by Dr. Willis in his book *De*
febribus (cap. 15, *de Variolis et Morbillis*). His words are
 these : “ In a woman’s womb (otherwise than in most other
 “ living creatures) there is generated a certain Ferment,
 “ which being communicated to the mass of the blood, affords
 “ to it vigour and spirit, and then at set periods procures a
 “ swelling up and an excretion of the superfluous blood. But
 “ at the time of conception, when the menstrua wholly cease,
 “ very much of this ferment is bestowed on the Fœtus or
 “ child, and its particles being heterogeneous to all the rest,

“as a certain extraneous thing, are confused with the mass of
 “Blood and humours, with which being involved and separated one from another, lurk or lie hid a long while. Yet
 “afterwards, at some time being moved or stirred up by some
 “evident cause, they ferment with the Blood, and induce to it
 “an ebullition, and then a coagulation, from whence many
 “symptoms of this disease arise.”*

So then that malignant diseases may be produced this way, and perhaps here and there the plague itselfe, but that pestilence when epidemicall should have noe other cause I am not satisfied. There must bee other agents disseminated through the air which surrounds us which wee continually breath in, which must produce soe universall and spreading an effect, though Helmont seemes to speak something agreeing to what was said before in his *Tumulus Pestis* in these words : *Totum intus nostri exitium materialiter et formaliter absque externo adiutorio subinde conficitur.*† And therefore, in the third place, my opinion falls in wholly with those who make the earth the seminary and seedplott of these venomous vapours and pestiferous effluvia, which vitiate and corrupt the Aire, and consequently induce the pestilence; and that there are such vapors destructive to the principles of life included in the cavities of the earth may be evident to any one that shall but reflect upon those damps frequent in mines and colepits, which in a moment suffocate the spirits of those that are employed about that work, and extinguish the Lampe of Life.

How many poysoned mineralls are there in the Bowells of the Earth! And I remember some Author or other who saith (I think it is Renodeus) that those men which digg in the mines seldome live above forty yeares. And Sennertus, speaking of the atheisticall life of Paracelsus, saith hee had a servant which hee kept to look after his stills, and that now and then by opening of his stills, or if it chanced not to bee close locked, that the vapours gott out a little, it put the fellow into such paroxismes and convulsion fitts that hee lay oft for dead. Besides, how many mortiferous and venomous vegetables are there growing upon the superficies of the earth, all which are nothing else but concretions or grosser consistences of those virulent Particles, which being more diffused, rarified, and spread abroad, fill up the vacuities of the Aire, and render it pernicious and harmefull to the animalls that breath it in, as Poyson injected into ponds renders that element fatall to fishes, its inhabitants. And to those may

* I have borrowed this translation from the English version, “Of Feavers”, published later than this MS.—ED.

† *Tumulus Pestis*, p. 68.

bee counted as well that those venomous Animals may have their share in helping on; nay, Athanasius Kircherus doth say downe right, that these increasing in number, either dead or alive, may bee a sole cause to infect the Aire and cause a great Pestilence.

Noe man acquainted with history can bee ignorant how frequently Earthquakes have preceded, I may not say produced, remarkable Plagues. As an earthquake at Venice once did, as Mr. Howell relates in his History of Venice, which overthrew many houses, and presently after came such a sweeping plague that it almost quite unpeopled the place, and the first Plague wee reade of in the Bible (except wee count the death of the firstborne in Ægypt, a plague) immediately fell out after the opening of the earth and swallowing up Korah and the rest which dyed, 14,700 (Numbers 16). Yea, if wee may believe authors sometymes, the breaking open of a small hole or sepulchre, as it happened in the dayes of Marcus Aurelius Antoninus at Cilicia, where some Roman Soldiers breaking open a hole in the ground of a tombe gave vent to such vapours which infected not only themselves and the whole Army, but most part of the world. But Diemerbrooke counts this a mistake; soe doe I, for who can believe soe small an occasion should infect the whole Aire? But by what hath beene aforesaid, we may well resolve with Helmont that the matter of the Plague to bee nothing else but *fræcidum gas terræ*, as he termes it, *i.e.*, as himselfe explaines it, *Silvester spiritus veneno tinctus*,* or a venomous vapour arising from the Earth, and as this is the opinion of severall learned Physitians, soe particularly of Dr. Willis (*De Febri Pestilent.*), who very ingeniously explaines it as hee doth all other things hee undertakes. I know the learned Isbrandus de Diemerbrooke, a person well versed both in the theory and practise of this disease, walks in a path by himselfe, and makes the cause of the Plague to be *aliquid de novo generatum*, some venome created by God immediately propagating it selfe like a ferment in Leven, through the body and masse of the Aire to the destruction of Animalls. I will now give you his owne wordes in his treatise, *De Peste* (chap. 8, libr. 1) *pestis seminarium est exiguum quid pessimâ summâque venenosâ qualitate; maxime noxium, in et ex aere ipsa Dei verbo genitum; quod instar acerrimi fermenti sese dilatans aerem hic illie certo modo corrumpere ejusque multis particulis pœculiarem quandam veneni speciem hominibus aut interdum brutis animalibus speciatim infensam imprimere at que ita se longe lateque diffundere potest.* I wonder that this

* *Tumulus Pestis*, 1644 p. 68.

learned man should fly to the Creation and miraculous production of the pestilent seminaries by God without any necessity, and the occasions which hee renders as leading him to this opinion have but little weight or cogency in them. Though they lye scattered in his booke wee may sum them upp under these three heades:—first, the effects of the Plague seeme to exceede the power of naturall causes; 2ndly, God in Scripture is made the Author of it; 3dly, God in the beginning created all things very good, and therefore this venome which causeth the Plague can bee noe issue and product of the first creation, but something created *de novo* since the fall for the punishment of man's Transgressions.

For answer to the first that the effects of the Plague seeme to exceede the power of naturall Causes, if wee consider the quicke and suddaine impression made by it upon the body, and the contagion of it, though I confesse these effects are unusuall and rare; yet who can say they are beyond the power of any naturall agent, or the efficacious impressions of any malignant vapour or venome, unlesse hee had made an inventory of all the poysons in Nature's Storehouse, whether animall, vegetable, or minerall, and could give us a full discovery of all their natures and wayes of operation; and this the greatest physitians and philosophers are not able to do. For *Maxima pars eorum quæ scimus est minima pars eorum quæ nescimus*; and must we ascribe every effect of the cause whereof wee are ignorant to some cause produced *de novo* and immediately from God? then for ought I see wee shall make noe end of multiplying new Creations and miraculous productions of things every day contrary to the joynt Judgment of all Divines and metaphysicall writers whatsoever, and for anything I see wee must acknowledge *το Θεϊον* (as some would interpret that of Hippocrates), not only in the Plague, but in every Ague, Epilepsie, or any other disease, either chronic or acute, whose cause wee are not acquainted withall. Though the effects of the Plague bee and are unusuall, yet that they are not supernaturall we may find by comparing them with the known effects of severall naturall agents. Doe not many poysonous damps and evaporations of minerall substances suffocate the spirits and extinguish life in a moment? soe also doe many diseases; and for contagion doe not many other diseases cause infection as well as the Plague, as the itch, small-pox, and French-pox, rabies canina, leprosy, and many others whose cause noe man doubts to bee naturall, though they infect not in soe high a measure and degree? And according to the old rule *magis et minus non variant*

speciem, the Plague may be still the effect of some naturall poyson, though of more penetrating particles and greater efficacy then any wee know. And indeed this learned man grants the matter *ex efficiente* the plague to bee a poyson, and to diffuse it selfe, and worke as other poysons doe, though more efficaciously and vigorously. But it must be a poyson created *de novo* for the punishment of sinne—but why not *a principio*, as the materialls of many other Judgments were and layd up among other Arrowes of the Almighty in the Great Magazine of the Creation to bee drawne forthe when hee is pleased to execute his Justice upon Sinners?

And that it is soe I shall cleere up more fully in answer to his following Arguments, and soe wee come to his Second Argument—that God in Sacred Scripture is made the Author of the Plague. I answer, these Scriptures which he cites make him Author also of famine and war, as of pestilence. Now, how is God Author of warr? is hee so by creating weapons and forming Armies in the sky, and sending them downe thence upon us? Noe such matter—but only by letting loose the passions and whetting the spirits of men, of one nation against the other; the instruments hee makes use of are not Ætheriall hosts descending out of the Clouds to invade, but men of the same mould, partakers of flesh and blood. Soe in bringing famine hee threatens noe venome for corrupting the fruites of the earth, but hee either overchargeth the ground with raine and so the seed is rotten under the Clouds (Joel, i, 17), or the concurrence of some second causes intends the heate of the Aire, hinders the generation of the Clouds, or diverts them from shedding their moisture upon this or that place, bringing raine upon one city and not upon another. Or hee calls together swarms of Locusts, Caterpillers, and other known Insects to prey upon the fruites of the ground, as we reade at large in the first and 2nd Chapters of Joel. Now as God brings warr and Famine not by any new-created Agents, but by the ministry of known and second Causes, makeing them the Executioners of his Decree upon Mankind, soe wee cannot with reason suppose hee doth otherwise in the Pestilence.

And soe I descend to the third Reason that God in the beginning created all things very good, and therefore this Pestiferous venome which causeth the Plague can be noe issue and product of the first creation, but something created *de novo* since the fall for the punishment of man's transgression.

Answer.—But if venomous creatures and venoms bee not capable of this Attribute "Good"—in Moses his sense—let

this Learned man consider that hee must make the Serpent none of God's Creation ; but wee find this venomous Beast in Paradise before man's apostasy and fall, and if poysonned animalls were created *ab initio*, why not poysonous vegetables and mineralls ? Therefore this Learned man mistakes the meaning of this word Good, which hee might have learned from every common writer of metaphysicks. Good is a relative or respective terme, and denotes an agreableness in anything to the nature or to the ends or intentions of some being besides it selfe. Now what was principally in God's intentions when hee reared up this Fabrique of the world but the forming of man ? Man was to bee his Image and representative, and wherein doth man most resemble God but in wisdome and understanding whereby hee beares Dominion over and makes use of all the rest of the Creatures, for *τέχνη κρατούμεν ὧν φύσει νικώμεθα*, saith the old Poet. If God had not made venomous and hurtfull Creatures as well as others, man would have wanted objects whereon to exercise his reason and prudence ; this quality which renders him soe like his Maker would have beene invisible and unseene, yea idle and uselesse.

Now, because I will not be too tedious about these nicetyes about what and whence the plague ariseth, but rather to passe on to those things more certaine and necessary, I will only sett downe a catalogue of these many little Peccadilloes which hitherto by most people and Physitians in the world have beene reckoned for absolute causes of the plague, which the most of them at least can bee but only furthering occasions, not originall causes, and they are such as these, viz., thickness of inhabitants ; those living as many families in a house ; living in cellars ; want of fitting accomodations, as good fires, good dyett, washing, want of good conveyances of filth ; standing and stinking waters ; dunghills, excrements, dead bodies lying unburied and putrifying, churchyards too full crammed, unseasonable weather, south and west winds, much dry weather coming together, over watching the body, overcharging the body with nourishments, hott and moyst constitutions, overheating the body with too much venery, increase of vermin, as Frogs, Toades, Spiders, Mice, Flies, wormes, buggs, serpents, locusts, ants, butterflyes, etc. Furring and stopping up of conveyances, as Channells, Pypes, gutters, want of scouring ditches and pooles, vaults, Fens, and Marshes ; hempe, flax, asphaltum, and sweet herbes, steeped long in standing waters, expiring out of putrified lakes and nasty Dennes and Dungeons, venomous herbes, putrifying above the ground, fumes of metallis and mineralls.

Arsenick, quicksilver, orpiment or antimony (but I am much mistaken if these emit of themselves any fumes at all); feeding on rotten meate, mouldy bread; malevolent aspects and mixture of the Planets, Eclipses of the Luminaries, corruption of humors, transportation of infected goods from place to place, breaking up tombes and graves, wherein dead bodyes have beene long buried and crowded together (yet this is not very likely to bee true, for when the Charnell house at St. Paul's was demolished there was a thousand cartloads of dead men's bones carried away to Finsbury, yet noe plague followed it). That story before-named of the Roman Soldiers exciting a Plague by opening a little hole in one single tombe must needes be ridiculous.

Many more might be gathered out of various Authors, but I think it scarce worth while, for here is more already then are likely or can bee proved to bee true, and in this they have only done as a man that would bee sure of the true Religion, therefore would bee of all. Soe because they would bee sure to hitt the nayle, they have named all the likely occasions they could think of, and all their conjectures tending to nastynes stinking and putrefaction; whereas good aires and sweet and cleanly places were noe more exempt from the disease than stinking places, and healthfull, wholesome bodyes fell under the disease as much as pocky corrupt bodyes, and more too. For my owne part farr bee it from mee to inform pnnctually concerning the certaine cause of a Pestilence, as noe man hath done, but I thinke I may have liberty to putt in my opinion also into the number, and I have alwaies had a conceite that seeing tyme produceth and perfiteth all things, that the Plague may be generated thus, that in some compasse of yeares or tyme the Fœces of the Earth come to a mature fermentation, which by some accident arriving towards its surface, as by dry weather and south winds, and soe the pores being something extraordinarily opened on its close body, and relaxed (as drought performes that best, for you see the dryest ground is the hollowest, and wett clay ground is close and stiffe), I say by hott or dry weather, as also by what occasion you please to think, its maligne effluvia or fume or vapour is drawne forth into the Aire, and drives hither and thither into what place the great Guider of them and all things pleaseth. And lett these punishments come when they will, though they all waies come sooner than they are welcome to us, yett to bee sure wee shall bee ready to make way for them by our sinnes and deserts, soe that as from God they are allwaies most just.

Now a word or two by way of recollection of what hath beene said, and with that I will end this portion. Most of the Authors have defined it not from its quiddity, but from the effects it workes in us, not from what it is in itselfe. Soe they make it sometimes a Feaver, and Helmont, *venenum terroris*, and Montanus saith it is the highest degree of putrefaction, and saith that a slight plague infects not unlesse a body bee extremely fitted to receive it; soe thirdly, Galen Ulsindius* defines it to bee nothing else but a changing aire into a putrefying pestilent quality; what sense there is in this let every one judge. Fernelius, who favours Astrology, concludes it to occult maligne quality in the celestiall configurations. Hippocrates and Galen come not close to the root of the matter, but only say that all Epidemicall diseases come from the Aire wee draw in our bodyes. Galen saith (lib. 1, cap. 7, *De Differ. febr.*) that the cause of pestilent feavers is inspiration, especially if the body bee fitted for such a guest, and that the greatest cause of the generation of diseases is the preparation of the body. *Corporis preparatio bonam partem actionis sibi vindicat.* Gideon Harvey and one Doctor Edwards define it to bee a malignant contagious feaver, when thousands dye of it without any feaver at all. Diemerbrooke resolves it to bee a peculiar venome in a small quantity, descending from heaven, spreading and leavening the whole aire, as a little aloes or wormewood will imbitter a great quantity of liquor. Aristotle holds it to bee infectious, and that it affects all that have a depraved habitt, *cujus contrarium est verum.* I have allwaies thought the Plague to arise from diversity of causes concurring and fermenting, and that it alwaies arose *ab infra et non de supra*, soe that I am like the Ape in the fable, accounting my own opinion most probable, which I thus describe. The Plague is the perfection of putrefaction, or if you like it better in more words, thus:—The Plague or Pestilence is a most subtle, peculiar, insinuating, venomous, deleterious Exhalation arising from the maturation of the ferment of the Fœces of the Earth extracted into the Aire by the heat of the sun, and diffused from place to place by the winds, and most tymes gradually but sometymes immediately aggressing apt bodyes.

* The Editor has been quite unable to identify this writer, or Dr. Edwards. The other authors quoted are either well-known writers, or have been already noticed in the Introduction.

CHAPTER II.

OF PROGNOSTICKS.

These are either generall or particular, either such by which we foresee a Plague coming, or such as conceive the condition of a sicke Patient, by which we predict good or evill concerning him. For the first of these, because I can say but little to it, I shall bee the more briefe. In the second I shall be the more large, as having much more experience in it. Solomon saith a wise man forseeth the evill and hideth himselfe, but in this point how many wise men had wee in our Country, or were in the world two yeares agoe? Yea, those curious observers who pretend to bee most exquisite in the foresight of future contingencies of good or evill, and a haire shall not wagge without their observation, and therefore in their yearly prediction fill the world with noyses of warrs, plagues, destruction, and overthrowes of kingdomes, monarchies, that to this said nothing at all, yet they will name the Starrs to bee in all the Fault. But as Fernelius saith, Judge only by consequences. Prophecy unto us things to come that wee may know yee are God, saith that excellent prophet Isaiah. Therefore *Deo omniscienti solummodo Gloria*. I think it may be said of the plague, as is said of the wind, that it bloweth where it listeth, and wee heare the sound thereof, but know not whence it cometh nor whether it goeth, but what things have occurred to men's weake observations I shall briefly set downe, and soe proceede.

Signes foreshewing a Plague coming are such as these, viz. :—

1. Times and Seasons, altering from their common state.
2. Many changes of weather in a short tyme.
3. Cometts, gleames of Fire, and fiery impressions in the Aire.
4. Increase of vermine, as frogs, toads, mice, flies, ants etc.
5. Death of Cattle, as Horses, Sheepe, Hoggs, etc.
6. Famine; also warr.
7. Children in sport fancying and aping out funeralls.*
8. South and west winds blowing long while together.
9. The Small Pox or spotted Feaver growing very rife.

* Many old writers mention this curious superstition, and with evident belief. Diemerbroeck quotes several authorities, and affirms that he himself observed it in the year preceding the great plague of Nimuegen. He also observed children playing at funerals before the house of a certain friend of his, in which, a few days afterwards, three children died of the small-pox.—*De Peste*, Lib. I, cap. vi.

10. Extraordinary flowing and ebbing of springs and rivers.
11. Much cloudy weather without raine.
12. A very dry spring, such a one as wee had six months together.
13. The nights very cold, and the dayes very hott, also a cold summer.
14. Birds, with foule and wild beasts leaving their accustomed places; few swallowes were seene in the yeares 1664 and 65.
15. Women miscarrying upon every slight occasion.
16. Fruite corrupted or altered from its common tast or colour and goodness.
17. Ill conditions of the Starrs, if you will believe the Astrologers.
18. The Spotted Feaver growing rife; the Measells and other Epidemicall diseases.
19. Generally any unusuall change in the elements or creatures, whereby it seemes nature to bee out of Course.
20. Change of the waters, froggs, lice, flyes, murraine of cattle, boyles and blaines, extraordinary haile, and strange kinds of locusts preceded the Plague of Death of the first borne in Ægypt.

CHAPTER III.

DIAGNOSTICKS.

1. Shuddering Cold at first falling sicke.
2. Frequent vomitting, or at least retching to vomitt.
3. Headach, dizziness, and lightness of the head.
4. Heate and thirstiness.
5. Bleeding at the nose and sometymes at mouth, Hemroids and menses.
6. Stiffness in the Necke or Flanke.
7. Great inward heate and outward cold.
8. Carbuncles, buboes, blaines, blisters, spotts riseing on the body.
9. Distraction, staring, frenzy, idle talke.
10. Drowsinesse and sometymes continuall watching.
11. A livid Countenance inclining to blacken, also a frowning Countenance.
12. Dissolution of strength.
13. Melancholy, sighing, and sadness of spirit.
14. Griping paine in the backe, belly, shoulders, sides, hipps, bones, and joynts.
15. Oppression of the Breast, stomach, heart.

16. Much sweating and sometymes difficulty of sweating.
17. The tongue presently furred all over with white furr.
18. Palpitation and trembling of the heart.
19. Universall faintness with gnawing paine at the mouth of the Stomach and astonishment of spirits.
20. An unusuall paine in some particular part of the body.
21. A straightness in the Breast, stomach, hart, that they cannot well breath, soe as their bowells seeme to be in a presse, or the Arteries stopped.

I shall speake of noe more in this place because I am to mention many more in the next Chapter, and some of these againe.

CHAPTER IV.

EVIL SIGNES OR PRESAGERS OF THE PLAGUE.

1. Spottes appearing, either coale blacke, dark blewish blacke, purple, cleare blood-red colour, or scarlet.
2. Stopping of the stomach or oppression of it.
3. An Hiccough coming upon them.
4. Continuall vomitting which will not bee staide.
5. Their Buboos or Carbuncles falling on a suddaine.
6. A suddaine loosenesse of 2 or 3 stooles together, usually with blacke excrements.
7. Shortness and difficulty of breathing as if they were choaked.
8. Stopping of veins, and a paine about the bladder and Pubes.
9. Great inward burning heate and outward cold.
10. Faultering in the voice, stammering and speakeing in the throate, and especially lisping, with a slight pulling in one side of the mouth when they speake.
11. Continuall drowsyness and sleeping at the beginning of the disease.
12. Continuall great thirstiness, causing to drink too much.
13. Noe eruptions or very late, low, hard, flatt.
14. Sleeping with the eyes halfe open as it were dead and sett.
15. An intermitting, halting, faultering pulse, a stopping pulse, a stealing pulse, a weak, low, trembling, shivering pulse.
16. Trembling of the lipps, hands, and shakeing of the head.
17. The necke swelling much and hard either one side or round about, hindering swallowing or breathing.

18. Staggering in going about a roome.
19. Sicke faint fitts, swooning and panting, and trembling of the hart.
20. Distraction or idle talke, raving phrensy.
21. Miscarriage in a teeming woman.
22. A settled paine in the backe about the hipps which will not remove, also a pulling paine betwixt the shoulders, in the sides and belly.
23. Cold sweats about the chin, forehead, breast, hands.
24. Extreme sweating too freely and continually.
25. The belly swollen or fallen inward towards the backe on a suddaine.
26. Being taken almost blind at first with a strong headach.
27. Much belching and windyness.
28. The soares decreasing, drying up, turning blacke on a suddaine.
29. Urine shadding blacke after 3 or 4 dayes being sicke, also bloody coloured unless caused by applying cantharides.
30. Melancholy, sad, and frightfull dreames.
31. Restlessness, tossing up and downe the leggs and whole body from one side of the bed to another.
32. Much and deepe sighing, and hasty long expiration.
33. Contraction of the jaws.
34. A laughing Countenance with a faint forced smile.
35. A livid Countenance composed of blewish blacke, also a sharpe Countenance.
36. Being dumbe and unwilling to speake, and stupidity of spirits.
37. Hoarsness, that they could not speake out.
38. Turning, playing, and fumbling with the bedclothes.
39. Their vomitt running out of the side of the mouth.
40. Crampe in the leggs and severall parts of the body.
41. A stiffness and soariness of one side of the necke.
42. A white, soft, suddaine puft up Tumour on the necke, behind the eares, in the Armpitt or in the flanke.
43. Being overloaden with the disease, as haveing riseings, carbuncles, and many blaines on the body all at once.
44. A large extended hard tumor under the chin, and swelling downwards upon their throate, fetching a great compasse.
45. Continuing cold, shivering, aguish; and proving difficult to sweate or raise blisters.
46. Bleeding at the nose, 3, 4, 5, or 6 dayes together, after the beginning of the disease.

SOME OTHER MORE GENERALL OBSERVATIONS PROVING FATALL
THIS PLAGUE.

47. Almost all that caught this Disease with feare dyed with Tokens in two or three dayes.

48. About the beginning most men gott the disease with fadling, surfetting, overheating themselves, and disorderly living.

49. Tokens appeared not much till about the middle of June, and carbuncles not till the latter end of July, but were very rife in the fall about September and October, and seized most on old people, adult, cholerick, and melancholy people, and generally on dry and leane bodyes. Children had none.

50. If very hott weather followed a shower of raine, the disease encreased much.

51. If in the heate of the disease the winds blew very sharp and cold people dyed very quickly, many lying sicke but one day.

52. Those that married in the heate of this disease (if they had not had the disease before) almost all fell into it in a weeke or a fortnight after it, both in City and in Country, of which most dyed, especially the men. The same thing Diemberbrooke observed in the plague at Nimuegen; 'tis easy to find the reason of this.

53. Those that dyed by reason of ther Buboes and Carbuncles drying up or returning inward, and those that lay long sicke before they dyed, and they that relapsed, all those dyed without Tokens.

54. Blacke men of thin and leane constitutions were heavy laden with this disease and dyed; all that I saw in two or three dayes, and most of them thicke with blacke tokens.

55. Sweating did noe good to raw boned or leane people, nor to strong men of large veines and arteries and dry bodyes.

56. The plague happening in a blood or generation, usually went through the whole kindred, though living in severall places, which was the cause it swept away so many whole familyes.

57. People of the best complexions and merry dispositions had least of the disease, and if they had it they fared best under it.

58. After one rising was broake and run, commonly another and another would rise in severall parts of the body, soe that many had the disease upon them above half a yeare. Some riseings would not breake under half a yeare, being soe deepe in the flesh.

59. Shutting up of houses, wickednesses, confident, ignorant mountebanks, overhasty cutting and burning soares, indulging too much to present ease, removeing servants and poore people to Pest-houses and to other houses in their sicknesse, overstiffing and weakening people with too much sweating, overhasty going abroad into the cold, and preposterous Physick killed many.

60. Many people had the spotted feaver and the Plague both together, and many the French pox and the Plague both together upon, and yet both sorts commonly lived.

61. Teeming women fared miserably in the disease, not that they were more subject to catch the disease than others, but when they had it scarce one in forty lived, for the disease and sweating forced them to miscarry, and the miscarriage drew in the disease againe, though they had laudable soares upon them before the returne of the disease killed them. Hippocrates saith to this purpose that women with child fare ill in occult and epidemicall diseases.

62. In winter, at the begining and at the latter end of the disease, it seized people gradually and obscurely, that till 3 or 4 or 6 dayes were over it was difficult to judge whether they had the disease or noe, soe that some had the Tokens before they would be convinced they had the disease.

63. They that fell sicke with drinking Brandy and strong waters over much presently grew light headed and dyed mad; and strong well sett men (and especially drunkards) that were distracted and had staring eyes, looking about them with a wild countenance, dyed quickly, commonly in two dayes. I being sent for to two, found them both mad by drinking Brandy, and next day both dead.

64. Strength of constitution of body was noe protection against the disease nor death, for it made the hottest assault upon strong bodyes and determined soonest, for they dyed sooner than people of weake constitution, and men dyed sooner than women, and if they had tokens they killed them sooner than they did weake persons and women.

65. All that I saw that were lett blood in the disease if they had beene sicke 2, 3, 4, or five days or more, dyed the same day.

66. Though all sorts of people dyed very thicke, both young and old, rich and poore, healthy and unhealthy, strong and weake, men and women of all constitutions, of all tempers and complexions, of all professions and places, of all religions, of all conditions good and bad, yet as farr as I could discern the difference of the two, more of the good

dyed then of the bad, more men than women, and more of dulle complexions then of faire.

67. Although all other diseases turned into the Plague, especially acute diseases, surfetts, hot diseases, all feavers; soe for five or six months together there was hardly any other disease seene but the Plague and a few Casualties, whatever the Bills sayd, and Thucydides saith the same of the Plague at Athens.

68. Thicke cloudy weather and often changing weather made the disease hang longer than constant hott and dry weather. Raw and frosty weather contracted it apace, soe that in two weekes successively in the Fall there decreased in the Bills 3,400 and odde, and this warm winter kept it up, scattering soe long as Diemerbrooke saith it did the same in Gelderland.

69. In the summer before the Plague in 1664 there was such a multitude of flyes that they lined the insides of houses, and if any threads or stringes did hang downe in any place, it was presently thicke sett with flyes like a rope of oniones, and swarms of Ants covered the highways that you might have taken up a handfull at a tyme, both winged and creeping Ants; and such a multitude of croaking froggs in ditches that you might have heard them before you saw them. Also the same summer the Small Pox was soe rife in our Parish that betwixt the Church and the Pound in St. Giles, which is not above six score paces, about forty families had the Small Pox.

70. This Plague was ushered in with 7 months dry weather and westerly windes.

71. When the Plague invades people violently and roughly, at first falling sicke, such usually dye in 2 or 3 days with Tokens.

72. Plagues beginning in ye winter are alwaies the greatest, for they are spread and dilated by the hott weather following, whereas plagues beginning in summer are commonly cured by the cold winter following. Soe saith also Fernelius, Petr. Paschalis, and experience.

73. The Plague hath put itselfe forth in St. Giles's, St. Clement's, St. Paul's, Covent Garden, and St. Martin's this 3 or 4 yeares, as I have beene certainly informed by the people themselves that had it in their houses in those Parishes.

74. The Plague fell first upon the highest ground, for our Parish is the highest ground about London, and the best aire, yet was first infected. Highgate, Hampstead, and Acton also all shared in it, and Nimuegen in Gelderland.

75. High Cordialls and strong Cordiall waters, which

given to people in other diseases just as they are dying, will a little protract and lengthen their lives, some minutes at least, and sometymes some houres; in this Disease will doe noe good at all, for give them *Aq. Caelestis Bezoardica*, *Marica Alchermes*, *Aurum potabile*, or what you will, and they will not live one minute longer than they would doe without them.

76. The Plague is a most acute disease, for though some dyed 8, 10, 12, or 20 dayes after they had beene sicke, yet the greatest part dyed before 5 or 6 dayes, and in the summer about halfe that were sicke dyed, but towards winter 3 parts in four lived, but none dyed suddenly as stricken with Lightning or an Apoplexy, as Authors write in severall countryes, and Diemerbrooke seems to believe it; but I saw none dye under 20 or 24 houres.

77. The evill Reliques and consequent diseases which the plague left in people's bodyes tormented many worse than the disease itselfe. What these diseases commonly are I shall speake of by a chapter of themselves. I had two patients dyed of these after-clappes, viz., one of a paine in the backe, and another of a continuall paine in the head, long tyme after the Plague had left them, and one haveing a great paine in the head had an Imposthume breake in his head and run out of his mouth and nose.

78. Many people after a violent sweate on takeing a strong cordiall, presently had the tokens come out, soe that every Nurse could say Cochinele was a fine thing to bring out the Tokens.

79. Those that dye of the Plague dye a very easy death generally; first, because it is speedy; secondly, because they dye without convulsions. They doe but of a suddaine fetch their breath a little thick and short, and are presently gone, just as you squeeze wind out of a bladder; soe that I have heard some say "How much am I bound to God who takes me away by such an easy death"; and they commonly say they are not sicke when Death is just at hand, and talke familiarly with you when they are ready to dye, and expect noe other themselves.

80. The more anyone was loaden with the Disease the sooner they dyed, and the more they infected the house, so that in some houses 10 out of 12, and 16 out of 20 dyed.

81. One friend growing melancholy for another was one maine cause of its goeing through a family, especially when they were shutt up, which bred a sad apprehension and consternation on their spirits, especially being shutt up in dark cellars.

82. Those that tooke much Brandy and strong waters for Antidotes every day dyed much of feavers, bleeding, and phrenzy.

83. Those who with Carbuneles had a great feaver or thirst if the Carbuneles did not run well nor separate themselves, nor sheale off from the rest of the flesh round about, nor rise higher, but rather sanke in lower, or grew hard and dry, or spread further in breadth; these were very evill signes.

84. Oft changing the Countenance was an ill signe, as to looke now angry, then laughing, then staring, afterwards moving, then contracting the face, then grinning, pouehing the mouth and lipps without speaking.

85. All involuntary aetions predieted evill, as pissing a bed not knowing it, vomitting as they lay in bed without turning the head or body, much spitting, watery eyes.

86. Prostration and dissolution of the whole strength of the body, and the patient having ill signes upon him, yet saith hee is well, being unapprehensive of his danger, was a sure signe; hee had but few sands to run.

87. Many people after they had laudable eruptions and began to move, and promised fairely, afterwards by taking many hott cordialls, strong waters, sulphurate, and Plague waters, putt themselves into a feaver and dyed.

88. Many women giving suck freed themselves of the Plague by their children sueking it from them, but some continued well some dayes, sometymes weekes, and then fell into the disease, after their children were dead.

89. A eough, sneezing and losse of limbes, which many Authors say troubled people in the Plague in other countryses, offended but little here, yet some lost their memory, haire, and senses, espeially their hearing and sight, and some became meere Ideotts.

90. The winds blowing westward soe long together from before Christmas until July, about 7 months, was the cause the Plague began first at the West end of the City, as at St. Giles's and St. Martin's, Westminster. Afterwards it gradually insinuated, and erect downe Holborne and the Strand, and then into the City, and at last to the East end of the Suburbs; soe that it was half a yeare at the West end of the City before the East end and Stepney was infected, which was about the middle of July. Southwark, being the South suburb, was infected almost as soon as the West end.

91. The naturall Constitution, Disposition, and Complexion did much make or marr in the disease, and was a very certaine and great helpe in predictions.

92. The Disease spread not altogether by contagion at first, nor began at only one place, and spread further and further as an eating spreading soare doth all over the body, but fell upon severall places of the City and Suburbs like raine, even at the first at St. Giles's, St. Martin's, Chancery Lane, Southwark, Houndsditch, and some places within the City, as at Proctor's House.

93. Many Nurses by giving cold drinks to coole their feavers destroyed many, and some Nurses, as soone as they saw the Tokens, gave them a little cold water, and soe sent them to their journey's end quickly. A good feaver at the beginning helpt out with the Disease much.

94. Those that were most shy of the disease and would not take money, goods, letters, without washing or airing, or refused entertaynment of people, though it belonged to them; holding and stopping their noses and running aside upon seeing a dunghill, a doore crost or shutt up, or meeting a searcher or corpse, shutting their windowes, stopping their keyholes, and refusing company with all people, and refusing severall sorts of victualls and drinks—usually such had the disease sorest, and fared worst in it, whereas those that were more familiar in these things either had it not at all or were but slightly toucht.

95. Cheerfullness and courage of heart and spirit did chiefly uphold some in this disease, verifying Solomon's saying, viz., a merry heart doth good like a medicine, whereas melancholy and dejection of spirits was the overthrow of many.

96. Old people that had many soares upon them, especially Carbuncles, allmost all dyed.

97. Many people by Launcing, Corrosives, actuall Cauteries, Scarifications, and many intollerable applications, put their patients to more paine than the disease did.

98. Those that tooke never so good Antidotes and preservations, and followed wholesome rules, if they had a naughty heart, it betrayed and frustrated all that which was done. Many falling into the disease and dying of it, especially those that were much dejected and afrayd to dye, dyed the sooner.

99. This yeare in which the Plague hath raged soe much, noe alteration or change appeared in any element, vegetable or animall, beside the body of man, except only the season of the yeare and the windes, the spring being continuall dry for 6 or 7 monthes together, there being noe raine at all, but a litle sprinkling Showre or two about the latter end of Aprill, which caused such a pitifull crop of Hay in the spring. Only in the Autumne there was a pretty good

eropp, but all other things kept their eommon integrity, as all sorts of fruited, as Apples, Peares, Cherryes, Plums, Mulberryes, Raspes, Strawberryes; all roots, as Parsnipps, Carrotts, Turnips; all flowers, all medicinable Simples, etc., were as plentifull, large, faire, and wholesome; all graine as plentifull and good; all kine, Cattle, Horses, Sheepe, Swine, Doggs, wild Beasts and tame, as healthfull, strong to labour, wholesome to eate as ever they were in any yeare. Though many pedling writers have undertaken to find fault with all these things, and made people soe fearfull and carefull of what they eate or dranke, or what they bought, of keeping Doggs, of eating Mutton, Pork, Fish, Fruitts, Rootes, Salletts, especially eherryes, were much exclaimed at, and eucumbers. Yet I believe very few people eate soe much fruit continually as I did this yeare, yet was not once sieke of any disease all the yeare.

100. Many ignorant praetizers (yet took upon them the name of Docters) as soone as they came to a patient, though but newly fallen siek, would presently bee peering in their breasts or armes for tokens, thereby frightening their patients into an ill eoneeite of themselves. Whereas in the heate of the disease and towards the fall I never looked after any tokens at all, for I knew when they had them and when not, I knew also whether they would have any tokens before they dyed, whether they would have many or few, great or small, black or redd, how long they would live with them; yea, I seldome judged by them, but allwaies judged them by foreseeing signes before they eame out, for I did seldome looke after them beaause the Patient should not thinke I did expeet their death. Yea, I most eommonly gave judgment whether people would live or dye at the first visit, almost allwaies at the seond, and whether they would have carbuneles, buboes, or blaines, whether they would have any feaver or noe, and many more accidents too tedious. Though at first I was baffled in giving Judgment, but afterwards by niee and long observation of the partieulars I arrived to a greater skill, for I rendered myselve very familiar with the disease, knowing that the meanes to doe any good, it must not bee nice and fearfull. Wherefore I eommonly drest forty soares in a day, held their pulse sweating in the bed half a quarter of an hour together to give judgment and informe myselve in the various tricks of it. I lett one blood, gave glisters, though but to few, held them up in their bedds to keepe them from strangling and choking half an houre together, commonly suffered their breathing in my faee severall tymes when they were dying, eate and dranke with them, especially

those that had soares, sate downe by their bedd sides and upon their bedds discoursing with them an houre together if I had tyme, and stayd by them to see the manner of their death, and closed up their mouth and eyes (for they dyed with their mouth and eyes very much open and stareing); then if people had noe body to helpe them (for helpe was scarce at such a tyme and place) I helpt to lay them forth out of the bedd and afterwards into the coffin, and last of all accompanying them to the grave.

CHAPTER V.

FURTHER COMMENTS ON EVIL SIGNS IN THE PLAGUE.

I think a short Comment upon each of these observations will not be amiss, but both enlighten and satisfy.

1. *Of the Tokens*, I shall say the lesse in this place because I intend to write a whole Chapter upon them hereafter, they being soe remarkable that they deserve a volume. I have ranked them in the forefront of the evill signes, making them the forehorses of Death's Chariot, because among all the evill signs there are none so common or conspicuous, soe dispatching, certain and infallible signes of death as this. Indeed, there were many signs, many of them coming together were certain forerunners of Death, as a stoppage of Urine, faltering speech, white Buboës through a sudden looseness, shortness of Breath, stopping and oppression of Stomach, intermitting & shivering pulse, laughing, trembling, swooning, staggering, cold sweats, any more which coming two, three, or four of them together were infallible signs of Death now at hand, and they seldom came single. Yet none were soe common and constant signs as the tokens, soe none gave infallible warning at such a distance as the tokens did; for they appeared sometymes two or three days, yea sometymes a weeke before the Patient dyed, though most lived but 2, 4, 8, 16, or 20 hours with them before they dyed, but the other signs commonly appeared (most of them) but an hour or two, if soe much, before they dyed. Diemerbrook saith they lay sick with black Tokens before they dyed, but it fell not soe out here, for the black Tokens killed them the speediest of all, commonly in halfe an hour, alwaies in three or four hours; the small, purple, thick, and red ones they lived a whole day with, sometymes many dayes.

2.* *Stopping of the Stomach* and great oppression thereabout.

* *Stopping of the Stomach*.—What is meant by this affection it is hard to see. It is often returned as a cause of death, apart from Plague, in the Bills of

This was a dangerous and evill prediction sign, but this appeared a day, or two, or three, before they dyed, and it was a sign I took speciall notice of, for it helpt mee much in conjecturing upon them, and I inquired much after it, and found but few that dyed that had not much or little of it. It was very burthensome to people, oppressing their brests, hindering drink and spoon meates from going downe easily. I believe the lungs were difflated, extended, and inflamed, for they had a great thirst with a kind of suffocation and weight lying upon their brest almost like those who are troubled with Night mare. I remember but one patient that lived under any degree of it, and she lived indeed beyond expectation, for she stammered soe that you could not understand what she said, with a very great stoppage and oppression at the brest and other evill signs. I caused her to try a conclusion which came in my head, viz., I made her lay a great Mastiff Puppy Dogge upon her brest 2 or 3 houres together, and made her drink Dill, Pennyroyall, Fenill, and Aniseed water, for she was a fat woman and could beare it. Soe by degrees all her stopping and lisping left her, and she crept up again, and is very well at this day.

3. *An Hiccough*; there was not many troubled with this in the Plague, yet in those that had it it proved, as it doth commonly in all other diseases, a forerunner of present death. The posset drink I named but now for stopping is, I believe, as good a medicine for it as you can use.

4. *Continual vomiting*; this was very common in most that dyed, and if they could not stop it in two days 'twas a bad presage, for it many tymes held them till they dyed either vomiting or straining to vomit. The lungs and stomach were affected, and I believe loaden with the disease, it sticking close there, and would not come up though you gave them a vomit to boot. If soe many dyed with vomiting, as many hundreds did, what work did they make, think you, who in their printed single sheets gave directions to all people to take vomits? I shall speak of the way to stop it elsewhere.

5. *Buboes* falling of a sudden. These were the white Buboes which came more suddenly up and soft. Those which were red, and hard, and long like a wedge, and came forth more by degrees, could not fall on a suddaine, but the others in the groin, armpit, or neck being white and soft, were filled only with wind or humour, or both, and fell flat commonly just before they dyed. The first that ever I saw

Mortality, and Graunt, in his "Observations", speaks of it as a "new disease", first appearing in the Bills in 1636; but cannot explain what it was.

(to take notice of) was one of these, soe was the second, both in May, upon two women, and both upon falling dyed presently. And mee thinks there should bee a distinction made between these and the red hard risings, and not let pass both under the name Buboës, for the white ones in my mind are the true Buboës, with which few live, the other risings.

6. *Suddain Looseness*; this usually seized people 2, 3, 4, or 6 days after they were sicke. Many things are very strange and admirable to us in this disease, but hidden things belong to God; for a looseness, bleeding, sleeping, spots, and outward eruptions happening in other diseases after some days being sicke are counted good criticall signs, but in this disease they are quite contrary. They did not fall into a great looseness which held them long, only a loose stool 2 or 3 times and within few hours would presently dye, but a looseness at the beginning was not soe bad.

7. *Short, difficult thick breathing*; this is a common evill sign in almost all diseases, and especially in this, because it seldom troubles people but a little before they dye; and it commonly came on people before the tokens were out, but continued not soe long on people in this disease as it doth in others; for commonly soe soon as they begin to fetch their breath a little thick and short, away they goe.

8. *Stopping of urine on a suddain*; this was an evill sign as any, for it shewed death at hand (without it were stopt by applying too many Cantharides at once); for when they complained they could not make water and had a pain somewhere across the bottom of the belly about the Pubes, presently in halfe an hour, sometymes lesse, they expired. The reason of this is not hard to find.

9. *Inward heat and outward cold*; this happened in this disease at all tymes, at the beginning, increase, and latter end; and it boded noe good, for commonly nothing would come out upon such bodyes but tokens, and they had too much feaver; but a feaver helps.

10. *A lispings, faltering voice*; this was a very demonstrative sign after which I was very inquisitive, for sometymes I talked to them on purpose to hear how they spoke, and urged them to speak to hear them. Authors that have written of the Plague (by inquiring, it's like, of some old Nurses) how people were affected in the Plague, understanding by them that they faltered in their speech, quoted it under the general name "*balbutiens*", but what manner of defect of speech it is cannot bee understood by that word. Thus by people writing only in another tongue wee are deprived of the right

understanding and apprehension of the manner of things. This fault happened to people usually two or 3 dayes before they dyed, and by reason of this was one of the first evill signes that appeared like a beacon that gave notice afar off what would follow, and that the enemy approached. It consisted in a certain lispng or speaking on one side of the mouth, soe as their words seemed to bee cut off from the mouth before they were quite spoken out, as if they were faint and wanted breath to speak them quite out. Sometyes they spake more inwardly towards the throat. I remember but one Patient that I had, lived, that was troubled with it, which was a woman of a very strong constitution and had her courses all the tyme of her sickness.

11. *Continuall sleep and drowsyness.* About the begining of the disease, viz., about March, I wondered what people ayed. I had thought they had got lethargies, they were soe drowsy. This disposition most tymes invaded people about the beginning of their falling sick, and usually they sweat much with it also, and commonly had nothing broke out upon them, but if they had, if their sleeping continued, they dyed notwithstanding.

12. *Great Thirst continuing;* this tormented them not soe much at the beginning of the disease as some dayes after, and a day or two before they dyed. This drinking much commonly kept their vomiting afoot, and soe did them mischief; it also swelled their belly and lungs; now those that restrained their appetite and would not drink as much as they desired did best. Colerick people that had Carbuncles were grievously thirsty. If it continued upon people, though they had never soe good sores on them, yet it commonly killed them, and if they had a shortness and suffocation of breath and stopping at stomach with it they alwaies dyed. Those that are poysoned are commonly very thirsty, and if they drink much it swells and kills them—the lungs, liver, and stomach were chiefly affected, but most the lungs.

13. *Want of eruptions or Sores.* When these would not appear they were alwaies in danger as long as they lay sick, and if they came forth but low or flat; for it showed nature to bee but weak, distracted and hindered in her worke. Many people by purging too much, others by vomiting, sweating, or bleeding, hindered their sores from coming forth, and while nature thrust one way, they strove a contrary way, and while they thought to empty out the disease by evacuating the humors, they commonly soe weakened the body and spirits that nature would noe longer bear up against the

venome, which then would easily prevail, though never soe little a quantity remained in the body; neither had she strength enough to thrust it out into a sore, or if any dull appearance of a sore were discovered, it was but a little before they dyed.

14. *Sleeping with the eyes half open, half shut.* This happened much to children and elder people a little before they dyed, and showed a cessation of strength and stupefaction of sense.

15. *Concerning the Pulse.* Authors pass over the pulse and urine, and say they differ not much in the Plague from their common state in tyme of health; but I believe most of them felt but few, or but nimbly and superficially, and were not inquisitive about trifling signes in the urine as they are in all other diseases. I took specially information from the pulse, and many times when noe other conspicuous signe occurred the pulse gave certain intelligence—I doe not say infallible, especially if separated from other signes. What kind of pulses I have observed I shall here set down with their effects. And *first*, an intermitting pulse, a faulting, halting, stopping pulse, an uneven pulse, all these are but as it were the same, and little difference betwixt them. The kinds of pulses were observed many dayes before they dyed, even from the beginning of the disease, and I gave judgment by this usually at the first visit at the beginning of the disease, and presently after. I held their pulse almost a quarter of an hour together that I might give the more certain accompt of their future condition, some would fault and stop soouer, some later, some at the 7th beate or return, others just at the two & twentieth Systole. One Patient at Westminster, a Butcher, had noe other ill signe but this for three or four days, which I alwaies took great notice of, and hee seeing mee soe diligent in feeling his pulse, told mee the Doctor sayd hee had a good pulse; but I told him it was the worst signe hee had about him and had bin soe all along, and told him it threatened him much. Wherefore he discarded mee and tooke the Doctor, but in two or three days hee dyed. I remember but one Patient in whom his pulse deceived mee, which was one, Mr. Stafford, at Acton, who, with his wife, lay sick of the Plague, having been married but a fortnight, and hee being much the worse, had a very extreme, intermitting pulse, and was brought even to the Jaws of Death, yet afterwards overcame all his weakness and arrived at the joyes of life.

There was another peculiar kind of pulse which happened in this disease. I know not readily better to express it.

It was a stealing, sliding pulse, and all I saw that had it dyed of it. This was the quality of it: after you had felt it a very little while, it would steal or slide away that you could not feel any pulse at all, unless you took away your finger and stayd a little while and then felt again, and then you should feel it again, but presently would bee gone again. This pulse was incident to children & weak people, but remained in them 3 or 4 days before they dyed. The weak, low, trembling, shivering pulse never appeared till they were weak and neer their death, and generally when the tokens were on them.

16. *Trembling hands, lips, shaking of the head*; these two first were very common, viz., the shaking of the head more rare, but were all Ambassadors of the King of Terrors. Trembling of the hands and lips is common in all other diseases, and affects people a little before they dye, and is alwaies a signe of life's Catastrophe. Soe it fell out in the Plague. But the other, viz., a shaking of the head, which was after an extraordinary hideous manner, soe that it almost affrighted the standers by; it happened to people that had relapses, and several dayes before they dyed, and chiefly to such as lay long before they dyed, and were followed with feavers.

17. *Swelling of the Neck*; this troubled people that were thick, short, and fat, and had big thick necks; sometymes the whole neck swelled round about, sometymes but one side, but alwaies very hard and much distended, soe that it quickly troubled them in swallowing, and at last in breathing; they breathe with such difficulty as if their breath were strained through some thick cloth or narrow hole. Such seldom have any tokens when they dye. It comes also upon taking cold in their sickness, and it makes them sweat much to get breath. The other diseases incident to the neck I shall speak of by and by.

18. *Staggering*. This happened commonly to strong men, for in walking about a room they would bee reeling and staggering, ready to fall; many people were thus, especially such that had a feaver, and such as would not keep their beds, and those that had a dizzinesse in their heads; but it took them many days before they dyed; some bled much at nose with it: it was a bad sign.

19. *Sick Fits, Swooning, etc.* If these continued long upon a patient it alwaies carried them away, and commonly they had noe superficiall sores, or but very obscure ones. Those that were thus troubled had but little feaver, and most tymes a bad countenance, with much sighing, shivering, and panting heart.

20. *Distraction, Raving, etc.* This happened most to strong people, and choleric and dry bodyes; yet I have seen many children soe, and though all dyed not as were thus, yet the greatest part did; if they had other bad signs with it, as a feaver, lispig, wild countenance, low pulse, stopping at stomach through constant vomiting or the like, they alwaies dyed of it, but it held them severall dayes before they dyed.

21. *Miscarriage in a woman with child.* These poore creatures had a sad tyme of it, and it was safest for such (if they could possible) to goe out of town when a plague came upon the place where they lived. I have writ before how it comed to pass to bee soe fatall to them, yet I had two patients which miscarried in the disease and lived.

22. *A settled pain in the back and sides, etc.* These people had but little feaver but were rather cold outwardly, which was the cause they had nothing break out upon them. If they dyed in 4 or 5 dayes they had tokens, but if they lay much longer they dyed without them, and were commonly given in cleene by the searchers, for indeed they were soe, yet dyed of the Plague. Some had an extreme pain in the side, like a pleurisy, but had not soe much feaver with it, and these dyed quickly, and if you let them blood for it they dyed presently. I was with a gentleman in the morning who had this pain in the side, and in the afternoon hee sent for a barber on his own head and was let blood, when presently after I coming to see him found his pulse very bad, but noe other ill signe; but running home to bring him a cordiall, which was but a little way from my house, yet hee was dead before it came to him. With the pain in the back and hips they lay much longer, and dyed without tokens; the paine in the belly and between the shoulders killed them in one, 2, or 3 days with tokens.

23. *Cold sweat.* This appeared not till Death had taken his execution on the body and was haling away the goods, viz., the soul and spirits out of the Clay House. This signe is common to other diseases, but hath a little difference, for in the Plague it appears most about the chin, forehead, and breast, but in other diseases anywhere, and remains not soe long on the body in the Plague before they dye as in other diseases.

24. *Sweating too frceely.* This also shortened many a man's journey: whatever Mr. Garencières¹ vapours, that by tossing them in blanketts three dayes together, oft sweating each day, he can cure 19 of 20, and then exclaims against the

* *A Mite Cust into the Treasury of the City of London* by Theophilus Garencières. London, 1665, p. 2. See Introduction.

ignorant Apothecaries and vapouring Chymists ; but I take this to be but a bait to catch fools by the pursestrings. This sweating too freely and continual I found to be worse than not sweating at all for many hundred tymes. Though they sweat not at all their sores would come forth kindly only by keeping them warm in their beds. Nay, I make it a great question whether, if sweating were layd aside, as many would not recover without it as with it, for if it were such a sure card as the Frenchman would have it, they had not lost three or foure thousand persons this year after they had been sweated. But it is noe new thing to hear Monsieur bragge. I practized it but little, yet I had (though I cannot say 19 of 20) yet had pretty good success, for I had 31 in 40 lived, yet most of them not sweated at all, and the most not above two hours, and that in the fall and spring, when they might better afford it, then in the hot summer: but this overmuch sweating weakened the spirits, fainted the heart, and hindered the soares from coming forth, dryed up the body, and brought out the tokens.

25. *Swelling and suddain falling of the belly.* All that I saw afflicted with this dyed ; they would be swelled a day, two or three before they dyed ; but as soon as they fell, they would be taken with a shortness of breath, and presently gone, though they had sores on them. The swelling of the belly I judge was the cause either by the venome of the disease or the much vomiting or windiness and looseness. I read one author who sayeth that the whole body used to swell, but I saw not one person in such a condition, yet it is very likely such a thing may be in some places or tymes, for many sorts of poysons will swell the whole body.

26. *Blindness and Headach.* Some are thus surprised on a suddain at first falling sick ; perhaps the violent pain in the head causeth the dimness over the eyes. Such seldom live three dayes, the disease is soe acute with them ; they are taken with a pulling strong pain betweene the shoulders, and presently after with a shivering cold, shaking like an Ague and vomiting. Cold windy weather usually brings this kind, and they dye speedily, viz., in 20 or 24 hours with tokens. Strong people are oft thus taken.

27. *Much Belching and windiness.* Strong people and lean were most perplexed with this and at the beginning of this disease, and signified that the disease would be speedy in dispatching them, for they seldom survived 4 dayes. Noe sore would rise well in them, or but windy, low, and flat ones and fell againe, and they died of the tokens.

28. *Sores decreasing or drying up, etc.* This was caused first by a feaver.

2ndly by catching cold.

3rdly by relapse.

4thly for want of skilfull and carefull dressing.

5thly by burning, cutting, and tampering too much with them and too soone.

6thly by neglecting the promoting their first rising.

7thly by preposterous applications.

8thly by drinking cold drinks.

9thly by weakness. And lastly by too much evacuations, as purging, bleeding, vomiting. Very few that had these accidents dyed of the Plague.

29. *Urine.* Indeed, generally the urine did not alter soe much as it doth commonly in other diseases of less consequence and less danger, and not soe acute. There was noe great matter as I saw to bee judged by; Only cholerick thick urines at the begining of the disease proclaimed happy success. A urine shadowing with a greenish black was generally an ill signe. They seldome had very high coloured urines, though they had some feaver, unless too many blistering plasters were applied at once, which both stopped their urine and caused them to piss blood, made them mad, and their eyes bloodshot. I shall speak more of urine hereafter.

30. *Melancholy, Frightfull Dreames.* These troubled people as bad as the night mare, for some would dream they were among Graves and Tombs in Churchyards, others that they tumbled down from some high place and fell amongst coffins, others cryed out in their dreams that they were all on fire, and these were harbingers of destruction, for they commonly proved more true then they did at other tymes in health.

31. *Restlessness.* All sorts of people from the beginning of their being sick were given to this, except they that lived, and some of them too, not only children and young people who had less reason or government of themselves, but old people were also in this fault. Their legs would never lye still, but alwaies tossing them up and down, and flinging their arms carelessly out of the bed, and many tymes their whole body was constantly tossed up and down from one side of the bed to the other with a certain raging. The former were bad signes, but this worse, for they commonly tossed about their bodyes soe till they dyed, and that they did the sooner because they moved themselves into soe many cold places in the bed; they dyed thick with Tokens commonly, because

they lay but a little while before they dyed, about 2 or 3 dayes.

32. *Sighing.* This was not from any manifest cause, as the Physicians say, but a certain involuntary action which they could not help, for children had it as well as others; they had it much about the beginning of the disease, and together with it alwaies had conjoynd a very livid deathly countenance. They most commonly dyed and in a short tyme. But I had one patient at Westminster, a maid, that promised very ill at the beginning with a very bad countenance and frequent sighing, but I bid her instead of sighing, humm it up, and ordered her friends that they should talk to her and make her as chearefull and merry as they could, and alwaies chid her for sighing, soe with two vesicatoryes and 2 or 3 cordialls she got over all and lived, which scarce one in ten did being soe afflicted.

33. *Contraction of the Jaws.* Surely the venome of the disease is very nigh kin to the venome of quicksilver, for in many of the effects there is a sympathetical correspondence. For many people being fluxed with quicksilver for the Pox have their jaws soe contracted that they can never open them again, but are forced to live upon sucking in liquid, spoonmeats, and such things. Soe it frequently comes to pass in this disease, for I have been forced to wrench open their teeth with something put betwixt to make them take things down, and as quick silver, so the plague causeth blew colour, headach, continuall deatness, cramps, pains in the back, lamenesse, spitting, swelled neck and face, alopecia, convulsions.

34. *A Laughing Countenance, a faint forced smile.* Here is the grand Traitor of all, as bad as Joab and Judas, stab whilst they kiss, or like some unlucky or subtile serjeant who while he cryes How doe you, Sir? at the next word cryes I arrest you. Or as the great Turk's Bostingi, Bassy, or Chiefe Gardner, whom hee comonly employed to strangle his great Bashawes, who, giving him a letter like a friend, claps a cord about his neck; soe in this disease, about a minute or two before they dye they will look in your face and give a smile or two when they have least reason for it, and if there were any in the room from whom they expected most help, as a Physitian, Apothecary, or Chyrurgeon, to bee sure they fixed their eyes on them, deriding in a kind of contempt their vain help and the world's deceitfullness, as the Jesuit said to his Crosses and Reliques: *Ite vana Fructra!*

35. *A Livid Countenane and sharp countenance.* This livid Countenance was composed of a colour composed of pale,

black and blewish, and this seized them sometymes at the beginning of the disease, and generally with sighing and vomiting and much dejection of spirits. Middle aged, young people, and children was most conspicuous in, because the countenance alters not much in old people. This was an evill prediction, for sores rise but badly on such, and they dye most of Tokens, but the sharp countenance seldom appears before their race's end, and it is such a Tell-truth that you may believe it without a witsesse.

36. *Being Deaf and Dumb and unwilling to speak.* Anguish of mind, dejection of spirits, fear of death, make some unwilling to speak or to bee spoken to; others are soe taken up with a conceit of their past life, present state, and future condition, that they desire not to be troubled; others with making their wills, settling their estates and affairs, etc. But the reservation of speech which I mean here is a kind of stupidity of soul and spirit sometymes invading them from the begining of their sickness, and then they lye not long in the disease, but sometymes it takes them only towards the latter end; it seizeth on all people, old or young, but most on men. I saw not any hardly that lived; they dye with Tokens.

37. *Hoarseness.* Many that would have spoke out, could not, but had such an hoarseness as if they had caught a great cold, and sometyme it was caused by a soar throat which was very dangerous. Some people having had the French Pox can never speak out againe as long as they live, but only whisper, but this hoarseness tooke them but a day or two before they dyed, & they dyed most tymes with Tokens.

38. *Fumbling with the Bedclothes.* This signe is rather propheticall then predictive, and because it is common to almost all diseases it needs the less discourse about it; it shewed itself also as in other diseases just before death.

39. *Vomit pouring out of the side of the Mouth.* Commonly they had a certain stupidity of spirits and dissolution of strength who vomited thus, for they never stirred or moved their body or head when they vomited, but as they lay soe they vomited, pouring out of one side of their mouth just as you pour liquor out of a pot at one side; or after they took a cordiall, or anything very strong, presently they fell into a sweat, especially on their forehead & face, & then would vomit it up againe in this fashion, not flashing up altogether as at other tymes, but in this manner, and commonly they lived but few hours after it, dying with Tokens.

40. *Cramps.* These Cramps arose not from the same cause

as commonly they doe in other diseases, as cold, emptyness, overpurging, vomiting, bleeding, wind, sharp humors, much sneezing, drinking, or the like, but merely from the malignity of the disease. Stupefying or pursuing the vitall heat from particular parts making an unequall distribution thereof in the body, as the leggs, arms, etc. All sorts of people had it, but usually they lived but a little while who were troubled with it much, for they dyed with Tokens unless they had relapsed through catching cold.

41. *Stiff, soar neck.* This frequently fell out a day or two after they fell sick, and was an unlucky pest; they had it on one side of the neck, sometymes more inward, and sometymes outwardly, and then they complained not soe much of present great trouble, but only of the stiffness & continuance of it. This troubled well grown people most, and all dyed of it that I saw, but some had noe tokens, and sweating did them noe good at all, for they sweat much.

42. *White soft tumours or Buboos.* This signe was almost as bad as the Tokens. Children and old people were free from it, but from sixteen to forty odd they suffered under it. It appeared sometymes not soe soon as the red hard risings, sometymes at the first falling sick; it was more round and not soe long as the red risings, whether it were upon the neck, or behind the ear, or under the armpit, or in the flank, it was mortal everywhere, when it arose at the begining of the disease they seldom lived above three days, but sometymes it arose not till after 4 or 5 days being sicke, but when once it came it made speedy work, commonly it fell flattish just before they dyed, for it was filled with little but wind. They had but little feaver with it, but vomiting, and sometymes without vomiting, with a livid or squalid countenance & faintness; they dyed oft without tokens and very suddainly. I judge these to bee the right Buboos; the first two plague risings that ever I saw were of this nature, upon two very strong lusty men, and both dyed suddainly upon their falling without Tokens.

43. *Being overloaden with the disease.* Pure Melancholy bodyes, and the compound constitutions of Choller and Melancholy which most tymes gives a black complexion and a thin body; such bodyes as these were most peppered with the disease, and next these, old people were heavy loaden also with the disease. I could tell you many horrible stories concerning this very thing, but that it would take up too much room and tyme, and I rather affect brevity then bulk. Now though many young people and children had a great many soars of different sorts, yet they were not great car-

buncles, nor soe venomous as in old, and other complexioned people. Children would have 8, 10, or 12 blains at a tyme together with a rising or two and yet doe well, but the other had some tymes many blains at a tyme together with a carbuncle or two, a rising, and after that as full of the Tokens as any besides. In some they appeared not much outwardly in soars, but dying quickly shewed the body to bee overcharged with the disease by a multitude of black Tokens coming forth.

44. *Great swelling under the Chyn.* In some the disease happened to settle here very hard, & fetching a large compass soe that it hung down like a bag upon their brest, which sometymes hindred their speaking & swallowing and choakt them, and it seldome broke kindly, they had but little feaver. Middle-aged people were afflicted with it most, and some old people, they all dyed without tokens, they lay sicke pretty long before they dyed, some it tormented soe much that they were mad with it. One woman being thus, falling downe stairs broke her imposthume & neck together; but few lived.

45. *Continuall Cold, aguish, difficult to sweate and raise blisters.* Children and young people were most of this condition, they would not bee ruled, they would not take things nor lye still, which was one cause they dyed almost all in 3 or 4 dayes with a few tokens.

46. *Bleeding at the nose, etc.* Those that bled pretty freely at the begining of the disease escaped best, but continued pitifull weak a great while; and some women having their courses from the disease's beginning did well, but that little short bleeding which usually they fell into 2, 3, 4, 6 days after their falling sicke was most tymes but the lacquey of death; for though some lived, yet many more dyed, and it was a vain thing to hope or look for a Crisis in this disease, for that brings death with it. And this little short bleeding was just of the same nature with the suddain little looseness of one or two loose stooles 3 or 4 dayes after their falling sicke, which is a certain token of death approaching, for thus the case falls out betwixt this and other diseases. Other diseases will bee better turned out through the common channels of nature, which she hath ordained for the evacuating and easing herself of all burdensome and unwelcome Guests, either of humors or excrements; I mean diseases of plenitude, and therefore a looseness, or sweate, or bleeding, running nose or ears, oftentimes carries off the disease, but this disease differing from all others will not bee soe easily unhoused, nor the same way. For the occasion of this bleed-

ing and looseness I reckon to bee only this: Nature having endeavored a day, two, or three, to congregate the venome and thrust it out to the superficies of the body, and being hindred in her work by some intervening accident as preposterous physick, outward cold, or too much restriction of the pores, or want of humor to carry it off withall, and too substantial gross, thick, compacted, hard, solid flesh, as it happens in lean bodyes which have too much scarcity of humour to pass the disease out upon, or raise a kindly soar. Or else nature is too weak to oppugne the disease and give it a writ of ejection, and then upon the retreat of the venome it forces a slight evacuation either of blood or excrements by virtue of its malignity, soe that these eruptions or evacuations are nothing else but the effect or return of the disease towards the interior region of the body, and therefore must bee needs very evill signes, especially the loosenesse. And by this you may see the reason why the pissing of blood was soe fatal a signe as Diemerbrook observed it to bee at Nimuegen, though this pissing of blood was not found here at all that I saw or heard of. Thus I have expounded the whole riddle of this disease as to this which is a main point and unfolds a method to the true way of cure, which justifies that good old saying of Hypocrates, that what is to bee evacuated must bee driven that way which Nature is most ready and prone to lead to and point out.

The other more general observations need noe explanation, being written something more at length, and I affect not tediousness, especially in matters historical.

I shall set downe a brief Compendium of good signes, and soe proceed to describe the particular eruptions.

CHAPTER VI.

GOOD SIGNES IN THE PLAGUE.

1. Those who had a moderate feaver, and were not overthirsty, neither vomited nor strained to vomit over much nor over long, and had noe looseness; such promised fair and most tymes did well, for the feaver helpt much to thrust out the disease, but many going about to cure the feaver spoyled all.

2. Those in whom the disease first lighted on the superficies of their body, without being sick, and soe continued, whatever kind the sore was of, and whether it broke or noe, they all did well.

3. When the Plague invaded the body remissly and kindly at first, most times they lived.

4. If their vomiting staid in due time, and had but a slight headache, and thirstiness not violent, noe belching, or any strong settled pain in any particular part, but had red pimples, blaines, hard red risings or carbuncles thrusting themselves forward pretty early, such fared well.

5. Bodyes with narrow veines, much flesh, and humors, commonly fared better under the disease than the contrary.

6. Those that layed the greatest restraint upon themselves, forbearing drinking, tossing, & passions, fared best.

7. Women of good constitutions and complexions having many of their courses in the tyme of their sickness usually did well.

8. Many being of a suddain taken with a violent vomiting, and continually soe, not above 2, 4, 6, or 8 hours, and then staying of it self, such were well again presently, and the disease proceeded noe further, like a suddain storme soon over.

9. They who accustomed their bodyes to take good Antidotes, seasonably and constantly, and were not over fearfull, either had not the disease at all, or if they had it, it fell upon the superficies or outside of their bodyes, soe that they seldom dyed or were sick with it, unless they caught it with some suddain fright or were extraordinarily timorous, for then nothing prevailed either to protect or cure them.

10. Old people that had the disease oft times were not sick at all, such commonly lived, unless they were too much loaded with it, or unless they caught it with some suddaine fright, but if they were sick with it they seldom lived.

11. When the sores came forth pretty early, and hard, and in good places, they most times lived.

12. Blackish and blew blains that had a pretty full bladder strouting like a cherry almost ripe, though they had most feaver with these, yet commonly they fared better with them then with the whitish yellow, flat, paltry blaines like the small pox, though authors say the contrary. I saw one man at our pest-house with a blain upon his leg almost as big as a stoole ball,* as blew as a razor, and as full of matter as the skin would hold, and a great feaver with it; I bid the nurse open it with a penknife, and gave her a playster to lay to it afterwards.

13. Thick black urine at the beginning of the disease was a good signe, a physician seeing the urine of one of my

* Stoole ball = cricket ball; but whether as large as a modern cricket ball may be uncertain.

patients, which was as black as ink, said hee would dye in 6 hours. I laughed at him, and sayd hee would live, yet the people, for fear of being shut up, removed him to another house in the middle of his sickness, which had been enough to have killed him alone ; notwithstanding hee did well, and soe continues to this day at Temple bar.

CHAPTER VII.

OF TOKENS, CARBUNCLES, BUBOES, & BLAINS.

Of these I shall speak distinctly, and in all of them shall demonstrate at large these things :

1. Their Matter or essence, their Cause and names.
2. Their Bigness.
3. Their Figure.
4. Their Number.
5. Their Place.
6. Their Tyme of appearing.
7. Their Colour.
8. Their Substance.
9. Their Subjects.
10. Their Temper & Difference.
11. Their Accidents.
12. Their Effects.

CHAPTER VIII.

OF TOKENS.

Because there is noe proper name in Latin for these spots to distinguish them from marks or spots of other kinds, Authors have called them *exanthemata*. They might have called them by some Compound name to have made them better understood (seeing they could not express them by one single word), as *Maculae venenatae, pestilentiales, lethales, mortiferae*. Other Authors have been very silent about these ; they quarrelled not about them, nor fill the world with cart loads of books about them, as they have done of feavers of severall sorts and other nicetyes of lesse concernement. Wee have named them Tokens, and very fitly too. The scripture called the manifestation of God's Mind Tokens, "the Heathen are afraid of thy tokens", and these are in many respects soe called.

1. They are Tokens of Death approaching.

2ly. They are Tokens of God's wrath for sin, for here God punisheth according to the kind as hee doth often; you may read examples enough both in scripture and history, where many tymes in the punishment are pointed out both kind, tyme, place, & degree. And thus man having made his soul like a leopard's skin by the guilt of multitude of sins, God to convict him of them makes his outward skin in the like case spotted.

3ly. They are also tokens of God's mercy, for by these hee forwarns men as by a beacon set up to discover the approach of the enemy Death; and that hee is now steering out of the river into the ocean, out of this narrow compass of tyme into the wide ocean of eternity, soe that they may have some hours to set their thoughts in order (as hee bid Hezekiah by his house) to prepare themselves to meet their God.

4thly. They may bee called signs or tokens because they are certain significations of the nature of the disease, of the truth of it, that it is the Plague, and the state and condition of the Patient, *sed non hævere in cortice*; that it does not stick in the Bark.

Diemerbrook hath spoke most of any of them, though not to much purpose; but I digress too much. The Tokens are a small round mark or spot fixed in the outward Corium or skin; they are generally orbicular or round, but sometymes long, but that is rare; and as I suppose caused by many coming out together in a long trace; they are generally but as big as spangles or silver half-pence, but some as big as a silver penny, and then they are counted very large. I hear some talked they were as big as groats, I have seen some such red marks, but they were not the Tokens, and I believe they were all deceived, not knowing them. They are generally of a compound colour, yet some of a simple colour, as pure black, but most of them of a purple colour, which is compounded of red and a little shadow of black in it. Some authors write of green Tokens, which I never saw, nor I believe themselves neither. Some are of a blackish blew, upon their thighs oft, they seldom are of a violet colour, or bright sky-blew till they are dead; there is another sort of little thick ones of a brownish colour, and there is another sort which are commonly but little, but red-like drops of fresh blood fixed in the skin, they bee of a bright scarlet red. These last are most found in sanguine and flegmatick, and generally on very clean skinned people; the black ones come on black and melancholy people, and the purple ones generally on any body. The thicker and smaller they come

out the longer they live, commonly a week in this manner if the black ones come out thick and large they kill presently, often in half an houre, but many people dye just upon their coming out, especially when they have but 3, or 4, or 6, or but few. Sometyes more come out when people are quite dead.

Many people dye within 2, 3, 4, or 6 dayes of the plague and yet have noe tokens, nor yet have noe risings or soares, yet dye of the Plague. They seldome dye of the Tokens if they live above 8 or 10 dayes after they are sick. When Tokens come cut upon them before they have cold sweats and shivering fits and pulse, they have but few and scattering; they come out first upon the inside of the arm, I seldome saw any on the back, as the Doctors say, neither doe I think they take the pains to turn them upon their backs. Commonly the necke and breast is full of them, the belly hath but few, but the legs and thighs have some, but not soe many as the arms. People that were old seldom had any; all other ages were subject to them. People began to grow very sick and faint at stomach after they had them, and were very sad and dejected in spirit when they saw them; they that dyed distracted seldom had any. They were not frequently seen till summer, for I have heard of such things very narrowly looked after, but never saw none till June; they are but meer colour and shadow, and nothing of gross substance as Diemerbrook writes, viz., That they rise up from within, deep, ascending narrower and narrower to the top of the body or superficies of it; and that they are voyd of sense is only a tale. To prove this I have felt with my finger upon great Tokens to try if I could feel anything substantial in them, but could perceive nothing by feeling but the very skin, and they could feel easily when you pinched or pricked them, for they must bee mortified or extraordinarily stupified if they were voyd of sense, as a Carbuncle is when it is ripe. But these are but little light effluvia or vapours of the infected body and spirits scattered over the whole mass of blood and spirits, for the whole mass of humors & spirits are infected (though perhaps the Gall is not). Soe these exhalations being carried in the vital blood and spirits through the veins and arteries are diffused through their mouths into the skin by reason of whose density there they stick and appear. Sometyes they will come and be gone and come again, they have but little feaver when they have them; the more feaver they have, the less apt are they to have them.

I mistook spotted feaver—purple spotts—for tokens at

first, and indeed they differ soe little that none but those that are used to both sorts can know them. I will give you some rules to know them by.

First. The signs that usually appear in the Plague are absent most of them (especially the worst of them) in the spotted feaver.

2ly. These spots come out more thick and small than tokens, but many tymes you shall see one among the thickest much bigger than ye others.

3ly. These commonly come out first about the neck very thick, and afterwards all over the arms and brest like flea-bites.

4ly. They are never of any other colour but purple, or red, browne, and very small. This disease is very rife in a Plague tyme. A whole Alley in Westminster had it in every house and most lived.

5ly. They have more feaver with these than in the Plague, but dye not soe much as of the Plague.

CHAPTER IX.

OF CARBUNCLES.

Carbuncles, Tokens, Buboos, Blains are originally primarily and radically the same, having but one efficient cause, viz., the Pestilent venome, but as it meets with different subjects and accidents it spreads itself into different effects as various sores and Tokens. But concerning Carbuncles, they are soe called either from Carbo or Coale because it is hot, dry, scurfy, & burnt like a coale, or flesh burnt with a hott Iron, or else it is named soe from the stone called Carbunculus, which is of a fiery shining colour, according to the verse, *splendentes Gemmas superat Carbunculus omnes*, and I believe this might bee the boyl or blain that plagued the Egyptians and their Magicians, which could not stand before Moses because of the blains upon them. These Carbuncles break forth upon any part of the body except the Emunctories, where Buboos commonly break out, for Carbuncles commonly rose upon the most substantial, gross, firm flesh as the thigh, legs, back, sides, buttocks, brest, face, arms, lips, never on the head among the hair as I saw, or on the belly. As for Diemerbrook's saying that sometymes Buboos may turn into Carbuncles, I cannot argue against the *posse*, but I can say I never saw or heard of any that fell out soe. I believe cauterizing may doe it if anything will. Our Car-

buncles did come out in that manner as they say they doe beyond seas, but they doe soe confound Blains and Carbuncles together under the name of Carbuncles, that one knowes not what they mean. I believe they make noe distinction, but call them all Carbuncles, for they say their Carbuncles arose with white blisters or pimples on the top of them, very fiery, sometymes single, sometymes many together in a cluster. Our Blains rose soe, indeed as I shall note anon, but the Carbuncles rose different ways soe that one knows not how to describe them.

First a hard red swelling arose more fiery then the rising, and presently turned blackish, hard & dry, burnt, mortified, stiff, & very painfull; it commonly seized on men and women of hard, dry, firm fleshy bodyes, and much on old folks, on Cholerick and Melancholick. Children had none. They were not seen till about July, and in the autumn they were very thick. Buboës happening upon places more replete with moyst serous humor doth not soe much scorch and dry the part, nor kill or mortify as a Carbuncle doth, being bridled from both these by correcting moysture. Carbuncles differ much in bigness and fieriness, some being almost as bigg as a man's head; they are broad in compasse, sometymes raised a little higher than the other flesh, and sometymes even with a red fiery Circuit of flesh round about. Sometymes it is lower then the other flesh, and as it were sunk in a little, and spread and in breadth and grows dry; this shews the patient will dye. It sheales off round about and rots more and more when it proceedeth as it should doe, and runs much both before and after the core is out. When it is raw it sometymes spreads itself 18 or 20 Inches in compass, soe that you would think it would pull out a whole broad-side of flesh and leave the bones raw, but when it is well and healed up, but a little scar will appear and remain behind. I have had some with Carbuncles on their cheeks which I thought would have had but half a face when they were well, yet have afterwards been healed up with very little scar. A great feaver commonly accompanies Carbuncles, and Stopping of Stomach, and if these happen they commonly dye. Most commonly they have but one of these at a tyme on their body, yet sometymes 3, 4, 5, 6 on lean bodyes. They begin to appear presently after their falling sick, but are sometymes 3 weeks, a month, 5 or 6 weeks before they have done running and healed up again, but the risings are more tedious. Oft they are black in colour and hard in substance before they rot, they that dye with them lye pretty long and alwaies dye without Tokens.

CHAPTER X.

OF BUBOES OR RISINGS.

Of white Buboës and their qualities I spoke before, these I mean to speak of here are the Red hard Risings, which for the most part arise upon the neck, in the groin, under the armpit, and behind the ear, yet though Diemerbrook is of opinion they never rise anywhere else but in the fore mentioned places, and finds much fault with Zacutus Lusitanus and calls him lyar for saying that Buboës rise in other places of the body; yet surely it is not against reason that different places should produce various effects, and wee doubt Zacutus saw or heard of what hee wrote. I cannot tell how it fell out with Diemerbrook's patients. I am sure I saw many upon other places besides those in the groin, armpits, and neck (as on the shoulders and under the chyn, on the brest, on the arm), but they never would breake well, but sunk away still. They were more round then those in the groin, which are commonly long like a wedge and high like a ridge, of a red colour inclining to blew; sometymes they begin to come forth as soon as the patient falls sick, sometymes not until two or three days after, and then obscurely and deep in the flesh, which delay threatens danger, but the sooner they begin to rise the better; sometymes they are quickly maturated and break easily, sometymes they are very tedious and hard to break. I have known some a quarter of a year before they would break, some because of their hardness, and some because of their lying soe deep in the flesh, and when they are broke they are a long tyme a running—sometymes 2 months, 10 weeks, or a quarter of a year. But most of them break in a fortnight and have done running in a fortnight more. They were till July before any would break under the arm.

Those in the groin are very tedious, sometymes ten weeks before they break; but those about the neck and ears are never soe tedious; if you leave them, there will come nothing but blood out of them, unless they bee ripe and then they will break of themselves. They have not such a core coming out of them as a Carbuncle, only after they have run a good while you may squeeze out a rope of thick, long, putrified matter. Some of these risings are very big, others but small, some as big as an ordinary penny loaf, but generally about the bigness of one's fist. Generally they have but one or two of them at a tyme on them, but

sometymes 3 or 4 at once. They are very hard and painfull, and soe continue till they bee ripe, and then they are soft and look whitish at the top. Old people if they live, are seldom very sick at their coming out, but if they remain sick at stomack and doe not come out kindly they die. Moist bodies were more subject to these kind of sores then dry bodies. Children had them also in all the four places. They had not soe great a feaver with these as with the Carbuncles. They that dyed commonly had Tokens and these together; those that fell and returned again were either white ones, or else those that rose very late, low, flat, and obscurely. They made people hop and goe lame a great while. The Plague at the begining is like an Ague, and at the latter end like the *lues venerea*, for it invades them with shakeing cold, and both it and an Ague will bee cured best with antidotes and sudorificks; and the *lues venerea* hath Buboes like the Plague, and makes people hop like it. They had sometymes great inflammations round about these risings.

CHAPTER XI.

OF BLAINES.

These are sometymes called Blisters, though there bee another kind more proper to bee called Blisters then this, for it raiseth the skin in length like ones finger, but because those are but rare I pass them by. What blaines are called in any other language I know not, for I never saw a term or name simple or compound given them in any language but our own. They are a kind of little diminutive Carbuncles, but are not soe hard, black, big, fiery, or feverish as a Carbuncle, and they seize on different persons also, but they have sometymes a little core in them like a Carbuncle, only less. They are generally noe bigger than Two pence, or a groate at biggest; they are sometymes of a black blewish colour, with a bladder full of liquor on the top of them, which if you open, but a little will come out. Some are whitish, of a lemon or straw colour, they have more feaver with the other, and though they seem the worst, because they are blew or black, yet they fare many tymes better with them then they doe with the other. Sometymes they come out only first with red pimples like pustules, or pimples on people's faces, on which if you lay some drawing playster they will be drawn forth in 2 or three days into a blain. These come out sometymes just as people fall sick,

sometymes presently after, they are quickly broke and cured again; they have noe great feaver with these. They have many on their bodyes at a tyme, sometymes 10, 16, 20, they seize much on children and fair people, and tender bodyes. Perhaps it was these Job was smitten with. Noe part of the body is exempted or priviledged from them. I had one Patient had a large one upon the crown of his head among the hair on the top of his head as directly as could be aimed. They are round, and raised but little above the other flesh, sometymes not at all. Sometymes before they come out they are very sick and feaverish, they are very sore, sharp, and somctymes fiery. There dye but few with these when they once come out, they that dye with these have Tokens also, for if they dye of these blaines commonly they live not above 2 or 3 dayes.

CHAPTER XII.

OF PROPHYLACTICKS OR PRESERVATIVE MEANS.

I think by right of naturall order these ought to bee ranked before the means and method of cure, for if wee can but reach to the first there will be no need of the second; if wee can by any means keep ourselves from the disease, wee shall have little need of cure. But before I begin I shall digress a little concerning the vanity and cruelty of people's unreasonable fear in all places, Cityes, Townes, Villages, single houses. Surely it is the great mistake which they have in them about the nature of the disease, which makes them egregiously fearfull and consequently soe uncharitable, superstitious, and cruel. They have been wormed in the ears with soe many lying storyes and horrible relations, and having heard some hideous terms and frighting aphorismes; as terrible Plague, noysome pestilence, burning pestilence, and that common speech soe often used in pulpits: "Fly from sin as from a plague," and many such like expressions, which make many people believe the plague is like a Basiliske or Salamander, which kill all they see or touch. And therefore I would undeceive people as far as their vain fear will let mee, which commonly is soe great and sinful that it stops and shuts up all Counsel, Reason, Charity, Truth, etc., and makes people fall upon such vain and ridiculous courses.

I shall name some particulars: First, what care was taken about letters. Some would sift them in a sieve, some wash them first in water and then dry them at the fire, some air

them at the top of a house, or an hedge, or a pole, two or three days before they opened them. Some would lay them between two cold stones 2 or 3 days, some set them before the fire like a toast, some would not receive them but on a long pole. A Countryman delivered one thus to my wife at the shop door, because hee would not venture too near her. Concerning money, some would take none, becoming *mentis inops*, growing modest (so that one would take them for saints *pro re natâ*, nothing idolizing the God of this world); but as soon as the supposed infection is over, shew themselves partial and temporizing and returning to the old mire. Some would needs take it in water and wash it. But for clothes, they were so gravelled that they would not once come near them if they came from London, especially linnen and woollen. The same with Cats, Dogs, Hogs, etc., and generally any thing that came near or out of London; which made them keep watch and ward soe strictly, as if they would have kept the winds out of the towne, forcing some to lye and dye in Ditches, and under Hedges and Trees, and there lye unburied for a prey to Dogs and Fowls of the air. At Gloucester the Mayor of the City being an Apothecary would not suffer pipes of wine to bee brought into the City that came from London. But being brought in would have had them drawn through the river to wash off the infection; but at last it was agreed they should be excused by pouring water upon them; soe the vintner's man took a dish of water and poured on them, and sprinkled each vessel a little and soe made them wholesome, notwithstanding they had come a hundred mile in the air and it had rained on them much by the way. But seing every body can furnish you with news enough of this nature, I shall desist. Some have stopped the key-holes of their doors, and avoided the occasions of action and communication with all people & creatures, yet have not their fears been more vain then the Antidotes—foolish, superstitious, troublesome, weak, and ridiculous—which some people have used and others appointed.

I will reckon up a few of the maddest of them, and then proceed to others of more moment. Those I count of little efficacy are such as these, viz., Amulets, Tobacco, taking strong waters, brandy, etc., fumigating of houses, rubbing houses with herbs and sprinkling them, sweet powders, Troches, Odoriferous Candles, Civett Boxes, Nose-gayes, Pomanders, Rope's-end tarred, spice caps, Crosses, washing the temple and mouth with vinegar. Plaisters to the groin, wrists, temples, armpitts; lozenges, haire or silk

or leathered clothes, stuffing the nose with rue, wormwood, or what else, sleeping on flock bedds or mattresses strewed with cold sweet herbs in the summer, and with hot sweet herbs in the winter; frictions, bathing, purging, sweating, bleeding, vomiting, the French Pox, issues, cordial quilts, avoiding all stinking things and places, making fires in the streets, smoaking their clothes with Brimstone and Storax, etc.; carrying venome about them, suppositoryes, Ruffi pills; washing of streets, shotting of guns, killing Dogs, and Cats, choosing high grounds or hills to live on, shutting up houses, burning infected linen or woollen, chawing Tobacco, roots, or herbs; warding towns, prohibiting goods and people intermission coming from infected places, forbearing coming into a crowd, anointing the nostrils, eating six leaves of sorrel, fasting; and it were almost endless to reckon up all the little devises and weake meanes and medicines which they have appointed and used as Shields and Bucklers. A great trade there was a while in summer of selling Arsenical Amulets, yet I judge them as effectually as Mr. Greatrake's stroking. Theophrastus counted Pericles a crackbrained fellow for wearing an Amulet, and sure the rat killers will have a sweeping trade next year, the Arsenick and Ratbane being all spent, and the cats killed. And noe less ineffectual is the shunning and running away from searchers, warders, dead-carts, shut up houses, nurses, narrow allyes, dead bodies, dunghills, cobwebs, Southwinds; also the sprinckling chambers with vinegar, opening North and shutting Southwest windows; keeping birds in cages or a goat about the house; flashing gunpowder, burning vinegar, or hornes, or leather, setting milk up and downe in ye house, eating garlick and butter, drinking their owne urine, continuall mastication of roots, druggs, drinking vinegar and salt, sweating once a weeke, carrying of Reliques or pictures about one, enchantment characters, pictures of stars, serpents, mysticall numbers, taking of Bezoar Epithems over the heart, unctions. As for some of these they may doe a little good, as those which concern care, and cleanness, and temperance. Issues for fat folkes, Tobacco-taking, Diemerbrook greatly commends, though I never took a pipe this year, nor ever doe or will doe; but how many thousand Tobacco-takers think you dyed this year, and the chief thing he commends it for (as any one may see) is because he then learned to take it himself, but dyed not of it, being yet alive, about fourscore yeares old, I believe. If it doe any good it is to those who use it moderately and never took it before, or but little. As for all those superstitions & preservatives as Amulets, Crosses,

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reliques, enchantments, pictures and such like, I have nothing to say to them more then what the prophet Jonas saith, "They that believe lying vanities forsake their own mercies"; soe they that put any confidence in such helpless, frivolous trifles as these are satisfied, and diverted from trusting in God and using better means then such empty vanities, and soe forsake their own mercies. But to hasten, I shall divide the whole business of preservation into two heads, viz., firstly, what is to bee avoided, 2ly, what is to bee done, and these may bee distinguished in spiritual, political, and medicinal; but I think to comprehend all under the two former distinctions.

CHAPTER XIII.

WHAT THINGS ARE TO BE AVOYDED.

First. All sins in general, especially such as doe more particularly and peculiarly promote judgments of this nature, which are such as these:—Lust, Pride, & whoredom, wantonness, and prophaneness; for the Plague hath been a common judgment upon these exorbitances, as may bee sufficiently proved, both from experience, reason, history, and the scriptures, to which I think may be justly reckoned these also, too much eagerness in carrying on worldly designs of profit or pleasure, as usury, extortions, buildings, feasting, publique playes, etc.

Noe less carefully ought we to avoid at such a tyme uncharitableness, both in censure and actions, contentions, impenitency, which was Pharaoh's fault, being hardened under his blows, as also Atheism, common vaine swearing, blasphemous doctrines, all open and scandalous sins together with Hypocrisy, as making great profession of Godlyness, but in the mean while following the swings of tyme and place, dishonouring God and Religion, emboldening the wicked and discouraging the good, and consequently introducing Apostacy. Indulging too much to ease, carnality and worldliness in their affections also, ingratitude for blessings and mercies, oppression, inhumanity towards poor and afflicted persons, contempt of means, mercies, ministers, obstinacy, irreverence, and relying too much to Creature help, which was Asa his fault, and generally all sinns which doe with a high hand provoke God's wrath.

And then, in the second place, you are to avoid all things and occasions which may but in the least agree, prompt, and further your liableness to receive the disease, as too much

drinking wine, strong Beer, Brandy, strong waters, or whatsoever other gormandizing, fasting, thirstiness, all odoriferous things unless some present stinking occasion require them; All sorts of venomous amulets, reliques, enchantments, and such like fopperies. Bathing, purging, bleeding, vomiting, swimming in ponds or rivers, all overheating or tiring the body, all suddain changes in the Actions or Passions, much and hasty inspiration, firing the aire in hott weather, killing dogs and cats, because it is needless for they never have nor carry the disease, whatever authors say or think, but when they are dead they lye stinking and doe mischief. High grounds, or hills, especially bleak windy places to live in. At Hampstead died two hundred, three score, and odd, out of about a hundred houses, yet at the West End a little village soe called a quarter of a mile off, at the bottom of the Hill, there dyed none, though there are about thirty or forty houses there; contrary to the doctrine of many authors, who have said that scarce any who live upon hills in cleere aire ever have the Plague. Acton, Highgate, Islington, also had as great a dose of the disease as others.

OTHER THINGS TO BE AVOIDED.

Shutting up of houses when once it is hot weather, and the disease is grown thick (for it hath been oft enough tried and alwaies found ineffectual); entering into needless crowds and dangerous places, specially tarrying over long on such occasions; over timorous and suddain amazement and running away from infected persons and places and things. But especially avoid the wearing and use of all linen that hath been used about the body or bed of sick patients, for that is worse than woollen, and the smell of sick people's excrements is enough to strike one dead in an instant. Impure and foggy aires, South and South West windes, all putrifying things, rotten rootes, herbs, meate, waters, liquors, bread; nastynesse, cobwebs and generally anything whereby the infectious aire may hold open or bee detayned. Too great fires in the summer and too little in the winter, lying neere Churchyards or other burying places too full crammed with dead bodyes of the Plague. Too great fullness, and too much emptiness of nourishment or humors. All suddaine changes either of Actions or Passions, places, drinkes, dyett etc. Among Fleshmeat, to avoid much feeding on Pork, and too much Fleshmeat, especially such as this because of its moisture and tendernesse is apt to corrupt and putrify by reason of too suddain a digesting; too early and too late

walking abroad in the air before the clime have discussed the Fogs and Mists and evil vapours.

Many sorts of Fish are thought also to bee destructive, as Herrings, Salmon, Eels, Polypus, Soles, Stockfish, Haberdine, Whiting, Muscles, Cockles, and many such like. Also many sorts of fruits, and generally all fruits over ripe, over sweet, luscious, fulsome and laxative, as many sorts of Plumbs, too soft, moyst and sweete, and many kinds of Pears of the same nature, and some few Apples and over ripe Cherries either blacke or red, but especially some sorts of gardners' fruit, as Cucumbers, Mellons, Pompions, Leekes, Onions, and Garlick. Also (whatever Galen saith to the contrary) Jerusalem Artichoakes, Parsnips, Lettuce, Spinage, Coleworts, Gourds, Dates, Figs, Intybes, Poppies, Prunes, Gooseberryes too ripe, Sebestens, Beetes. Liquorish, as the Spanish Doctors think is not good, nor Sugar and Hony. Some condemn Asparagus, Mallowes, Mercury, Henbane, Sowthistle, Opium, Manna, Oyle, Muske, Pigeons, Quicksilver, Lead, also drinking water or beere too new, too small, new and sweet wines, new ale. As for Exercise—avoid overtiring, sweating and overheating the body, overmuch or too little sleeping, too much venereall exercise, especially people unaccustomed to it. Therefore marrying in a Plague tyme is very dangerous, especially for men, as the great number of widdowes everywhere testified. Also sleeping in the daytyme, sleeping in the sunne or upon hay, also all unquietness and disturbance of the Mind and Spirits, as well as of the body; as Anger, Fear, Grief, Sadness, especially suddain Fear or Joy, also too much care, study, distrust, fearfullness, discontent.

CHAPTER XIV.

WHAT IS TO BEE DONE? FIRST, OF FLIGHT.

Beza and some other Divines treating of this point and commending and advising it, doe not like well to have it called flying away, perhaps thinking it a scandalous term, but would have it called only going aside, a more moderate word. All phisicians terme it Flight and many of them scruple much the advising of it, soe that some will say nothing at all to it, neither persuade nor dissuade, but leave every man to his choice, but the Divines have beene more bold, and advise it more eagerly and condemn those that betake not themselves to their heels. Nay, they say people are wicked and provoke

God in not doing of it. The Turks (they say) neither fear nor fly from it. As to the lawfullness of the thing I see noe reason why people should soe scruple about it, seeing an indifferent understanding may solve the doubt; for sure it is lawful if a man live not in a healthful aire to remove into another, or if a man doe not sit easy, to remove to another seat; a man hath the world before him and given him to live in. The heaven is the Lord's, but the Earth hee hath given to the children of men, as the prophet sayeth, neither is it only lawful, but convenient also, for by this means many lives are saved, soe that the land is not soe much weakened by the thinness of people, and those that are gone can better provide for those that stay, by sending them reliefe of money and victualls, also it much abates the fury of the disease, for by making the inhabitants thinner, it rages not soe much, for more fuel, more fire and woe. It is lawfull to fly from other epidemical judgment, as Famine, War, persecutions, etc. And then why not from the Plague also. But, saith Diemerbrook, you must fly in the Fear of God, and indeed that was well put in, for if wee feared God more, wee should feare all evil less, and the plague less, and soe the less prone to catch it, and the fear of God is as universal a remedy as flying away. Solomon saith it is the Fountain of life for the avoiding of Death, but those that make use of this preservative would doe well to join prayers and alms, which would sanctify it to themselves, and help their neighbours.

But here ariseth another question, who may fly, and who may not, for it is not to bee thought that all may run without distinction, care or consideration; but as for children, I think it would bee well if they could bee all put out into the country, for what good doe they in a dangerous place, but make work and trouble, and add fuel to the fire, they being more apt to catch the disease than others? And as for others, I think all may fly that are free and not obliged to stay either by their office, relations or necessities, such as Magistrates, Ministers, and Physitians, Apothecaries, Surgeons, Midwives. But those Apothecaries which have their work and dependence from the Physitians are not, I think, obliged to stay behind, when their Masters lead the way; for who shall direct them? They say it is not our business to direct or undertake to give Phisick of our own heads; therefore they are to bee excused. But those Apothecaries which stand upon their own Legs, and live by their own practize, are bound by their undertakings to stay and help as in other diseases. Every man that undertakes to bee of a profession or takes upon him any office

must take all parts of it, the good and the evil, the pleasure and the pain, the profit and the inconvenience altogether, and not pick and chuse; for ministers must preach, Captains must fight, Physitians attend upon the sick, etc. But two or three of the yongest are appointed in a plague tyme to looke to 30 or 40 thousand sick people, when four or five hundred is too few, and at another tyme, when there dyes but two or three hundred a week, you should have 5 or 6 hundred hanging after them if they bee well lined with white Mettall. 'Tis the Rich whose persons are guarded with Angels.* These are the carcasses whose stomachs shall bee cloyed with as much phisick for the cure of the Toothache, as the cost would cure half the diseases of the Town if honestly ordered. But if four or five Physitians bee enough in such a plague as this was, surely one is enough for common diseases at other tymes. But to speak a little more of flight, I think those who are very fearfull ought especially to fly, and that quickly, but for parts of families to fly is altogether to bee condemned;— for a man to fly, and leave his wife, children, and servants, or the wife to doe the like, or the Master and Mistress and children to fly and leave the servants or any part. Either let all stay or all go, or else but only children, and bee sure to observe the old rule, *longe, cito, tarde*;† for many in our Parish and many more in the City intending to fly lingered soe long that they were taken with the Disease and dyed before they could get out. Others went too little a way off, as 3, 4, or 5 miles at most, and there were taken sick, for unless people go 10, 16, or 20 miles off at least, they had as good stay at home, for all the aire was infected round about the City for 7 miles round, soe that the further you went, the safer you were. Then againe some returned in the heat of the Disease, as Mr. Bolt, the Apothecary, and a Grocer by us and many others by us, and dyed. Such had better a great deal never have stirred out of the City, and others who returned about October, November and thereabouts came too soone for their safety; but necessity must pardon many such errors. Teeming women should forsake infected places because of the great danger. The best way to fly is thought to bee Northward not Southward. This shall serve for those

* The point of this little joke will be missed if we do not remember that a physician's fee at this time was an *angel*; a gold coin then worth ten shillings. To the same effect was a gibe of Nicholas Culpepper's—that physicians of the present day are like Balaam's ass; they will not speak till they see an *Angel*.

† “Hæc tria pestiferam pellunt adverbia tabem,
Mox, Longe et Tarde, Cede, Recede, Redi.”

That is:—“Flee quick, Go far, and slow Return.”

(An old couplet quoted by Gidcon Harvey.)

that are able to save themselves by flight; those that are necessitated to stay behind and abide the shock of Battle, deserve to have more pains taken in prescribing them rules and means of safety, because they are in the greatest danger.

CHAPTER XV.

PRESERVATIVES AND MEANS FOR THOSE WHO STAY BEHIND.

After Humiliation, Confession, and resolution for reformation of life, which is necessary at all tymes, especially at such a tyme, because of the extraordinary fickieness of our lives, wee may the more comfortably and confidently descend to the use of other means of inferior ranke; and in these I will not make many nice divisions, for the avoiding of tediousness, because it overchargeth people's thoughts and memory; but after a few short rules concerning aire, meate, and drinke, fullness and emptyness, exercise and rest, sleeping and waking, and passions of the mind, I shall descend to medicine. Therefore first, concerning aire, little can bee done concerning this because all that wee can do will work but little alteration in it, the effect of all that bee done, being soe flitting and transitory. Yet a great bustle hath beene made among Authors and the people, about correcting the aire (as well as correcting of medicines which comes to as little also). I have not spent two farthings this yeare about correcting the aire in my house, yet I think I had as wholesome aire blowing in my house as my neighbours, many of which filled their houses every day with smoke to fumigate and correct the aire, yet I had noe body sick or dyed in my house all this year, nor in my life; for my man was taken sick in Gray's Inn Fields, and lay sick but a day, and then dyed with Tokens in another place. But because some people have great conceits about correcting the aire, I will set down all the devises I can think of which may do any good. As in winter tyme and in foggy and moyst places and tymes, especially nights and mornings, to keepe good fires if you bee able (though it bee in the summer, nights and mornings will doe good). Wood fires are accounted best, and if you bee more choice about the quality of your wood, you may choose Juniper wood, Ash Tree, Oak, Guaicum, Lignum, Aloes, Asphaltum, Sassaphras, Cypress, Rhodium, Maple, Beech, Walnut tree, especially Orange tree, Barberry tree, Service tree, Box and Bay Tree, any Arromatick tree, Frankincense, and Masticke tree, Myrtle tree, Apple tree, Sloe tree, or

Black thorne, Fir tree, Camphire tree, Ivy. Yet I know noe reason why Sea coale fires also should bee discontinued, seeing they commend the burning of brimstone soe much. The next, to bee sure to keep the house from anything which may occasionally infect the aire, as nastyness in generall, foul water, dust, cobwebbs, or anything rotten or mouldy, as Herbs, Rootes, Victualls; to rub houses with Angelica, Rue, Scordium, Wormewood, Southernewood, Costmary. Walnut leaves, bay leaves, Lavender, Cotton and many other are counted very wholesome, or to boyle these or the like in a kettle of water, and wash the house with it hot; to keepe the windows of the house close shut all night, and all day too in close and cloudy weather, and windy rainy weather; but on faire, dry, sunshiney weather to open the North and East windows in the day tyme, and alwaies to keep the South and West shut. And likewise to keep in the lieu [lew or lukewarm] or calme still aire out of cold bleake and windy places, but in very hot weather to avoid the use of great fires.

That was (in my mind) but a slender exploit to make fires in all the streets of London in the midst of the hott weather, and as poor success it had, and though I reverence Antiquity, and affect it as much as any man, yet I believe nothing at all of that old story of Hypocrates, his curing a great plague by setting a wood on fire. Perhaps hee might doe it upon the turning and declination of the disease, and soe perhaps it decreased apace, or perchance frosty weather clapt in upon it, and that age observed not, and thus it might goe for current in after tymes, that the Fire did the feat. As little can I think that the soldiers discharging the guns ever quelled it in any places as some Authors have written, also oft sprinckling houses, viz. the floors and the walls with Aromatick Decoctions, Waters, Vinegars, strewing Windows, Rooms and Chymnies with Sweet Herbs and Flowers, burning or fuming vinegar and rose water. Some think it fit to keep birds in cages to fan the aire with their fluttering wings to keep it from stagnation and putrefying, but I thinke this is but a trifle. Now for fuming and smoke-drying houses, this being generally practized, and for those sakes that believe in it, I will set down all simples which are good and will conveniently and handsomely burn; what woods are good I have set down already.

Burn rather Pitch, Resin, Turpentine, Asafœtida, Asadulcis, balsam of Peru, Tolu, Capivi, Camphire, Caranna, Frankincense, Tachamahacca, Storax Calamit, and Storax liquida, Opopanax and Galbanum, Labdanum, Gum elemi, Amber, Sulpher, Benjamin, Mirrhe, also some Aromatic things as

Nutmegs, Cloves, Bayberries. You may make use of any of these single or make compositions out of the woods; Gums, Spices, Roses, or any other sweet flowers being added to them. I will sett downe but one Composition, which I thinke may save a labour of writing a heap, because all books abound with variety, and one may answer to all intentions soe far as concerns fuming. Thus; take Juniper and Rhodium wood, of each half a pound. Frankincense and Rosin, of each half a pound, Storax and Benjamin, of each two ounces, Labdanum, Amber, Masticke, Tacamahacca, Cloves, Bayberries, Brimstone, Camphire, Damaske, Roses, Mirrhe, Juniper Berries, of each 2 Drams. Mingle them together and burn them a little when you please, or of the forenamed simples you may make Troches, Candles, pomanders or what you please. Besides these things oft flashing of gunpowder is much in esteem with some, and wildfire squibbs, fire balls and other, serpents, crackers and gymnacks which are commonly used on the 5th of November. Besides these, burning old Shoes, Leather and Hornes are in use with some poor folk, also the smell of a Fox or Goat is thought good by some, but that which was chiefly in vogue (and for universality of use) was smoking of Tobacco, of which I have spoken before. And thus much for correcting the aire which I think towards preservation lends but a weak hand.

CHAPTER XVI.

OF MEAT AND DRINK, FULLNESS AND FASTING.

Those errors which are commonly committed about eating, drinking, exercise and such things are very dangerous in a pestilent constitution, and the least miscarriage is apt to make a man catch the disease in a plague tyme, soe that one had need to keep his body as charily as a Venice glass in such a tyme, and though some have lived carelessly in all respects and yet escaped, yet that is nothing; for as there is noe Medicine soe infallible for any disease, nor for this, but that many people taking it some will dye, *Nil ad omnia beatum*, soe there is noe mischief soe certainly mortal (in such common lawful things) but that many people committing it go scot free; but how many clear examples might bee brought of many hundred of persons, if I might not say thousands, that have got their bane by running into but a little excess to what they doe at other tymes. But to dispatch soe much as

concernes meat and drink, may bee branched into these heads, viz. quantity, quality, tyme, custome, order, age.

First for quantity—the quantity must bee according to the substance of the Food, as it is hard or easy of digestion, nourishing much or little, and according to the strength, Age, Constitution, and Complexion of the eater, for Custome if that bee bad must bee allowed, and that by degrees, because all suddain changes are dangerous more than ordinary in such a tyme. The tyme of eating must bee minded and in that the tyme of the day and the tyme of the year; for the day, in such a tyme I think it good to eat thrice a day, though you eat the less. The tyme of the year, and soe the summer tyme requires meat colder, moyster, easier of digestion and less in quantity, the winter requires food more firm, substantial, hotter, and more in quality, the stomack then being hottest and strongest. For order it is hardly worth speaking of, for people should not bee burthened with too many particulars. And for Age a word or two will serve, viz. That children and old folks must use dyett hotter, moyster and easier of digestion, and middle Aged, strong people, the Contrary.

In drink I entend to bee as brief as may bee, and I think it a very good rule for all, and would conduce much to their good in body, Purse and business, to drink oft at Meales and little or not at all between Meales, unless thirst constrain, and for quality I judge a middle sort best, because beer too small flats the spirits too much, and too strong fires them too much. And now and then a glass of sack doth very well in such a tyme, because it takes off fear, and all melancholy etc., and cheers the spirits. As for what meat or food is to bee chosen 'tis needless to write here, because I have set down before what are naught and to bee avoided, and by avoiding them you necessarily fall upon the good. As for fullness and emptyness either of nourishments, humors, spirits or excrements, I rather commend a constant fullness than emptyness, because it more conduceth to safety, and diseases of plenitude cure better and easier than those of vacuity, but concerning Clothes, if any bee soe nice as to think any great safety lieth in the choice of Apparell (if their purse will reach it), they may wear Sattin or any kind of Silk or Hair Clothes or Leather or Oyle Cloth, I thinke these are most rationally to bee chosen. Woollen Clothes are generally condemned, yet I wore noe other all the plague tyme, nor have worn any other these seven years, but I believe the Infection catcheth sooner upon Linen and remaineth longer in it, then in woollen, and more have received the disease from infected Linen than infected Woollen.

CHAPTER XVII.

OF SLEEPING AND EXERCISE.

In Sleep is to be considered tyme and quantity. As for day tyme, as it is at all other tymes unseasonable, being against Scripture, Custome and reason, soe at this tyme it is more then ordinary unwholesome, and as for quantity, you must have respect to Age, Constitution and Employment, but in general 5 hours is the least that can in reason be allowed and seven or eight hours is enough in Conscience for those that work never soe hard, and in short old people, children and lean people should sleep most, and fat people, young and middle aged least, and idle, unemployed people and students should eat, drink, and sleep less than people that work hard, and the errors comitted about sleeping and exercise are more dangerous then at other tymes when there is no plague. And as for exercise, there is to be minded only moderation, and immoderation; overheating the body is very bad, because it disturbs the humours and spirits, and makes the body more apt to receive any impression from the Aire, but it is excellent to keep one's self in moderate employment, and not to mind every idle tale they hear, which fills their heads with vain fears disturbing their apprehension and doeing mischief; soe much for this.

CHAPTER XVIII.

OF PASSIONS AND AFFECTIONS.

Little will serve to be said concerning these, both tending to content and discontent. What dispositions are to be avoided I have spoken of before. I believe one great cause why this disease sweeps away whole families is because they grow Melancholy and discontented, one friend for another, especially being shut up brings a sad cloud upon their spirits. Now when any one perceives himself very fearfull and Melancholy and cannot well rid himself of such a humor, he must use the means to overcome and alleviate it, the most common and effectual are three, viz., Company, Wine and Musick and any other lawfull diversions; and in short I could commend Stoickal life, temper of spirit, viz., to observe and carry an even brow under all change of good and evil, not to be dejected at ill newes nor suddenly raised at good, but to fix in an immoveable resolution. As for sack, 'tis an excellent

Antidote for Melancholy people if they keep a due moderation as a pint in a day, because it takes off care, sadness, etc. As for musick, some may think it very unreasonable at such a tyme, which requires a contrary temper of spirit, and consequently unlawful, but I think noe man need bce soe nicc and narrow spirited, as to question the lawfullness of private solace and Chamber Musick, especially when it is used for such a good purpose, and sure noe man thinks that I mean your wild wanton, hackney fiddlers, whose employment is altogether to bee condemned at such a tyme.

CHAPTER XIX.

OF MEDICINAL PRESERVATIVES.

These are either outward or inward means or occasions; means as amulets, plaisters, nosegayes, sweet boxes, issues, bleedings; or occasions which commonly are some kinds of diseases which accidently become preservative from the greater disease, as sometimes many petty infirmities keep off greater fits of sickness, and hence perhaps came that proverb of a grunting wife, etc. Such diseases as these are commonly as good as preservatives, but I would not have anybody to trust to them. Old outward sores or ulcers, cancers, polypus, ozena, boiles, Kings evil, itch, French Pox, scab, scaldheads, Leprosy, fistulas and running sores; and that such things as these should fence people against the plague is not against reason nor experience, for though like draw his like, yet are there venomes of different nature which are Antipathetical and expell one another. That this is not against experience witness all the common prostitutes of Lukener's Lane and Dog Yard and other places, where all these unclean beasts are still alive, and scarce one dead, yet are almost all of them full of old sores, itch, scabs, running sores, pox, fistules, ulcers, and such like, soe that those that make use of them had need of stomachs like Ostriches able to digest a tennpenny nail, whom you may trust in a garrison. Soe much for the occasions, as for the means, I have spoke of all of them before except Issues.

As for blecding, either for cure or preservation, it is wholly to bee layd aside, for if you use it to cure, it presently kills, if you use it for preservation you catch the disease the sooner and the easier, and twenty to one but you dyc of it to boot. Now for Issues, I like well of them for fat people, if they run well, but for lean old people

and dry bodyes, I think them bad, but I would not have anybody trust to them alone, and use noc other preservative. Now to Medicines, all Evacuative Medicine is to bee avoided, except only a few gentle ones which may serve for melancholy and dry bodyes, that are commonly bound threc or 4 days together, and such may take once a week of Ruffi pills, and which I think is as good or better, *Pilulæ Aloephanginæ*; such a dose also, or such an extract as this *R. rad. angelicæ, imperatoricæ, enulæ, gentiani, Zedoarie, baccar. Juniperi, rad. serpentariæ, vel gentianæ ana ℥ s.s. fol. scordii, cardui, rutæ, ana M. i. Cinnamoni, charyophyllorum, croci, dictamni cret. ana ℥ ii Cort. extern. Citri, summitat. Centaur. ana ℥ i folior. sennæ, agarici ana ℥ i s.s. rhabarbari ℥ i epithymi ℥ s.s. infudent omnia contusa in vini albi q.s. per septimanam deinde coquentur leviter et colaturæ claræ adde aloes optim. ℥ vi Myrrhæ claræ rub ℥ i s.s. balsami peruv., Mastickes, ol. nuc. Mosch. per express. ana ℥ ii M. et evaporando redigatur in Massam idoneam. Of this pill may bee taken two scruples once in 4 or 5 dayes, but as for myself, I never took a grain of any pill or any purging physick these many years, though I count not this for a rule for everybody; but some cannot swallow pills, yet can take potions well enough though bitter. For such may bec made such a wine or Tincture as this: *R. Rad. enulæ, petasitis, angelicæ, contra yervæ, bardanæ ana ℥ i, fol. scabiosæ, abrotoni, pimpinellæ, scordii ana Mi flor. calendulæ ℥ s.s. cinnamoni, nucis moschatæ, Charyophyllorum, Zedoariæ, Centaurii ana ℥ ii aloes luridæ ℥ ii rhabarbari ℥ i incisa et contusa singula infudentur vino albo (vel pro pauperibus in Cerevisia bona) lb xii vel xvi et bibat quotidie mane ℥ ii vel iii. These are enough sceing every book is loaden with Receipts though not one in forty worth anything in many of them, for everybody will bee overtaking to write Receipts though they durst never look the disease in the face. Now something should be contrived for poor people sceing they cannot fly because they want money; therefore the disease lyes hard upon them. The Germans in a plague tyme invented this powder for the poor, viz. Ginger and sugar of each an ounce, camphire half an ounce mixt together. This I like well enough, and it would bee very suitable for poor people, but that the Camphire is dear, but if the Camphire were as cheap as the Ginger, how should the poor have soe much of it as would serve such a number—soe many hundred thousand people—unless the rich would joyne together to lay in a stock to procure it for them, which is seldom put in execution.**

Therefore something should bee devised for them which

lyeth within the reach of possibility to bee had for them, and I can think noe easier or better way at present (if any knew a better, they would doe well to make it known), then in such a tyme, if the plague bee in such a city as this where there is soe many Brewers to let them doe it, but if it bee scattered in the country then every particular house may doe it for themselves, because there they almost all brew their owne Beer. I mean that the Brewers should brew all their drink with alexipharmacall Herbs, roots etc., instead of Hops, but they must bee, such as may bee had in good quantityes. The Ingredients are these, viz., Carduus, Scordium, Scabious, Aron leaves, Burdocks, Angelica, Southernwood, pimpernell, wormwood, Goats' rue, Marigold, Elicompane leaves or roots, Juniper berries, enough to bee had, Walnut leaves or the tender boughs, and many more might bee reckoned, but all these may bee had in quantityes great enough, and yet are not any of them soe ill tasted but that they are all tolerable in drink, though they were all brewed together. I have forborne to name rue, because it is soe strong in taste and smell, and it is so dear and scarce to bee had, especially in a plague. They that can abide it and have it growing may make use of it. Scordium also is commonly dear, which may be left out if not easily had, though it is one of the best of them.

But to make as short work about medicines as may bee, because every book is soe full of them, I will only sum up all those particular Simples which I judge are good, out of which you may make compositions at your pleasure; afterwards I will set downe 5 or 6 compositions of my own that I have made use and trial of this last year, and soe proceed to the Method of Cure. The simples are these following, viz., *Rootes*—The Rootes of Scorzonera, Tormentill, Meum, Nard Celtick and Indian, Masterwort, Cinquefoile, Ginger, Petasite, Valerian, Sulphurwort, Zedoary, Leekes, Onions, Garlick, Sarsaparilla, Aron, Vipers' Buglosse, Elicompane, Virginia Snake weede, Dragon roots, Ash, Galangall, Hyacinth, Orris, Docke, Dittany, Cyprus Root, Costus uterque, Selondia, Avens, Calamus aromaticus, Buglosse and Burrage, Bistort, Behen, Burdock, Aristolochia, Gentian, Acorus, Angelica.

Herbs—As Pimpernell, Chervill, Centaury, Carduus, Goats' Rue, Marigolds, Burrage, Bettony, Costmary, Mugwort, Woodroffe, Marjoram, Agnus Castus, Woodsorrell, Common Sorrell, Southernwood, Wormwood, Germander, Camomill, Dittany of Crete, St. John's wort, Lavender, Cotton, Bayes, Balme, Mints, Tobacco, Bazill, Plantain, Polium, Roses red, Rosemary, Rue Sage, Savory, Scabious, Schoenanthus,

Scordium, Tyme, Divell's bitt, Mead sweet. *Woods*—Lignum Aloes, Balsom wood, Sassafras, Juniper, Box, Walnut tree, Guaiacum; *Barks*—Lemon peelee, Citron and Orange Peeles. *Flowers*—as Gilliflowers, Orange Flowers, Saffron, Stockes, Elder, Violetts.

Fruits—As Oranges, Pipins, Pearmains, Bayberries, Barberries, Cloves, Carpobalsanum, Pomccitrons, Cubebs, Walnutts, Pomegranetts, Lemons, Nutmeggs, Pepper, Currants.

Seeds—Sorrell seeds, Bishopswood, Amonum, Dill, Cardamoms, Daucus Creticus, Gith, Macedonian Parsley, Wormwood, Seseleos.

Gumms—As Assafetida, Bdelium, Balsam, Camphire, Galbanum, Mirrh, Storax, Olibanum.

Vinegar, Succus Kermes, white wine and canary, agaricke, sparrows, scorpions, vipers, hart's horne, unicorn's horne, boue of a stagg's hart, castor, bezoar, silke, amber greece, red corral, pearles, antimonium diaphoreticum, gold, silver, bole armeniacke, terra sigillata, terra Samia, lapis granatus, rubinus, saphir, emerald, sulphur.

Compound Medicines good against the Plaguc are Acetum Caryophylorum, Acetum theriacale, Aq. Absynthii Comp., Aqua Angelicæ Comp., Aq. Bezoartica, Aq. Cord. frigida Saxonæ, Aq. Gentianæ, Aq. imperialis, Aq. Juglandium, Aq. Celestis Mariæ, Aq. Melissæ, Aqua mirabilis, Aqua petasitidis Comp., Aq. Scordii Comp., Aq. Theriacalis, Aromaticum Caryophilatum, Aromaticum Rosatum, Confectio Alchernes, Confect. de Hyacintho, Diacinnamum, Diacorallion, Diarrhodon Abbatis, Diasatyron, Diascordium, Electuarium de bacc. lauri, Elect. de ovo, Elect. e sassaphras, Extractum theriacale, Extract. Bezoardicum, Julepum Cardiacum, Laudanum Londinense (Pulvis), Lætificans, Mithridatium, Philonium Magistrale, Persicum, Romanum; Pulvis antilyssus, Pulv. rad. ari Comp., Pulv. Bezoardic. magist., Pulv. e chelis canc., Saccharum tabulat. perlatum; Species Cord. temperatæ, Sp. diamargariton frigidum, Sp. diambrae, Sp. diatrion pipereon; Spirit Castorei, Sp. lavendulae, Syrup. acetosus Comp., Syr. e Cort et e succ. Citri, Syr. e coralliis Comp., Syr. melissophyli, Syr. de stœchade, Theriaca Andromachi, Th. Diatessaron, Theriaca Londinensis, Tinctura Croci, Tinctura Theriacalis, Trochisci Alexiterii, Troch. de Camphora, Cypheos, Hedychroi, de ligno Aloës, Troch. de vipera; Vinum Absynthites, Vin. scilliticum.

Then you are to take notice also that the same medicines are to bee used both for curing the Plague and preserving from it (except only in the cure you are not

to use any of the purging Medicines at the beginning nor middle of the disease, though they bee never soe gentle, till eight, 10 or 12 dayes bee over, but generally not till the sores have done running), soe that all these Medicines, both simple and compound, are effectual not only to preserve from the disease, but also to cure it. Soe that when I come to speake of the Cure I shall have occasion to write down but few Medicines, because I have named them here before. Besides many other boobies have saved mee the Labour, and especially Diemerbrook, whose book, as well as many others, is crowded with Medicines, but his are all very good, though too tedious. A few Compound Medicines will serve him in his Practize, half-a-dozen good ones are enough in Reason. I will only add 4 or 5 Compound Medicines of my own which I used all the year with good successe, and soe make an end of preservatives. I used none but my own commonly, for I had not seen Diemerbrook nor heard of him till of late, till my practize was all done. Since Christmas last, when the Plague began to grow thick, I made a few Medicines which might serve for a general use, as an Electuary Antidote, a Plague water, Lozenges, an Antipestilential Tincture, Ingredients for Posset drinke, to keep ready mixt, an Extract, a Pultisse, a Playster.

The Electuary was this:—℞. rad. Angelicæ, Ari, bacc. Juniperi per liberum excret, fol rutæ ana ℥ii rad. Serpentariæ, Contrayervæ, Tormentillæ, Zedoariæ, Costi dulcis, Enulæ, gentianæ, imperatoriæ, seminum Acetosæ, sem. Citri, cort. extern citri, sem. cardui, Cinnamoni, Dictamni cretici, boli armeni, Castorii, fol. scordii, gummi guaiaci, flor. calendulæ ana ℥ s.s. croci, balsami peruv., cochinelæ, Myrrhæ, caryophyllorum, troch. de vipera ana ℥ii Bezoar Orientall, Camphoræ, lactis sulphuris, ana ℥ s.s. Saccharum Triplum dissolut. in aq. Theriacali q. s. f. Electuarium.

Two Drams of this Electuary is enough to take in a morning, or a Dram and half to bee constant every Day. I took nothing else all this year but only about 2 Drams of this in a morning and sometymes I carried the Lozenges about mee to eat as I went into infected houses, but at last I left them off quite; having soe many to visit, I could not remember to use them, being all day out of one house into another, from six a clocke in the morning till ten at night. This Antidote I sold to many both in ye parish and other places, and whosoever tooke it constantly and carefully kept well for the most part, and if they chanced to have the disease it commonly seized them but on the outward parts of the body without being sick at all with it, and then they never dyed.

I used this also for Cure as well as preservation, for 'tis as good for one as the other. I used betwixt 30 and 40 lb. of this in a month. The Plague water with which I used to make cordialls and Juleps, or to mix them was this :

℞. rad. enulæ, bardanæ, petasitidis, angelicæ ana lb s.s. baccar Juniperi lb i s.s. rad. tormentil., iridis, gentianæ, acetosæ, ana $\frac{3}{4}$ ii fol. scabiosæ, dracontii, angelicæ, abrotoni, scordii, cardui; frondes ulmarie, thymi, absinthii, pimpinellæ, melissæ, galegæ; flor. tunicæ, calendulæ ana m. ii. rutæ viridis m. vi aurantior. Civil. No. xii, sem. thlaspios, acetosæ, citri, pœoniæ, ana $\frac{3}{4}$ i s.s. Cinnamoni, croci, ana $\frac{3}{4}$ i Caryophyllorum, Zedoariæ, rad. serpentariæ, ana $\frac{3}{4}$ s.s. contusa macerentur in alâ novâ et vino albo ana q.s. vel lb. x et alembico distillentur.

FOR LOZENGES.

Those Trochisci alexiterii of Renodeus in the old Dispensatory are very good ones, but not soe pleasant as those in the new dispensatory, though much more effectually in my mind, it being methinks very ridiculous to put pulv. e chelis cancrorum and bole armeniack into a Lozenge to bee held in the mouth, but those which I used were these :

℞. Rad. iridis, dictamni albi, zedoariæ, angelicæ, caryophyllorum, nuc. moschata, rad ari, enulæ, cinnamoni, sem. citri excorticat. ana $\frac{3}{4}$ i croci $\frac{3}{4}$ i, camphoræ $\frac{3}{4}$ s.s. sacchari albi dissolut. in aq. Theriacali lb. s.s.; f. tabulæ ore continendæ et sensim deglutendæ.

THE TINCTURE WAS THIS:—

℞. rad. angelicæ, baccar. Juniperi, rad. tormentillæ, enulæ, Zedoariæ, imperatoriæ ana $\frac{3}{4}$ s.s. fol. cardui, rutæ, scordii, pimpinellæ, flor. calendulæ ana m. i, Cinnamoni, croci, cochinnellæ, Caryophyllorum, granorum Kermes, nucis moschata, cort. citri, fol. menthæ ana $\frac{3}{4}$ i Infunde aceti vini albi acerrimi lb. ii et reservetur ad usum. This is good to mix with Cordialls to provoke sweat and stay vomiting.

THE INGREDIENTS FOR POSSET DRINKS ARE THESE:—

℞. rad. scorzonera, acetosæ, tormentill., cort fraxini, rad. bardanæ, baccar. juniperi, ras. cornu cervi, flor. calendulæ fol. lujulæ, sem. cardui, fol. scabiosæ, pimpinellæ ana $\frac{3}{4}$ ii macis $\frac{3}{4}$ s.s. M. coquentur in possetulâ pro potû ordinario.

THE EXTRACT.

℞. Rad. imperatoriæ, angelicæ Hispanicæ, enulæ, baccar. juniperi ana $\frac{3}{4}$ iiiii folior, scordii, rutæ, cardui, ana M. ii

flor. eentaurii, ealendulæ ana $\frac{3}{4}$ mæcis $\frac{3}{4}$ 1, charyophyllar, croei ana $\frac{3}{4}$ s.s., sueei Jugland. Melissæ ana lb. i, vini albi et hyspanici ana lb. ii post insolationem 3 dierum coquentur leviter, exprimentur prelo et in extract. molle reducentur. Of this may bee given a Dram or more or less to provoke sweat or for a preservative, for it will doe for both. Only you must give bigger doses for cure than for preservation.

There are commonly many ingredients in several sorts of Treacle waters, alexitericall waters, and other waters which will not aseend in distillation, but will deposit their virtues in infusions or Decoctions, and therefore I think it better to make the infusions or Decoctions such as will keep, being strained cleare than to still them into water; but in a plague tyme they may bee tolerated, and thus you may doe by Treacle water because of the Juice of Lemons which is in it.

THE PULTESSE.

R. rad. altheæ, lilliorum. alb., eeparum tost, rad. Symphiti recentis, ana $\frac{3}{4}$ ii fol. malvæ m ii flor chamæmeli, meliloti ana m i sem. lini et sinapeos pulv. ana $\frac{3}{4}$ eroei pulv $\frac{3}{4}$ ii Terebinthinæ $\frac{3}{4}$ s.s. vitell ovorum No. ii ol. lini et lillior. alb. ana $\frac{3}{4}$ iii unguenti basiliei et ægyptiaci ana $\frac{3}{4}$ i M. f. pultieula.

THE PLAYSTER.

R. Emplast de mucilagibus, terebinthinæ venet., galban colat., picis. burgund., ana $\frac{3}{4}$ sem. lini pulv. $\frac{3}{4}$ croci $\frac{3}{4}$ ii M.

I found by often experience that white bread, milk and saffron would digest and break risings as soon as anything with great ease and speed, especially those behind the ears. Pultesses are very fitt for Buboës, but that they will not lye on them handsomely and fall off again, unless they can bee bound on as they may on a legg or an arm; for it is judged they doe not constipate the pores soe much as playsters doe, but leave more scope for the venemous exhalations to breath out, which the pultesse moderately moves towards the plaee. They that affect to pick and echoose amongst a multitude of medieines either for preservation or cure may find them enough in every author which have writt of the Disease, espeially in Diemerbrook, where there is a great heap of medieines, and most of them very good, which will save mee a great labour.

And thus I will make end of preservatives, only for a farewell advise people to five or six general rules (for they are commonly eonfounded with a multitude), and these are only negatives; as to forbear too much fear, fullness, exees-

sive drinking and intemperate eating, bleeding, venery, purges and vomits, overtiring and overheating the body, all suddain changes in food, exercise and sleep, passions or affections; and run into noe more dangers than lawful necessity forceth you to doe. You may goe into any infected Town or house if you bee not fearfull and stay not long in the place, as not above two houres in a Towne, or half an hour in a house. If you have a good friend lying on his death-bed, and you have business of great importance with him, you may first drink half a pint of sack or hold a clove or peece of a Nutmeg in your mouth, or Zedoary, Elicompane, and fear not to goe to him and doe your business; but if you bee very fearfull 'tis best to stay away and save your life though you lose a legacy. One thing more I thinke fit to advise you concerning bleeding, that in the tyme of the Plague, 'tis not good to let blood for any disease whatsoever, for all feavers, pleurisies and hot diseases presently turn into the Plague, and the sooner a great deal if they bee blooded, and they seldom let blood for any other than hot distempers. Some have been let blood for a pleurisy and after some few days and sometymes hours have dyed of the Plague as I have seen, and people presently run to purging and some to bleeding for prevention of the disease as they think, and this is one thing which makes the disease increase after their coming in.

One thing more which I think fit to advise you of, because I have seen the experience of it in my self and others; to change your Antidotes if you bee of a dry constitution of body. For the constant taking of hot and dry Antidotes against the disease begets several diseases upon the body; especially, stone, gravel, sand, by overheating the kidneys, together with consumptions, jaundice, feavers, headache, inflammations, hecticks, nausousness of stomach, heartburnings and many pustules outwardly. But it doth rather incline people towards such diseases than wholly bring them into them, for I never knew any dyc of any disease they caught by taking of Antidotes. But I think it best for such people to take but twice or thrice a week of hot strong Antidotes as Mithridate, Venice Treacle, London Treacle, Elect. de ovo, Antidote Matthioli or that before written, and three or four tymes a week to take some other cooler Antidote, as such a one as this:

℞. Conserv. berberorum, lujulæ, pulpæ radicum scorzonæræ recentis, pulpæ baccar. juniperi ana ℥ ii Boli armeni, rad. tormentillæ, sem. citri excort., sem. acetosæ, spir. Cordial temperat. ana ℥ ii confect. de Hyacintho et Alchermies ana ℥ flor. sulphuris ℥ s.s. camphoræ ℥ i, syr. e succo Citri q. s. f.

Electuarium. They may take of this and sometymes of the other electuary first written.

I took of none but the former hot electuary because I perceived noe ill effect it wrought till after long taking; only it would make one have some sickish qualmes on the stomach about an hour after taking of it, and would drive out a many pimples in several parts of the body. As Diemerbrook also saith; the same pimples, their Antidotes drove out in Holland upon sound people. But I used my self to eat a great deal of fruit in Summer tyme as Cherryes, Peares, Apples, etc. notwithstanding they are cryed against soe much, that by their moysture and coldness they might temper and allay the effects of the hot dry Antidote.

CHAPTER XX.

OF CURE IN GENERALL.

Mr. Garencières saith the Plague is the easiest disease in the world to cure, and soe said Mr. Stoakes the Apothecary though he dared not venture on it, but hee is dead since. But whoever thinks like Mr. Garencières to cure 19 of 20 only with sweating reiterated or by taking of Venice Treacle will miss their mark I believe, and Diemerbrook himself mee thinkes lays a little too much stress upon that one common way of often repeated sweating, and yet confesseth this oft fayled of which hee expected most success. I thinke both hee and this City last year made it too universal a rule to bee put in practize upon all bodyes at all tymes of whatsoever age, complexion, season, constitution, for though some doe think (and the Chymists especially) that *in Morbis acutis complexiones non considerantur* yet I incline to the other opinion; for if a choleric and a phlegmatic man have each of them a pleurisy or a fever they will not alter their course in the cures of both, seeing one may bee cured of both diseases without bleeding, as I have oft tryed.

Some physitians here followed Diemerbrook as neere as they could; sweating was the most generall course taken, yet were not other ways left unattempted by rude and ignorant people, as purging, vomiting, bleeding. For the physitians almost all going out of Town left the poor people for a prey to these devouring blunt fellows, blind Bayards, who were very bold to turn Doctors. The absence of those who should have watched over the people's lives handed them the opportunity by their going aside, and these were all such timber-headed

fellows that notwithstanding their confident fearless familiarity they could make noe accurate observations at all, which the Physicians could easily have done, had they the same courage, and the new upstart Empiricks made sad work both with people's bodies and purses, selling their idle medicines at an extraordinary dear rate. One sold purging pills at half a crown a pill, and an ointment at 5d. an ounce, these also sold pomanders very dear and playsters 5 Shillings a peece. One gave Mathews his pill to sweat, made with hellebore, opium, etc., which choaked people. A wheelwright and a shoe maker used these. I happened into the company of one of them, who bragged much of a water hee had. I asked him which way the water would effect the cure, and hee told mee by purging, vomiting and bleeding all at a tyme. One Gray, a quaker in Gutter lane, gave purging Pills to all that came to him; a great many also that would not venture in the battle would hold themselves excused by writing single sheets of directions out of charity, which did as much hurt as the Mountebanke; for though they never saw one sick yet would undertake to write that vomits was the only way, others that bleeding was good. Some were for purging, but not to regard what they did here or beyond seas, or what authors have writ, most of which run presently to bleeding (except Diemerbrook, who hath straitly condemned that course and hath done well in doing soe), yet hee sweated all. Yet hee had but thirty odd lives for foure seore which dyed as his history sheweth.

I shall only here shew my opinion and leave everyone to chose to follow either this or what liketh them best. The whole Cure I think may bee divided into Regiment and Medicine, and the first mee thinks is the difficultest of the two to resolve, for wee are not soe ignorant in the matter as the method, in the what, as the how, though wee are not soe exquisite at that neither. Notwithstanding wee have Cartloads of reecipts yet few of any great certainty, nor are like to have soe long as wee keep ourselves in the Fetters of long tedious compositions. But the order of Cure soe much as concerns Method I will divide into meat, drink, and government, and first what meat and drink is fit. All substantial food, as flesh, fish, bread, eggs, etc., for the first 3 or 4 days must bee avoided and most commonly 6 or 7 days, especially if there bee a feaver, and keep only to warm spoonemeats, in which you may infuse or decoct Maee, Sorrell, Hartshorne, Cinnamon, Marigolds, Wood sorrell, Currants, Oranges, Lemons, Marmelade, Tamarinds, Barberries, Prunelloes, eandied Angelica Stalks, red roses,

Chicken, Larks, Partridges, Sparrows, Burrage, Buglosse, Cowslip flowers, Sage, Rosemary, gilly flowers, Juniper berries, Scorzonera roots, Nutmeggs, Pippins, Betany, Marjoram, Saffron, Mints, Savory, Tyme or what you will; any of these, according as the patient is troubled either with vomiting, Frenzy, Faintness, Feaver, windiness. The poor must make a shift with Panadoes, made with some of these things in it. They that are rich may make themselves other Cordiall broths more costly as thus :

Take a Chick or young Capon, or Partridge and three or foure Larks, the intralls taken out, adding some veal knuckles also an Orange and Lemon cut into slices with peel and seeds and all, or a whole Citron if it bee the tyme of the year that you can get them, or if it bee not you may take the Candied flesh of them, half a pound, fresh scorzonera roots, scraped, candied orange roots and Angelica stalks candied, of each two ounces. Conserve of Roses, Barberries, and quinces, of each 2 ounces, Cinnamon, half an ounce, Mace two drams, Hartshorn an ounce, boyl these together in a quart of water, and a quart of white wine, or as much of each as will conveniently serve (for I am noe cook). You must boyle it a pretty while, as an hour, or an hour and a half, then strain it through some cloth, and if you will press it out in a press, of this the sick may take 6 or 7 spoonfuls 4 or 5 tymes a day.

I think I need not write much of this nature seeing every Nurse knows or ought to know how to order their dyet which differs nothing from the order to bee observed in the Small Pox. You must give nothing cold either meat or drink, but warm both. For Drink at the beginning of the disease it should bee something smaller then after, as one part strong beer, and 2 parts small, but forbear large draughts though you drink the oftener, and commonly posset drink boyled with some of the things in it I mentioned but now before. The Broth Posset Drink turned only with Oyle of Sulphur is highly commended by some, also Oranges and Lemons and Wood sorrell are good if great feaver and thirstiness trouble them, but in the posset you give them in their sweats, you had best to boyl Scabious, Carduus, Marygolds, Juniper Berries, Hartshorne and the like. Possets made with white wine or Cawdles with it are to bee commended, if there bee much feaver you may make such Juleps as these to drink now and then instead of Beer :

℞. Aq. Cardui, Iujulæ ana ℥ iiii Aq. theriacale, Aq. Cord. frigid. saxonæ, Cinnamoni hordeati ana ℥ ii succi aurantior ℥ iii Syr. e succo Citri ℥ iiii M.

If it bee for poore people this will serve :

℞. pomorum redolent n^o 6, lujulæ M. ii Coq. in aq. font. lb. iiii adde succi aurant ꝑ iiii sacchari ꝑ ii m.; let them drink this instead of beere.

At the beginning of the disease you must make your Cordialls more expensive especially if you trust to them to eject the disease without Antidotall electuaries or Powders, for some people cannot take electuaries or Powders, neither in Bole nor Potions, then you may make them such a potion as this :

℞. Aq. Antipestilential ante prescript ꝑ iiii aq. Theriacal still. ꝑ ii spirit. croci ꝑ i aq. Bezoard ꝑ ii s.s. syr. e cortic. Citri et fl. Caryophyllor. ana ꝑ i olei sulphuris gt xii m. capiat dimid. initio morbi et reliq. intra horas tres.

If the Party bee troubled with constant vomiting you may make such a Julep in stead of beer, and in this disease nothing is better to deny themselves much drinke, or drinke small draughts of this Julep.

℞. Aq. lujulæ, Citri totius ana ꝑ iiii aq. Cinnamoni hordeati, menthæ, rosar. rub., ana ꝑ s.s. succi aurantior civil. ꝑ ii Syrupi e succo Cydonior ꝑ ii s.s. ol. vitrioli gt xii m. capiat C ii quâque horâ. If they bee disposed to bee loose which is dangerous such Julep as this will doe well :

℞. Rad. tormentillæ, acetosæ, Symphiti, Scorzonæræ, ana ꝑ i fol. lujulæ, centinodii ana Mi, rosar. rub. M. ii cornu cervini, eboris, ana ꝑ i Cinnamoni ꝑ s.s. Coq. aq. fervent et vino albo ana C s.s. ad lb. i s.s. Colaturæ adde Syrupi de rosis siccis, Syr. myrtini ana ꝑ ii ol. vitrioli gt xx m. Cap. cochlearia sex ter quaterve in die.

For continuall vomiting you may apply outward Cordiall and stomachicall Epithemes to the stomach, or soake a Tost in Vinegar, with Nutmegg, and lett them smell to it and chaw it, or clap a stomachicall playster all over the stomach, such a one as this :

℞. Emp. Stomach. magistral ꝑ i s.s. mastiches et Taccamahac pulv. ana ꝑ i aromatici rosat ꝑ i s.s. ol. Moschati ꝑ ii ol. Cinnamoni et Menthæ Chymic ana gt xvi m. extende alutâ tenui et stomacho applicetur.

And this Julep now and then :

℞. Aceti Theriacalis prescripti in tinctura ꝑ aq. Cydonior., Cinnamoni seu menthæ rosar. rub. ana ꝑ i Succo Cydon. si habere poterit ꝑ syr. Cardiaci et de Mentha Comp. ana ꝑ i s.s. m.

Some condemn the use of wine either for preservation or cure, perhaps thinking it inclines them to sleepe, or thirst, or feavers, or perhaps, judging as Rondeletius doth, that it carries venome the swifter to the vitalls; for hec saith hem-

lock given in wine kills speedily, but in water slowly, though I believe not that hee ever tryed it either way ; but people come at things, and then publish them for truth. I cannot dislike the use of any good wine, as Canary or Rhenish, given only to fit persons in due tyme and quantity either for preservation or cure, if it bee not just in the beginning of the disease, nor the patient very sleepy or have a high feaver, or in hot weather, or bee a cholerick person, or frantick or light-headed, or have a great pain in the head, or thirstiness, or inflammations, or bee a child, in such cases it is to bee forborne ; but to others free to bee used especially for preservation, for there is scarce a better Cordiall to bee found that growes in soe great a quantity amongst all Simples, and doth much good in a plague tyme by expelling feare and melancholy, or you may mix a Cordiall with it as thus :

℞. Vini Canarini lb.s.s. aqua boraginis, Cinnamoni hordeati, ana ℥ iiii Syr. e Succo Lujulæ, berberorum, Idei rub., e Succo citri ana ℥ i aq. rosar. dam. ℥ ii M.

Now concerning the Method of ordering of a Person in his Sickness from the tyme of his falling sick to his going abroad again, in this lyes all the Art and difficulty, and I was once in the mind to have sayd nothing at all concerning this, fearing my weakness and inability to perform it least I should commit some errors about it, which might endamage the publick safety of mankind. But seeing this is most materiall, and the booke bee imperfect without it, I thought good to lett people know my opinion concerning it, for I doe not desire any one should pin his faith upon my sleeve in this particular. Much less doe I undertake to give a generall rule to the world to walk by, but leave every one to his choice to goe his owne way, for soe many various circumstances arise upon severall persons at different tymes, Ages and Seasons, that it is an endless and almost impossible thing to treat of all particulars, but only lay downe a few generall rules to keep people from the more gross errors which are most dangerous, and leave the more nice particulars to bee ordered according to the present occasion and skill of the Physitian. Therefore, first, the total avoyding of bleeding, purging, and vomiting as most pernicious and destructive by what meanes soever procured, or by whomsoever practized or commended, by writing or otherwise ; for though there bee 30 or 40 Authors which have commended bleeding, there are as many or more which condemn it, besides continuall experience. Besides these, common reasons are enough to confute all Arguments which can be raised in defence of bleeding, as :—

1. Because the Plague is not bred either from plethora or cacochymia, from plenitude or corruption of humors, nor obstructions or anything within the body, though such things are sometymes the occasions of sooner taking it, but from the outward Infection in the Air or other Subjects.

2. The Infection doth not allwaies float upon the humors nor spirits, though most tymes a little mixed with them, but sticks to the Internall solid parts, and therefore will not swim out with bleeding or purging, nor be wafted off with sweating many tymes.

3. But few have any feaver, and those that have any have it not properly or originally, by reason of the pestilent venome, but of the Putrifaction of humours, which is caused by that, and you must have a greater eye to the Plague then to the Feaver for this hardly kills any (of the Plague) simple of itselfe, but as it is joyned with the Pest, and soe makes the burden heavier to bee borne, and the Patient sooner to bee ruined, especially at the beginning of the disease.

4. You doe the greatest injury to the patient that can bee, because Nature raiseth this in the body on purpose to help herself withall, to help to thrust out the disease to the superficies, and I saw all along that they who had a pretty high feaver at the beginning of the disease usually fared best, wherefore I never meddled with the feaver till three or four dayes were over and the disease pretty well thrust out; but a feaver happening in the middle of the disease, or three or four dayes after falling sicke, was dangerous.

5. Because the main thing to bee designed at in this distemper (and almost in all others) is to preserve the spirits and strength of the body that nature may make the strongest expulsion; but bleeding renders them weak, languid, and flagging, and nothing more diminisheth them.

6. Because bleeding quite overthrowes the laudable designe of Nature by perverting her course, which is to drive the matter offending from the Centre to the Circumference, and from the noble to the ignoble parts; whereas this turns in the venome again, as may easily bee perceived by people's growing soe faint and dying soe suddainly after bleeding or spontaneous sudden loosenesse.

7. Because it checks the expulsive faculty soe much and makes all outward eruptions to fall flatt, black or blewish, which should by all means bee raised.

8. Because by it the spirits and humors being disturbed are more prone to take the infection, and scatter it, which perhaps was gathering to one place before.

9. Because perhaps before the venome only lodged in some

outward or ignoble part, and now after bleeding the empty veins receive it into themselves and soe transmitt it into the Intralls.

10. Because Hypocrates teaches us to follow the intentions of nature, and alwaies to drive a disease that way which she is most willing to, and most readily points out, and in this and almost all other venoms, she thrusts them out to the outside of the body, into boyles, seabbs, Itch, pimples, etc., and these same arguments will serve against vomiting and purging, and wee see experience enough that whether they bee procured by art or nature, if a vomiting cannot bee staid or if they fall into a loosenesse they allwaies dye.

CHAPTER XXI.

THE METHOD OF CURES.

Before I begin this I must needs say something concerning a doubt which hangs in my mind, which I have hinted at a little once or twice before, viz., whether strong sweats often repeated be an authentically canonicall rule which will serve for all sorts of people or noe. I wish some body of more skill would resolve the doubt. That which makes mee doubt and stiek concerning this is that I have seen soe many this year of strong, lean, rawboned, nervous people of much spirit and little humor, that have been very laudably sweated, and scarce one in twenty of them have lived, but dyed all within two or three days, and the sooner by how much the more freely they sweated, and were the worse after their sweating, being much more subject to lightness of head, staggering, faintness, bleeding at the nose, quinzies in the throat, and some had the tokens come out presently, which made mee desist from much sweating such persons. And then I had many patients, lusty men, that lived, which I never sweat at all, and are living to testify the same. And I observed that they that sweated very freely of their own accords seldom lived. But let not any think that I goe about to deery the common way, which of all the four vacuations is surely the safest; I speak only in referenee to one partiicular constitution of people, that others may take the more notice of it. So I will not say noe more about it, but now turn to describe the whole method of ordinary siek persons from their falling sick to their going abroad.

First, when you have concluded any one from manifest signes to have the Plague, let him or her goe into a warm

bed in a close chamber with a fire in it, which must be bigger in the winter and less in the summer. In the summer you may strew or rub the room with cold sweet herbs and in the winter with hott, or sprinkle it with Vinegar or Rose water (but these things are of least consequence) then presently give the party some alexipharmick bole or Potion, which is more convenient then a bole unless they bee inclined to vomiting, then a bole will stick best, and if they vomit it up, give another, but alter it a little, and let them hold a spoonfull of wine vinegar in their mouths and smell to some besides. Then appoint this, let him or her sweat an hour or an hour and half 2 or 3 tymes, according as circumstances permit, as they are strong or weak, fat or leane, hott or cold tempered, old or young, or middle aged, the season of the yeare, the weather, the strength of the disease, the sexe, the forwardness or backwardness to sweate, in these things the discretion of the overseer must direct. But sweat not 24 houres as some appoint. Then in sweating drink such posset drink as was prescribed before, a Carduus or Juniper posset, if you cannot get all the other things, and have by you a convenient Cordiall Julep, to drink now and then, and if they will not sweat easily with medicines and coverings you must apply hot things to the outsides of their bodies, as bricks wrapped up in napkins, bottles or bladders of hot water; or baggs of sand heated or any mettall. You may apply these to the armpitts or groine; the head must have a cap or a napkin about it.

And after sweating and all well dryed you may open the North or East windowes halfe an houre to diffilate the evill fumes or vapours of the chamber, but change not their shift or bed clothes unless for foul ones worn before and well ayred again (for this is a very ticklish disease and the least error committed turnes a man out of dores) untill a fortnight bee over at least. But if you see noe fair eruptions come forth, nor the party bee not better after the sweat, but ill signes continue still, you must give another dose of Antidote, and sweat again after 6 or 8 houres, according as hee sweat more or less before, and lay on two strong large blistering playsters to the inside of his arms a little below his shoulders, for there they doe alwaies more good than on the wrists, and six or seven houres after hee hath sweated take them off againe, and dresse them twice a day with Burgundy Pitch and Melilot playster mixt together, or either single as they are more hardy or tender. And if the buboes come not forth well nor you can perceive noe blaines or carbuncles arise any where else, you may apply blistering playsters to the Emunctories; then when you perceive the Inwards freed from the Infection, you may give the patient

some kind of small nourishment, or tender meates of lightest digestion, and now and then a little Cordiall, and sometymes a little Antidote without sweating. Some after they have given the first dose to sweat upon, give another of the same within two houres, and a third or a fourth at little distances of tyme all the while they sweat, both the first, second and third sweats, but if after this second sweat you perceive little success and the party continues either with belching, vomiting, or looseness, gidly-headed, lisping, thirstyness, sick faint fitts, feaverish oppression or stopping at stomach, hiccough, bad pulse, stiff neck, restless or some settled pain in some particular part, that will not remove; if any of these or other ill signes appeare, then you may if you think good take the other bout at sweating. But it is seldome that the third or fourth sweate doth any good, if the first or second doth not, but in sweating a patient have a care of making him weak and faint, for it were better in my mind that they were not sweated at all then to have their strength overthrown, and have care of their drowsing and sleeping in their sweating, especially at the beginning of their disease.

CHAPTER XXII.

THE CURE OF CONCOMITANT SYMPTOMES JOYND TO THE PLAGUE, AND FIRST OF THE FEAVER.

The feaver I told you before must not bee much meddled with at the begining for fear of hindring the cure of the Plague, but if it remain long and increase and threaten the party, then you may use the same Medicines, but not the same method, for you must not purge, bleed, nor vomit nor glisten, which you doe in other Feavers, only in the Medicines you must have an eye to the pest, therefore I shall say noe more to this, seing the usuall Medicines good for the Plague, which are of the cooler sort, will serve for the Feaver, as Wood Sorrell, Barberies, Oranges, Citrons, Scorzonera, Tormentill, Plantane, Borage, Sour Granates, Violetts, Sorrell seeds, Bole, Camphir, ol. Sulphuris, Vitrioli, Salis, Corall, Ivory, Pearls, Nitre, Lapis, Hyacinthus.

Of Headache, too much Sleeping, Watching and Frenzy.

The headache usually lasted not long but somtymes it was soe grievous that it required particular care and cure, and this is easily done by Frontalls and unguents, and a few Cephalicks used inwardly; if need bee such an unguent as this often prevails:

℞. Ung. populei ℥ iii ol. nuc. moschat. per expressionem
 ℥ ii Camphoræ ℥ s.s. Opii gran. ii spirit. rosar. gr. ii M. f.
 linimentum pro fronte.

Or Red-rose Oake soaked in red-rose Vinegar with a little Nutmegg and Camphire applyed, and if such things will not doe, you may apply a strong Vesicatory to the necke or a Cupping-glass without scarification. The Ointment will serve for watching and frenzies, and the Vesicatory and Cupping will serve for drowsiness and too much sleeping. If you think not these enough you may make any other kinds of medicines out of the simples good for the purpose, as some of these, viz. :—Roots of Piony, Zedoary, Marjoram, Mistleto, Bettony, Cowslipps, Lavender, Goats' Rue, Yewberries, Masterwort, Tobacco, Popyes, Sage, Willow, Stæchas, Nymphaea, Nigella, Juniper, Black Cherryes, Gum elemi, Taccamacha, Nutmegg, Castor, Cloves, Rosemary, Lime-tree Flowers, Bayberries. Applications to the feet may bee tolerated also for diseases in the head. They that are inclined to sleep too much must also bee hindred from it, pulling, troubling, and talking to them, and walking about the room if they bee able. You may boyle some of these simples, as Bettony, Rosemary, Lavender, Marjoram, Castor, Stæchas, Cloves, Nutmegg, in Wine Vinegar, and inject it in the nostrills and rubb the forehead and ears with it also, or else Chymicall Oyle for anointing the temples. To divert the Drowsynes, as Oyle of Rosemary, Amber, Rue, Camomill, Castor or the like, or moderately to use sternutatives if they doe not sneeze of themselves; but these venemous vapours which ascending doe cause these sleepy inclinations are chiefly dissipated by gentle Sweates, and the eruptions coming kindly forth better then any Topicks or Cephalicks.

Fainting, weakness, and swooning are to bee cured by convenient Cordialls, Electuaries, Epithemes.

Wind, belching, and hiccoughs must bee cured (if they will admitt of cure) with such things as these :

℞. fol anethi, thymi, pulegii, satureii, ana M i. flor fumitoriaë dul., carui, anisi, anethi, charyophyllor., nucis moschat. ana ℥ i coq. in possetatu; or this Powder :

℞. sem. anethi thymi, carui, cymini, anisi, ana ℥ i charyophyl, Zedoarie, nuc. mosch. croci, ana ℥ s.s. camphoræ ℥ s.s. F. Sacchari ℥ iii m. f. pulvis—or this Electuary :

℞. El. de baccis Lauri, conservæ Menthæ ana ℥ i aromatic. rosat., diagalangæ ana ℥ i Syr. Cardiaci q. s. f. electuarium.

To cure their vomiting was the greatest difficulty, nay, sometymes it would not bee staid for all that could bee done. To stay this vomiting divers things are to bee tryed, both

by outward and inward meanes, the most effectuall I shall here sett down :

℞. conserv. ros. rub. menthæ, berberorum ana ℥; diascordii. confect. de Hyacintho, sive mosch. ana ℥ ii Aq. pestilential. prescr. ℥ ii aq. Cydonior., menthæ, Cinnamoni seu succi limonum ana ℥ i aq. rosar. rub. ℥ i s.s. m. et stent per horam et colentur et detur. cyathum i ter. in hora una.

℞. Unguenti astrigentis, ung. rosat., ol. Scorpion. ana ℥; theriacæ Andromachi, ol. nuc. mosch. per expressionem ana ℥ i s.s. ol. menthæ chym. ℥ s.s. M. f. liniment pro stomacho.

℞. Emplast. stomach. magistral. ℥ i ol. nuc. mosch. per express. ℥ i ol. Cinnamomi, menthæ chym. ana m. ℥ s.s. M.

℞. Aromatici rosati ℥ iii fol. menthæ, carÿophÿllor., macis, mastiches, ana ℥ i pulverizentur et adde micarum panis alb. ℥ iii aceti rosar. et succi Cydonior. ana q. s. f. pasta mollis et ventriculi regioni applicetur.

℞. Aq. Antipestilent. prescript. ℥ iii succi cydon. et lujulæ ana ℥ i aq. Cinnamomi hordeati et aceti rosar. ana ℥ i Syr. de Symphito ℥ ii f. Julep.

℞. Cinnamomi ℥ s.s. rosar. rubr., sem. coriandri, macis ana ℥ ii Rasuræ cornu cervini et Eboris ana ℥ s.s. fol. menthæ ℥ i panis alb. ℥ i s.s. coq. aq. fount. q.s. ad lb. i Colatur adde syr. e succo Cydoniorum ℥ iii ol. vitrioli gut. xx. M.

℞. Conserv. menthæ, rosar. rub., berberorum ana ℥ ii nuc. mosch., conserv. cort. cit. cond. ana ℥ i aromatici rosati ℥ iii Elect. e sassaphras ℥ i ol. Cinnamoni gt. viii syr. rosar. sicc. q. s. ol. sulph. ℥ s.s. F. B. pistentur conserve et f. electuarium.

℞. Cinnamomi, macis, carÿophÿl., Cort. Citr. fol. menthæ rutæ, Mastiches, rosar. rub., santali rub. ana ℥ i sacchar. ℥ ii contunde et nodulo infunde lb. i Vini Rhen. aq. rosar. et aceti samb. ana ℥ i M.

℞. Carnis Cydonior. condit., gelatinæ Idei rub., cons. berberorum, cons. Rosar. rub., ana ℥ i M. Capiat ℥ ii pro bibitu.

I think these enough, but many more may bee made as occasion requires. Now if any think it a good way to give a vomit to help nature to vomit up all at once, thinking that then the patient will bee well, sure they are much out of the way, as they were who published such a way by their printed sheets in the summer, for it is not a commodious way for nature to cast out the disease this way, neither doth she intend it but to the superficies of the body. I gave but one Vomit all the yeare, which was to a strong man in May, 1665, who having drunk hard, had a great disposition to vomit, and did of himself, and the day after hee

took the vomit had an obscure Buboe arose in his Groine, which with his belly falling a little flatt, and giving a faint smile hee dyed presently.

THE CURE OF BLEEDING AT YE NOSE, COURSES, SPITTING OF BLOOD, PISSING OF BLOOD—PILES.

Severall Countreyes produce severall effects. For Diemerbrook saith that in Guilderland at Nimuegen, where he practized, bleeding was a dangerous sign, and scarce any lived of it, but especially of spitting and pissing of blood. Now this pissing of blood was not seen at all with us, and the spitting but little; but wee had abundance that bled at the nose, and some also had their Courses yet did well. I believe a third or fourth part of them that bled lived, yet I never liked it, and had rather alwaies that it should not have happened; yet it was soe doubtfull a sign that I durst never give judgment by it; but there was noe stir made about the curing of it as Diemerbrook speaks of. But people lett it alone generally, for usually they bled but a few drops. I remember but two men at present who bled freely, one of which lived and the other dyed, viz., hee that bled at the nose, bled at the beginning of the disease two or three quarts and lived, but the other bled at the mouth two or three dayes after hee fell sick and dyed that night. Now if such bleeding happens that threatens the life you may apply such meanes as are commonly used iu that case, as Bole, Red Corral, Comfrey, Troches de terra Lemnia, Ivory, hartshorn, red roses, lap. hematites, vinegar, white Copperas, Tormentill, bistort, opium, Chalk, lyme, lead, terra sigillata, a live Toad, Iron Stone, Jasper, Topaz, Clay, cum multis aliis; and of these to make either Playsters or dipp Raggs and stop into the nose, vinegar, a plaister of lime and vinegar layd saddle-wise upon the nose together with ligatures, frictions, cupping, and many other devises too tedious to write. Soe much for this.

The flux of the belly and looseness which happened to many if it came upon them two or three dayes after their falling sick, scarce one in forty lived; but if any lived with it, it was such as had it from the beginning of their sickness, and but few of these lived neither; but seing what can must bee done, the way and method of curing these fluxes differs not much from the means and method of cure at another tyme, you may only make your Antidotes a little more restraining, and if you see it difficult to stop them you may use Opiates, as thus:

℞. Theriacæ venet. ℥ ii, boli veri, diarhod. Abbatis ana ℥ i laudani Lond. gr. ii ol. anisi gt. iiii. syr. de rosis sic. q. s. f. bolus. Or 2 drams of Diascordium with as much conserve of Roses taken at a tyme; there are abundance of Medicines both simple and compound good for this purpose which are too tedious to reckon here.

Oppression and stopping at Brest and Stomach. Though very few live when they come to these things, yet here and there one makes a shift to creep over this and many other threating signes; but you must not goe about to cure this as you doe other stoppings in the stomach, as by squills oximells, vomits, but by apertive medicines as this:

℞. fol. Thymi puleg. ii anethi satnreii M. i, rad. feniculi ℥ sem. anisi, fenil. dulc., urticae, macis, moschat, ana ℥ ii Coq. in posseto facto ex vino alb. et lacte lb. s.s. addendo parum sacchari M. cujus bibet æger ℥ iii tertia quaque hora.

Other medicines you may make according as occasion and circumstances require, also you may cutt up a puppy dog alive and apply him warm to the brest. These remedies will also serve for faltering in the voice, also of which few live, but in that you must look well after the mouth, tongue, and throat, that they bee not too much furred, for that sometymes is the occasion of speaking untowardly, and to help that you must oft wash their mouths with mild Gargarisms, and not with rough and sharp aluminous waters which make the tongue more dry and the Patient more thirsty, or roule a little butter and sugar together, and lett them hold a little bitt of it upon their tongue, and gently melt down their throat, which will gently loosen and fetch off the black furr from the tongue and begett a more easy lubricity in the voice and throat.

The swellings and stiffness of the neck, and pain and soareness in the same, though few live of this also, if any cure bee to bee had, it is by revulsion, as by blisters on the arms. Cupping, but not upon the neck, but below the Tumor, also keeping the necke warm, and annoynting it with gentle Mollifying Oyles and Ointments.

Almost all the other evill signes, about 30 in number, will hardly admitt of any Cure, wherefore I think it needless to write anything concerning them, for what Cure can bee made upon Tokens, Buboës fallen flat, bad pulses, cold sweats, bad urine, white soft Buboës, Carbuncles, Blaines; and first of Buboës.

CHAPTER XXIII.

THE METHOD OF CUREING BUBOES AS MUCH AS CONCERNS
OUTWARD CURES.

Though many Buboës after they come to bee very bigg never come to break at all, but sink away again, and by degrees wear quite away, yet doth the Patient grow well and continue soe notwithstanding their not breaking, yet you must not make it your design to repell, divert, or disguise them, but only to suppurate them, and if you see them not more forward or digest soe fast as is convenient, then you may apply a vesicatory just underneath them, that soe the pernicious Ichorous matter may have vent and these blistering Playsters had better success alwaies than Cupping or burning or potentiall Cauteryses; and you may apply once a day a fresh poultess to it if you can make it abide on, but I found them soe troublesome, that I altogether discarded the use of them, seeing there is soe much trouble in compounding, takeing off and makeing them abide on the right places, for the Buboës alwaies happen on such places as poultesses will not lye on, but fall off with turning the body. Therefore I made use of Playsters; only use more mollifying, maturitive and digestive Plaisters at first till you perceive it ripe enough, and then add some stronger and drawing Playsters or ingredients to break it withall, and then you hitt the marke, and when it is quite ripe if it doth not breake soone enough with the Plaisters, you may open it with a lance or a penknife. Some lance them while they are green and keep them running like an Issue, which is not soe commodious a way as the other. Methinks there is noe more reason for it then for a man to cutt down his Corne before it is in the ear, or gather his fruit before it is half Ripe; yet this way of lancing hard sores is not only tolerable, but convenient sometymes, as when a sore remains hard a long tyme and noe Topically means will bring it to Concoction.

When there is any danger threatened because of the slow progress of its rising, some use to lett the Buboës alone two or three days, doing nothing to them, and afterwards begin to lay playsters and dress them, which was none of my way, for I made application to hand them forward as soone as I perceived their first budding forth, accounting it as much sense in letting them alone two or three days, as if a Middwife should see a Child at the birth,

and should say, "I will come to-morrow and deliver the woman". Would not all women say she was a cordworthy person? But here you are to take nature. These swellings that arise behind the ears and upon the Throat must not have soe strong pultesses and Playsters as you use to the other Emunctories and other places of the body, for fear of suffocation. Gentle Pultesses or Cataplasmes will serve best for the Necke, as Mallowes boyled in Milk and a little saffron and white bread will doe for them as well as anything I ever found; and for the Groin and Armpitt and other places, for somtymes they rise in other places as well as in the Emunctories, though many think not soe, this Playster will serve :

℞ Galbani vino colati, Diachili comp. cum gummi ℥ i croci ℥ i Terebinthinæ ℥ ii vel iii. M.

You may anoint the swelling allwaies a little before you put on the Playster with Oyle of Lyllies or Linseed Oyle. This Playster will serve for all intentions and purposes, soe far as concerns digesting of Buboës, and at latter end to break it you may apply only Galbanum colated, for that commonly breaks it in a few hours. The most common Playster or Mixture which the poor people used all over the Town was an egg and wheat flower and Turpentine and Honey and oyle of Lillies, which is not to bee contemned, but may doe well enough, though I never used it, but found something else better and cheaper for the poor people, but shall not say what, though it is noe secret. After they are broke, you may dress them twice a day with Melilote playster, and if they dry upp too fast with that, or doe not run well enough, you may add some Turpentine, and burgundy pitch, and melt them together and spread it. Some have delivered doctrines that venemous creatures and other things venemous, as Toads, Froggs, severall kinds of serpents, scorpions, Fishes, as Oysters, Mussells, and Crabs, layd to Buboës draw out all the venome, others that the Rumps of Hennis, Chickens, Pigeons, and other Fowles applyed to the sores till they dye, holding their bills and putting salt on their Tails will draw out all the venome. Crowfoot stamped and applyed will draw as good blisters as Cantharides. Some apply living creatures, either Fowles or Beasts still alive. For Ripeners these simples are accounted good, Mallowes, Marshmallowes, violets, comfrey, Berts, scabious, Camomile, onions, Leekes, Horseradish, Elicompane, Mustard, Mercury, Burdock leaves, Coleworts, Melilote, Mullein, St. John's wort, Figgs, Dates, Mithridate, Venice Treacle, lillyes, Lineseed, and Fenugreek, saffron Oyle, Wax, Honey, Turpentine, Opopanax, galbanum,

yoakes of Eggs, Loadstone, drawing Playsters with Arsenick in them, soot, salt, Leven, soape, Butter, Pidgeons' Dung, Hens' Dung.

CHAPTER XXIV.

THE CURE OF CARBUNCLES.

The outward Cure of Carbuncles must bee wrought after a different manner from Buboës, there being soe great difference betweene them in many respects, as in substance, Figure, Place, Temper, Colour, Effects; you must use mllifying maturitive Ointments to these, and such as doe not exceede in heate, but such as may modify the drynesse and mitigate the paine and burning of it, and rott it, and bring it to sheale off from the other flesh, to all which purposes such ointments as these will serve :

℞. rad. Altheæ, Symphiti ana ξ i fol. altheæ, malvæ, scabiosæ, ana M. i pulv. sem. lini. ξ i flor. meliloti et his etiam addendo unguenti basilici, apostolorum, ana ξ i s.s. terebinthinæ venet., mellis, ana ξ s.s. olei liliorum alborum ξ i s.s. vitell. ovorum No. 2 m. f. unguentum; with this you may anoint the Carbuncle twice a day, and lay over the Plaister I mentioned before for Buboës, and at 5, 6, or 8 dayes it usually rots and sheales off from the other flesh, but if you will not bee at the trouble of making this Ointment, this will doe the business well enough :

℞. unguenti basilici, Dialtheæ, Ægyptiaci, olei lini., lillior albor. valent. scabiosæ, Terebinth. venet. ana ξ i pulv. sem. lini., flor. meliloti ana ξ i s.s. m. f. unguentum.

Some upstarts here in Towne used much to lance Carbuncles, others to cutt them round about, and then poure into the greene wound vinegar and salt, but to what purpose I know not, unlesse they delighted to torment people, for it put them to as much paine as if they had beene on a wrack, worse than Death itselfe. A Frenchman which I have heard of used to cutt them round, and pluck them out with his Pincers before they were ripe, and put them to much paine. Now both before the Carbuncle is ripe and after it is fallen of it will run very much, and after the Core is out you may dresse it with Minium playster, Meliloti, or Diachilon, for Diachilon will not heale it up too soone, as you may suppose, for it will not heale up a great while, doe what you can. Some Chirurgeons used only a little bazilicon and tow to Carbuncles, and tis likely that may serve well

enough in common, but you must not thinly and slightly annoynt the Carbuncle with these Oyntments, but lay them on thicke upon the soare twice a day, because the soare is soe hott and dry; butter mixed with oyntments is good also. Many other Devises have been used about Carbuncles, as soot, salt and soape, and figgs, leven, vesieatoryes, and burning them with hot Irons, which are too madd wayes, and many other oyntments, Playsters, Pultesses and liniments not needfull to write seeing I have set downe those at first which will make sure worke. Butter of Antimony is comended to doe admirable things in making a Carbuncle sheale off, and keeping it from spreading further and further upon the sound flesh if you annoynt the circumference of the Carbuncles round about with it.

CHAPTER XXV.

THE CURE OF BLAINS.

When anyone falls siek of the Plague, as soone as you perceive any little red pimples arise in any part of the body or white or straw coloured with a little matter in them, like the small Pox, when they are at their full biggenesse, or a little bladder, with blackish or blewish moisture in it, then lay a Playster over it once a day at least, if not twice a day, and in about a week's tyme it will run well; and most tymes there is a little Coare in them also which will come out in a little tyme, and afterwards you may dress them with Minium Playsters. The Playsters which I wrote before for Buboës, will serve as well as anything that can bee invented to draw forth and breake and ripen these blaines, and though these little Pustles seeme but contemptible things at the first, yet when they are drawne forth, they will spread sometymes as broade as a groate or a six pence, and bee very soare and painfull, and if you neglect them and doe nothing to them, the Patient will continue siek the longer, and bee in the more danger, and somtymes dye, for want of their being well ordered.

CHAPTER XXVI.

MEDICINES FOR EXPPELLING THE PLAGUE.

I will set downe here severall Doses and Medieines to bee used in expelling the Plague seeing I set downe none in the Method of Cure, neither since, out of which you may pick and

chuse which you like best. Diemerbrook makes mention against honey, sugar, saffron, hartshorne (unlesse burnt), bezoar, troches of vipers, and therefore in his expulsive cordialls never putts any syrups, yet in electuaries he useth many Conserves and Cardits, scordium, angelica, Oyle of Vitriol, and Sulphur, and setts a high esteenie on camphore and sulphur, but thinkes crude hartshorne will signify little, unlesse it bee burnt and then it may doe something by drying, and for saffron, hee saith it troubles the head too much and heats and causeth drowsynesse, and for Bezoar, though it may bee good in Putrid Feavers and the small Pox, yet in the Plague, though hee oft gave a Dram at a tyme, yet found little successe in it, and for Troches of vipers though they bee good against venemous bitings, and Arsenick yet they bear noe antipathy against the Pestilent venome. I much dislike opium, wherefore in my Antidote I omitted it, and many in the Parish, haveing taken Mathews his Pill (soe called) were destroyed by it, by one Turner a wheelwright who gave nothing else to sweate withall, but is since dead of the Plague himself. But I digresse too much, therefore I come to those promised Receipts.*

℞. Elect. de ovo ℥ii salis absinthii ℥i aqua scordii comp. aq. petasitidis comp. ana ℥ii e cort. citri ℥vi aceti Theriacal. presc. ℥ s.s. M.

℞. Theriacæ Andromachi ℥ii aceti rosar. ℥ s.s. Succu cardui ℥i ss. aq. rutæ et aq. jugland. simp. ana ℥i s.s. M. f. haustus.

℞. Mithridatis, Theriaci Lond., Diascordii ana ℥i aq. nuc. jugland. ℥iiii aceti sambucini ℥ M. f. haustus.

℞. Diascordii ℥ B. aq. Cardui ℥iiii olei Sulphuris ℥ s s m. f. haustus.

℞. Salis absinthii, cardui, rutæ, scordii ana ℥i aq. Theriacalis, aq. calendulæ ana ℥ii sacchari prelati ℥i M. f. haustus.

℞. Elect. de ovo ℥ii ol. sulphuris gt. xii confect. liberant. ℥i M. f. bolus.

℞. Aq. Antipest. presc. ℥iii syrapi e succo citri ℥i s.s. M. f. haust. pro delicatis.

℞. Aq. Theriacal aq. pestilent. ana ℥i succi aurantior. ℥i syr. cardiaci ℥i confect. alchermes sive e odoriferis ℥ii aq. ros., cinnamoni hordeat. ana ℥ M. pro delicatulis.

℞. Fol. cardui m. ii coq. in aq. fontan. q. s. ad ℥iiii Colaturæ cui adde salis albi communis ℥i aceti vini albi M. f. haust. pro pauperibus.

℞. Theriaca Londinensis ℥ii vel iii aceti rosacei ℥i aq. cardui ℥iiii M. pro pauperibus.

* This long list of prescriptions, which is in part a repetition of what has gone before, has been somewhat abbreviated.—EDITOR.

℞. Aq. theriacal. stillit ℥i aq. pestilent. ℥ii aq. ros. rub., cinnamoni hordeati ana ℥i aceti rosacei ℥i syr. e succo cydonior. ℥i s.s. M. ad compescendum vomitum.

℞. Spec. cordial. temperatæ, pulv. e chel. canc. comp. speciei liberantis ana ℥s.s. aq. Citri corticis, aq. scordii comp. ana ℥i s.s. syr. limon. ℥vi si febris et carbunculus adsit.

℞. Conserv. berberorum, conserv. Cydinor., conserv. Idei rub. condit., carnis Citri, conserv. rosar. rub. lujulæ ana ℥i spec. Cordial. temperat. ℥ii syr. e succo citri q. s. f. elect. ad sedandam sitem et confortandum stomachum in febris et vomitu.

℞. Aq. Theriacal. fact. per infusionem sive distillationem ℥iiii capiat pro haustu expulsivo.

℞. Rad. angelicæ, imperatoriæ, enulæ ana ℥i fol. scordii, rutæ, cardui, scabiosæ, ana mi baccar. Juniperi ℥ii fl. calendulæ, cinnamoni, chariophyllor., macis ana ℥ii coq. aq. fontana lb. ii aceti optimi vini albi ℥vi Colatura clara reservetur pro usu. Dosis ℥ii, iii vel iiiii.

℞. pulv. rad. enulæ, zingiberis. flor. sulphuris sacchari albi ana ℥i M. pro pauperibus ℥i, ii vel iii secund. ætatem.

℞. Balsami sulph. ꝑi croci gr. vi antimonii diaphoretici ꝑ B. m. deglutiat. in bolo.

℞. Sapæ cardui ℥i succi rutæ, aurantiorum ana ℥i vini alb. ℥ii syr. melissophili ℥vi m. fiat haustus.

℞. Allii contusi, theriacæ andr. ana ℥i contrayervæ ꝑi M. fiat bolus pro hominibus obesis.

℞. Rad. Contrayervæ Serpentariæ Imperatoriæ Angelicæ Zeodariæ, baccarum Juniperi ana ℥i sacchari albi ℥i s.s. M. Dosis ℥i, ii vel iii.

Galen saith in a great Plague at Rome all dyed who received noe benefit by Bole Armeniacke or Venice Treacle.

As for Chymicall Medicines, you may have them out of other bookes, and more than these I judge it unnecessary to write seeing there is a daily necessity of altering Medicines according as the case of the Patient requires, and these are only for Patients to guide you in generall.

I will add but one more, which is yet defective, and I think very necessary to bee demonstrated for the avoiding relapses and many ill consequences which commonly follow the Plague, and that is a convenient purge to bee taken after they are well of the Plague, and the soares pretty well done running, and I thinke this Purging Apozeme will fitly serve the purpose instead of a multitude of severall kindes of Purges which might bee prescribed. Take a quarter of a pint more or lesse according to age and strength once in a weeke, 2 or 3 weeks together.

℞ Rad. Angelicæ, imperatoriæ, Enulæ, baccarum Juniperi ana ℥i scabiosæ scordii ana rad. scorzonerae, ℥ii zedoarie Caryophyllor., nuc. mosch., fl. calendulæ ana ℥ii Coquentur aquæ Cardui et vini albi ana lb. i colaturæ lb. ii infunde fol. sennæ ℥iii rhabarbari, epithymi, mechoacanæ, turpethi, hermodactillor. ana ℥ s.s. salis tartari ℥ii post infusionem debitam colentur strenue et add. syr. de cichor. et rhabarbaro, syrup. magistral. ad melancholiam ana ℥ii spirit. croci ℥i m. f. Apozema.

That it is possible to have the disease 2 or 3 tymes in a yeare hath beene proved this yeare many tymes to bee true, and that some have dyed the third tyme of their having it. Yet I question whether they were seized afresh alwayes with the plague after it had beene once throughly cured, and their bodies cleane ridded of it, but rather that some reliques or remainders of the infection lay dormant in some parts of the body, and after some space of tyme, these old enemies creeping out of their ambushments, assaulted nature afresh; which is very probable by those many indispositions and diseases which people fall into after they have had it, of which consequent infirmitics many dye; and what these diseases commonly are I shall mention now in this next and last chapter.

CHAPTER XXVII.

OF THE MANY EVILL RELIQUES AND CONSEQUENT DISEASES WHICH FOLLOW A PLAGUE.

The Plague is like the Serpent with two heades, for it kills at both ends, but neither Diemerbrook nor others have wrote one word of the ill effects which a Plague leaves behind it. Many sorts of venomes doe the like, both minerall, vegetable and animall. I have beene certainly informed of two gentlemen being bitten by adders, both of them continually broke out with a dry Itch for 2 or 3 yeares, and then dyed of consumptions. The common discases that the Plague carryes in its Tail are these. Extreeme paines in the backe, hipps, shoulders, heade, armes, great and painfull swellings in the shoulders, breast, leggs, thighs, losse of limbes, soare eyes, lamenesse, intollerable Itch, pimples, swelling of the yard. Alopecia, impostumes in the head, scurfes and inflamations, little red superficiall pimples in clusters like nettle stinging. Blindness, Feavers, Deafness, consumptions, forgettfullness, Toothach, excrescences;—there is not any of these which I have named,

but I have seen many of them this yeare, which have handled the Patient worse then the disease by far. Some have layne a quarter of a yeare of intollerable paine in the backe and then dyed, others of as great and constant paine in their heads and then dyed, others soe miserably plagued with the Itch they have torne their skin off their flesh. Others become quite deafe, others ever lingering fall into consumptions, and are cured by Death. Their hair coming off was common, soe was the swelling of the yard towards the glans. I had one patient dyed of a paine in her backe long after she had beene up of the disease, another that dyed of a great paine in his head, and had not beene free of it for three monthes. Another haveing had a long tyme a great paine in his head, at last an Impos-thume brake out, and run out at his mouth.

Now as to the causes of these diseases it is easy to attribute all to the remainders of the old pestilent venome, which still lurkes in some corners of the body, and perhaps want of convenient skillfull purging after the disease may become occasion of some of them; yet I have seene some who have beene very laudably purged after the disease, yet fall into severall of these diseases. Yet how to cure and gett rid of these, I know not any other way but what is commonly used to each particular at other tymes, therefore I shall say nothing about it in this place.

Now at this tyme the great feare of the City is of another Plague this summer 1666, especially seeing wee have had this May 3 weekes together the Bills increasing successively, yet mee thinkes if they lay all arguments together they may find reason enough to bee of my mind, which is that the Plague hath a long Taile, but yet it will bee going backwards and forwards in little increases and decreases till it bee quite gone.

CHAPTER XXVIII.

SOME OBSERVATIONS THAT COULD NOT BEE CONVENIENTLY PUT INTO THE FOREGOEING CHAPTERS.

1. Towards the latter end of the Plague, many people that stay, and others that returne have little angry pustles, and blaines riseing upon them, especially upon the hands, without being sick at all, but such never dye, nor infect others. And I remember Diemberbrooke saith hee had a Carbuncle (as hee called it) upon his hand at the latter end of the Plague, which hee judgeth hee caught by going to one Patient after the

Plague was done, but I believe hee mistakes in thinking that hee caught it, for surely it was only one of those things which commonly happen, and sure it was but a blaine (but hee puts all under the name Carbuncle) for I saw noe Carbuncles on the hand all this plague tyme but only Blaines, yet many Carbuncles on the legs.

2ly. Blaines and Buboës come upon many people without makeing them sick, but Carbuncles seldom or never, which proves that Diemerbrooke's was only a blaine, for hee was not sick with it.

3ly. Besides a blaine, there is a thing you may call a blister, puffing up the skin long like ones finger, in figure like a Blister raised with Cantharides, and such usually dye.

4. In the West Indyës they set Cupping glasses 4 or 5 to the back to draw blood, and the Egyptians rub the leg, then bath it, then bind it, then slash it in 30 or 40 places, and draw out about 2 Pints of blood, with what success I know not. But the Turkes neither take physick nor fly for it, but attribute all to inevitable fate.

5. Many people are afraid at this tyme of the disease returning this summer, but my judgment is that such a thing will not bee, but now and then there may bee some little increases, it may bee for some weekes together, which may bee occasioned by the first approaching of hott weather, dilating, drawing forth and spreading some of the old fumes remayning still unextinct in some odd places. But I believe, if wee had had a very cold pinching winter there had benee very little of the disease remaining at this tyme, being the month of May, though I believe it must now bee next winter's work to bee thoroughly discharged of it.

6. Those that bled fresh at the nose, at the beginning of the disease, and those that had their courses much at the begining and soe continued, many of these did well; but they that after 2, 3, or 4 dayes lying sicke, bled only a little at one nostrill fared ill; yet this is noe warrant for any one to let blood, at the beginning of the disease, to cure.

7. Old people that had the disease, many of them were not sicke at all, but they that were sicke almost all dyed. I had one patient four score and six yeares old.

8. The spotted Feaver is allwaies rife in a Plague tyme, which I suppose makes many people say that severall have lived of the Tokens, and that boy, which Diemerbrook saith lived of the Tokens, was I believe only the spotted Feaver. These spotts are red, small and thicke, coming out first about the necke, then the arnes and brest; I had many patients of it last summer, 1665, and but few dyed.

9. Diemberbrooke saith that Birds kept in cages dyeing, the people of that house dyed presently after.

10. None dyed without being sicke, though many said that an houre or half an houre before they dyed they were not sicke, and hardly any dyed under 20 or 24 houres being ill, though some authors say that in some countreyes some people were struck suddenly dead with it. And Diemberbrook reckons one soe scerved with the smell of excrements.

11. The Good and bad fared all alike, and if any fared worse I thinke it was the Good. Perhaps God will put noe difference in common things, that it might not bee an occasion of envy and repining, as Solomon saith all things fall alike to all, and therefore noe man knowes good or evill by all that is before them; and in this point Jacob committed an error concerning Joseph in his parti-coloured coat testifying his affection to him above his brethren, which wrought their hatred against him, and was the cause of the evill and good that followed.

12. Diemberbrooke saith about the full Moone the plague raged most, but here the plague was not soe serviceable to the Moone, for the Moone went its course and the plague its course.

13. Of all the common hackney prostitutes of Lutten Lane, Dog Yard, Cross Lane, Baldwin's Gardens, Hatton Garden, and other places; the common Cryers of Oranges, Oysters, fruite, etc.; all the impudent, drunken, drabbing Bayles and fellowes and many others of the Rouge Route, there is but few missing; verifying the testimony of Diemberbrooke that the plague left the rotten bodyes, and took the sound.

14. Authors speake of severall kinds of Plagues which tooke only children, others maids, others young people under thirty, but this of ours tooke all sorts, yet it fell not very thicke upon old people till about the middle or slake of the disease, and most in the decrease and declining of the disease.

15. Catts, Doggs, Oxen, Horses, Sheepe, Hoggs, Conies, all wild beasts, Hens, Geese, Pigeons, Turkeys, etc., and all wild fowle were free from infection.

16. Great doubting and disputing there is in the world whether the plague bee infectious or catching or not, because some think if it were infectious it would infect all, as the fire heates, and heates all it comes neare, but the plague leaves as many as it takes, thus are they gravelled at such arguments, and cannot solve their doubts; and Van Helmont thinks all people catch it by feare, and generally everyone is apt to judge by his experience, for if they have beene in never

soe little danger, and yet have escaped without catching it, they presently think the disease not infectious. Now if anyone may draw his conclusion from this, I have as much reason almost as any to think it is not infectious, having passed through a multitude of continuall dangers *cum summo vitæ periculo*, being employed all day till ten a clocke at night, out of one house into another, dressing soares and being allwaies in their breath and sweate, without catching the disease of any through God's protection, and soe did many Nurses who were in the like danger. Yet I count it to bee the most subtile infectious disease of any, and that all catch it not by feare neither (though this doth much as Helmont thinks), for then children and confident people would not have the disease, but wee see many of them also have it, and children especially most of any.

17. It hath beene observed that great plagues have commonly followed Earthquakes, and opening of the earth, as that first plague wee read of in Scripture (unlesse you count that Death of the first born in Egypt to bee one) that Moses speakes of, that followed upon the Earth's opening and swallowing up Korah and the rest, and another great plague at Venice which followed after a hideous Earthquake, and so unpeopled the place that they were forced to send for inhabitants to live there for nothing; as in Mr. Howell's History of Venice is to bee seene, which helps to prove a plague arises *ab infra*, et not *de supra*.

18. The Plague is like an Ague at the beginning and the Lues Gallica at the latter end.

19. One way of Cure will not serve for all, but wee must doe as contingencies and circumstances doe divert us.

20. By continuall following of one course, occasion is given to every Mountebanke, tradesman and ignorant old woman to practize.

21. Whatever particular method you make to become generall many will live of it, but more dye.

22. I was told by an auntient woman that in Somersetshire the spotted feaver was very epidemicall, soe that whole familyes dyed of it, but being told that plantain was very good, all of them almost tooke it, which wrought an admirable change, for very few dyed that tooke it, whereas before they dyed very fast. I know noc reason why one may not give credit to this relation, seeing for aught anyone can prove, it is as likely to effect such a cure as higher prized Medicines, and I should trust it before Pearl, Bezoar, or Gascon powder.

23. Wormes (which Diemerbrook saith many of his Patients

had and dyed with) were very rare here in this Plague, for I saw not any at all, nor heard of but one, which was a neighbour's child in S. Giles, which vomited one worme and voided another by stoole. The child's mother being told by a woman her neighbour that 'Tansey was very good for the worms, she gave it the juice of Tansey twice, but the child dyed in 6 or 8 houres after voiding the wormes. And I perceiv by many circumstances which I gather from Diemerbrook's writing that the Plague at Nimuegen which hee writeth of was far more mortall then this of ours, there dying ten thousand in that City, which I believe is not soe bigg as the tenth part of London and the Suburbs; yet I judge not by this argument only.

24. A generall flux with vomiting and gripping of the Guts, followed next Summer after the Plague, viz., Anno 1666. This flux seized on all sorts of people.

25. The whole kindred dying of the Plague, were commonly taken all alike, affected alike, proceeded in their sickness alike, lay the like tyme and dyed alike.

26. Some being taken at first with very bad signes, as stupefaction of senses, unwillingness to speake, speaking quick, inward and short, remain soe the first day, but next day the disease makes a retreat, they come to themselves, are lively and talke freely, but the same day in the afternoon they fall ill again, and by midnight are dead with the Tokens.

27. They that at the beginning of the disease complain of a paine in their back seldome live.

28. When the disease seizeth people violently at first as with convulsions, swooning fits, blindness, vehement headache, stupefaction of senses, such seldome live about two dayes.

29. Fretfullness, fuming and snarling is a signe of Death in the Plague.

30. The Disease absconding itselfe, and noe certaine signes appearing till 3 or 4 dayes bee over is an ill signe.

31. Risings spreading flat low, white, late, are evill signes.

32. People having hollow eyes commonly dye of the disease.

33. Those that dye having soares or risings lye longer than those that have none.

34. Noe signe is infallible but the Tokens, though many predict extreme danger, as a faultring voice, intermitting pulse, stopping at Stomach, etc.

35. The Summer following the Plague very few Flyes, Frogs and such like appeared.

36. They that catch the disease by easy and slight

occasions, as by feare, seldome live, especially if sudden feare seize them.

37. They that lye but little while sicke and dye with the Tokens, dye a far easier death then those that continue long sieke, or dye upon the relapse of a feaver.

38. The Plague generally begins at the West and the Southwest parts of Townes and Cityes, and commonly in little low poore houses.

39. It is difficult to give judgement upon old people, the disease aets soe sluggishly upon them.

40. Strong and young people dye sooner in the Plague then old and weake.

41. As soone as any house is infected all the sound people should bee had out of it, and not shut up therein to bee murdered.

42. The Plague falls on old people most in the Autumne.

43. The Plague mightily overthroweth the strength and spirits of the strongest bodyes in a little tyme, as a day or two.

44. They that in the Plague fall into a looseness within 2 or 3 dayes, their excrements are as blaek as Inke, and they generally all dye.

45. When the Plague is got into the Country sometymes it continues 8 or 10 yeares stragglng up and downe from City to City and from Towne to Towne.

46. After the Plague, in the two succeeding winters, the Small Pox was exceeding rife, and bastard Pleurisies, and straitness of the brest and wheezing, with difficulty of breathing killed many.*

* In these "bastard Pleurisies", with respiratory troubles, we ought probably to recognise the Influenza, of which epidemics are distinctly traceable about this period. Whether the flux mentioned above (24) was Dysentery, or merely an epidemic diarrhœa, it is difficult to say.—EDITOR.

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