

Suggestions for the prevention and mitigation of epidemic and pestilential diseases, comprehending the abolition of quarantines and lazarettos : with some opportune remarks upon the danger of pestilence from scarcity intended to serve as an introduction to a work, entitled Researches in Turkey, concerning the plague, &c; / by Charles Maclean.

Contributors

Maclean, Charles, active 1788-1824.

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SUGGESTIONS
FOR THE
PREVENTION AND MITIGATION
OF
Epidemic and Pestilential Diseases,
COMPREHENDING
THE ABOLITION
OF
QUARANTINES AND LAZARETTOS:
WITH
SOME OPPORTUNE REMARKS
UPON THE
DANGER OF PESTILENCE FROM SCARCITY.
INTENDED
TO SERVE AS AN INTRODUCTION TO A WORK, ENTITLED
RESEARCHES IN TURKEY,
CONCERNING THE PLAGUE, &c.

BY CHARLES MACLEAN, M. D.

LECTURER ON THE DISEASES OF HOT CLIMATES TO THE
HONOURABLE EAST-INDIA COMPANY.

LONDON:

1817.



PREFACE.

We hear, every where, of pestilential diseases ; but we hear no where, of their true cause. To dissipate the dreadful delusions, which prevail upon the subject—to assign their true cause, and to promulgate an efficient method of cure, are the principal objects of a work which I am preparing for publication, according to the notice contained in the following pages.

But, in the mean time, it would not be justifiable in persons, who, like myself, have given their attention to the subject, to remain silent under the very alarming symptoms of progressive scarcity which pervade the world, and when several countries are actually afflicted with pestilence, arising in a great measure from that source.

An article, which appeared in the public journals of the 15th instant, under the head of Vienna, of the 28th of December last, has the following statement : “ According to accounts from the Turkish frontiers, there are still appearances of the plague in some parts of Bosnia, Servia, and Bulgaria. In Moldavia it has spread so much, that, in October last, few parts of the country were free from it. In November, it even shewed itself at Jafry, the capital; and as the symptoms became frequent there, all the Consuls left the city, and, since that time, *all intercourse with the city is interrupted.* In Wallachia, they are more fortunate : that province has not only remained free from the plague, but *the harvest has been most abundant.* The cordon which Austria has formed in the Buckowina towards Moldavia, and which has lately been so much strengthened, *will suffice, we hope, to preserve our frontiers from the infection.*”

To deprecate our having recourse, in the event of a pestilence in this country, to measures so absurd and injurious, is, in part, the object of this publication.

The effect of this melancholy delusion is to increase mortality, and to aggravate disease, at least in a fourfold degree, by obliging



the people to remain exposed to the influence of the atmosphere, which is the principal cause of the disease, and by restricting access to the means of subsistence, scarcity being its most powerful auxiliary cause, as well as in various other ways, which cannot be enumerated here.

That the want of a regular and abundant supply of the means of subsistence, is a very powerful cause of plague, in the countries mentioned, shall be elsewhere shewn. It is seldom that an affluent native, at least among the Turkish population, and very rarely, indeed, that an Englishman, is affected with plague in the Levant.

When, in the year 1758, a scarcity existed in England, which was considered not real, but artificial, and which did not affect other countries nearly in the same proportion as at present, it was thought necessary, by Sir Richard Manningham, a physician of London, to call the attention of the public to the dangers of an impending pestilence:—"The plague of pestilence," says he, "may be much sooner produced in this nation, by an artificial famine, than by any infection of the plague itself from foreign parts."

If such apprehensions were justly entertained respecting the effects that might have arisen from a scarcity which was only artificial, local, and temporary; how much greater ought our apprehensions to be from a scarcity threatening to become real, general, and of long duration!

But whether famine arise from a real or artificial scarcity, or from a want of the means of procuring subsistence, or from a combination of these circumstances, the effect is precisely the same; the pestilence ensuing would be also of the same nature; and to augment the abundance of the articles of subsistence, or of the means of procuring them, would in all cases be the proper remedy.

Hence all measures which, in giving an artificial support to particular classes, tend to narrow the supply, or to keep up the price of the necessaries of life, must operate directly against the welfare of the great bulk of the community; and, under existing circumstances, augment the already afflicting miseries of the people.

Not only, therefore, should such measures be avoided, but all those means should be resorted to by which the abundance of the articles of subsistence, and of the means of procuring them, can be augmented, especially encouragement to importation, and the establishment of public granaries: the former, as the most efficient remedy against a real, the latter, against an artificial scarcity.

* Vide Discourse concerning the Plague, &c. title page. In the Preface, p. 1, he calls it, "A most notorious *artificial* scarcity: for 'tis known," he adds, "that we have bread corn more than enough in our nation for the full supply of all the people."

To abolish, or if that be thought too much, to suspend quarantine, is one of the means which I would recommend in order to facilitate the importation of grain, flour, rice, Indian corn, or other articles of subsistence, from countries supposed to be the seat of those diseases for the prevention of which quarantines have been established; as the ports of the Black Sea, and of the Mediterranean, and the West Barbary, on the Atlantic Ocean. In Egypt, and, probably, in others of these countries, the harvest has been this year particularly abundant. But if these sources were overflowing, and the people of this country starving, they could not be rendered available under the existence of the mischievous laws of quarantine.

If the evil of scarcity should happily be only temporary, no general detriment can arise from acting as if it were to be permanent; whilst, if it should prove permanent, by acting as if it were only to be temporary, a great part of the community, either by the direct effect of famine, or through the intervention of a pestilence, might be destroyed.

I shall probably be excused for hazarding these hints by all who are duly impressed with the fact, that the times and circumstances are of an aspect most serious, and require something much beyond the application of palliatives and placebos.

In tracing to a papal stratagem the origin of the doctrine, to which we owe so great a proportion of the mortality incidental to epidemic diseases, no liberal Roman Catholic will, I am persuaded, suspect me of wishing to disparage his religion. This would be as unreasonable as it would be to impute to me a predilection for the tenets of the Mahommedans or Hindoos, because I consider their opinion of the non-existence of contagion, in epidemic diseases, as beneficial and true.

London, 4, Bouverie Street, Fleet street,
22d January, 1817.

SUGGESTIONS,

&c.

It has justly been remarked, by one of the most recent writers upon the Turkish Empire, that "the experience of so many ages, respecting the nature of the Plague, is limited to a knowledge of its symptoms, and of its fatal effects."¹

A similar observation has been, with equal truth, extended, by an ingenious and candid writer, of much experience, among ourselves, to epidemic maladies in general; "We know no more of epidemical diseases, or their causes," says he, "than the inhabitants of Soldania."²

These authors are only not correct, in that they have not gone far enough. Relative to this most interesting and most important subject of human research, involving, as it does, the fate of at least a million of our fellow-creatures annually, our condition is much worse than a state of absolute ignorance. We have unfortunately wandered so long, and so far, into the regions of error, that, to recover our lost way, has now become our first indispensable labour. We must unlearn all that we have been hitherto learning: we must transpierce mountains of consecrated delusion, before we can even enter the right path of investigation.

It is, probably, not unknown to the public, that I last year³ em-

¹ "L'expérience de tant de siècles, sur la nature de ce mal, se borne donc à la connaissance des symptômes qui l'annoncent, et de ses funestes effets."—*Tableau Général de l'Empire Othoman*, par Mr. M. D'Ohsson, tom. ii. §. vi.

² A Treatise on Tropical Diseases. By B. Moseley, M. D. 4th edit. p. 638.

³ In the autumn of 1815.

ployed myself in investigating the Plague, and in treating cases of that malady, in the Greek Hospital, near the Seven Towers, at Constantinople.

So peculiar an experience, embracing also that of the progress, and cure, of the disease, in my own person, will, perhaps, be admitted to confer upon my observations, respecting pestilential affections, a degree of authority, which they could not derive, either from superior talents, or eminent station.

But I would not be understood, from thence, to claim for my doctrines any credit; and it were well for science if none were ever accorded, beyond what is due to strict demonstration. All that I request of the reader, is, that he will not refuse his assent to my conclusions, unless he can shew them not to be logical inferences; or deny the correctness of my results, until he shall have ascertained, that similar processes, conducted under similar circumstances, do not produce similar effects.

Epidemic diseases, from their greater number, as well as their greater severity, naturally take precedence of all other maladies. In proportion as they are more fatal, the discussions, which relate to them, are of superior importance. The subject even derives additional solemnity from the profound ignorance of their nature, which still continues to prevail: and they will be found, besides, to possess an interest, derived from adventitious circumstances, altogether singular and extraordinary, which distinguishes them from every other human ailment.

Opinions, respecting their cause, which have arisen in the progress of society, and in Christian countries now almost universally prevail, not only have the effect, by augmenting terror, and diminishing, or rendering precarious the means of subsistence, and the attendance upon the sick, of increasing, in an almost incredible ratio, mortality and disease; but are, in many other respects, productive of extensively injurious consequences to the best interests of mankind.

And, what may be regarded as still more singular and extraordinary, these influential opinions are not only palpably erroneous, but of fraudulent origin, and of modern date.

The object, then, of the work which I contemplate, respecting epidemic and pestilential diseases, and which is actually in a state of forward preparation, is to promulgate principles, by the general application of which, besides considerations of humanity and of science, the population and the revenues of states may be increased; or, what amounts to the same thing, their ordinary waste may be diminished in a degree, which, *prima facie*, might almost exceed belief.

But, as it would not be fitting, that results, which are deemed of such high importance, should be presented to the public in an imperfect state; and, as it may be yet some time before I am enabled to complete my plan; I conceive it may, in the interim, be useful towards promoting discussion, by which alone truth can be fully elicited, and finally established, to call the attention of the public, by means of this notice of the fruits of my investigation, to a subject no less remarkable for its importance, than for the neglect with which it has hitherto been treated, and the consequent obscurity in which it remains involved.

There are, besides, in the actual state of the world, and especially of this country, some circumstances which lead me to think, that it may possibly be of service that I should not delay to make known at least some of the most prominent features of the results of my investigation concerning epidemic diseases.

These are portentous times. Discontent and scarcity are abroad; and famine, with its usual concomitant, pestilence, *may* follow.

Nor let me be reproached with endeavouring unnecessarily, to excite alarm. If the danger be but imaginary, the speculation will be harmless: the prophecy of the end of the world destroyed only a few crazy tenements. But, if it should prove real, to anticipate, if it cannot repel, is at least to break the force of the calamity.

My apprehension of the possibility of the occurrence of an epidemic disease in this country, arises from the prospect of a general scarcity throughout Europe; and the doubts that may rationally be entertained, whether any measures within the compass of our power may be adequate to obviate the consequences, in this respect, of the varied and extensive evils which either exist, or are impending. Let us not conceal from ourselves that it is not the pressure of the present moment only against which we have to guard. Considering, indeed, the deplorable state of the agricultural prospects of this country as connected with those of some other nations, and the unsettled state of all, it would be both unreasonable and pusillanimous not to anticipate, that, unless some very material improvement speedily happen, upon which we have no right to calculate, scarcity and distress, and consequently the probability of famine and disease, may be even greater the next and the following, than it is this year.*

The body being prepared by famine for falling into disease, a slight deterioration of the atmosphere would be sufficient to

* We hear alarming accounts of scarcity from almost every quarter: from Sweden, Switzerland, Germany, France, and the Netherlands. We *feel* it at home. Nor does the message of the American President, Mr. Maddison, to both Houses of Congress, which has just been received, give any promise of a superabundance beyond the Atlantic. It is not by shutting our eyes against danger that we can hope to avert it.

produce an epidemic malady. It consequently depends upon the casual diminution of the purity of the air, (and it is of the greatest importance to note, that contagion can have nothing to do with the matter,¹) whether we are to be afflicted with this additional calamity.

When we become acquainted with the true causes, as well principal as subordinate or collateral, upon which epidemic diseases depend, and with the nature of the adventitious causes (the consequences of the belief in the doctrine of contagion) which multiply their destructive effects, we shall readily perceive the reason why it would not be safe for any nation, even the most cultivated, and consequently, other things being equal, the least liable to those scourges, to consider itself as permanently exempt from the recurrence of pestilential maladies.²

In countries far advanced in civilization and culture, indeed, it is seldom that the inferior or collateral causes of epidemic diseases, as famine, &c. occur with any considerable force; and, under these circumstances, it requires the presence of the principal cause, (which I shall prove, but, for the present, assume to be a deteriorated state of the atmosphere,) operating, in a high degree, to produce such pestilences as those which afflicted England in the course of the seventeenth century.

Hence, for the last hundred and fifty years, although there have been many obscure epidemics, as the bills of mortality enable me to infer, which, however, have not been noted as such, we have, in this country, remained exempt from any palpable or destructive pestilence.³ And whilst it must be admitted, that the chances are, according to the same principles, greatly in favour of the continuance, with very rare interruption, of this happy exemption; it is, however, no less obvious, that the subordinate or collateral causes being, as at present, operating with unusual force, a slighter measure of the principal cause than under ordinary circumstances, would be sufficient to produce the deprecated effect.

It is the part of wisdom to be prepared for every event. And

¹ It would seem as if medical writers had no other idea of the cause of fever than contagion, or marsh *miasma*. When we come to investigate the true cause of epidemic diseases, these will be found to be *almost* equally imaginary. It will, then, appear as absurd to talk of marsh *miasma*, *on the rock of Gibraltar*, or *on board a ship*, as to talk, *any where*, of contagion.

² I am here obliged, for the sake of illustration, to assume some things as known, which are only to be demonstrated in the work, announced in these pages. And, in the mean time, I have to request that the reader will give me credit for being able to prove what I deliberately assert.

³ I shall shew, that neither this long exemption, nor the repeated recurrence of plague in the seventeenth century, have depended, in any degree, upon the state of our intercourse with Turkey, or any other country, during these periods respectively.

if we are properly prepared for that, which I have supposed possible, by making ourselves acquainted beforehand with the true causes of epidemic diseases, and with the appropriate measures to be pursued for their alleviation, prevention, and cure, (concerning all of which the most destructive errors continue to prevail,) I will venture to affirm, that the mortality, to be apprehended from their intrinsic severity, need not be contemplated with terror.

The peculiar nature of my experience, perhaps, may be deemed to justify my speaking with some degree of confidence upon this important subject: and it assuredly would not be, upon any evidence short of demonstration, that I should permit myself to assert, in the most unqualified terms, that with the exception of those diseases, as small-pox and measles, which notoriously depend upon that source, there is no fever, nor any general disease in existence, that we know of, which is propagated by contagion.¹

I have been led more at large into this train of observation, from having repeatedly perused, in the public journals, advertisements announcing the meeting of a *soi-disant* "Institution, for the cure, and prevention, of contagious fever, in the metropolis;" and by the desire to counteract the false and pernicious impression, that might be made upon the public mind by an annunciation of this nature, seeming to come from medical authority, if it were left freely to operate, in the event of any casual increase of sickness, in London, or others of our populous towns or cities.

But, it becomes of still greater moment, to endeavour to obviate the effects of this delusion, if it be true, as is generally understood, that the College of Physicians, who would of course be officially consulted, upon the occurrence of an epidemic malady in the metropolis, entertain, and would recommend measures conformable to the same belief.

Of the destructive consequences of acting upon these erroneous opinions, as well as that the opinions *are* erroneous, I rely that the proofs, which I am enabled to adduce, will be found convincing, and satisfactory. And, if so, it must be obvious, that if, in the event of a pestilence, advice should be given to the Lord Mayor and Aldermen of London, founded upon the errors deprecated, (similar opinions have, if I be not misinformed, been recently communicated by the College to the Privy Council,) as was addressed to their predecessors, in 1665, by the then College of Physicians, the consequence would be, as it was at that period, to increase the otherwise inevitable mortality, at least four-fold.² There would be two hundred thousand deaths, instead of fifty thousand.

¹ Typhus, upon which the changes have been so incessantly rung by the advocates for contagion, will be shewn to be as incapable of propagating itself as gout or dropsy.

² Vide Directions for the Cure of the Plague, by the College of Physicians, and Orders by the Lord Mayor and Aldermen of London, published 1665.

The advantages of discussing and deciding the question respecting their cause, whilst we are free from the terror and confusion incidental to the presence of epidemic maladies, is rendered manifest by a single consideration. During the plague of London in 1665, that of Marseilles in 1720, and indeed those of all other cities, in which the belief in contagion has prevailed, a great proportion of the sickness and mortality was obviously occasioned by scarcity, from the impossibility of obtaining a regular and sufficient supply of provisions, owing entirely to the influence of this unfounded belief.

The deaths in London, from plague only, in 1665, were estimated at one hundred thousand, upon grounds which there is no good reason to consider as exaggerated, although the bills of mortality did not state quite so many. The population being now double of what it was at that period, a similar state of the atmosphere being given, (for I shall prove that such was the cause of that epidemic,) and the belief in contagion, with all its desolating train of consequences, being operating with equal force, the mortality would be double also.

Hence, it cannot fail to be of the most essential importance, in the event of so calamitous an occurrence happening even in the smallest degree, that the public should be made aware, that, independent of all medical treatment, and of proper means of prevention, three fourths at least of the mortality, which would otherwise happen, may be obviated, merely by avoiding all the mistaken measures, which have been usually pursued, under similar circumstances, arising out of an *hypothesis* palpably erroneous.

That epidemic diseases do not depend upon contagion, then, shall be demonstrated, by proofs, positive, negative, analogical, circumstantial, and *ad absurdum*.

With respect to the origin of this erroneous opinion, which was altogether unknown to the ancient physicians, it may be considered not a little curious, that it should have been first promulgated, as a *pious fraud*, about the middle of the 16th century, by the legates of Pope Paul III, at the Council of Trent; and that it should have since been propagated, and spread, and now exists, by faith, dread, and fiction only.

The prepossession in favour of the *hypothesis* of contagion, arising from the erroneous opinion entertained of its antiquity, being thus destroyed, the question will be argued upon its proper merits.

To a papal stratagem solely, then, are we to attribute the destruction of lives, and the detriment to health, morals, medicine, commerce, navigation, the intercourse of nations, individual freedom, military operations, the general consumer, and the public revenues,

which I shall shew to have been occasioned by the consequences, directly or indirectly, of the *hypothesis* of contagion; besides the expenditure of immense sums of money, by all the nations of Christendom, *in instituting and maintaining establishments, that essentially contribute to increase mortality and disease.*¹

The destruction of lives, alone, depending upon the pernicious measures founded upon them, I roundly estimate at nearly a million of persons annually, throughout the world, since the period at which they began to operate, in 1547; not to speak of constitutions ruined, and the miseries of poverty and want inflicted upon many millions more.

Nor will it fail to be regarded as a singular phenomenon, that the Turkish government alone, placed in the very *focus* of pestilence, should have had the wisdom and forbearance, as I shall shew it to be, to reject those fatal institutions, even when they were strongly urged to adopt them by a neighbouring power.²

¹ Quarantines, and other regulations of plague police, first established by the Venetians, are here alluded to. The plague having always been, as it now is, a frequent visitor of the territories of this state, they established, about the middle of the fifteenth century, an office, or council of health. Afterwards, when that disease had become contagious, by a decree of the Pope, and the Council of Trent, (and all good Catholics were bound implicitly to believe this doctrine,) a similar office was established in almost every village; and quarantines, lazarettos, and other regulations of plague police, multiplied along the banks of the Adriatic. They were adopted at Marseilles, in 1669, probably in consequence of the great plague of London. The regulations of Venice have served as models to Russia, Austria, and other states. Of the origin and progress of the belief upon which they have been founded, of its erroneousness, and of its numerous pernicious consequences, I shall give a full and explicit history.

² Some account will be given of the representations, which were made upon the occasion here alluded to, by the Cabinet of Vienna, to the Turkish Divan, through the medium of the Austrian Internuncio at Constantinople, Baron Sturmer, proposing the establishment of Quarantines in various parts of the Turkish dominions, as communicated to me by the venerable father of German physic, the justly celebrated Dr. Frank, counsellor of state, and, first physician to their Imperial Majesties of Russia, who assisted to draw up the regulations which were proposed for general adoption.

During the sitting of the Congress at Vienna, a memorial was presented to that body, by the Philanthropic German Physician, Count Harrach, recommending that the Allied Powers should embrace the opportunity of their assemblage, to obtain, by their conjoint representations, the consent of the Turkish Government, to institute similar measures of plague police, in their territories, with those entertained in other countries. This document shall appear in the narrative of my researches, the benevolent author having, with the liberality which distinguishes the true votary of science, favoured me with a copy of it, knowing that my opinions upon the subject were diametrically opposite to his own.

It is certainly very clear, that if the quarantines that exist are useful, they should be generally extended, and the plan of Count Harrach acted upon; whilst, if they are useless, or pernicious, as I maintain, they should be wholly abolished.

By some persons, who have considered the subject superficially, the frequent recurrence of plague in Turkey has been most absurdly imputed to the want of these establishments; since it will be found, that, wherever they have been adopted, instead of preventing, they have but increased mortality, and aggravated disease.

The establishments to which I here more particularly allude, are quarantines, and lazarettos. But every other measure of separation, seclusion, restriction or regulation, which comes under the denomination of plague police, should be considered as comprehended under the same head, and liable to the same objections.

Such are the measures, then, which I would most earnestly exhort my countrymen to reject, in the event of the occurrence, under our present, or impending distresses, of an epidemic malady, in whatever degree, among them; pledging myself, if they will examine with attention, and without prejudice or prepossession, the proofs and arguments which I shall offer for their perusal, to shew to their entire satisfaction, and by the most irrefragable demonstration, that epidemic diseases never depend upon contagion.

And whilst the intelligence, that a demonstration is about to appear, evincing that epidemic diseases never depend upon contagion, may tend to obviate the apprehensions, which, upon the occurrence, or even the rumour of the existence of such diseases, never fail to arise from the supposed danger of *infection*; it may also contribute, in no small degree, towards the same end, to be informed, that there are, in like manner, proofs in preparation, of an efficient method of cure.

In the narrative of my proceedings at the Greek Hospital, near the Seven Towers, besides some things, that will perhaps be deemed both curious and new, with respect to the nature, cause, prevention, and cure of plague, I shall have occasion to illustrate the obstacles which have hitherto prevented or impeded the investigation of epidemic maladies.

An account will be rendered of my correspondence with the Turkish Government, respecting the resumption of the investigation, upon my recovery from the plague; and their motives for not wishing to encourage measures tending to repress the devastations of that disease, as connected with religion, policy, and avarice, will be explained.

From the whole of the details, it will be rendered manifest, that, notwithstanding this disfavour, and the more active and dangerous hostility of the inferior agents of the plague institutions, my inquiry has been attended with a very complete success.

In order to prevent misapprehension, or misrepresentation, I think it right explicitly to declare, that, by complete success, I would be understood to mean, that I have, by unequivocal pro-

cesses, invariably conducted by my personal agency, fully satisfied myself, not only that plague does not depend upon contagion, but that it is capable, by a mode of treatment, which I shall indicate, of being cured, in the proportion of at least four cases out of five of those presented, on or before the third day of the disease, in a pestilence of ordinary severity: conclusions which I am ready at any time to verify, in their full extent, to the satisfaction of others.

The system of *depôts* for the reception of persons ill of the plague, in order to disencumber their frightened relations, and from whence they are transferred to the burying-ground, as exemplified in the practice of that near the Seven Towers, at which I performed my experiments, shall be fully developed.

The progress, symptoms, and treatment of the disease, in my own person, shall be described.

And, finally, an account will be given of the means by which I have endeavoured to procure the immediate and general application to public use, of the principles deduced from my experiments.

The general results of my researches concerning epidemic diseases, may be thus summed up.

1. The nature of the obstacles which impede or prevent investigation, is explained; and the path, which, to myself, was full of thorns, rendered smooth to my successors.

2. The noted *hypothesis* of contagion is refuted.

3. Its fraudulent origin traced; and,

4. Its destructive consequences shewn.

5. The nature of epidemic diseases is illustrated, as deduced from their phenomena, and the results of the operation of remedies.

6. The doctrines concerning their cause, as laid down by Hippocrates and the ancient physicians, are, in their great outlines, but with certain modifications, adopted.

7. The means of prevention, and alleviation, are deduced from the nature of the cause.

8. An efficient method of cure is ascertained.

9. It is assumed that a million of persons die annually of epidemic diseases throughout the world.

10. Of this mortality, it is computed that fifteen-sixteenths are occasioned by the consequences of the belief in contagion; the absence of the means of prevention, which depend upon a knowledge of the cause; and the want of an efficient method of cure.

11. Consequently, the result of the general renunciation of this belief; of the general adoption of proper means of alleviation and prevention; and of the general application of an efficient method of cure; would be to save fifteen-sixteenths of a million, or

937,500 lives, annually, throughout the world : reducing the mortality from a million to 62,500, or one-sixteenth.

In whatever degree these principles might be applied, the saving of lives would be proportional.

The grounds upon which this computation has been made, shall be duly assigned. It does not pretend to any thing like accuracy. But whether it be excessive, or deficient, is immaterial, since that could not affect the validity of my general reasoning, or conclusions. The only difference would be in respect to the *quantum* of utility : and it cannot be alleged, that, in this instance, its *minimum* would not possess a sufficient degree of importance. If the proportions be even reversed, and the annual saving in lives, instead of 937,500, be estimated at only 62,500, the object will not cease to be worthy of being prosecuted.

12. From all which, it follows that it is an object of the highest interest and importance, that a plan, upon a scale of suitable magnitude, should be adopted, for the purposes of undeceiving the multitude, in all countries, respecting the desolating belief in contagion ; of propagating a knowledge of the proper means of alleviation and prevention ; and of effecting the general application of an efficient method of cure, in epidemic and pestilential diseases.

Of Plague Police Establishments.

These Institutions being founded upon the doctrine of contagion, are part of the destructive consequences of the belief in that *hypothesis* alluded to, under the fourth of the foregoing general heads, of the results of my researches. If this *hypothesis* were disproved, all question respecting the merits of these institutions would, of course, cease : but, whilst that object remains unaccomplished, it may, in the present state of knowledge respecting epidemic diseases, tend greatly to elucidate the subject ; if, previous to coming in full collision with the whole mass of existing prejudices, it be shewn, that, upon the principles of the advocates for contagion themselves,

1. The laws of quarantine are absurd ;
2. That plague police establishments are, in fact, inefficient for their object ;
3. That they are injurious to health, navigation, and commerce ;
4. And a source of great and pernicious expenditure.

Whether the measures which have been pursued, in order to prevent the propagation of supposed infection, consist of seclusion and confinement, in a house, lazaretto, ship, district, or town,

they are all of the same nature, differing only in degree and manner of restraint. The shutting up of houses, in which there are persons ill of the plague; drawing lines of circumvallation, and cordons of troops round cities, supposed to be infected; shooting the sick; and other measures of similar barbarity, of which I shall cite examples but too recent, are, I trust, already beginning to grow obsolete. And let us also hope, that it will be but a very short time before we see the detention of ships, goods, and persons, upon grounds which are either frivolous or chimerical, proscribed, as unsuitable to the spirit and intelligence of the age.

All the regulations of plague police may be represented by the general term

Quarantine.

Quarantine signifies the detention for forty days, as the term imports, in a state of exclusion from society, of persons, ships, goods, &c. supposed to be capable of propagating, by contact or contiguity, an infectious disease; forty days being presumed to be the period at which that capability ceases.

Although the periods vary, being sometimes more, and sometimes less than forty days, the name remains the same.

As quarantine is a measure in perpetual operation, whether there exist an epidemic disease or not, and even without the rumour of one, it becomes a consideration of more importance, in so far as its effects are distinct from those of other plague police measures, than the regulations which are only enforced in the event of actual pestilence.

Absurdity of the Quarantine Laws, even according to the Doctrine of Contagion.

Were the laws of quarantine in other respects well-founded, we might justly accuse them of having had more regard to the fears, than to the permanent interests of persons in health; whilst to the sick they have been cruel, pernicious, or destructive. Plague, in particular, has been assumed to be a disease necessarily fatal; and the measures which have been adopted upon its occurrence, have been well calculated to justify the assumption. In resolving upon means proper to arrest the progress of an evil, of which both the nature and the cause have been equally misunderstood, it appears as if the suggestions of alarm had been alone consulted. These regulations, one would think, must have been made by men in high

health, and never expecting that it might come to their turn to be afflicted with sickness ; for they are the quintessence of abject fear and base selfishness. By the very precautions employed against their spreading, we find diseases, which might only be severe, rendered almost certainly mortal ; and innocent or useful members, for having the misfortune to be seized with a dangerous malady, lopped off, like criminals, from the great body of society.¹

That contagion is the cause of epidemic diseases, being, for the sake of the argument, admitted, the object, at present, is to shew, that the measures of plague police, enforced to prevent their spreading, are, upon that supposition, not only detrimental, but almost certainly destructive to the sick ; without being necessary, or even conducive, to the safety of those in health.

Finding that the phenomena of epidemic diseases could not be accounted for by the *hypothesis* of contagion alone, the partisans of that doctrine have been driven to the subterfuge of enlisting the atmosphere as an auxiliary into their service. Accordingly, they have generally admitted, that, “ to the effect of contact, *a certain disposition of the air is necessary* ; ” “ for we often see,” says one of them, “ *infected persons arrive from other countries, yet the disease does not spread.* ”²

This is a fact, of which I am enabled to adduce some decisive instances ; which, among other proofs, shall be employed to shew that epidemic diseases do not depend upon contagion. In this number the celebrated Larnica cases shall not be forgotten, by which Dr. Russel has succeeded in refuting the chief parts of his own elaborate work ; and which Mr. Pym, as he wished durability to his Bulamian invention, or permanence to quarantines and lazarettos, committed a great oversight in so freely quoting. But my purpose, at present, is to meet the advocates for contagion upon their own ground.

If, then, to the effect of contact a certain disposition of the air be *necessary* to the production of any disease, that disposition of the air must not only form a part of its cause, but a part, *without which the effect cannot follow.*

Consequently, to remove persons in health from that air, without the aid of which, the disease, even according to the contagionists themselves, cannot be produced by mere contact, must be the

¹ It would not be practicable here, without extending these remarks much beyond their intended limits, to enter into a distinct analysis of the effects of each separate measure of plague police. But those, to whom these observations are particularly addressed, will be able to distinguish to which measure they are more especially applicable, when they do not embrace several, or the whole.

² Vide Howard on the Principal Lazarettos of Europe, p. 33.

proper and efficient means of prevention : and to remove the sick, must be a principal part of the method of cure.

It follows, no less clearly, that the continuance of persons in an air viciously disposed, must be one of the most effectual means of rendering the healthy sick, and the diseases of the sick mortal. And to detain them in it upon compulsion, which is the effect of all the usual measures of plague police, is, even admitting contagion, little short of wilful murder.

Nor will the means usually resorted to upon such occasions, for keeping the sick secluded, appear, according to the same doctrines, to be either necessary or conducive to the safety of persons in health.

It is not contended by the most zealous advocates for contagion, even those who have a direct interest in the permanence of the belief, that its influence can extend beyond *a few paces*. Raymond, Physician to the lazaretto at Marseilles, and Desmollins, Surgeon, say, that "*infected persons are conversed with, without danger, across a barrier, which separates them only a few paces.*"¹

Giovanelli, Physician to the lazaretto at Leghorn, mentions *five* geometrical paces, as the *greatest* distance to which contagion can extend.² They, Physician to the lazaretto at Malta, says : "*the infection only extends some paces.*"³ And a Jew Physician of Smyrna is of opinion, "*that, in the greatest contagion, one may securely see a patient at the distance of two ells, if the chamber windows be not all shut.*"⁴

Here we have it on the evidence of persons who cannot be suspected of wishing to curtail its sphere of influence, that infection never extends beyond a few paces. It would certainly be unreasonable to reject evidence of this nature, coming from such a quarter ; although, if the same persons were to assert that infection *is* capable of being produced at the distance of one or two paces, or at any distance, I should think it necessary to require proof. But as I am now reasoning upon their own principles, I shall adopt, as its basis, the greatest distance which they have themselves assumed, being five paces. Five paces, then, according to the doctrines of the contagionists, ensures safety as completely as five hundred, or five thousand.

Thus, the healthy inhabitants of a town, district, lazaretto, or vessel, might walk or tarry in perfect security at the distance of five paces from the sick. There could, in such a case, be no possibility of the spreading of infection ; and the precaution of keeping the sick at this distance from the rest of society duly enforced, would infallibly, and at once, put an end to the propagation of any

¹ Vide Howard on the Principal Lazarettos of Europe, p. 34.

² Ibid.

³ Ibid.

⁴ Ibid. p. 35.

disease solely depending upon contagion, or, in as far as it might in any degree depend upon such a source.

But the fact is, that a result of this kind has never been known to happen, under the application of the precautionary measures in question, in any epidemic disease. On the contrary, they will be found to have commenced, run their course, and ceased, precisely at the same periods, and in the same manner, where such institutions have existed, and where they have not.

If this reasoning be correct, how greatly ought we to deplore the existence of such regulations as those which follow?—

Ships, goods, and persons, are declared liable to quarantine “coming from, or having touched at, any place from whence His Majesty, with the advice of his Privy Council, shall have adjudged and declared it probable, that the plague, or any other *infectious* disease or distemper, highly dangerous to the health of His Majesty’s subjects, *may* be brought; and those having communication with, or receiving any persons or articles from ships so coming from, or having touched at, such infected place,” &c.¹

“The places from whence the plague, or some other *infectious* disease, may be brought into Great Britain, &c. are adjudged to be any part of Turkey, or any port or place in Africa, within the Straits of Gibraltar and the West Barbary, on the Atlantic Ocean.”²

But we find, that “although certain goods and ships, under particular circumstances, are made subject to certain fixed rates of quarantine, yet it is farther provided, that goods specified in *any* Order of Council, and ships, shall be made subject to quarantine.”³ The Privy Council may make such orders as they shall think necessary upon emergencies.”⁴

Thus it appears, that ships and goods coming from any part of the world, and under any circumstances, may be subjected to such restraints and detention as the Privy Council may choose to direct: “they may make such order as they shall think necessary upon emergencies.”

This unlimited authority has of course given rise to many injurious acts and regulations. If, for instance, a vessel meets with another vessel, or a squadron, at sea, and is boarded by them, although those so communicating have neither sickness, nor have come from any place at which sickness existed at the time of their departure, she is obliged to do quarantine. I knew a case of this kind, in which a ship (the *Sophia* and *Mary*, of Bristol) was obliged

¹ Vide 45 Geo. III. cap. 10. sec. x.; and Order in Council, 5th April, 1815, sec. i.

² Vide Order in Council, 5th April, 1805.

³ 54 Geo. III. cap. 10, sec. xi.

⁴ Ib. sec. vii.

to perform a quarantine of forty-two days at Malta, merely for having been boarded by an Algerine squadron off Lisbon.

The bare rumour of the existence of a plague in any part of the Mediterranean, gives a pretext for the strict enforcement of quarantine amongst the farthest nations of the North; and the report of a yellow fever in the West Indies, produces an increased vigilance of the plague police establishments on the shores of the Baltic. By the same rule, as the infection in these cases is supposed to be brought in goods, and no one knows the period at which they cease to be contagious, quarantine might, without more impropriety, be enforced upon the arrival of East Indiamen from Bengal or China; or rather ought, in consistency, to be enforced, when the report of the existence of an epidemic has prevailed, at the time of their sailing, in any part of these remote regions.

Considering the matter merely in a view of commercial policy, we may be allowed to regret, that, in conferring powers so arbitrary, extensive, and undefined, the danger, against which it was intended to provide, should have been so implicitly taken for granted; and that, in the absence of all correct knowledge respecting epidemic diseases, no regular inquiry into the subject should have been thought necessary, more than if their nature had been already perfectly understood. By regular inquiry, I do not mean the mere official formality of ascertaining the individual or collective opinions of men, who could not be supposed, without the gift of inspiration, to know more of the nature of pestilential maladies, than they might have found in the puerile traditions of the Catholics of the Levant, and of Italy, transmitted through successive generations unquestioned; or in the absurd fables, respecting contagion, invented by Fracastorius, in 1546, at the instigation of the Pope and his Legates, and since quoted, as knowledge, by every successive writer upon the plague;¹ but, *a continued practical investigation.*

Such, however, have been the tales, first fraudulently imposed upon the world, in Italy, afterwards implicitly adopted by Mead, and servilely copied by his successors, in England, which have served as the foundation of our quarantine laws in this country. Of the injury which they have occasioned to commerce and navigation, some idea may be formed, from the following sweeping clause, which it has been latterly judged expedient to introduce, in order to protect our Levant trade against the competition of the Dutch, and others, who were enabled, by the lenity of their quarantine laws, or an almost total disregard of them, to anticipate

¹ Such is the story of the leather cap, by which 25 Germans are said by that author to have been successively infected in Italy; which, with many similar tales, I shall endeavour to place in their true light.

and undersell us, with respect to Turkish commodities, in the British markets : " Certain goods, wares, and merchandises, being the growth, produce, or manufacture of Turkey, or of any place in Africa, within the Straits of Gibraltar, or in the West Barbary, on the Atlantic Ocean, coming from any place in Europe, without the Straits, or on the Continent of America, where there is not a regular establishment for the performance of quarantine," are declared subject to the same regulations as if coming directly from the Mediterranean, or the West Barbary, on the Atlantic Ocean.¹ The ships which bring them shall do quarantine, like those from Turkey, with clean bills of health.²

It can hardly be supposed, that to guard against contagion could have been the design of this regulation ; since, with that view, it would have been perfectly ridiculous. And although, with what I understand to be its avowed object of protecting our commerce against the rivalry of the Dutch, it may appear somewhat less irrational ; it would certainly have been still better, that such a measure had not been rendered necessary. The more numerous, complex, and rigid, are our quarantine regulations, the more will our positive, as well as our relative advantages, with regard to the commerce with the Levant, as I shall afterwards have occasion more fully to explain, be diminished.

Of the different Kinds of Quarantine.

There are, in this country, six kinds of quarantine.

1. That performed, on account of actual pestilence, or *suspected* sickness, at the Isles of Scilly only, its period being 44 days.

A ship bound from Turkey, we shall suppose, arrives in England. She has one, or a few sick persons on board. The disease is immediately concluded to be contagious, or *suspected*, which has the same effect ; although it would be difficult to conceive how one or two sick persons, having an infectious disease capable of being propagated, as is supposed of plague, could make a long voyage, in daily or hourly contact with their messmates, without communicating the malady to all the crew. But there is probably no instance in the annals of the trade between Turkey and this country, of the arrival of a vessel having, or having had, her whole crew sick. Now, it is hardly possible to suppose, that any one can have about him that potent and penetrating kind of contagion,

¹ Vide Orders in Council, 5th April, 1805.

² Ibid. sect. v. and xlii.

imputed to the plague, without his communicating it to the whole crew; although a disease may certainly affect a whole crew, scurvy for instance, without being in the least contagious.

These trifling inconsistencies, however, being disregarded, quarantine ensues. In the mode of performing it, one should suppose that some regard might be had to the greatest infectious distance (five paces) laid down by the lazaretto authorities of the Levant. But no! neither five, nor five hundred, nor yet five thousand paces, are deemed sufficient by the plague authorities, in this country, to ensure safety. They do not consider themselves as secure from infection, until this unfortunate ship and cargo, her crew and passengers, sick and well, articles enumerated, and articles not enumerated, as contagious, have fairly reached the rocks of Scilly!¹

The sole precautions necessary in this case, even according to the doctrines of the contagionists, would be to place the sick in good air, with ample space, and suitable provisions and attendance, having the interval of five paces between them and the rest of the community, until death or recovery took place.

The passengers and crew in health, the ship and cargo should then, according to the same doctrines, be kept in quarantine; that is, isolated at the distance of five paces or more from persons in health, but only for the longest period, after being separated from the sick, which the contagionists suppose to elapse between receiving the infection and the appearance of the disease; that is, for three days: any farther period could have no object.

I beg it to be observed, that I am here again taking the doctrines of the advocates for contagion as my text, and deducing from them just inferences, in order to shew the absurdity, *upon their own principles*, of the precautionary measures adopted to prevent the spreading of epidemic diseases.

Recommencement of Quarantine.

It is farther enacted, that if any death, suspected to arise from a contagious disease, happen during any period of the quarantine, it shall recommence.² And thus, if a suspected death should take place on the last day, the ship, crew, passengers, and cargo, must submit to a farther detention of forty, or forty-four days; and it might even so happen that, from an unfortunate repetition of such an occurrence, the detention might be prolonged until the ship and

¹ "Commanders, or masters of ships, having an actual pestilence on board, are directed, if within the Straits, to proceed to some lazaretto in the Mediterranean; if without the Straits, to proceed to the Scilly Isles."—*Vide* 45 Geo. III. cap. 10. sect. xiii.

² *Vide* Ord. in Council, 5th April, 1805, sect. xxix.

cargo were rotten, or her crew and passengers dead.¹ Whereas, by the immediate separation of the sick from those in health, upon the arrival of the vessel, the whole of the time usually wasted in quarantine, with the exception of the three days, might be saved, and the whole of the loss upon the ship and cargo obviated. The propriety of even this quarantine of three days, let it be recollected, is only upon the principles of the doctrine of contagion.

Such a chain of accidents, it is true, may not often happen; but the law is not, on that account, the less injudicious. If the evil were of frequent occurrence, its immensity would alone demonstrate the absurdity of the enactment, even to those who did not immediately feel the injury.

But it is so seldom, if ever, that quarantine is performed in England, on account of *suspected* sickness, that, but for the principle, the point would scarcely have been worthy of any, and, from its consequences, does not appear to merit farther consideration.

2. The second kind of quarantine is that performed by ships having no suspected sickness, and bearing clean bills of health; that is, a certificate that there was no suspected sickness at the port from whence they sailed, during their loading, or at the period of their departure. The time is fifteen days, to which must be added that occupied in discharging such parts of their cargoes as consist of enumerated articles.² Quarantine, under these circumstances, is performed at different specified ports.

That a ship arriving in England, not only without any sickness, but with a clean bill of health, should be required to do quarantine for a single minute, seems to me to be a regulation without an object; especially when we reflect that all ships coming from

¹ This would certainly be their fate, under the circumstances stated, if plague were really contagious. All these regulations have been literally copied from those of Venice, without considering that, even had their foundation been correct, the difference of the circumstances of the two countries would have required an essential difference in the application of the principles in detail. "When a person dies in any of these lazarettos, unless the Physician and Surgeon of the Office of Health declare that his death is not owing to any contagious cause, and are very clear in their reports, all those who are under quarantine are obliged to recommence it; and this as often as there happens any suspected death." This, and other vexations, such as having no pay, sometimes give rise to mutinies among the crews detained in quarantine.—*Vide Howard's Account of the Principal Lazarettos of Europe*, p. 7.

² Ships furnished with clean bills of health shall, as well as the crews and passengers, perform a quarantine of fifteen days from the date of the delivery into the lazaretto, of such part of the cargoes as consist of the goods enumerated in class first and second; or if there be no such cargo, from the arrival of the ships at their appointed stations. *Vide Order in Council*, 5th April, 1805, sect. xii.

Turkey perform more than a full quarantine at sea during the passage. Is it not a violation of all common sense, that we, who are double the distance from Turkey with some other countries, should do double the quarantine? It appears even more preposterous, in proportion as we are more removed from the *focus* of supposed infection, than the quarantine of *eighty days*, which used to be performed at Venice, but is now considered superfluous, even there. "Formerly," says Howard, "when persons who had the plague were brought from the city, (Venice), they were put, for forty days, into a large room in the lazaretto, and afterwards into another apartment, for the same time, before they were discharged."¹

The period now supposed sufficient for expurgation is forty days from the commencement of the malady; although there is no better ground for this than mere *hypothesis*; and forty minutes, forty hours, forty weeks, or forty years, would, in point of principle, have been equally justifiable, or equally absurd.

The only danger that can be supposed to exist, under this species of quarantine, is that which is presumed to depend upon the capacity of goods to receive, retain, and communicate infection. This, as shall be presently shewn, amounts to nothing; but this quarantine has the advantage over the two following kinds, that, with precisely the same risk, it exacts only half the detention.

The following quarantines, although subject to different periods, are all performed upon grounds similar to each other, and similar to the preceding.

3. A ship sailing from Turkey, with *suspected* bills of health, commonly called *touched* patents; that is, when a suspicion of plague exists at the place of her lading or departure, but without suspected sickness on board at the period of her arrival in England, performs quarantine for thirty-four days at Stangate Creek only.²

4. A vessel sailing without clean bills of health, that is, with a certificate that the plague is understood to be actually existing at the port of her lading or departure, but arriving without suspected sickness in England, performs quarantine for forty-four days at *Stangate Creek only*. This is at present, and has been for a long time, by far the most frequent species of quarantine.³

¹ Vide an Account of the Principal Lazarettos of Europe, pp. 9 and 12.

² "Ships, &c. arriving with *suspected* bills of health, (commonly called *touched* patents, or bills,) shall respectively be subject to ten days less quarantine than those without clean bills of health." *Vide Order in Council, April 5, 1805, sect. xli.*

³ Ships without clean bills of health, but having no suspected disease on board, shall perform quarantine at Stangate Creek, and *no where else*.—*Vide Order in Council, April 5, 1805, sect. xiv. xxxvii. and xxxix.*

5. Goods, enumerated in class first and second, brought to England in ships that have already performed quarantine at any of the lazarettos in the Mediterranean, are directed to perform a farther quarantine of fifteen days.¹

6. A similar quarantine is directed to be performed by goods, the growth, produce, or manufacture of Turkey, &c., coming from any place in Europe, without the Straits, or on the continent of America, where there is not a regular establishment for the performance of quarantine, as if coming directly from the Mediterranean,² &c.

The last seems to be merely a politico-commercial regulation; and the preceding one to have been made to keep it in countenance.

Upon what principle it has been decided that the Scilly Isles are the proper station for ships having *suspected* sickness on board to perform quarantine, or that Stangate Creek is the proper station for ships having no sickness, I am equally at a loss to conjecture. Nor can I forbear to contrast with these regulations the conduct of the Turkish government, in the year 1665, in freely and without restriction admitting some of our ships into their harbours, after they had been driven away, *as suspected*, from several Christian ports. I should be curious to know what measures our contagionists, in their wisdom, would advise the Privy Council to adopt, if it were ascertained that Turkish vessels had it in contemplation, for purposes of commerce, to frequent our shores. It is probable, I think, they would not consider themselves quite safe, if a quarantine station were appointed for them nearer than the Orkneys. The Mahomedans would not certainly hold intercourse with any nation upon these conditions. And may we not find in quarantine a solution, why the Turkish flag is so rarely, if ever to be seen beyond the Straits of Gibraltar?³

But, to return from what may appear to be a digression: if the occasional detention of a ship, passengers, crew, and cargo, for forty-four days, at the Scilly Isles, on account of the sickness of one, or a few persons on board, and who might have been at once removed, and the rest liberated, be, as I have shewn, both absurd, and, as far as it operates, mischievous; what ought we to think of the detention, for the same period of time, of almost the whole commerce of the Levant, without any sickness, and consequently, without any assignable motive, at Stangate Creek? For it is

¹ Order in Council, April 5, 1805, sect. xliii. ² Ibid.

³ It is singular that the opinion that plague does not depend upon contagion, has been imputed as an error to the Turks, as connected with their ideas of fatalism; whilst the real error upon this subject has been regarded as truth, and its fraudulent origin not observed.

obvious that the want of a clean bill of health cannot in any view of reason amount to a motive. There being no sickness, no apprehension can be entertained of infection from persons: for, if the crew of a ship could be supposed to go to sea, their persons being loaded with infection, without the malady having actually made its appearance, either the whole of it would be blown away before they could make one fourth of the passage, or it would remain entirely inoperative, from the absence of that disposition of the air which is considered by the contagionists indispensable to render it efficient.

As of late years very few vessels have arrived from Turkey with clean bills of health, so nearly all the ships in that trade, belonging to the United Kingdom, have been obliged to perform quarantine; that is, to lose one third of their time, without an object, at Stangate Creek. And this, as it is of constant occurrence, and the other (quarantine for *suspected* sickness, at the Scilly Isles) but very rarely happens, comprehends almost the whole of the evil. Indeed, it may reasonably be presumed to be alone sufficient to arrest the progress of the trade of this country with the Levant; and but for the destruction of that of France, in consequence of the events of the war, would have probably, ere this, effected its annihilation. It remains still to be seen, whether, upon the revival of the trade of France with Turkey, in the event of the continuance of peace between France and England, this will not actually be the result.

I shall presently shew, from historical records, the pernicious effects upon navigation and commerce which quarantine has actually produced in this country. But this seems to be the proper place for saying a few words respecting clean, suspected, and unclean bills of health.

Of Bills of Health.

A bill of health is a document from the Consul at the port from which a vessel sails, in any of the countries specified, purporting either that, at the time of her sailing there was no plague, or suspicion of plague; that there were rumours of plague, but no actual plague; or that there was actual plague. The first are called clean bills, the second suspected, and the last foul bills; or, by a courteous circumlocution, being without clean bills of health.

Although, there being no sickness on board, there does not, upon the supposition of contagion, appear to be any difference in the risk; vessels upon their arrival in England have, as we have seen, quarantines allotted to them of very different periods, according to the

specification of the bill of health with which they may be furnished; that is, fifteen, thirty-four, and forty-four days respectively. And if the detention of fifteen days be justly deemed a hardship, where there is not the smallest shadow of risk, how much greater is the hardship of being detained for thirty-four or forty-four days, where the danger is equally chimerical! For even according to the doctrines of the contagionists, it is clear that there can be no positive risk but in cases of suspected sickness.

Bills of health, then, not being founded upon any probable danger, arising from the existence of actual sickness among the crew of a nature suspected to be infectious; but upon the supposition of the possibility of an infection (itself not proved) being capable of being communicated at some uncertain period, by some unknown artificer, to some undescribed article of produce or manufacture, regarded, upon some unintelligible principle, as capable of receiving, retaining, and again communicating that infection, upon some unexpected occasion, to living persons, must be regarded as not only evidently absurd in their principle, but even an insult to common sense.

Let us examine the practice. A single *accident* (the term used to denote death) from the plague, or the report of an accident occurring in some obscure quarter of the great cities of Smyrna or Constantinople, whilst a ship is loading for England, is deemed sufficient ground to refuse that ship a clean bill of health. (We have seen that even clean bills of health do not exempt from quarantine.) But even this ground, such as it is, can never be a matter of certainty. There are no means of ascertaining the truth of these reports. The Consuls cannot themselves, nor any of those immediately connected with them, if they were so inclined, enter into personal inquiries, as this might subject them to quarantine, or, as is supposed, to danger of infection. These reports they are, therefore, obliged to take upon trust; and as they are often fabricated for purposes of commercial speculation, those who give them credit are very liable to be deceived. Indeed, those to whose department it belongs to grant bills of health, whilst they have reason to believe the reports that are in circulation to be fabricated, consider themselves as having no option, but to act upon them. Hence ships may be despatched without clean bills of health, when there is neither plague, nor any suspicious sickness; whilst those who have fabricated the reports upon which they have been refused, may have been despatching cargoes by circuitous routes, in order to arrive at our markets before our own can have finished their quarantine; and if this mischief can even be in any degree remedied by protecting regulations, it must

still be at the price of additional restrictions upon navigation and commerce, and enhancing the value of the commodities of the Levant to the general consumer.

At Constantinople there are, at almost all periods of the year, and in almost every year, straggling cases, or reports of cases, of plague; whilst at Smyrna, the periods of its commencement and cessation are more distinctly defined. A town must be free from plague six weeks before clean bills of health can be issued.¹ For these reasons, although clean bills of health are sometimes issued at Smyrna, it is very rarely, especially of late years, that they have been granted at Constantinople. And this may be, in part, the reason why the Smyrna market is better supplied with cargoes for this part of the world; why ships prefer going there to load; and why so few English ships now resort to the Turkish capital.

It may also afford a solution, to a certain extent, of the great advantages, under the system of quarantine, which the French Levant trade enjoys over that of Great Britain; advantages which I shall endeavour to shew would be much less considerable, if no quarantine were performed in either country.

But it is farther evident, from these observations, that without reference to the question of infection, communicated from person to person, unless the system of bills of health, together with that of quarantines, be immediately abolished, which can alone prove an efficient cure for so many and so great evils; or, at least, if some radical alterations be not made in the regulations respecting them, the most insignificant flags of Europe will prevail over us in the trade of the Levant.

Infection, as such, cannot be communicated to, retained by, or propagated from Goods.

It is upon the chimerical notion, as it now appears, that certain goods, wares, and merchandises, therefore called *susceptible*, are capable of receiving, retaining, and again communicating, at some uncertain period, to the living body an infection capable of producing desolation and death among mankind, that both bills of health in Turkey, and quarantines in England, are founded: for the occurrence of *suspected disease*, as a ground of quarantine, is so rare, if it ever happen, that, regarded in its effects, it is scarcely worthy of consideration.²

¹ The reports respecting the cessation, as well as the commencement of plague, are equally subject to uncertainty, even if the principle were correct upon which bills of health are granted.

² There is not, as I am informed, an instance upon record, of a ship being

In arguing for the abolition of the system of bills of health and quarantines, I trust it will be thought that it is treating the advocates for contagion liberally to meet them upon their own ground. Having, for the sake of the argument, admitted that epidemic diseases may depend, according to their own notions of the matter, *partly* upon specific contagion, capable, with the *aid*, however, of a certain disposition of the atmosphere, of propagating itself from one person to another; it will even then appear, that neither by facts nor by reasoning can the opinion be justified that such infection may be communicated from persons to goods, and from goods again to persons.

If, to the effect of contact, a certain disposition of the atmosphere be admitted to be necessary to the propagation of infection, even from one living body to another, is it not the height of human absurdity to suppose that infection, *as such*, and by virtue of its inherent powers, can pass from the living body into *inanimate matter*, upon which the air cannot be presumed to have a similar influence; and that, after residing for some time in this inanimate matter, it can repass, still retaining its infectious qualities, into the living human body?

In the Levant no one is afraid to touch the body of a person dead of the plague.* This fearlessness must have arisen from experience and observation of the innoxiousness of this species of contact. If, then, the human body, which, in its living state, had been supposed capable of propagating contagion to other living bodies, be acknowledged by the advocates for that *hypothesis* to have ceased, with the cessation of life, to possess that capability, upon what ground can it be assumed that this faculty may be possessed or acquired by other inanimate substances?

Here, then, the whole of that extraordinary doctrine of articles susceptible of contagion in the first degree, articles susceptible in the second degree, and articles non-susceptible, upon which bills of health, quarantines, and other regulations of plague police have been founded, falls to the ground.

The positive facts which shew that goods do not propagate infection, are even more unequivocal than those which relate to persons. From the information which I obtained at Malta, and in other places, I feel myself authorized in concluding, that persons employed in the expurgation of goods in the lazarettos, have been even less frequently affected by epidemic diseases, in proportion to

obliged to do quarantine at the Scilly Isles, on account of an actual pestilence on board. Consequently, even according to the doctrines of contagion, quarantine in this country can have no object.

* Vide an Account of the Principal Lazarettos of Europe, p. 25, note.

their numbers, than some other classes of the community :¹ and from such persons, when seized, an epidemic disease has never been known to be propagated.

Neither have any instances been known of persons, who have been seized whilst packing and unpacking goods, or stowing and unstowing cargoes, (itself an event of rare occurrence,) communicating their disease to others.

All the relations, then, of the propagation of infection in epidemic diseases, whether from the living body or inanimate matter, with which the public have been deluded or amused, for two centuries and a half, will be found to be of no higher authority than that of the leather cap of Fracastorius,² or the feather-bed of Benedictus.³

As infection, admitting it to exist in a state capable of being propagated, with the help of a certain disposition of the air, according to the contagionists, from one living body to another, cannot, as has been shewn, be communicated from the living body to dead matter, and again from dead matter to the living body, quarantine must, upon their own principles, be in all cases not only superfluous, but pernicious.

The doctrine of the susceptibility of goods, then, upon which it is founded, may be regarded as one of the most imaginary, delusive, and destructive emanations of popular credulity, and pious fraud, by which devastation has been spread over the face of our planet.⁴

But granting, for a moment, that infection may even be propagated from persons to goods, and from goods again to persons, what would be the consequences? The consequences would be, that the quarantines at present in use would be wholly inadequate to their object; and that *no quarantine could ensure safety, without being interminable!*

¹ This fact is acknowledged, in his answers to my queries, by the President of the College of Physicians (*Proto-Medico*) of that island, although a firm believer in contagion.

² De Contagione, lib. iii. cap. 7.

³ De Peste, cap. 3.—These tales, invented, as I shall shew, at the instigation of the Pope and his Legates, during the Council of Trent, afterwards became the principal foundation for quarantines and lazarettos.

⁴ For the fanciful classification here alluded to, see Order in Council, April 5, 1805, sect. xxx. and xxxv.

In a manuscript, with the perusal of which I was favoured at Constantinople, by Mr. Julius Cæsar Kelli, a native of Leghorn, and for many years a practitioner of medicine in the Levant, containing observations which he had made during the plague at Salonica, in 1783, and at Brusa, in 1800, 1812, and 1813, I find it very gravely stated, that warm bread, pastry, and feathers, are amongst the articles *most susceptible* of infection; and that the shaggy, or long-haired horse, is the *only animal not susceptible!*

It must be quite obvious, that if infection exist in goods, no quarantine can avail that is not of a period somewhat longer than the greatest duration of the capability of such goods to retain and communicate that infection. Thus, as the plague, we are told, spread in Paris from rags, after having lain several years in an old wall,¹ *several years* is the *shortest* period for which rags ought to perform quarantine. But, if infection can exist in rags for several years, what certainty can we have that it may not continue to exist for several ages, or for several centuries? Again, a feather-bed, as we are informed, having communicated infection at the end of seven years;² *seven years* is the *shortest* quarantine that feathers ought to be made to perform. And what guarantee have we of safety even at the end of that period? If feathers be capable of retaining infection for seven years, how shall we ascertain whether they be not capable of retaining it for seventy, or seven hundred years?

The absurdity of these consequences, from the principles of the contagionists, ought, I should think, to be quite conclusive of the argument.

Continuing to reason upon the same grounds, it may be proper, after having shewn that the measures actually in use for the prevention of epidemic diseases, are absurd, according to the doctrines upon which they are founded, to inquire into the nature of those means which would, upon the same principles, be efficient, and ought, if they were correct, to be employed.

The obvious method of preventing all farther propagation of a disease, communicated in the manner supposed by the contagionists, would be to remove the sick. This would of itself be sufficient, since those affected could not, without the aid of the air, communicate the infection to others; and persons in health, the contagion being removed from them, could not be infected by the air alone.

No species of quarantine, no period of confinement or seclusion, could, according to these doctrines, be necessary, either in respect to the sick, or to persons in health.

Even in cases where infection had taken place, but the disease had not yet appeared, it would be sufficient, still acting upon the same opinions, at the breaking out of the symptoms, to remove the persons afflicted, in the same manner as the other sick had been previously removed.

But removal being rendered, by any circumstances, impracticable, it would be sufficient, for the safety of those in health, to keep the suspected in quarantine for the longest supposed period between

¹ Theodore Mayerne *Conseils contre la Peste, &c.* p. 631.

² Alexander Benedictus, *de Peste*, c. 3.

the reception of infection and the appearance of disease ; being, according to the contagionists, three days ; and those actually labouring under disease, for the longest supposed period of the duration of the capability of propagating infection, being forty or forty-two days from the commencement of the disease.

Thus it appears, that in no possible case can any measures of restriction be necessary, according to the principles of the contagionists themselves, taking them in their best defined form, excepting when the removal of the sick from the noxious air, which, together with contact, is supposed to produce the disease, becomes impracticable ;—a circumstance which can very rarely if ever happen.

The measures, then, which obviously result from the doctrines of contagion, as declared by its most experienced advocates, are almost diametrically opposite to those which are now generally in use.

But, it would equally accord with the preceding opinions, as it obviously follows from the principles of non-contagion, that both those affected, and those in health, should, in all cases in which it is practicable, be removed from the noxious atmosphere, as the most efficient mode of prevention, as well as an essential part of the cure.

When, however, as most frequently, or almost always, happens, the removal of persons in health, as in large cities, is altogether impracticable, other means of prevention become necessary, far different indeed from those vain attempts to purify the mass of a deteriorated atmosphere, which have usually been resorted to upon such occasions.

These means shall be considered in treating of the methods of prevention founded upon the knowledge of the true cause of epidemic diseases.

*Institutions of Plague Police are, in fact, inefficient
for their Object.*

There cannot be a clearer illustration of the inefficiency, as to their object, or of the perniciousness, in other respects, of the measures of precaution usually adopted against the propagation of epidemic diseases, than what happened in the plagues of London in 1625 and 1665 ; in both which instances, whilst the houses were kept shut up, the disease continued to spread, and mortality to increase ; and when they were allowed to be opened, mortality decreased, and the disease ceased to spread.

In Gibraltar, and many parts of Spain, as we are enabled to infer from the materials published by Sir James Fellowes, and other advocates for contagion, epidemic diseases have, since the introduction and progress toward perfection of plague police establishments, been even more frequent than before. To impute this increased frequency, indeed, to the operation of these institutions, although such would be the obvious conclusion from the doctrine of contagion, would be as inconsistent with truth, as to impute to their absence the recurrence of pestilences in countries where they do not exist. The fact is, that epidemic diseases commence, pursue their course, and terminate at similar periods, and in a similar manner, in all countries similarly situated, whether these countries possess plague police establishments or not; but with this difference, that where these establishments exist, they never fail, in the precise measure of their activity, to increase mortality, and to aggravate disease.

In 1813, for instance, the plague commenced, spread, declined, and ceased at similar periods, in Malta, where there are quarantines, lazarettos, and other plague police regulations, of the most perfect kind; and in Wallachia, where there are none.¹ Of the periods, in regard to the latter, I was informed by the Prince of that country, who is an intelligent Greek, and by the foreign Consuls, as well as by several of the medical faculty, principally Germans, resident at Bucharest. And these statements are the less liable to suspicion, that my informants are all faithful believers in contagion.

It is not a little remarkable, and very much in point, that in the same year, upon the rumour of the plague having broken out at Malta, the garrison of Gibraltar was put under rigid quarantine, and remained so for two months; notwithstanding which, the disease commenced, ran its course, and terminated, in the same manner as if no precautions whatever had been taken.²

Considering these facts, it may be regarded as a curious phenomenon in the history of the human mind, that the advocates for contagion and quarantines should persevere, as they have recently done in Spain and in Malta, in attributing the disappearance of the malady at its usual season, to the vigilance and activity of the police institutions. It shall be rendered manifest, that, excepting in a view of mischief, it would have been precisely the same thing whether they had been vigilant or asleep.

¹ These institutions have been brought, according to the existing ideas, to the highest perfection, at Odessa, under the government of the Duke de Richlieu; and at Malta, by Lieutenant-General Sir Thomas Maitland. But they never have been, and never will be, able to prevent the spreading of pestilence, when the circumstances occur that would otherwise produce it.

² Vide a practical account of the Mediterranean fever, by W. Burnet, M. D. p. 479.

The circumstances connected with the frequent recurrence of the plague in England during the century which preceded 1665, as well as those connected with the exemption which it has enjoyed from that malady during the century and a half which have intervened, are equally in proof that the absence or the presence of that malady do not depend, in the smallest degree, upon the state of our intercourse with Turkey, or any other country.

In the 73 years which preceded 1665, when there was very little commerce or communication with the Levant, the plague occurred seventeen times in England, allowing that of 1636 to have existed, with intervals, twelve years.

During the fifty years which followed 1665, although the trade and communication with the Levant must have been at least quadrupled, whilst England still had no institutions of plague police, and the disease continued to visit Turkey with undiminished frequency, it did not once occur in this country.

According to these data, however, if the disease had depended upon communication with Turkey, that is, upon infection from goods, (for there have been no instances of the arrival of persons actually labouring under disease of a pestilential nature,) the plague, observing a similar rate of recurrence as in the 73 years which preceded, would have appeared about forty-six times in England, from 1665 to 1720. Its total exemption under such circumstances, however, appears to me to amount to forty-six good reasons against the existence of contagion in goods; whilst not one reason can be found in favour of the contrary opinion, now so generally acted upon.

Hence it would be as unreasonable to impute to quarantine the exemption of England from plague, during the century which has elapsed since its institution, as to impute it to any other regulation, of which the existence happened to commence about the same period; or as it would be to attribute the frequent recurrence of plague in Turkey to the want of these establishments.

If such conclusions were correct, Spain, Gibraltar, Malta, Marseilles, the Ionian Islands, and the Venetian territories, all of which are copiously supplied with these institutions, would never have the plague; whilst it would be constantly infesting Persia, India, &c., which have not the benefit of these sovereign preventives: neither of which do we find to be the case.

*Plague Police Establishments are injurious to Health,
Navigation, and Commerce.*

Since to produce disease must be the obvious and necessary

consequence of detention and confinement, under circumstances calculated to depress the mind or deprive the body of its usual exercise, it cannot be necessary to cite proofs of the insalubrity of quarantine, or other measures of plague police. They are to be found in the most ordinary laws of life. Howard used to complain of constantly experiencing headache during his visits to the lazarettos and hospitals. ¹

My business, at present, is rather with the effect of these institutions upon navigation and commerce.

Perhaps the best mode of estimating the effect of quarantine upon commerce and navigation, is to compare those of France and England with Turkey at several periods.

Previous to 1669, when there was no quarantine in either country, the Levant trade of England, as we learn from Anderson's useful work upon commerce, was superior to that of France.

From 1669 to 1720, quarantine being established in France, but not in England, our Levant commerce still continued to preponderate.

From 1720 to 1785, quarantine existing in both countries, the trade of England regularly declined; so that from 1760 to 1785, the average annual exports were not quite equal to one-fourth of those of the twenty years preceding 1720, nor the imports to one half. ²

During the same period the trade of France with Turkey regularly increased; so that its exports, in 1787, were to those of England, in 1785, as fifteen and a half; and its imports as ten and a half to one. ³

The state of our Levant commerce, from the breaking out of the war, a few years afterwards, to the present period, as there was no competition, can afford no *data*.

As the remedies which were attempted to be applied to these evils all failed of success, we may presume, that the causes to which they had been imputed were not the right ones.

Under the persuasion that our inferiority might depend upon the limitations under which our Levant trade was conducted, although these limitations existed in an equal or greater degree

¹ Vide an account of the Principal Lazarettos of Europe, p. 106.

² Vide And. Com. Vol. IV. passim.—The difference seems so surprising, that I cannot but apprehend, that I must have committed some errors in my deductions from the *data* of Mr. Anderson: but, if I have, the reader will, I dare say, believe that it was not wilful: and I shall be much obliged to any one who will enable me to correct any error of importance into which I may have fallen.

³ In 1787, the exports and imports of France to Turkey amounted each to about a million sterling.—Vide. And. Com. Vol. IV. p. 657.

when our commerce surpassed that of France, an act of parliament was passed in 1754, by which every subject of Great Britain, desiring to become a member of the Turkey Company, was directed to be admitted, within thirty days after making such request, paying for such admission twenty pounds for the use of the Company, and no more.¹

Notwithstanding this enlargement, the trade continued to decline from 1754 to 1785, more rapidly than before; and as there appears to be no reason to doubt that this state of decay would have continued progressive, it is more than probable that, but for the intervention of the French war of the Revolution, and the destruction of the French commerce of the Levant, ours would, ere this, have been wholly annihilated.

Amongst the palliatives resorted to in mitigation of this evil, was a law, passed in 1759, to prohibit British subjects from exporting French broad-cloth to Turkey, and from importing raw silk from Leghorn into Great Britain.²

A duty was also laid, in 1781, upon cotton and cotton wool, imported into this kingdom in foreign ships or vessels, during the then existing hostilities.³

But these protecting laws, as they did not touch the main cause of the evil, were, as might be expected, wholly unavailing.

From the moment of the establishment of the quarantine laws in England, our Levant commerce began and continued to decline, until the Turkey trade of France also fell into our hands. This coincidence clearly indicates these laws as the main cause of the evils. It is both so obvious and so adequate, that there can be no necessity to look for any other; and if we do not, by its removal, apply the proper remedy, it is not difficult to foresee, that as France is about to resume her rivalry, perhaps with more advantages than before, it will not be long before she regains her superiority.

Although there can be no doubt that quarantine operates injuriously to commerce and navigation in France, and in every other country in which it has been adopted, as well as in England; yet it must be observed, that neither the inconvenience nor the expense of doing quarantine at Marseilles, when it is even of the same duration, can be near so great as at the Isles of Scilly, or in Stangate Creek, or in Milford Haven. And hence the advantages enjoyed by France, from the situation of Marseilles, when there were no quarantines in either country, must be now greatly enhanced by the different operation of those establishments in each.

¹ And. Com. Vol. III. p. 292, 3.

² Id. Vol. III. p. 317, 3. ³ Id. Vol. IV. p. 398.

It is evident, that from proximity merely, vessels may go from Marseilles to Smyrna, embracing the intervals in which that place is known to be free from plague, and from rumours of plague; and after having supplied themselves with all that the demand requires of the commodities of the Levant, may return at seasonable periods, subject only, for the most part, to the short detention required under clean bills of health, whilst by far the greatest number of our vessels, not having the same facilities of embracing the most favourable seasons, are placed under the circumstances which subject them to the performance of the long quarantine of forty-four days.

This constitutes a very great difference in respect to the injury which the trade of each country suffers from those regulations. But there is a further circumstance, which is also much against us in this comparison. Marseilles being the most conveniently situated point in France for the centre of Levant commerce, the merchandize of these countries, after suffering, generally, no farther detention at that port than the period of the shortest quarantine, are promptly transmitted to all the other parts of the kingdom; whilst ours, by being consigned to Stangate Creek, is doomed, after having performed the longest period of quarantine, to the farther detention of a circuitous navigation, arising from the inappropriate situation, excepting for the port of London, of that place.

With respect to the comparative disadvantages to which our Levant commerce is exposed by the quarantine laws, and of their positive mischiefs, which are both great and numerous, I shall, for the present, only observe, without insisting upon incidental expenses, the tear and wear of ships, the wages of crews, or the waste or destruction of cargoes, that the *detention merely* must either have the effect of diminishing the profits, on the commerce and navigation to the Levant, by one-third, or of inhancing, in the same ratio, the price of the commodities of that country to the general consumer, since, but for this detention, vessels would make at least three voyages, where they now make only two.

The severity with which, even under the least unfavourable circumstances, the effects of quarantine are felt by the commercial community, is well evinced by the following circumstance. The Council of Commerce, established by the French King in 1700, presented a memorial to that King's council, in which, among other things, they represent that, "It would be more advantageous for France to permit her ports on the ocean to carry on this trade directly to the Levant, without being obliged, ever since the year

* It was not my intention here to do more than merely to indicate them.

1669, to unlade at Marseilles, on their return, *under pretence* of preventing their bringing in the plague; *which has obliged them to relinquish that trade entirely.*"¹

How much more heavily the disadvantages of these regulations have weighed upon the commerce of England, where, from its greater distance from the seat of the supposed infection, the pretext was still more unreasonable, I have already had occasion to shew.

Plague Police Establishments are a Source of great and pernicious Expenditure.

Previous to 1800, ships without clean bills of health were not admitted to entry in these kingdoms, unless after having performed quarantine in one of the principal foreign lazarettos (we had then none of our own,) in the Mediterranean. This regulation has existed since the first introduction of quarantine into this country, in 1720. From that period to the year 1800, quarantine, with clean bills of health, was performed in England, in old ships of war, called floating lazarets; and the expense borne by his Majesty's government.

In 1800, it being deemed expedient to remove the restrictions mentioned, an act, (39 and 40 Geo. III. c. 80,) was passed, authorizing ships to enter without clean bills of health; appropriating the sum of 65,000*l.* from the consolidated fund, for the establishment of a land lazaret at Chetney Hill, and imposing a tonnage duty upon the shipping employed in the Levant trade, to reimburse the cost of Chetney Hill, and to provide for the future expenses of quarantine, as well afloat as on shore.²

In 1805, this sum having been found insufficient, another act was passed, to make further provision, and to confirm the act of 1800 in all its conditions.

¹ Vide And. Com. Vol. III. p. 7.

² Experience of the comparative disadvantages arising to our commerce from the performance of quarantine, with foul bills of health, in the Mediterranean, and, perhaps, the difficulty of procuring access to the foreign lazarettos in war time, after France had extended her conquests, pointed out the expediency of transferring them to England: and, were these institutions useful, this measure would certainly have been an improvement. Its propriety was pointed out several years before it was carried into effect, in an able letter, addressed by the merchants of Smyrna, to Mr. Howard, and inserted at page 27 of his Account of the Principal Lazarettos of Europe. But if my conclusions be just, this transfer can now only be regarded as the improvement of an error.

Under the authority of these acts upwards of 250,000*l.* have, since 1800, been levied upon the trade of the Levant. The land lazaret remains still unfinished. And, after an expense has been incurred of between one and two hundred thousand pounds, in the purchase of lands, and the erection of works, doubts have even arisen respecting the healthiness of the situation.

Here, then, is a direct expense of from 16,000*l.* to 20,000*l.* a year entailed on the public for an object that is not simply useless, but injurious; for whether it be paid in the first instance by a duty on the Levant trade, or otherwise, the amount always comes ultimately from the pockets of the consumer.

This is an ascertained expenditure. But we know not how much has been advanced out of the consolidated or other funds, to support the quarantine establishments in this country, beyond what has been reimbursed by the tonnage duty levied upon the trade.

This is properly a subject of official inquiry, and the truth may be easily ascertained.

To the amount expended upon quarantine establishments at home, we have now to add that which is required for those of Malta, Gibraltar, and such as have recently devolved to us in the Ionian islands. The whole united cannot fall short of a hundred thousand pounds a year, and may possibly exceed two.

Were the expense indeed twenty times as great, there is no doubt that if these establishments could be shewn to be unequivocally useful, it ought and would be cheerfully borne. But as it has, I think, been proved, that whether contagion do or do not exist, they are insufficient for their object, and otherwise injurious, it follows that if the expense were only one twentieth part of the actual amount, it ought to be forthwith discontinued.

