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# A LETTER,

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### A LETTER

TO THE

## Editor of the Literary Gazette,

UPON THE MISREPRESENTATIONS

CONTAINED IN

## A Pamphlet

Recently published by Dr. NEALE,

UPON THE SUBJECT

OF THE

### CHELTENHAM WATERS.

### By THOMAS NEWELL, M.D.

Surgeon Extraordinary to the King.

#### Cheltenham:

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## LETTER, &c.

Sir,

AFTER reading an article in the Literary Gazette of June 24, upon the subject of the Cheltenham Waters, to which is subjoined extracts from a pamphlet recently published by Dr. Neale upon their nature and qualities; I was much struck with the very partial nature of the statement there given of these celebrated Springs.

I must claim attention from your liberality and candour, while I attempt to show you, that Dr. Neale's representations are in some instances erroneous, and in others quite unfounded.

It will perhaps be best in the first place, to settle the character of Dr. Neale's publication; by stating to the public, through the medium of your paper, the circumstances under which it was published, and the views it was intended to answer; after which, I will concisely state to you a history of the numerous Wells of this place, and the medicinal properties of the Waters they contain.

From recent exposures which have taken place at Cheltenham, it appears, that the pamphlet in question, was written for the express purpose of recommending the Water of the Old Well; and Dr. Neale actually received One Hundred Pounds, as a reward for the services it was calculated to produce; besides which, to use Dr. Neale's own words, -" Certain advantages were held out to me, "as likely to arise to myself individually " from this undertaking, as all the expenses " of advertising, printing, and publishing the "pamphlet, were to be defrayed by Captain " Matthews, (the renter of the Old Well,) as "well as whatever expenses might arise, "should I be exposed to legal proceedings, " from the revenge or resentment of the other " Proprietors; in short, I was to be borne out " harmless in the affair, and was offered ver-"bally, a subsequent interest to accrue con-" ditionally,"

This statement requires no comment.—It is not therefore to be wondered at, that in order to fulfil his agreement, Dr. Neale should have gone a good deal out of his way, in commenting upon the rival establishments, and that he should have made use of assertions to establish his point, which, I trust, I shall show are untrue in themselves, as well as contradicted by all medical experience.

To make good what I have advanced, I must beg leave to remark, that the Well of Water which Dr. Neale designates as the original Spa Water, and to recommend which to the preference of invalids was the principal motive of his pamphlet, was never examined by Dr. Fothergill at all, though he gives its contents as the analysis of that celebrated physician; and for any thing Dr. Neale can know to the contrary, it may contain as much Muriate of Soda as either of the Wells at the Montpelier or the Sherborne Spas, which he so much condemns.

The fact is, that the Original Spring, and which was analyzed many years ago by Dr. Fothergill, became dried up, or nearly so, as much as ten or twelve years since; and the

Well, which was not more than six or eight feet deep, was sunk about two years ago to the depth of seventy feet, where Water was found in the clay just as it is found in all the New Wells.

What the medicinal quality of this Water is, as well as that of the other numerous Wells here, I will notice hereafter; but must first attend to Dr. Neale's extraordinary assertions, of the deleterious nature of Muriate of Soda or common salt, in the proportions contained in Mr. Thompson's Wells.

In what school of Medicine, or what field of experience he obtained this notion, he has not explained to us; but when he asserts that Muriate of Soda, in the quantity that is found in Cheltenham Water, is capable of exciting into inordinate action the blood vessels, and to use his own words,—"that many "a torpid liver which might have remained for 'years in a quiescent state comparatively harm—"less to its possessor, has been speedily thrown "into violent inflammatory action, succeeded by suppuration, and the patient been hurried "into the grave, sooner by some years than "would have happened, had he not been put

" on a course of these stimulating Waters—" and that, in one instance, a fatal apoplexy "had been produced, to his own knowledge," he asserted what he cannot prove; and although this assertion was well calculated to answer his own purpose, and to instil into the public mind a prejudice highly injurious to the reputation of the Cheltenham Springs, it will have little influence on the minds of Medical Men of experience on the spot, or elsewhere.

Another invidious observation of Dr. Neale's, as applicable to the Montpelier Spas, is, "that in their clumsy attempts to render some of these Waters more aperient, the Mixers of the Waters appear to have no fixed rule in adding the saline solution—but again I must observe, that this can hardly occur at the Old Well, because the quantity of Aperient Salts contained in those Waters, is in general quite adequate to produce the effect required upon the bowels."

Is Dr. Neale ignorant that the saline solution as he calls it, (and which is put in Italics to insinuate that it may be composed of any purgative salt) is a solution of the salts produced by evaporating the Cheltenham Water

itself? Has he the smallest shadow of proof of this insinuation? or on the contrary, does he not know that concealment upon this subject, (viz. solution) has never been attempted? or that every thing connected with these Wells is, and always has been open to public inspection and enquiry?—These being undisputed facts, how can he justify himself for the unwarrantable part he has taken? or how can he satisfactorily explain himself to those, who are capable of forming a correct judgment upon the subject?

Before I take leave of Dr. Neale's pamphlet, I ought to notice shortly what he has called the jocular part of it. In this he directs his imaginary friend in Scotland (who is supposed to have a weak saline water upon his estate) in a method which he says his southern neighbours possess, of "adding to "the strength of their Mineral Waters, and "thereby reaping a rich harvest from the "credulity of their visitors." He then goes on to say, that a few tons of Glauber and Epsom Salts must be provided, and mixed with the pure element, from some rapid torrent or deep well; and when salted to the taste, as Mrs.

Glasse would call it, get your composition recommended, by some, "complaisant Editor" of a Monthly, Philosophical, or Medical "Journal," by saying, "We congratulate "the public on the discovery of a rich Mineral "Water," &c. This Dr. Neale calls jocularity. The sensible part of mankind however, will consider it in a more serious point of view, and may very naturally ask, what reward the recommenders of so gross an imposition would be entitled to?

The jocularity of Dr. Neale's production, though levelled against the prosperity of the favoured town of Cheltenham, will fall pointless to the ground; and although among the conflicting opinions of men, there will be always found those, who from ignorance, prejudice, or more unworthy motives, will take the wrong side of a question, still the good sense of the public will in the end prevail; and the excellence of Cheltenham Water, as a remedy in many of the diseases which afflict suffering humanity, will be acknowledged and sought after, when its traducers are sunk and buried in oblivion.

The reflection of Dr. Neale upon the

Medical Men who have long practised at Cheltenham, would not be worthy notice, were it not for the concluding sentence, which at their expense conveys a compliment to himself.

After expressing his surprise that "none of the Medical Men who have resided here for years, have noticed and commented upon what he calls a fact, but which has been, I trust, satisfactorily proved to have been a misrepresentation, he states, that—"such un-"grateful tasks are generally left to any casual "labourers in the vineyard, who like myself, "may choose to take them up from a pure "love of truth."

Of the delicacy, or the truth of this remark, I must leave the world to form their own opinion. I beg leave to disclaim any thing personal to Dr. Neale, in what I have advanced, upon the attack he has made upon the Cheltenham Waters. My motive has been to correct misrepresentation. How far I have been successful the public must judge.

I will now, as I promised, give you a concise history of the Wells and Waters of Cheltenham, the result of twenty-eight years experience as a practitioner in this town.

From the first discovery of the Saline Spring, in 1718, to the period of his late Majesty's visit here, in 1788, there was but one Well, which was about eight feet deep, and was the receptable of a scanty Spring of Water, issuing out of the side of a slightly sloping bank, in a field a few hundred yards to the south of the town of Cheltenham.

His Majesty finding there was no Water for culinary purposes at Bay's-Hill Lodge, the Mansion of the late Earl Fauconberg, where he resided, commanded a Well to be sunk for the convenience of the house, which is situated a few hundred yards to the westward of the original Spa.

At the depth of seventy or eighty feet, a Spring was discovered, which on examination was found to possess the same purgative properties, as the original Water; and it continued to be used as such, by many of the frequenters of Cheltenham, for several years before the commencement of the Montpelier, or Mr. Thompson's Spas.

In process of time this Well became less productive of Water, and ultimately quite dry.

About this time it was found by Mr. Thompson, upon examining the soil in the neighbourhood of the Old Well, the property of which he had recently purchased, that at a depth of sixty feet, or more, Water of the same quality was to be met with;—in consequence of which, several Wells were sunk.

It was also found, that although many of the Wells produced abundance of Water in the first instance, the quantity gradually diminished; and that some of them, as had been the case in the King's Well, ultimately became dry.

This made it necessary to dig New Wells almost every year. In the mean time, the Proprietors of the Old Spa, to supply the deficiency in the original Well, sunk new ones also with the same success; and within the last two years, a new Establishment altogether has been formed, called the Sherborne Spa, in honour of the nobleman of that name, who is Lord of the Manor, which has Waters of the same properties; and where the Proprietors have built a magnificent temple, and at

great expense have laid out walks and drives, highly ornamental to the town.

Thus there are three Establishments, at all of which the Saline Water is drank; and belonging to the whole, there are nearly one HUNDRED WELLS.

The greater number of these, however, are used to supply Water for evaporation, to obtain the Salts, for which, of late, there has been a vast demand from every part of the world:

The soil in the immediate neighbourhood of Cheltenham, is a dark blue clay, filled with numerous marine productions, as shells, &c.; and interspersed in some places with iron pyrites.

By what revolution of our globe this formation has been produced, it is not the place here to enquire; but it commences where the calcareous structure which forms the Cotswold Hills ceases, and extends a distance into the Vale of Gloucester, and to a depth, neither of which have as yet been ascertained.

As this clay is of the same quality, the Water which pervades it is of the same principles.

The impregnation of Cheltenham Waters, consists in purgative salts, and iron. They

have also other impurities, in common with all other Waters which pervade earthy matter; and although these are fit objects for chemical enquiry, they have little or nothing to do with their medicinal efficacy.

The predominant salt is Sulphate of Soda, afterwards Sulphate of Magnesia, and Muriate of Soda.

Some of the Wells when first dug, have been found impregnated with Sulphuretted Hydrogen Gas, giving to them a quick sulphureous flavour; but in general this principle has not been retained for any length of time; for by being frequently pumped out, the Well becomes sweetened from the admission of common air, and the Water in a short time loses this property.

This, however, is not the case with Well No. 2, at the Montpelier Spa, which retains its sulphureous property, in addition to the saline impregnation common to the other Wells; and which in a medicinal point of view, is of some importance, as applicable to some classes of cutaneous complaints, for which these Waters have long been celebrated. The iron is held by the carbonic acid gas.

In these numerous Wells, there may be shades of difference as to their strength; but I much doubt whether to such an amount, as to produce any sensible difference in their effects upon the human body; and this opinion has not been lightly taken up, but is the result of many years observation and experience.

Neither does it appear to me in a practical point of view, that the variation there may be in the proportions of these respective Salts, is of any consequence, for men of experience know, that a mixture of purgative medicines act better than any will do separately; and it may be from this law, that the combination as it exists in the Waters here, has made them so efficacious.

It has been asserted, that it is incompatible with the laws of Chemical affinity, for Muriate of Soda and Sulphate of Magnesia to exist in the same solution. If this is the case, and a double decomposition were to take place, it would increase the predominance of Sulphate of Soda; and the Muriate of Magnesia which would thus be formed, is as mild, and nearly as active an Aperient as the Sulphate of Magnesia has been long known to be.

It may be remarked however, that the laws of Chemical affinity are varied by the quantity of menstruum in which Salts are held; and indeed these substances in a state of dryness hardly act upon each other at all. From this it may happen, that in the analyzation of Mineral Waters, combinations may be varied, or new ones formed, producing results, not exactly corresponding with their relations as existing originally in the Water. This may in some measure, account for the discordant results, given by different Chemists of most Mineral Waters.

These differences, however, are of less importance than a practical knowledge of their effects upon the human body in disease; and fortunately for Cheltenham, this experience is too firmly established to be shaken by any illiberal or unfounded attacks, from whatever quarter they may proceed; or to be further confirmed by any attempts in their favour in my power to make.

It may not be irrelevant in this place, to state the result of an investigation which took place in September, 1814, in the Literary and Philosophical Society of this Town, upon the qualities of the Waters, in consequence of certain Queries submitted by me, for consideration.

This Society was composed of the professional and literary gentlemen of the town and neighbourhood; and consequently embraced those who were most competent to form a correct opinion upon the subject.

It is to be observed, that this enquiry was confined to the Montpelier, or Mr. Thompson's Spas.

The first Query went to ascertain what difference, if any, existed between the Wells, numbered One, and Four.

It was determined, that each of these Wells had nearly the same impregnation; and that their medicinal properties were nearly alike. It was decided, that the saline matter upon which their virtues depended, was Sulphate of Soda, and Sulphate of Magnesia, with a small proportion of Muriate of Soda. They both contained iron, held by carbonic acid gas.

The second Query was, to enquire whether any difference existed between No. 2, and

3, which is the Water impregnated with the sulphuretted hydrogen gas.

It appeared that No. 2, and 3, came out of the same Well; the Water of which had besides, the same saline qualities as No. 1, and 4; and it was ascertained; that the reason why No. 2, appears stronger in sulphureous flavour than No. 3, is, that the pipe of the pump of the former, goes to the bottom of the Well, while that of the latter, dips but a little under the surface of the Water. I have before remarked, that several of the Wells, when first dug, have more or less of a sulphureous quality, which goes off when they have been frequently pumped out; and the reason why No. 2, and 3, have so long retained this property is, that the Well from which they proceed is the most productive one at Cheltenham, and is, consequently, seldom or never pumped dry.

In answer to the third Query, which regarded the Well, No. 5, it was the general opinion of the Society, that its predominant, purgative Salt was Sulphate of Magnesia, which in the other. Wells is Sulphate of Soda; that the proportion of this Salt was

such as to make it as purgative as the other Wells, and that its medicinal properties were the same; as it is a well known fact, that the Aperient powers of Sulphate of Soda, and Sulphate of Magnesia are nearly alike.

As at the time these Queries were proposed, there were in all about forty Wells, it was asked,—Is there any marked difference between them, and the five Wells above-mentioned, which only are devoted to the purpose of drinking?

It was determined, that all these Wells produced nearly the same proportion of Chrystals, at equal points of concentration, as the Wells One, Two, Three, and Four; the Well No. 5, being the only exception, its impregnation being, as was before observed, the Sulphate of Magnesia.

In the course of the discussion it appeared, that the quantity of Waters produced in these Wells was various. In some it was nearly stationary, while in others there was a considerable failure.

It was determined, however, that the quantity produced in each, was in some

measure varied by the same causes which influence the produce of Water in other Wells; as well as that the saline impregnation varied a little at different times, according as the Springs were more or less abundant.

It was found that the saline Water is not met with any where but in the blue clay, which, as before remarked, contains in considerable quantities, the remains of various marine substances; and Mr. Thompson, the Proprietor, acquainted the Society, that the Sulphates and Muriates varied in their relative proportions, according to the depth of the Wells.

This point, however, is of less consequence, and was not completely settled.

I have not thought it necessary upon this occasion, to enter into a consideration of the medicinal effects of the Waters of Cheltenham, in the various diseases for the relief of which they have been so long celebrated.

My present motive has been, to vindicate them from the aspersions of interested or ignorant declaimers; and I may probably at some future time, give to the public the result of my experience of their effects upon the human body, in the various cases of its morbid derangement to which they are applicable.

I am, Sir,

Your obedient Servant,

THOMAS NEWELL, M. D.

Surgeon Extraordinary to the King.

S. Y. Griffith, Printer, Chronicle-Office, Cheltenham.

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