

A MEDICAL MAN'S PLEA

FOR

A WINTER GARDEN

IN

THE CRYSTAL PALACE.

LONDON :

JOHN VAN VOORST, 1 PATERNOSTER ROW.

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1851.

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## MEDICAL MAN'S PLEA,

*&c. &c.*

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DENARIUS has shown the financial possibility of maintaining the Crystal Palace if we will have it, and the facile genius of Mr. Paxton has, by anticipation, disposed its vast interior into an Arcadia of his own imagining. Both have advanced good reasons connected with our pleasures or our interest for the adoption of their suggestions, and both have enunciated their views with the confidence which a large experience would seem to warrant, and with the prestige which naturally belongs to a recent success. They have omitted, nevertheless, the arguments which, of all others, were most likely to influence the thinking portion of the

Addition to the arguments of Denarius and Mr. Paxton in favour of a Winter Garden in London,

London public in its decision. They might have reminded us that we live in a city grievously unhealthy: they might have shown that the main cause of this unhealthiness is within our knowledge, and that it admits, if not of entire removal, at least of considerable alleviation; and that—by the adoption, with some additions, of their own excellent proposal.

to be found in the unhealthiness of the city in which we live, and in the fact that

The unhealthiness of London may be estimated by the fact that, although the proportion of marriages among its citizens is greater far than among the population at large, the births which result are actually fewer, and the deaths more numerous; thus :—

1842.	Persons married to 100 persons living.	Births to 100 males and 100 females living.	Deaths to 100 persons living.
In all England . . . .	1·540	6·400	2·209
In London . . . .	1·951	6·083	2·563*

The annual mortality per cent being :—

	Males.	Females.	Living to one death. Males.	Living to one death. Females.
In England ..	2·270	2·104	44·1	47·5
In London ..	2·737	2·308	36·5	43·3†

\* Sixth Annual Report of the Registrar-General, p. xlvi. Table A.

† Ninth Annual Report of the Registrar-General, p. 177.

Results which nothing else than a condition of health highly unfavourable to the Londoners can possibly explain.

And in effect, when we examine into the remarkable, and apparently discrepant results here displayed, we find them to depend upon causes strictly atmospheric; that is to say, upon the prevalence of those diseases which affect the air-passages, and upon the ills incidental to an impure atmosphere and overcrowded dwellings. Thus, of all the deaths which occur annually in London, somewhat more than one-third are caused by tubercular and respiratory diseases, while in the rest of England the proportion is about one-fourth.

this unhealthiness is mainly dependent on an insufficient supply of pure air to the inhabitants.

	Deaths from all causes.	Deaths from tubercular and respiratory diseases.
In England (excluding London) .. } ..	360,535	97,987*
In London .. ..	60,444	21,092*

Now it is to be carefully observed that, although these causes are most in operation during the winter months,

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\* Table of the Causes of the 420,977 Deaths registered in the year 1847.—REGISTRAR-GENERAL.

Deaths from tubercular and respiratory diseases in } .. 7059
the summer quarters of 1850 (London)
Deaths from tubercular and respiratory diseases in } .. 9302*
the winter quarters of 1850 (London)

they appear to originate less in the inclemency of the weather than in circumstances which affect the purity and quantity of the air we breathe. For, referring to the returns from a suburb, unusually exposed, but healthy in other respects, we find that, at Hampstead, the annual mortality per cent of males under five years of age is 6·286, and of females, 4·918, while in the warmer but crowded district of St. Martin-in-the-Fields, it is no less than 12·058 among males and 9·140 among females—a fearful disproportion—which, however, does not prove that a cold air is good, but that no rigour of climate can compete, as a source of disease, with the effects of close confinement to limited and crowded areas and a corresponding deprivation of pure air.

Popular illustration of the *modus operandi* of this cause,

The object of the respiratory process in warm-blooded animals, it is well known, is to extricate from the body carbonic acid, the product of the decay and waste which the

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\* Summary of the London Returns of Mortality for the Twelve Years, 1839-1850.—REGISTRAR-GENERAL.

tissues are constantly undergoing; and air-breathing animals are supplied with a simple apparatus to effect this. Their external skin is reflected inwards, and forms passages and chambers into which the air they inhale is received, and on the walls of which the blood, containing the carbon of the system, is distributed: this apparatus constitutes the lungs. When the animal inspires, the chambers become gently distended with air, and the blood, hitherto dark from the presence of carbon, becomes red. It has exchanged its carbon for the oxygen of the fresh air, and is fitted, by this momentary contact and interchange, to renew the decay and waste which are constantly taking place in every organ of the body.

Now, through the lungs of an adult man not less than 450,000\* cubic inches of air must pass in the twenty-four hours; that is, an adult, shut up in a room of twenty-four feet square (by no means a small room), will have breathed the whole contents of the chamber four times over at the end of

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\* Coathupe, in Athenæum Report of Meeting of the British Association, 1839, p. 707, 460,224 cub. in.

the first twenty-four hours of his confinement. The atmosphere then surrounding him would not be in the same state as when he entered the chamber, for he would have consumed nearly all the oxygen it contained, and exhaled, in its place, a quantity of gas highly deleterious to life — a quantity sufficient, in fact, to furnish a weight of not less than eight ounces troy of actual carbon. The aëration of the blood would, by this time, have become impeded, and, by and by, would be actually suspended; as it is, it is no longer reddened by contact with such an atmosphere, but, black and impure, continues a languid circulation till the hue of health has fled and the skin assumed a sallowness approaching to lividity. Were the experiment carried far enough, the individual would actually die asphyxiated. It is more to our purpose, however, to stop it at this point, for it illustrates, exactly, the effect produced upon human beings who exist — we cannot say, live — from year's end to year's end in houses insufficiently ventilated.

Thus, it has been calculated that a London child—a real denizen of the place—

especially as regards its destructive operation on children.



of necessity and on account of the weather and the state of his health together, passes a period in the house equal to about eleven months in every year, *i.e.* he is not out of doors for more than three hours a-day, during 250 of the 365 days which compose the year. Is it wonderful, then, knowing as we now do the inevitable consequences of such confinement, that his skin assumes the characteristic pallor and sallowness we have described; and that, after a sufficient time, he himself becomes the subject of one or more of those diseases which we have shown are mainly instrumental in his destruction? Those whose lot it is to contemplate and to combat the influences of such an existence are prepared for what they find in the Registrar-General's reports of the mortality among London children; but the public generally, we venture to state, are quite unconscious that, of all the children born in London, nearly one-sixth of the whole number die before they have attained the age of one year, and one-third before the age of five years; and that these results are so different from those obtained from certain

A London  
child's plea for  
a winter garden.

open, and known healthy, parts of the country, that the chances of a London child, as compared with those of a rustic in these districts, are not more than as nine to fourteen. Thus, at Tonbridge, a proportion nearly equal to one-ninth of the whole population die before the age of one year, and one-fifth before the age of five years.

The figures are,—

	Births.	Deaths under One Year.	Deaths under Five Years.
In London . . . .	35,318	6,065	10,503*
In England . . .	293,146	52,388	86,219
In Tonbridge ..	862	104	183†

Opinions of Sir  
James Clark.

Nor is there any discrepancy between these figures and what we actually observe in practice. Sir James Clark, speaking of children not hereditarily predisposed to tubercular diseases (which, we may mention, include consumption and scrofula), says, “if a child be confined to rooms in which free ventilation is neglected, a few months will often suffice to induce tuberculous cachexia. The countenance will become pale, the flesh

\* Ninth Report of the Registrar-General, p. 119.

† Ibid. p. 126, 127.

soft, the limbs emaciated, the abdomen tumid, and the evacuations foetid and unnatural. The external lymphatic glands, especially those of the neck, will enlarge, and the child will speedily fall a victim to tuberculous disease. . . . If this is the case," he goes on to say, "in a strong infant, the offspring of healthy parents, and perfectly healthy at its birth, how much more certainly and rapidly will the same effects be produced in the feeble infant of unhealthy parents."\* Again, "In the confined districts of large and populous cities, where neither pure air nor sufficient light can enter the buildings, the food of the inhabitants cannot be assimilated, even though the supply be unexceptionable."†

Mons. Baudelocque speaks still more strongly:—"Telle est la véritable cause, la seule cause, peut-être, de la maladie scrophuleuse. . . . Partout où il y a des scrophuleux cette cause existe; que partout où elle existe il y a des scrophuleux, et que là où

Opinion of  
Mons. Baudelocque.

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\* A Treatise on Pulmonary Consumption and Scrofulous Diseases. By James Clark, M.D. London, 1835, 8vo. pp. 228, 229.

† Ibid. p. 232.

elle manque la maladie scrophuleuse n'est pas connue."\*

Though a perfect remedy can never be found for this state of things as long as London (in its present shape) endures,

Do these things admit of a remedy? We think it must be at once admitted that they do not. So long as 2,500,000 human beings continue their endeavours to exist upon the volume of air afforded them by the present area of London, so long will they continue to languish, and so surely will they die prematurely. The limited utility of sanitary measures, too, which have for their object the mere purification of the air, will now become apparent — they cannot purify what there is not.

we have a palliative remedy in the establishment of protected exercising grounds.

But although no radical cure offers itself, we have within our reach a prophylactic of great power. If we cannot enlarge the scope of our London atmosphere, we can, at least, baffle the destroyer, by coaxing the crowded inhabitants out of their houses, and, by means of our parks and open spaces, so spreading the living mass for a few hours of certain auspicious days in the year, as to send them home, for the nonce, invigorated

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\* Etudes sur les Causes, la Nature, et le Traitement de la Maladie scrophuleuse. Par A. C. Baudelocque. Paris, 1834.

and refreshed. Could we get them out on EVERY day of the year ; could we turn any portion of our parks and open spaces into protected exercising grounds available at all periods of the year ; could we make these exercising grounds perfectly pervious to a large body of moving and ever-changing air ; could we secure for this contained air a moderate and standard temperature, and a constant hygrometric condition ; could we insure this during the five months in the year that our children are immured in the nursery, and our invalids hermetically sealed up in their chambers,—we should then, we believe, be obtaining for them as much as the nature of their situation, and the inevitable conditions we have just considered, can possibly permit them to enjoy.

Pervious to light and air of standard temperature, and even hygrometric condition.

And all these conditions we have the authority of competent persons for stating are perfectly attainable, should the public intimate its desire to see them combined in the Crystal Palace.

Desiderata which are perfectly attainable in the Crystal Palace.

It will be observed that we have carefully confined ourselves to those points in our argument which have appeared to us

Any idea of converting the Crystal Palace into a hospital disclaimed, and

of paramount Hygienic importance, and that we have used no rhetoric more persuasive than a few figures. We desire expressly to state, too, that we have no wish to see the Crystal Palace converted into an exclusive resort for invalids. We have even a horror of the very name of Sanitarium, and are writing not for a class, but for the public at large. If we have used exclusive arguments, it is because we felt that, by our medical experience, we could the better illustrate and plead the necessities of every one of our fellow-citizens.

Were the Crystal Palace, however, at our disposal, together with the surplus thousands in the hands of the Royal Commissioners, we would go much further than either Denarius or Mr. Paxton. We would have, in addition to the shrubs and fountains — both of great utility as agitators and renovators of the air — Springs of living water for personal use. We would sink wells in the Crystal Palace, and establish a system of Baths, which should combine all that is desirable in the Spas of Germany with all that is decent in the Roman Thermæ. We would have a copious

some further suggestions, which would greatly enhance its value as a place of public resort.

Springs.

Thermæ.

and well-arranged Library and Reading-rooms, Libraries.  
 Retiring and Reclining-rooms, Couches for Retiring and Reclining-rooms.  
 Repose disposed about the building, Hand- Couches.  
 carriages of every description, and a scale of Bath chairs and  
 Refreshments so liberal and complete, as to Refreshments.  
 furnish those who would spend the whole  
 day in the place with the most ample and  
 convenient means of doing so.

On the subject of Baths we could, and All sources of revenue.  
 may, at a future time, venture to enlarge.  
 For the present—and to propitiate Denarius  
 —we will simply remind him that all these  
 things are, in themselves, fertile sources of  
 revenue.

To the owners and occupiers of the Opposite houses.  
 houses in the neighbourhood we would say,  
 Would that we were in your position: as  
 owners, on account of the increased value  
 which we should expect our property to  
 acquire; and as occupiers, in our contiguity  
 to such a winter park as we are sure  
 Mr. Paxton can make for us. The crowd  
 which now throngs about the transept and  
 takes shelter under our porticoes, and the  
 omnibuses which distract us, the policemen,  
 the Symposium, and the dust, we should

expect to disappear, one by one, and to find ourselves, at no very distant period, entire masters of the situation.

Horsemen.

Athletæ on horseback should not enter our winter garden. The iron hoof and the slender Galanthus present to our ideas an antagonism too uncomfortable to be thought of. Horses, in short, would ill agree with the place : but, to be consistent, *our* reason for their exclusion is, that the place would not agree with them.

FINIS.