

**The Leamington waters chemically, therapeutically and clinically considered : with observations on the climate of Leamington / By Francis William Smith.**

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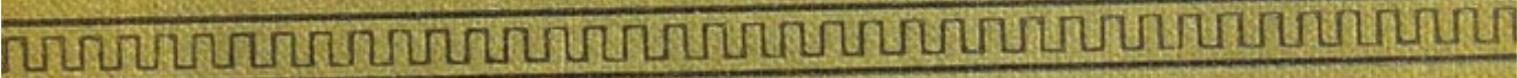
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THE  
LEAMINGTON WATERS



F. W. SMITH, M.D.



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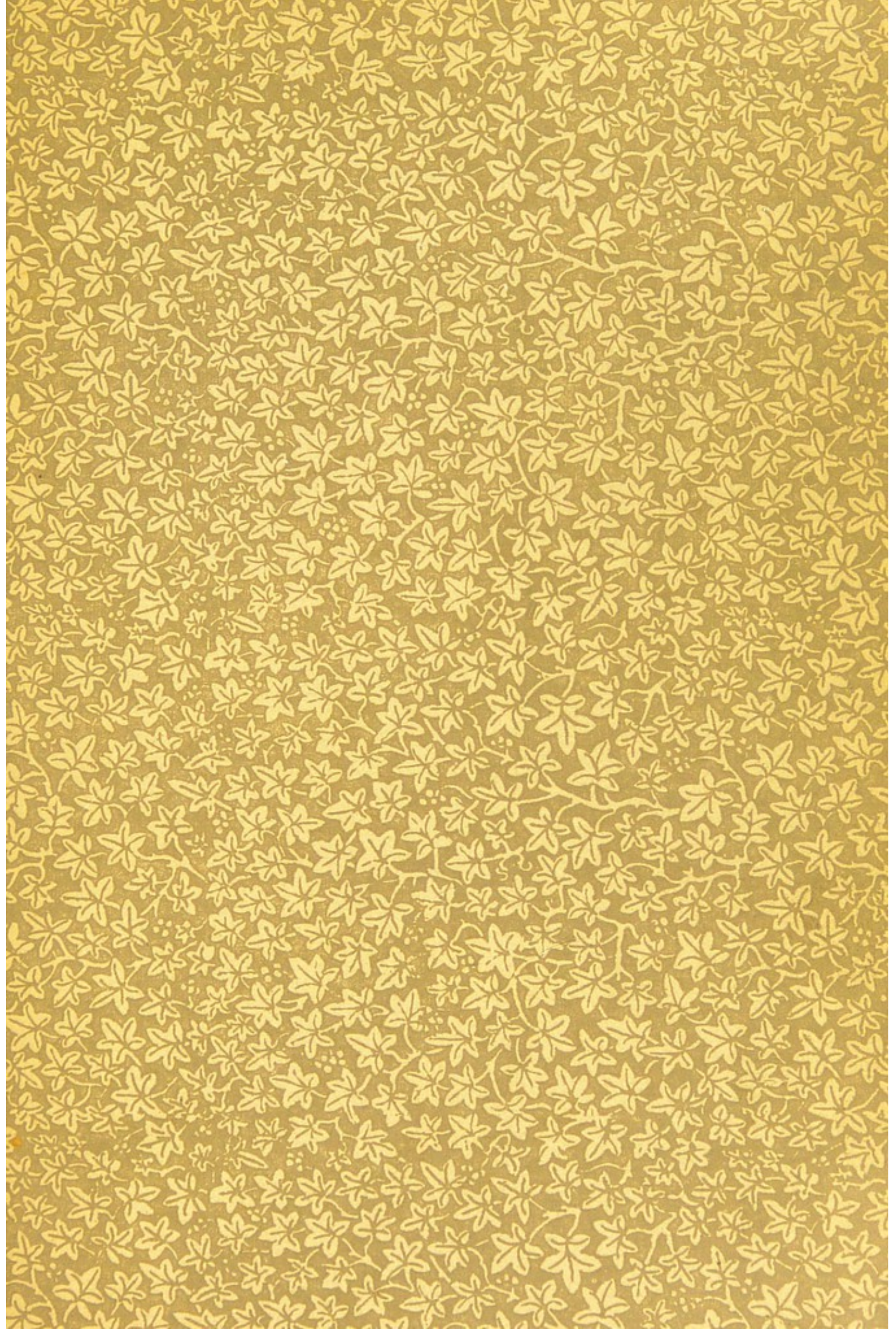
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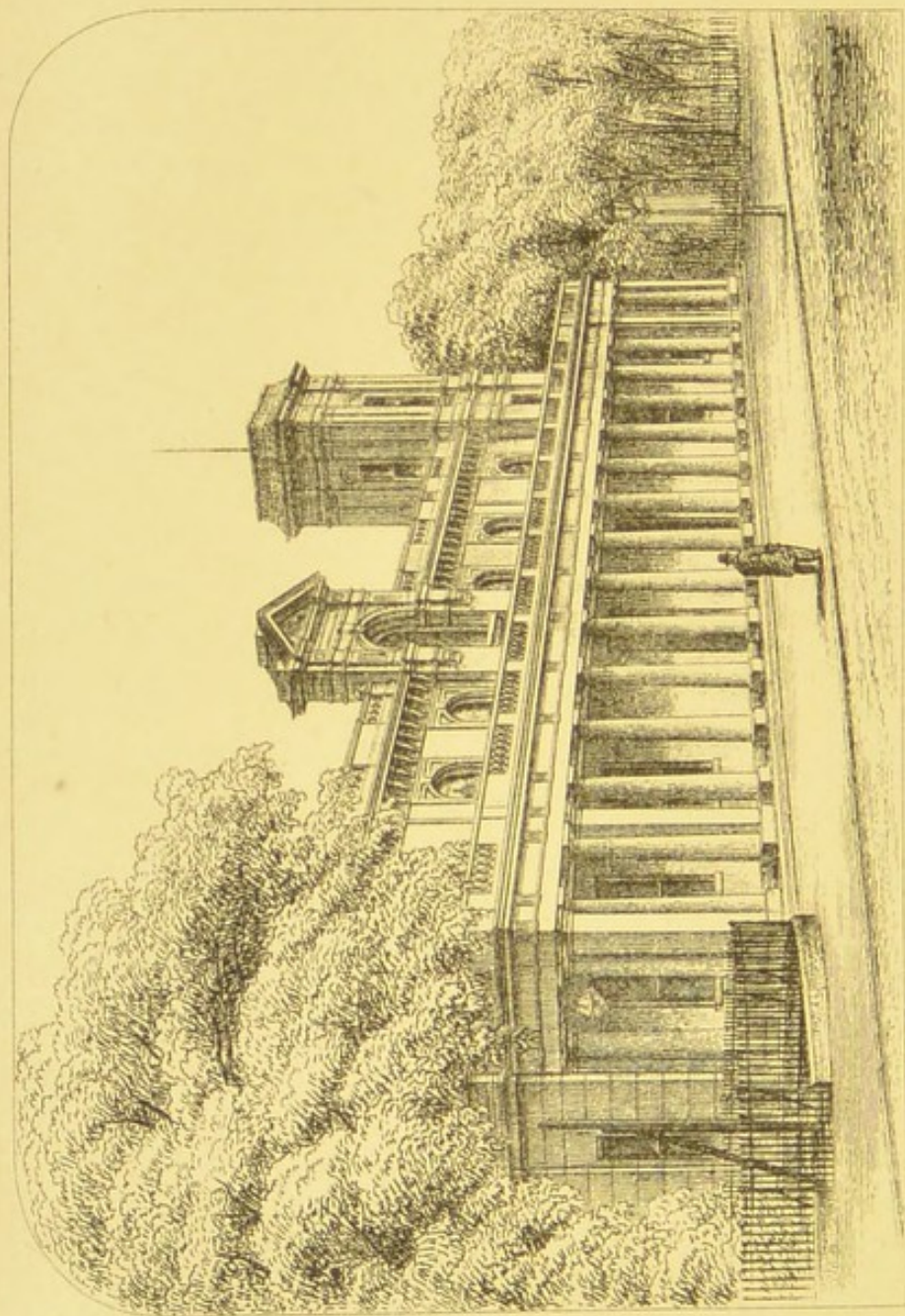
LEAMINGTON.





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ROYAL PUMP ROOMS, LEAMINGTON SPA.

London: Published by H.K. Lewis, 136, Gower Street.

THE  
LEAMINGTON WATERS

CHEMICALLY, THERAPEUTICALLY  
AND CLINICALLY CONSIDERED

WITH  
OBSERVATIONS ON THE CLIMATE OF LEAMINGTON.

BY  
FRANCIS WILLIAM SMITH, M.D.

AND BACHELOR OF SURGERY.

LONDON:  
H. K. LEWIS, 136, GOWER STREET, W.C.

1884.

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TO THE  
MEMBERS OF THE MEDICAL PROFESSION  
IN THE UNITED KINGDOM,  
THIS SKETCH OF THE  
HYDRO-THERAPEUTICS OF LEAMINGTON  
IS, WITH DUE HUMILITY,  
DEDICATED.



## P R E F A C E.

—0—

THERE seems to be, at the present time, an universal desire that the mineral waters of Great Britain should be made more generally known; and with the view of bringing the healing properties of the Leamington Saline Springs before the medical profession, I have undertaken the task of writing this little volume. And if in the slightest degree I have been the means of benefiting any poor sufferer, my object, in a great measure, will have been gained.

It is now many years since any book of recognized authority was published on the subject, for I find that, in the year 1831, Dr. Loudon wrote "A Practical Dissertation on the Waters of the Leamington Spa"; and again, in the year 1843, Dr. Amos Middleton brought out his work on "The Chemical Analysis of the Leamington Water."

In daring to supplement such works of learning and ability as these, I trust the ever generous profession will pardon the imperfections of the present treatise.

It is not my object, in the remarks which are to follow, to make invidious comparisons of the different

British mineral waters which may, in many ways, resemble those of Leamington, but simply to place before my readers plain and honest facts—truths which have been brought under my notice in the use of the Saline Waters, in the cure and alleviation of disease, as observed in patients from day to day.

In placing Leamington before the profession in its medical bearings, I will endeavour, in as few words as possible, to describe it—

1st. Geographically.

2nd. Geologically.

3rd. Meteorologically.

4th. Its drainage, water supply and mortality.

5th. Its seats of education.

6th. Socially considered.

7th. Its mineral waters and baths.

8th. The value of the Leamington saline waters in their chemical, therapeutical, and clinical aspects.

And in dealing with Leamington and its mineral waters from all these points of view, I would wish my readers to understand that I claim no particular originality over Loudon and Middleton, but trust that, with the renewed light of modern physiology and pathology, I may be able to explain matters in a different way, and thus bring the whole subject into harmony with modern ideas.

But, alas! how much there is in medicine that we cannot explain. The knowledge of disease, and of the practice of medicine, is, unfortunately for all concerned, an uncertain science; but, as with all remedies which in a great degree work for good, so with my present

theme—I trust I shall be able to show that we have, in Leamington, healing waters of no mean order.

Simplicity in prescribing medicines is the order of the present day, and in the Leamington mineral waters we have a prescription—simple in itself and physiologically correct.

And, in concluding these remarks, I would quote some very weighty words which occur in a letter of the late Sir Robert Christison, written to me on December 6th, 1880, and dated Edinburgh:—"There is no doubt," says he, "that, in search of relief from most varieties of mineral waters, our countrymen have, for a long time past, made it a senseless fashion to repair to Continental springs, when they have, comparatively at their doors, springs of the same quality—beautiful surroundings—national amusements, and, above all, British comforts.

"As to aperient springs—for which we Britishers have, perhaps, more occasion than for any others—so long as Leamington and others in England, and Airthry at Bridge of Allan, in Scotland, are not drunk dry, there is no reason—no medical reason, I mean—why a man should deprive himself of his home comforts and submit to the annoyances of long journeys and Continental deficiencies."

These are the words of one of the most learned physicians who ever wrote about medicines and their uses. If that was his opinion, surely such authority ought to carry weight.

There are hundreds, nay thousands, of medical men, I feel sure, who are not acquainted with Leamington

and its mineral springs; and it is to their notice I would call its beauties and their virtues, as well worthy consideration, in the interest of patients.

In modern days, steamboats and railways have brought Continental springs of undoubted repute within a few hours' reach. But there are times when people cannot fly to distant parts, and when the fatigue of travel undoes, in a great measure, what change and mineral water remedies may have worked for good. Mention need not be made of the numerous risks which invalids run by residence in most of the Continental towns that are fashionable as health resorts. Generally speaking, the drinking water and drainage are vile, and the consequence is that often patients, who go abroad for the benefit of one malady, contract some other more dreadful than the first—in the shape of deadly fever or blood-poisoning. This is a well-known fact to all medical men, as well as to laymen.

We have, however, in our own Island, mineral springs in different parts, which suit all ailments, tastes, pursuits, pockets, and seasons, and, in the case of Leamington, may be enjoyed all the year round.

Far be it from me to say that its mineral waters are a cure for all the ills which flesh is heir to, or to say that it is absolutely necessary for people in health to indulge in them, but only to tell a simple, honest tale as to what they are, to give indications as to their uses, and the complaints they are intended to cure.

I may add that I have had exceptional opportunities of trying their effects upon hundreds of dispensary and

private patients ; but I have purposely avoided giving many individual cases, although I have done so in a few instances. This would have been only a waste of time.

My thanks are due to Mr. Bailey, of Bath Street, for the use of his copperplates, and to the different gentlemen in the various towns, hereinafter named, for the kind assistance they have given me in making up the temperature charts. So far as Leamington is concerned on this heading, I must especially thank Mr. Barnitt for his courtesy and for his kindness.

I, BERTIE TERRACE, LEAMINGTON,  
*May 1, 1884.*



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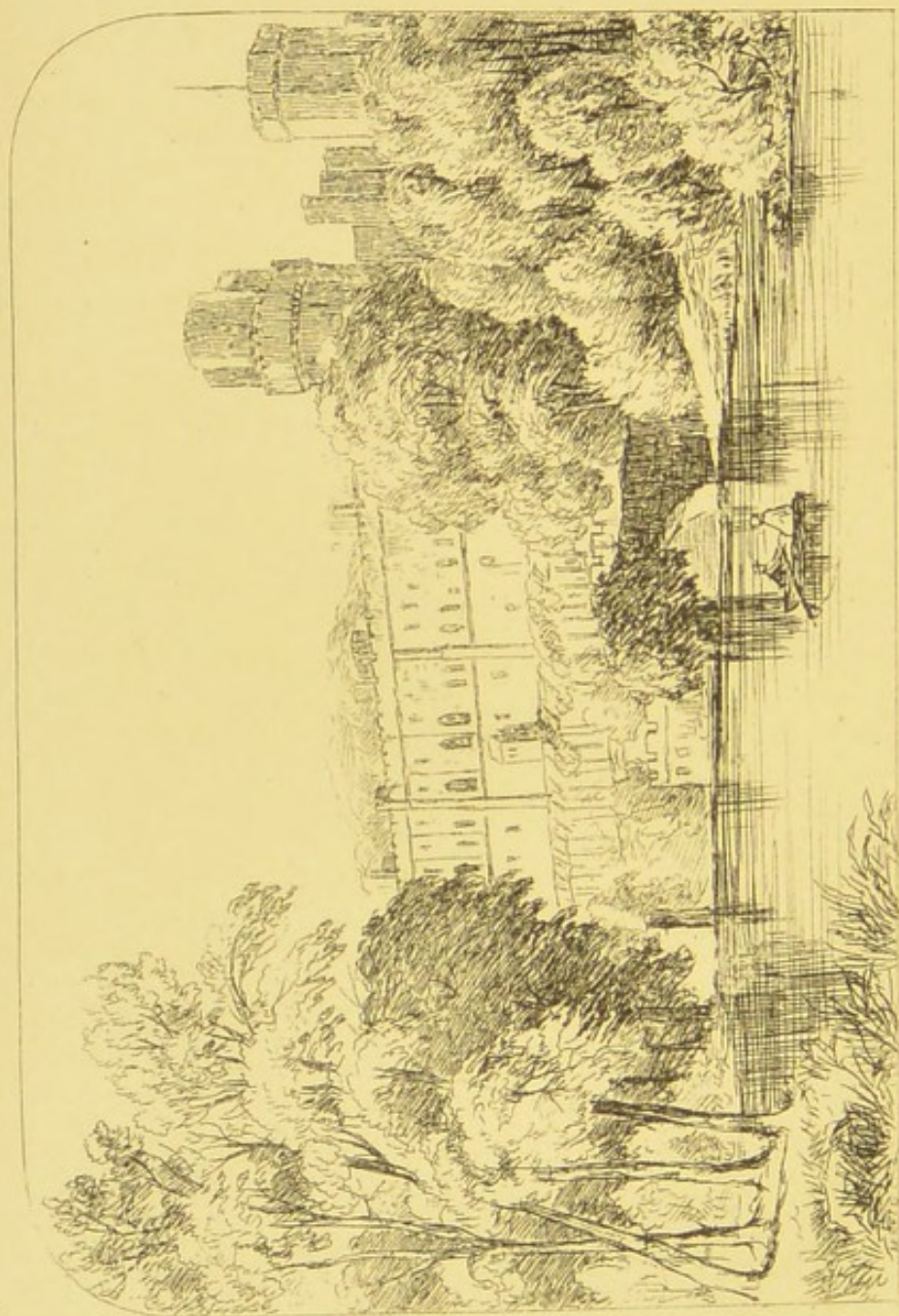
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WARWICK CASTLE—FROM THE BRIDGE.

London: Published by H K Lewis, 136, Gower Street.

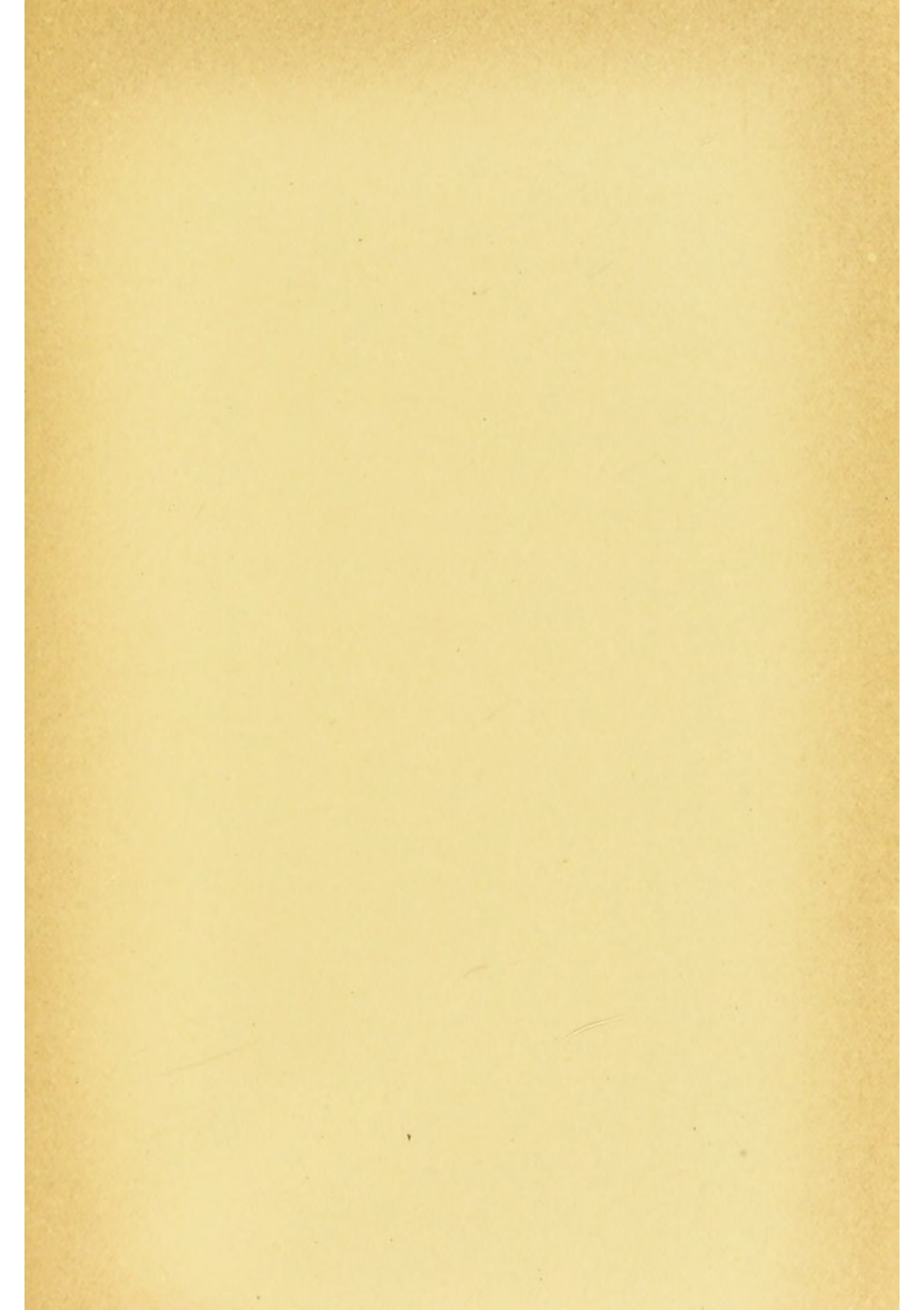
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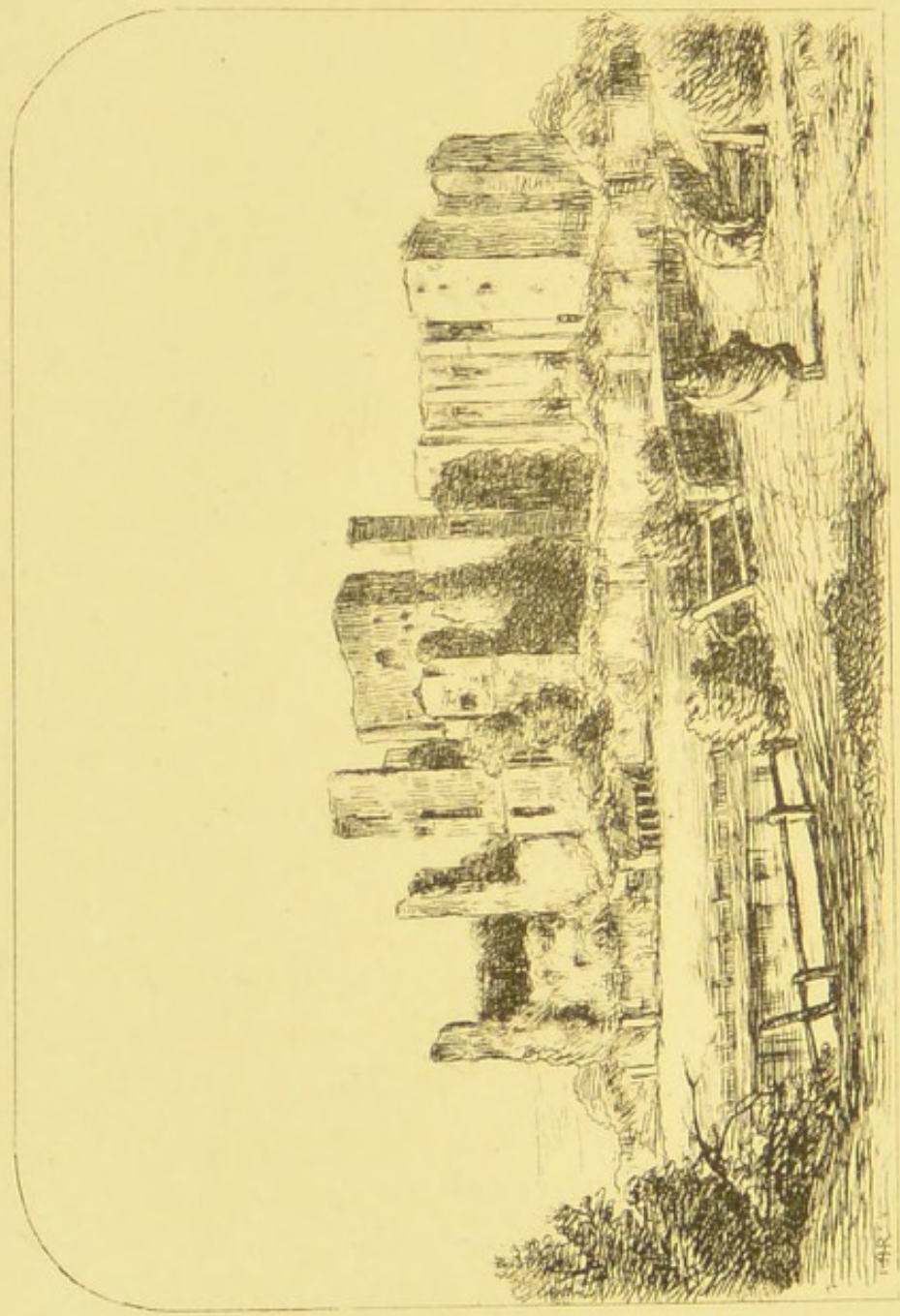
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### LEAMINGTON COMPARED WITH CONTI- NENTAL SPAS.

“We can see no reason why Leamington should not again become a much frequented and useful watering-place, the more so, as in many instances it may be resorted to in early autumn, or even winter, on account of its great mildness of climate compared with Continental Spas.”—(*Braun on the Curative Effects of Baths and Waters*, Edited by Herman Weber, 1874.)







KENILWORTH CASTLE.

London: Published by H K Lewis, 136, Gower Street.

THE  
LEAMINGTON WATERS:

CHEMICALLY, THERAPEUTICALLY AND CLINICALLY  
CONSIDERED.

—o—

INTRODUCTORY.

LEAMINGTON, like most places, has a history. True it is, that it cannot boast of the antiquity of some of our other health resorts; to wit, the ancient city of Bath; but, still, it would appear that the healing virtues of the mineral waters have been known and appreciated in the immediate neighbourhood, and even in remote parts of central England, for many years.

In 1586 Leamington Saline Springs are mentioned by Camden, and ten years later Speed speaks of them as having medicinal properties.

In Dugdale's *Antiquities of Warwickshire*—first published in 1656, the author remarks:—"Nigh to the east end of the church there is a spring of salt water whereof the inhabitants make much use in seasoning their meat."

Fuller, some years later, writes : " At Leamington, two miles from Warwick, there issues out, within a stride, of the womb of the earth, two twin springs, as different in taste and operation as Jacob and Esau in disposition, the one salt and the other fresh. This the meanest countryman does plainly see by their effects ; whilst it would puzzle a consultation of physicians to assign the cause thereof."

In Dr. Thomas' edition of Dugdale, published in 1730, the first mention is made of the real medicinal properties of the Leamington saline water. About this time strangers and visitors from the immediate neighbourhood came and drank of the healing waters, chiefly as an antidote to scorbutic affections.

During the next forty years various medical men called considerable attention to the subject, and we learn that large bottles of water were religiously taken away—especially on Sunday mornings, to be imbibed for different ailments. I am told, by a very old resident, that in his recollection the coach to Birmingham carried jars of the water from day to day, for medicinal purposes.

Many and varied are the accounts which are given of the modes of applying the waters—only to be exceeded by the wonderful cures wrought thereby ; and we read a little later on that one Benjamin Satchwell, the village worthy, shoemaker, and keeper of the Post-office, chronicled an account of the most remarkable cures, and for a small gratuity sang their praises in verse and rhyme. The exuberant verbosity of this village

rhymers had the effect of increasing the number of drinkers, and causing one William Abbotts, of the "Dog," to erect a bath, and provide improved accommodation. From this time the reputation of the saline waters of Leamington was established, for we hear that a certain Dr. Kerr, of Northampton, took the matter in hand, and under his recommendation patients came from distant parts, and received benefit.

It would not interest my professional brethren to particularize the different physicians who wrote about and prescribed the Leamington water ; suffice it to say that the works already alluded to were written by Loudon and Middleton—standards in themselves, and which well served their day. But whilst mention is made of these learned and accomplished physicians, I must not forget one to whom, above all others, Leamington and its mineral waters owe all they have or hope to enjoy. It is needless to say that this astute, accomplished, and far-seeing man was none other than the late Dr. Jephson. Jephson opened up the treasure-houses of the Leamington saline springs, prescribed the waters, and applied them to cases. And in doing this, he raised Leamington from a small straggling town or village, to a place of undoubted repute as a health resort, and a place where the high and accomplished in the land "did congregate." Many and singular were the devices by which he was wont to apply his remedies, and there are some who are fain to say that the erratic adjuncts of treatment were of more service than the mineral remedies themselves. Be this as it may, the fact remains unchanged, viz., Jephson

brought out the real properties of the saline waters, and to this day their virtues remain the same—unaltered and unalterable—unchanged and unchangeable.

About this time Leamington was favoured by the smiles of Royalty, for George the Fourth, as Prince Regent, visited it in 1819.

In 1822, Princess Augusta was at 9, Upper Parade, for some time, and in the same year the Duke and Duchess of Gloucester stayed in Regent Street, at a residence afterwards known as Gloucester House. In that year likewise the Prince and Princess of Denmark visited the Royal Spa, and lived at the Royal Hotel.

Queen Victoria, then Princess Victoria, honoured Leamington with a visit in 1830, and eight years later, the town was styled “Royal,” to commemorate the event.

I believe I am also right in stating, that the late Emperor Napoleon the Third resided at 4, Clarendon Square, and was charmed with the town and its beautiful surroundings. He also, I am told, regularly hunted with the Warwickshire foxhounds.

#### I. GEOGRAPHICALLY CONSIDERED.

Royal Leamington Spa, including Milverton and Lillington, with a joint population approaching 30,000 inhabitants, is situated nearly in the middle of Warwickshire. A sturdy oak—otherwise known as the “trysting-tree”—marks a spot which is known as the centre of England.

The town stands at 190 feet above the sea-level, and is of great natural beauty. It is often pronounced the prettiest and cleanest town in England. Conveniently located on the main routes of two great lines of railway, it is very accessible from London and the North, as well as from surrounding places of importance. The 4.45 P.M. train from Paddington "slips" a carriage at Leamington at 6.57 P.M., having traversed 105½ miles with only one stoppage.

The greater part of the town is built upon a regular plan, with wide and open streets, which cross each other at right angles. These, in many instances, are bordered with avenues of chestnut and lime trees, which impart to the place a Parisian effect.

In the centre of the town are beautiful gardens, which take their name from the immortal Jephson,—Leamington's benefactor. The grounds of these gardens are elaborately laid out with flowering shrubs of the most elegant and varied description, and during the months of May and June the air is scented with varied and fragrant perfumes and the eye charmed by hues of richest colour.

The country around is fertile, undulating, and wooded, and abounds with objects of the greatest historical interest—for within easy access are Shakespeare's home at Stratford-on-Avon; Warwick Castle—one of England's noblest piles; Kenilworth Castle—a stately ruin, associated with Royal gatherings, silent gondolas, splendid banquets, pestilential fevers, and "Burly Round-heads."

## GEOLOGICAL.

The triassic formation is seen in this part of Warwickshire, and it is interesting to note how, in the different borings which have been made at different times, and in different parts, in and around Leamington, salt water was met with in the light blue marl, and at a greater depth of 38 feet fresh water, in large quantity. At a still greater depth of 119 and 173 feet respectively, first fresh water and then salt was found, both in the red sandstone.

There seems to be a succession of blue sand, sandy clay, red marl, light blue marl, red marl, red sandstone, light blue marl, red sandstone, grey sandstone, and so on.

All these, in their way, play important parts and become decided factors in the health-giving properties of Leamington generally, and must not be overlooked in estimating them from a medical point of view.

## METEOROLOGICALLY CONSIDERED, AS TO DRYNESS AND TEMPERATURE.

Taking a period of twelve years, and comparing the following inland watering-places, it will be seen, that in the number of inches Leamington is the lowest, and in the number of days on which rain fell, it is fourth from the bottom. So that, so far as rainfall is concerned, Leamington stands well, and its dryness is established.

I would refer my readers to a calculation from Symonds' British Rainfall, from 1868 to 1879 inclusive,

the average annual rainfall and number of days on which  $\frac{1}{100}$  in. or more of rain fell :—

—	Inches.	Rainy Days.	Observers.
Leamington .....	27·1	169	Jones and Barnitt.
Tunbridge Wells .....	32·6	165	Stow, Miller, Brentnall, Townhend.
Cheltenham .....	31·3	165	Humphries, Kay.
Clifton .....	35·3	174	North, Burder.
Great Malvern .....	31·7	173	Burrow, Sandoe.
Bath .....	33·2	180	Weston.
Buxton .....	54·7	211	Sykes.
Ilkley ....	41·3	196	Scott, Middleton, Dy- mond.
Matlock Bath .....	39·0	185	Chadwick.
Harrogate .....	33·4	156	Coupland.
Average .....	36·2	179	

#### TEMPERATURE.

The temperature of Leamington may be described as equable. It is not subject to great extremes. The air is dry, as is proved by the small rainfall, and the following table speaks for itself.

I have had some difficulty in making the under-mentioned calculations, but, considered generally, the table represents pretty accurately the mean temperature for ten recent years :—

	Fahr.
Leamington . . . . .	48·0°
Cheltenham . . . . .	48·3°
Clifton . . . . .	48·7°

---

	Fahr.
Bath . . . . .	50·3°
Bournemouth . . . . .	50·3°
Torquay . . . . .	49·8°
Llandudno . . . . .	50·5°
Buxton . . . . .	45·20°

The climate of England is well known to vary and to be uncertain, no matter in what part people live. That of Leamington will seem, from the foregoing tables, to be one which well admits of its being a place of permanent residence. The fact that it has become so speaks for itself. And certainly, so far as taking a course of the saline waters goes, this may be begun and carried on at any time of the year, which cannot be done in the more Northern Spas of England. I admit, however, that I consider the benefit is greater in the Spring, Summer, and early Autumn.

#### THE CLIMATE MEDICALLY CONSIDERED.

Outsiders are liable to look upon the death-rate of a place as the reasonable guarantee for its salubrity. This is true, in a certain degree, and considering the number of people who visit Leamington in search of health, and who die from already mortally contracted diseases, the death-rate may be looked upon as small. Leamington of 1884 is not what it was in 1854. Thirty or forty years ago it depended chiefly upon its visitors,

but lately such has been its popularity for salubrity that now, in addition to those who come to drink the mineral waters, it has become a residential town for the wealthy as well as for the weak. It is surprising to what green old ages people live here, especially women, and as a medical man I can testify that many of my patients look upon four score summers as in no way near the goal to which they hope to attain. For young children also, the climate is particularly health-giving. I am often asked, "What is the season for Leamington?" The answer depends upon which season is meant. If the season for water drinking and bathing, I answer from April to October, although, as I have already stated, the waters may be taken all the year round, with benefit and safety. If the season for gaiety—the answer is, from November to May. This is known as the "hunting season."

#### THE DRAINAGE.

The borough has a model system of drainage. The drainage matter, after being emptied into a receiving tank, on the south side of the Leam, is pumped up to the Earl of Warwick's sewage farm—there to fertilize the soil, and to prove a substantial investment.

The sewers are numerously ventilated, and the consequence is that there is a minimum escape of sewer gas into houses. Following this, as a good result, is the almost entire absence of typhoid fever, diphtheria, and other ailments dependent on foul air.

## WATER SUPPLY.

Drainage, however effectual, must carry with it a good water supply. Fortunately for all concerned, this Leamington possesses. In its infancy, like most towns, Leamington depended for its water supply on private wells, and for many years was supplied by filtered (?) water from the river Leam. In the year 1874 an artesian well was sunk, and now the Borough and neighbourhood enjoy all the privileges of pure water, and plenty of it.

## MORTALITY.

Considering the number of people who come here in search of health, and who have already fatal diseases wasting them away, and taking into consideration the number of residents, Leamington bears a favourable comparison with other inland watering places. The deaths from zymotic diseases prove the accuracy of what I have stated with reference to drainage and pure water

Taking the average death rate for a period of eleven years—from 1872 to 1882 inclusive—the proportion in the 1,000 is 17·35 from all causes, and from zymotic diseases 1·83. These figures speak for themselves.

## AS A CENTRE OF EDUCATION.

I have previously said that the climate is well adapted for children. Parents therefore may have confidence in

sending their children to school here. Leamington College, though not one of the largest public schools in England, enjoys the reputation of claiming many who, from being pupils, have gained high honours at Oxford and Cambridge, and who, in after life, have become men of eminence in the State, in the learned professions and in the public services. There is also a high class College for young ladies, to say nothing of the numerous well conducted private schools for both sexes.

#### SOCIALLY CONSIDERED.

In addition to those who come in search of cures, it must not be forgotten that there are others who come with invalids ; and many who come to “enjoy life.” All classes and all temperaments can be accommodated. For those who are fond of “good works ” there is plenty of scope in various ways—for those who come to enjoy themselves, as they call it, there is the noble sport of fox-hunting, which they may follow to their heart’s content ; there is a theatre, and also a school of Art, a club, archery, lawn tennis, and very good boating on the Leam and on the historic Avon.

#### THE MINERAL WATERS AND BATHS.

In and around Leamington the saline waters have been found in many places. There were, at one time, many wells ; but, though varying in strength, they are

all more or less alike in ingredients. Loudon speaks of a Sulphur Well in the High Street\* and a chalybeate spring in Clemens Street, but though they, in their day, enjoyed a certain celebrity, the pure saline seems to me to be the chief characteristic of the Leamington mineral water, and that upon which we must for the future depend.

The three principal wells are—

1st. The Pump Room in the Parade.

2nd. Lord Aylesford's well in Spencer Street.

3rd. A public fountain at the railway bridges.

The following is the latest analysis of the Pump-Room Well (made by Cutting).

Temperature 40° Fahr.

Sp. gr. 1·0127

The Imperial Pint contains :—

	Grains.
Sulphate of Soda . . .	35·97
Chloride of Sodium . . .	86·02
Chloride of Calcium . . .	20·79
Chloride of Magnesium . . .	11·86
Silica . . . . .	·12
Iron . . . . .	·11
	<hr/>
	154·87
	<hr/>

There is a trace of iodide and bromide of magnesium.

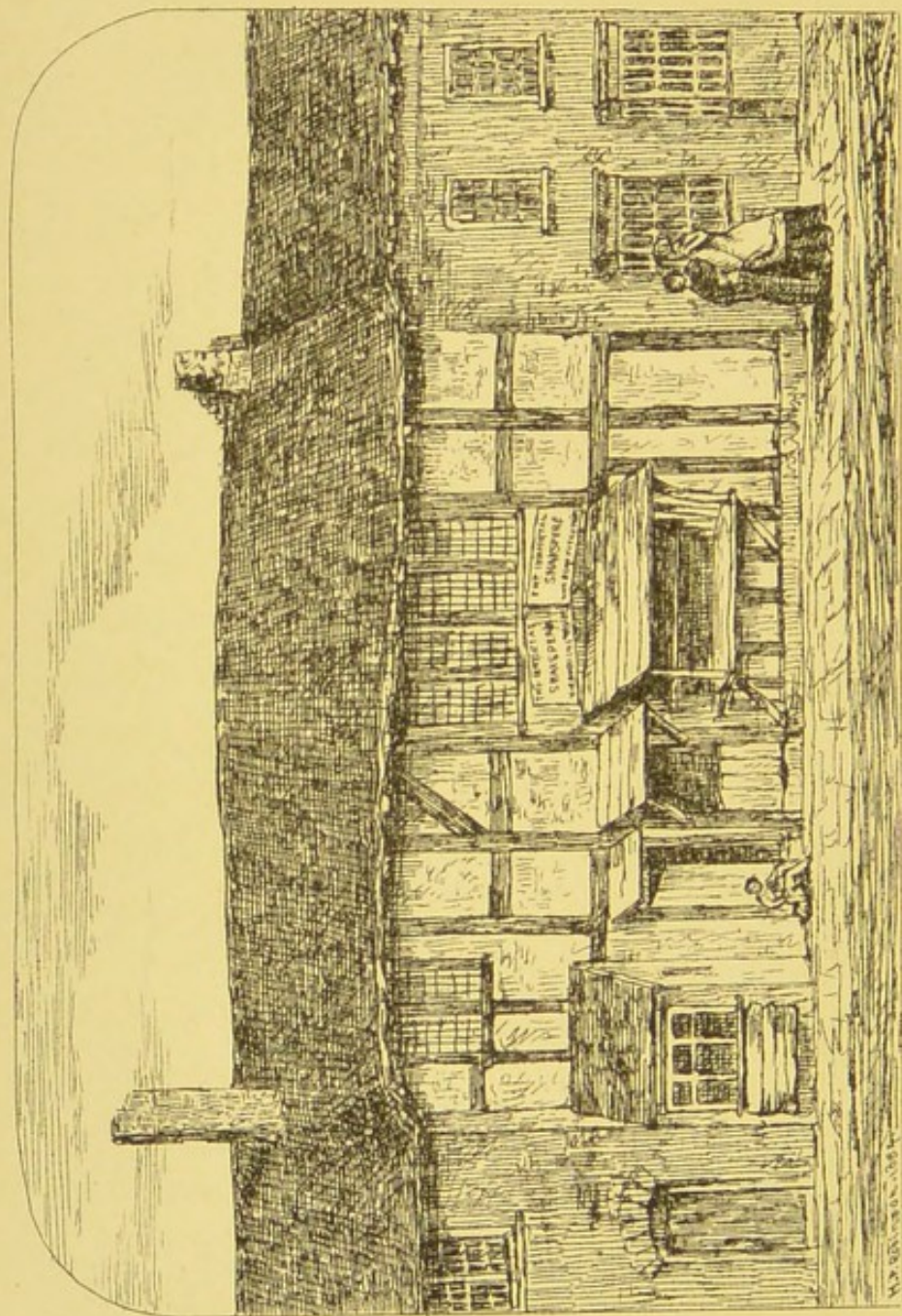
The chief gas is carbonic, with small quantities of nitrogen and oxygen.

\* It is doubtful whether the sulphur source is permanent.

I have said that this makes a simple prescription, and I think every intelligent practitioner will admit that such is the case. It is a well-known fact in medicine, that the action of mineral waters is different in character and degree from pharmaceutical solutions of their ingredients. This is especially borne out by Sir Henry Thompson in his remarks upon the action of salines in cases of gravel. An intellectual practitioner of the present day, when he writes a prescription, keeps in view the cause of the complaint, and prescribes remedies which he believes, on physiological principles, will produce certain results. He does not jumble up all manner of incompatibles, but strikes at the root of the thing. So it is with the simplicity of the Leamington saline water. It is a simple, straightforward prescription, and, in the case of certain maladies, to be hereafter mentioned, is physiologically correct. It will be observed, on looking at the analysis, that excess of any principal ingredient is not extremely great, except of chloride of sodium, and in this lies its power. The prescription, therefore, is well balanced, and enables it to be borne for lengthened periods. And this, of course, is all-important. Strong remedies, like strong drink, must be taken in moderation. It has been a fashion to imagine that the stronger the mineral water is, in aperient properties, the more likely it will be to produce favourable results. Hence the number of bottled foreign mineral aperient waters which adorn the windows of chemists' shops. The idea is that the more the ingredients and the stronger the solution, the better the results. This is a

fallacy. These aperient waters are all very useful in their way, but as intended for a course of mineral water-drinking, they are not to be thought of, when better and safer results are to be had from the mother wells on the spot. The late world-famed Abernethy was wont, I believe, to illustrate the difference between strong aperients and laxatives by this simile. He said that "a strong dose of salts was like pushing a besom through the stomach and bowels the wrong way, and that a laxative represented the same piece of culinary mechanism drawn the smooth way." The Leamington saline represents the latter.





HOUSE IN WHICH SHAKESPEARE WAS BORN.

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PHYSIOLOGICALLY AND THERAPEUTICALLY  
CONSIDERED—EACH SALT SEPARATELY  
DEALT WITH.

SULPHATE OF SODA.

Sulphate of soda plays an important part in the composition of the Leamington saline water. It is the salt, above all others, which appropriates itself to the liver.

Dr. Rutherford, of Edinburgh, in his experiments with liver stimulants, places it as one of no mean order, as such. Whilst sulphate of magnesia simply acts as a saline aperient, by stimulating the intestinal glands, the sulphate of soda has a separate action—namely, a hepatic stimulant. But the sulphate of soda has, likewise, another power. It has a particular action on the blood. In the portal circulation, gouty blood, which is highly charged with uric acid, is neutralized by the sulphate of soda—not by being alkalized by salts such as potash and other alkalies, but by the channel of excesses being diverted, through the bowels and through the tubules of the kidneys.

I admit that the chlorides assist this action. In combination, therefore, the sulphate of soda, in addition to its stimulant properties, promotes secretions and increases the peristaltic action of the bowels.

Therefore, sulphate of soda, more than all other salts of its class, "stirs up" the liver. Hence its value.

And now, in the order of rotation, comes

### CHLORIDE OF SODIUM.

This is found in greater quantities in the saline water than any other, and enhances its value, as is well known.

Chloride of sodium is found in the human body, as part and parcel of it, and if through disease it be reduced in quantity, its presence in the salines makes up the deficiency, when prescribed as a remedy. On being taken, the stomach converts the chloride of sodium, by a chemical process, into hydrochloric acid, which is the natural acid of the gastric juice; so that, apart from any scientific view of its administration, one would naturally conclude that, where necessary, it is the salt which, above all others, would help an enfeebled and weak digestion.

Chloride of sodium, therefore, acts on the gastric glands in proportion to the strength of its administration. If the dose be weak, it acts as a mild stimulant; if strong, the action is irritant, and the result is purgation. If the stomach be wanting in this acid, the want is supplied by chloride of sodium.

The gastric juice has a fermentive power on proteids, and, therefore, where the gastric glands are wanting in tone, and require stimulation, the presence of chloride

of sodium, as taken in the Leamington salines, is beneficial.

Chloride of sodium is present in large proportion in the blood, and holds in solution fibrinogen and paraglobulin. These are the proteids of the blood.

If wanting in any degree, chloride of sodium, therefore, stimulates the saliva, the gastric juice in the stomach, the bile from the liver, the pancreatic fluid, and the succus entericus or intestinal juices.

I have already said that hydrochloric acid (the product of chloride of sodium) acts in the stomach upon proteids as a ferment. "This ferment is pepsin, but, in the absence of the exact knowledge of the constitution of proteids, it cannot be definitely settled what the exact nature of the change into peptone is."—(Foster.)

Chloride of sodium enters largely into the composition of the tissues, of the secretions, and of the blood ; and this being the case, it stands to reason that it must be an important factor in maintaining the proper balance, as regards the prevention of tissue waste, and in the rapid elimination of products, which are carried off from the body, by secretions and excretions.

I therefore not unnaturally conclude that physiologically it helps a weak gastric digestion, it stimulates an enfeebled biliary and weakened circulation, it likewise stimulates the construction of the tissues generally, and retards retrograde metamorphosis.

As an addition to the sulphate of soda, chloride of sodium is invaluable, and, on physiological principles, its use is sound.

## CHLORIDE OF CALCIUM.

In my introductory remarks I gave this quotation :—  
“About the year 1730, strangers and visitors came and drank of the healing waters chiefly as an antidote to scorbutic affections.” Although the particular healing salt was probably not then differentiated, nevertheless I have little doubt that chloride of calcium, in combination with the others, was the one which had the virtue in it.

There is an old saying that “there is nothing new under the sun,”—so it comes to pass that in the present day the calcium preparations are largely and scientifically prescribed as anti-scorbutics.

The use of the chloride of calcium as a remedy in strumous diseases is considerable. Dr. Robert Bell (*Lancet*, page 275, 1877) finds that it possesses wonderful power in controlling, if not in actually curing, many forms of tubercular disease; and in the wasting of childhood he has found it to be a therapeutic agent of inestimable value. Dr. J. G. S. Coghill (*Practitioner*, page 247, 1877) regards chloride of calcium as possessing quite the character of a specific in strumous disease—more potent and more manageable than iodine preparations. All this I have found to be true. The proportion of the salt in the Leamington saline is certainly very great, and adds very much to its value.

Chloride of calcium, therefore, assists the chloride of sodium in preventing retrograde metamorphosis of tis-

sues ; it stimulates the reconstruction of them generally, and has a peculiarly remedial action upon glandular substances, as is seen in struma, tabes mesenterica, bronchocele, certain stages of consumption, and in chronically enlarged tonsils.

I cannot help thinking that the two chlorides, and perhaps chloride of calcium more than the other, have some particular action on the spleen. What it is I am not prepared to say—unless it be to either directly or indirectly arrest the excessive destruction of red blood corpuscles which goes on in the spleen, as is seen in chlorotic young women.

The spleen, in health, acts as the destroyer of the red blood corpuscles, and in chlorosis the destruction has gone on to excess, so much so as to cause a disease. If the administration of the Leamington saline, in combination with iron, arrests this excessive destruction in the blood, and again gives to it its normal constituents, surely we may, with reason, conclude that the chlorides of calcium and sodium act upon the spleen in a way to prevent or arrest retrograde metamorphosis in the red blood. I shall show that the Leamington saline has a great power in the treatment of chlorosis, and if the foregoing explanation is good, it may reasonably be applied to other ailments, such as scrofula and consumption. At any rate, chloride of calcium has of late found favour in the treatment of tubercular diseases—after being discarded for something like fifty years.

## CHLORIDE OF MAGNESIUM.

This salt is a laxative. Its operation is different from that of sulphate of magnesia. It acts freely on the bowels, and is not so likely to cause constipation after its use. In this, probably, it is assisted by the sulphate of soda. It does not seem to continuously irritate the gastric and intestinal glands—like the sulphate of magnesia—and hence its administration does not “fidget” the patient, with repeated desires for action.

## SILICA AND IRON.

These salts enter into the composition of the saline water in so slight a degree that it is doubtful whether or not they can be looked upon as having much, if any, therapeutical value.

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Such, then, is the simple, scientific prescription ; and to tinker with it is, in my opinion, to spoil it. I do not say that it is perfect—far from it ; but if it be necessary to prescribe other drugs, I consider it best to give them separately by themselves, and not add them to the mineral water.

I have purposely avoided verbosity and complexity in the foregoing remarks, knowing full well that standard works on Physiology and Therapeutics exhaust all the subjects on which I have touched.

## THE BATHS.

At the Pump-room there is a well-appointed system for saline bathing, and also a Turkish bath—small, but perfect.

Some few weeks ago I met the Committee of Management, which includes the Mayor and several members of the Corporation, and suggested to them many improvements and additions to the Baths, and to the Pump Rooms generally. The consequence is that a large sum of money is about to be spent in making the whole bathing system more complete, and in every way up to modern and continental ideas.

There are, in connection with the saline baths, douche baths of various kinds for direct application to specially affected parts, shower baths, and saline vapour baths. There is likewise a large swimming bath, which is kept up to a uniform temperature, and is a great luxury to bathers.

The saline baths are useful in muscular rheumatism, chronic gout, derangements of the stomach and liver, and in some skin diseases, such as dry eczema, psoriasis, and acne.

The hot and cold vaginal douche is most beneficial in abrasions of the os, leucorrhœa, and subinvolution of the uterus.

#### INTRODUCTORY TO THERAPEUTICAL AND CLINICAL INDICATIONS.

In the following pages I shall endeavour to apply to maladies and their treatment a great deal of what I have spoken of in what has gone before. I shall avoid even giving general outlines of treatment ; as each individual case requires its own particular management. It is

impossible for any medical man, however accomplished, to direct at a distance a course of treatment by mineral water remedies, and I therefore consider that the practitioners on the spot are the best able to indicate and carry out the treatment of each case which may come under their notice.

In selecting ailments for treatment by the Leamington saline water great care is necessary. Some are apt to imagine that it is only necessary to swallow so many half pints or pints of the water in the early morning, and they have done everything required. This is a mistake. In some cases the laxative properties are indicated ; in others, the alterative. For instance, if a patient who is threatened with an acute attack of gout or gouty eczema, indulges in what he calls a "course" of the water, he will frequently do much harm ; and a premature and severe attack will be the result.

It is, therefore, in the more chronic forms of these complaints—or after the active symptoms have subsided—that a regular course is indicated, and this only under medical advice.

#### THE THERAPEUTICAL AND CLINICAL PROPERTIES OF THE LEAMINGTON SALINE WATER.

In dealing with diseases which have come under my notice for saline water treatment, I shall begin with those that affect the alimentary canal.

*Stomach.*—When the breath is offensive ; the tongue loaded ; there are foetid eructations ; the appetite is faulty,

general distention of abdomen, and sometimes constipation, and sometimes diarrhoea ; a course of Leamington saline water, with appropriate diet, is indicated. To aid this, the cause must be stopped, if possible. Errors of diet, not unfrequently, bring about such a state of things. But it must be borne in mind that hereditary and constitutional predisposition very often has as much to do with it. It is a fashion, now-a-days, with those who advocate extreme measures, to put down every ailment which flesh is heir to, to excesses "in drinking." This is an error. Far be it from me to countenance transgressions in this direction, but I boldly assert that indulgences in eating—especially of meats of various kinds—are as liable to overstrain a willing digestion as the cup which, when indulged in too well, inebriates. When there is dilatation of the stomach with sarcinous vomiting, I have found the saline water beneficial.

*Constipation.*—Saline aperients are generally beneficial in chronic constipation. The Leamington saline water is particularly so. When there is chronic catarrh, with loss of power in the muscular coats of the stomach and intestines, a well-regulated course of the saline water affords marked relief.

*Hæmorrhoids, or Piles.*—In this painful malady treatment by Leamington salines is often very happy in its results. This is easily explained when we consider the relations of the veins in the abdomen. A smart aperient dose of Leamington saline relieves portal plethora, by abstracting a quantity of serous fluid from the portal

blood. Indirectly this relieves the congested hæmorrhoidal plexus of veins around the anus ; for the superior hæmorrhoidal vein is a branch of the inferior mesenteric vein, which gathers up, in addition, venous blood by the sigmoid veins, and from the left colic, and, after being strengthened by all these tributaries, empties itself into the splenic vein, which is a branch of the portal.

#### CONGESTIONS OF THE PELVIC ORGANS.

Especially of the female.—This is not the place to enter into the factors which bring about an over-congested state of the ovaries and uterus. Suffice it to say that the Leamington saline waters form an admirable adjunct to treatment in the following states of these parts—namely, in congestion of the ovaries, with the usual pain in the right or left part of the abdomen—low down ; with forcing and bearing-down pains generally.

The pathology is congestion of the ovaries and subinvolution of the uterus, which means hypertrophy of the muscular coat of the womb, equally with that of the connective tissue. The causation of this state of things is generally laceration or bruising of the cervix in parturition, the too early getting up after delivery, miscarriages, and child-bearing at a late period of life. I have found a well-regulated course of the internal administration of the Leamington saline, and also a continuous course of vaginal douches of the same

water, sometimes at a temperature of  $110^{\circ}$  Fahr., sometimes tepid, and sometimes cold, together with the administration of bromide of potassium and iron—a remedy to be sought after by most who suffer in the manner I have indicated.

The explanation of a course of treatment in these disorders by saline purgation, by the Leamington water, lies in the fact of its being well borne for a lengthened period, and the fact that the inferior mesenteric vein inosculates with those of the internal iliac, and thus establishes a communication between the portal and the general venous system.

#### CONGESTIONS OF THE KIDNEYS.

These are relieved in three ways, by the skin in perspiration, by the use of purgative salines, and by diuretics, be the complaint acute or chronic.

The Leamington Saline is diuretic, but in chronic kidney disease, the power lies in the aperient relief gained by portal derivation, and the explanation is, “that, besides the anastomoses between the portal vein and the branches of the vena cava inferior, the anastomoses between the portal and the systemic venous system are formed by the communication between the left renal vein and the veins of the intestines; especially of the colon and duodenum, and between the superficial branches of the liver and phrenic veins.”—(Gray.)

In congestion of the kidneys I have found the saline vapour or Turkish baths materially help the internal administration of the saline aperient, by acting on the skin.

#### CONGESTION OR HYPERÆMIA OF THE LIVER.

This may be due to many causes—to wit, exposure to wet and cold; exposure to excessive heat—with malaria; and, in addition, the enforced use of foul and polluted water for drinking purposes; and errors of diet, such as excesses in eating and drinking. There are also other causes.

A judicious course of saline waters is most advantageous in congestion of the liver—or in what is known as Indian Liver. The following case will illustrate what I mean, and is a typical one:—

C. W., aged 24, a tall, strong, well-built, temperate young officer in the Royal Navy, had been exposed to all the hardships of warfare in the British Expedition in Egypt against Arabi. He was present at the siege of Alexandria, and other minor “brushes” with the enemy up to, and including the battle of Tel-el-Kebir. He had been exposed to excessive heat, hard-work, and hard-living—especially as to being obliged to drink contaminated water, and the consequence was congestion of the liver and jaundice.

He was invalided home, and by the time he arrived in England all acute symptoms had subsided. He con-

sulted a Court physician in London, who ordered him a course of mineral waters at Homburg. It so happened that he was obliged to come to Leamington, and by some chance, consulted me. It was inconvenient for him to go abroad, and I advised a course of Leamington Saline Water, with other appropriate treatment as to diet, &c., and the result was that, in six weeks, he left for his ship, with a liver normal in size; the jaundice quite gone; and in other respects well.

The combined effect of the Leamington Saline and a diet properly regulated, relieved the congested portal circulation which lies at the circumference and between the lobules of the liver. Therefore I say that the use of the Leamington Saline was physiologically and pathologically sound. This kind of liver affection is often met with in India, and benefit is almost invariably derived from this mode of treatment. The Saline Aperient water is beneficial in almost all liver congestions, except those due to pressure from malignant tumours.

*Jaundice.*—I have referred to Jaundice accompanying congestion of the liver and disappearing with it. The cause is evident—namely, under treatment the pressure upon the bile ducts was removed; the bile fluid took its natural course into the intestines, instead of appearing in the skin from being absorbed into the system.

#### GOUT.

I have already stated that care is necessary in applying the Leamington Saline to Gout. It is in

Chronic Gout that treatment by this remedy is indicated. It is an old saying that gout is "brewed" in the liver. This is true to a great extent. It is generally said that an attack of gout is due to excesses of stimulants and gorging; but family history has frequently much more to do with it. Gout unfortunately is, in most cases, an ailment which accompanies the patient through all his years of existence, and be it "suppressed" or "well-developed," periodically has to be dealt with by remedies and diet. Potash and Colchicum, of all other remedies, "look acute gout straight in the face;" but in the Chronic forms the course of mineral water treatment from time to time, completes that which these fail to accomplish. The excesses of Urates and Uric Acid in the blood are eliminated from the system by a well-directed plan of treatment by Leamington Saline water. The strain upon the kidneys is lessened by the deposits being extracted, and the general tissues of the body are left in a healthier condition.

So far therefore as the treatment of gout is concerned the Leamington Saline waters operate freely upon the portal circulation, they wash out from the tissues Uric acid, and urate of Soda from the tubules of the kidneys. Indirectly therefore gout is relieved and, in many cases, for the time cured—not by being alkalized by potash and other alkalies, but by the channel of excesses being directed through the bowels and kidneys, as has already been pointed out.

I here quote a case which came under my care, and well illustrates what a regulated diet and treatment by

the Leamington Saline will do. It bears upon gout, with gouty effusions into joints.

F. H., an officer in the Army—aged 33, of fleshy build and inclined to plethora, had served with his regiment in different climes for eleven years. He had been exposed to great variations of climate—from the heats and colds of Canada to the tropical and malarial influences of India. He was a man who lived the ordinary barrack life and was not given to excesses in any way,—“he messed daily and took his wine with the rest.”

While in India he contracted an acute attack of gout, which left a chronic state of things—with, amongst others, a large effusion of fluid into the right knee joint, and to which the name Rheumatic Gout was given. On his way home, on sick leave, he tried the waters and baths of Aix-les-Bains, with some relief. When he consulted me, in June 1883, there was effusion into the knee joint to the extent of its being the size of a child's head eight months old. He was, of course, very lame and generally debilitated. The kidneys acted scantily, the sp. gr. of the secretion being 1040—Urates and Uric acid being enormously in excess—bringing the sp. gr. up to that of diabetic urine.

Suffice it to say that, in two months, what with a well-regulated course of mineral water treatment and careful dieting, the patient left for the Highlands with joints of normal size, and himself prepared to well enjoy the balmy and bracing air of bonnie Scotland. This class of case is most instructive, and well illustrates what

a careful course of the Leamington Saline water will do for a frame shattered by exposure, and by a chronic malady such as gout. In eight weeks the secretion of the kidneys had passed from a sp. gr. of 1040 to 1015. Further comment is unnecessary, except to add that all meats and stimulants were excluded from the diet.

#### SCIATICA OR HIP GOUT.

In approaching this ailment I feel that to some varieties, the treatment by the Leamington Saline water is not applicable. I also feel that I am confronted by the opinion of many Physicians who say, that not unfrequently, Sciatica gets well from no particular treatment. In fact, from time immemorial the causation and treatment of Sciatica have been vexed questions.

The Local causes of Sciatica are, most frequently, long-continued sitting, colds or draughts upon the buttock and sitting upon damp; but not uncommonly the cause is associated with gout or rheumatism and mental depression. I have found the Leamington Salines promote a cure when all other remedies have failed, and I cannot speak too highly of the happy results obtained by this mode of treatment.

In order to illustrate what I mean I give the following authentic cases, which speak for themselves. C. C.—A gentleman in Holy Orders, in the spring of 1883 contracted Sciatica. He had been exposed to cold and other predisposing causes, and underwent a course of

treatment at one place and another—including Baths, Electricity, &c. Towards the end of April I found him suffering from acute inflammation of the sciatic sheath and excessive pain in the nerve. The usual remedies—rest, hypodermic injections of morphia, galvanism, medicines by the mouth, warm and Turkish Baths, were tried. All these remedies, jointly and severally, had the effect of bringing the ailment from the acute to the chronic stage. But the pain remained the same, except when relieved by the Morphia injections. And here the improvement seemed to cease. Accordingly I put the patient upon a regular course of Leamington Saline with appropriate diet, and in six weeks, from being in a state of chronic agony except when under sedative influences, he entirely lost all pain and stiffness of the affected leg, improved in general health, and was, when he left for a change of air on July 1st, quite well.

I quote another remarkable case—the more so when the age of my patient is taken into consideration. I have permission to use his name, and I shall give his own version of the case. Mr. Hyde, of 15, Church Hill, Leamington, says:—"About the year 1871 I had a severe attack of sciatica. I tried the baths and waters at Buxton, Matlock, the Isle of Wight, and the Ozone baths at Llandudno; likewise galvanism; but all to no effect. This had been going on for seven or eight years, and I got worse instead of better. I had to carry a camp-stool when I went out, and had frequently to sit down—the pain coming on suddenly. In addition to sciatica, I had rheumatism in my feet and hands, which

were much swollen, and for weeks at a time rendered me quite helpless. I was told that the complaint was chronic, and at my age (eighty-one) I must not expect a cure. I was not satisfied with this verdict, and determined to try the Leamington Spa water, which I did. I began a course, and soon experienced benefit; and after persevering for several months I was quite cured, and remain so, although this is now thirteen years ago."

This is a remarkable and well-known case in Leamington.

I give yet another which came under my notice amongst the poor.

S. B., a poor woman, aged fifty-nine, living in Kenilworth Street, had been subject to sciatica for many months. She had undergone varied treatment in the way of plasters, blisters, and the usual run of remedies, internal and external. She got no better, but worse, although, to my knowledge, the treatment had lasted for many weeks. There was a family history of what she called rheumatic-gout, and bearing this in mind, I put her upon a course of treatment internally and externally, and in eight weeks she had lost every symptom of sciatica, and was quite well, and has continued so, thanks to the Leamington Saline water.

I might quote many more cases, but I abstain from doing so. I have brought these three forward as representing in a high degree the kind of sciatica which is likely to be benefited by the Leamington Saline—in the upper and the lower ranks of life; and the results only

confirm the indications physiologically and therapeutically, which I have been trying to inculcate.

### RHEUMATISM.

The kind of rheumatism which I have found benefited by a saline course is "Muscular rheumatism," and also chronic stiffness of joints, with binding down of tendons around them, after repeated attacks of "rheumatics." I confess, however, that the progress towards recovery is slow, and the treatment must extend over a lengthened period. Massage and medical rubbing, together with the direct application of the saline douche to the affected part, have, when persevered in, done great good.

### ANÆMIA—CHLOROSIS.

Anæmia means deficiency of the red blood corpuscles, and may be due to direct loss of blood, imperfect formation, or excessive destruction.

It is to the latter I would direct attention, under the name of chlorosis. Females are generally most subject to this ailment, from fifteen to twenty-five years of age.

Chlorosis, or "Green sickness" is met with in all ranks of life, and the chief symptoms are—pale eyelids inside, pale gums, tongue and lips; subjects stout enough, but with waxy look, and in some cases a kind of pea-green pasty look,—faces like kidney suet, and bloodless.

Patients generally suffer from constipation, dyspepsia with eructations, headaches, dizziness, noises in the ears, neuralgia in various parts—especially in the left side, and attended with tenderness, violent palpitations, sleepless dreamy nights, shortness of breath on going upstairs, or walking up hill, derangement of menses, and general lassitude.

There are hæmic murmurs at the heart, and the pulse is compressible, feeble and weak.

Such a state of affairs may lead to consumption, if not attended to ; and it is with a view to proving the powerful influence for good, of the Leamington saline water, that I have taken the pains to succinctly enumerate a few of the leading symptoms of this disease.

Strong as is my belief in the curative properties of the Leamington saline waters, in the previously related forms of disease, yet equally, nay I may say, more so, is it in cases of chlorosis in young women. I could bring scores of cases to prove the superiority of a course of this water in chlorosis, combined with appropriate diet and chalybeate remedies.

I have purposely tried the same patients, suffering from chlorosis, upon the aloes aperient and ferruginous treatment, and I can conscientiously say that the results have come nowhere near those obtained by the Leamington saline and chalybeates.

I have also tried patients with chalybeates in combination with other salines—not of Leamington, and the results have not been so good, nor anything like it.

In treating somewhat lengthily upon the symptoms of

chlorosis, I wish to remind my readers of some remarks which I made with reference to the spleen as a red blood destroyer, and my belief in the chlorides—especially the calcium chloride, in preventing retrograde metamorphosis of the red blood corpuscles, and a consequent stimulation to the construction of tissues generally. If the “poor body” has “gone back,” so to speak, and the Leamington Salines have been the means of assisting the reconstruction in a way more rapid and more lasting, in conjunction with separate chalybeates and appropriate diet, than by vegetable aperients or other salines—then I claim for the Leamington waters, and their chlorides, especially in this respect, an unbounded boon to the chlorotic female under proper direction. The chlorides of sodium and calcium are therefore anti-anæmics. Not unfrequently have I found, on prescribing chalybeates alone, that hæmoglobin reached a certain point, and beyond that it did not go; but by giving the Leamington Saline—the chlorides came to the rescue, and the benefit was, in a short time, made manifest. Therefore I conclude that in chlorotic young women—or women who are “waxy-looking;” or in others who look like “tallow candles”—with all the constitutional disturbances herein described, I consider the Leamington Saline, with other remedies named, an almost certain specific. And the treatment may be carried on at any time of the year, provided the water be got fresh from the wells.

I have had under my care, recently, two young ladies who have suffered from anæmia for some years, and who

have during that time, taken iron or steel in one form or another. They have had changes to various parts of this country and the continent, and have been almost blown away at Margate, Scarborough, Aberdeen, and Braemar, because, as they said, they were ordered bracing air to assist the remedies. When they came under my care, they presented the usual "waxy" Chlorotic, and as they described it "fashionable," appearance. I put them upon a regulated course of Leamington Saline treatment with chalybeates and a properly regulated diet, and the result surpassed my best expectations, and gratified the patients and their relations. Rosy cheeks took the place of pea-green faces, hearts that beat in discord now beat in tune, and all the other dependent difficulties vanished one by one.

#### CLIMATERIC DISORDERS, OR DISORDERS DURING THE CHANGE OF LIFE.

When there is a headache, especially in the back of the head, when there is aphasia, when there are epileptoid attacks, when there are heats and chills, giddiness or vertigo, when there are disorders of the digestive organs associated with a tendency to grow fat, when there is derangement of the liver, kidneys, and skin, when there are constipation and flatulent distension of the intestines, when there is lithiasis or passing of gravel or red sand, a proper course of Leamington Saline does great good. The physiological and thera-

peutical actions of the principal salts, which have been previously dealt with, give the proper explanation, and I can with confidence recommend these waters as being a pronounced assistance to every physician or surgeon who makes the diseases of women his particular study.

### STRUMA.

When the glands in the neck, under the chin, or in other parts of the body become enlarged and suppurate and discharge cheesy matter, as well as pus ; when there is scrofulous disease of joints—"White Swelling;" when the alimentary canal suffers from stasis or atony in its whole course, complicated with *tabes mesenterica*—in fact when we get the usual scrofulous constitution—a Saline course, with tonics, is of great value. The chemical composition of the water and the pathological condition of the parts affected, fully warrant such success. The chloride of calcium has already been referred to as having anti-strumous properties, and the various maladies connected therewith have been dealt with jointly and severally under the heading "Chloride of Calcium."

### RICKETS.

I have tried some rickety children with a course of Saline water treatment, with results which justify me in hoping that the Leamington water may prove beneficial in such cases.

The ætiology, the anatomical characters and pathology of the ailment are still a vexed question; and although many authorities believe that one cause is the absence in the bone of phosphate of lime, there are others—and at their head is Sir William Jenner, the President of the Royal College of Physicians—who believe that there is no deficiency of lime salts, but merely a malposition. That being the case, I think I may not unnaturally conclude that a course of the Leamington Saline water, which is so thoroughly charged with chloride of calcium, may by this and by its other physiologically correct ingredients so reconstitute and reconstruct the rickety frame, that happy results may be looked for by its administration in suitable cases.

#### LEAD POISONING.

Where the breath is offensive, where there is a blue line on the gums at their junction with the teeth, where the skin is dry and sallow, where there is emaciation, where the pulse is too slow, where there are tremors of the muscles, where there is “drop wrist”; the internal use of the Saline water and the baths considerably assist other remedies, such as Iodide of Potassium and cod-liver oil. Massage and medical shampooings and Saline warm douches are all adjuncts to the treatment, especially where there is local paralysis.

## SKIN DISEASES.

*Eczema.* Eczema, especially when associated with Chronic gout, which it often is, demands some notice. I have seen admirable results from a course of Saline Water; and when the eruption becomes dry, the baths materially assist its internal administration. During the last five months I have had under my care a young man of twenty, who had suffered from Eczema more or less from childhood. When I saw him first, he was literally covered with scabs—face, body, hands, arms and legs. He had taken the usual remedies, had been for weeks in the Warneford Hospital, but had never been treated by the Leamington water. He was put upon a fish and milk diet, with cod-liver oil and Leamington Saline water, and now, March 22nd, his skin, from his head to his feet is as smooth as it need be. He took no stimulants of any kind. I contend that the Spa Water was the means of working this cure, for he had undergone similar treatment for years before, with only partial relief. This is the class of cases in which I find the water does good, and I give this instance out of dozens of others I might bring forward.

In selecting patients for treatment, care is necessary; for I have seen much harm done by the ignorant and indiscriminate use of the water. It is in the chronic forms of this disease that benefit is looked for.

*Acne, Lichen, Prurigo.* I have found obstinate cases of Acne, Lichen, and Prurigo, when mixed up with

Struma or gout, or where the liver and stomach are disordered, yield to the Spa Water, and regulated dieting and regular habits.

*Herpes Zoster, or Shingles.* Most medical men have found the neuralgia which accompanies this painful complaint, and which in those advancing in years follows it for weeks and months together, a vexed and worrying problem as to treatment. At any rate I have. And I am glad to be able to record the fact that I have, I feel sure, advanced the treatment in a satisfactory manner, by the internal administration of the Saline water and the baths. It is a long, trying, and tedious malady to conquer, especially when the patient is more than sixty years of age, and if anything can be found to assist other remedies, one is very thankful. This I have found the Leamington water do.

SOME GENERAL AILMENTS OF THE BODY AND MIND  
WHICH DERIVE RELIEF FROM TREATMENT BY THE  
LEAMINGTON SALINE AND OTHER REGIMEN.

It is a well-known fact in medical practice, that where the gouty diathesis exists, we not unfrequently find Bronchitis or Asthma alternate with or accompany an attack of gout. In the chronic stages of these alternating complaints, I have often found the bronchial affection relieved, and the distress of breathing overcome by a well-directed Saline course.

Likewise, I find that where there is fatty degenera-

tion of muscles, or fatty infiltration amongst the tissues of the body, a combined, regulated, and sustained course of Spa water, with iron separately prescribed, gives admirable results. The Sulphate of Soda and the Chlorides prepare the stomach, liver, spleen, intestines, and the blood for the simple addition of the Chalybeate.

As a happy result of such a line of treatment, I give the following in supposition :—

A gentleman has lived an arduous professional or commercial kind of life. He has laboured hard with his brain to serve his clients or his employers, and to remunerate himself. He has lived well withal, “dined” daily, and has taken a fair share of wine. He has taken little exercise and few changes, “as,” said he, “there was no time.” His object in life was to get together a sufficiency to maintain himself in independence in his latter days. His life has been one of great anxiety, and at the age of sixty, he finds himself getting “puffy” and short breathed ; he has grown stout and perhaps a little gouty, so he begins to think of retiring into private life. When, “one fine morning” about eight, just after his morning “tub,” he is overtaken by paralysis of one side and loss of speech. Alas ! poor fellow, he has laboured “Not wisely but too well.”

The active symptoms pass away, he regains partial use of the affected limbs and speech, and becomes what is called a chronic case ; or he may recover sufficiently to be able to return to business again. It is when the patient gets over the active symptoms, that I have found

the Saline water, with dialysed Iron, most useful. In such a case, the Leamington Saline water relieves the chylopoiëtic viscera, and in due course the chlorides prepare the way for and assist in the reconstruction of the tissues generally, and the blood in particular. Consequently the addition of the Chalybeate pushes the regenerative process further on, helps the muscular tissue of the body as a whole, and the vascular system especially,—even to the fibres of the heart. I have at present more than one case of the kind above described under my care, in which I can trace decided benefit from the almost habitual use of the Leamington Saline and dialysed iron. The system bears this water much better than Hunyadi, Pullna, or Æsculap—all of which “pull” at the system, and do not appear to have the same reconstructive powers.

Therefore I conclude that where a patient is over sixty, where he has had great mental work, no exercise, and moderate indulgence in the good things of this life, where there has been or is slight paralysis, where there is shortness of breath, or what patients call “pumpings” in breathing, where there are traces of albumen in the water, where there is obesity with gouty tendencies and signs of fatty degeneration, including the heart muscle, where too there is an intermittent pulse in consequence, and where there is constipation,—a well-regulated course of Leamington Saline water, with Iron in one form or another and proper dieting, helps the crippled frame from day to day, gives tone to the system, and prolongs life.

## CONCLUDING REMARKS.

In bringing this short treatise to a close, I venture to suggest to the medical profession generally, and to the London consultants especially, that they might with advantage to their patients recommend a course of the Leamington Saline Water, in such cases as I have, imperfectly I know, tried to describe. I have stated certain things about the curative properties of these waters, all of which I am prepared to substantiate. The late Sir Robert Christison, in his letter to me, which I quote, and in his lectures to his students in medicine, most strongly recommended the British Mineral Waters and those of Leamington particularly. We know their analysis, and, as medical men, we know their medical qualities. Why, therefore, send patients to the continent for that which they can get at home?

Sir Robert Christison says, "the best means would be to convince the consulting physicians of London of the folly of the present fashion." HE could afford to say this. I cannot, but I WILL say I think they might do much worse than send their patients to Leamington and to other British watering-places of equal value.

I have tried as plainly as I can, to lay bare the Leamington Saline Waters and their medicinal properties. I have endeavoured to explain all that I have stated in their behalf, and, in conclusion, let me make a parting common-sense suggestion. And before doing this, let me offer an explanation. From the beginning of May to the middle of July the London season has been in full swing. During this time, "Society" enters into all that is dazzling, enticing, intellectual, enjoyable, fatiguing and wasting.

In the case of many men and women the strain of night and day entertainments tells sadly on their minds and bodies,—so much so that generally there are many "breakdowns" before the season is on the wane. "They must have a change"—"they must have rest,"—"they must have mineral waters to correct disordered stomachs, livers, and nervous systems." The present fashion is to order them abroad,—possibly to Homburg, where they have the same character of water as the Leamington Saline.

Why not, I ask, order them to Leamington? Here they might have rest, regular hours, and a mineral water physiologically correct as to their ailments. They could here enjoy an equable climate and most enchanting surroundings, and after three or four weeks' repose, go northwards to the Highlands, where they might breathe the pure mountain air, inhale the mellifluous scent of the heather-bell, or follow, if they

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may, the track of the ptarmigan, the black cock, the grouse, or the red deer, and thus regain that which they have lost—viz., a sound mind in a sound body.

FINIS.









