

Notes of visits to Contrexéville and Royat-les-Bains / by F.R. Cruise.

Contributors

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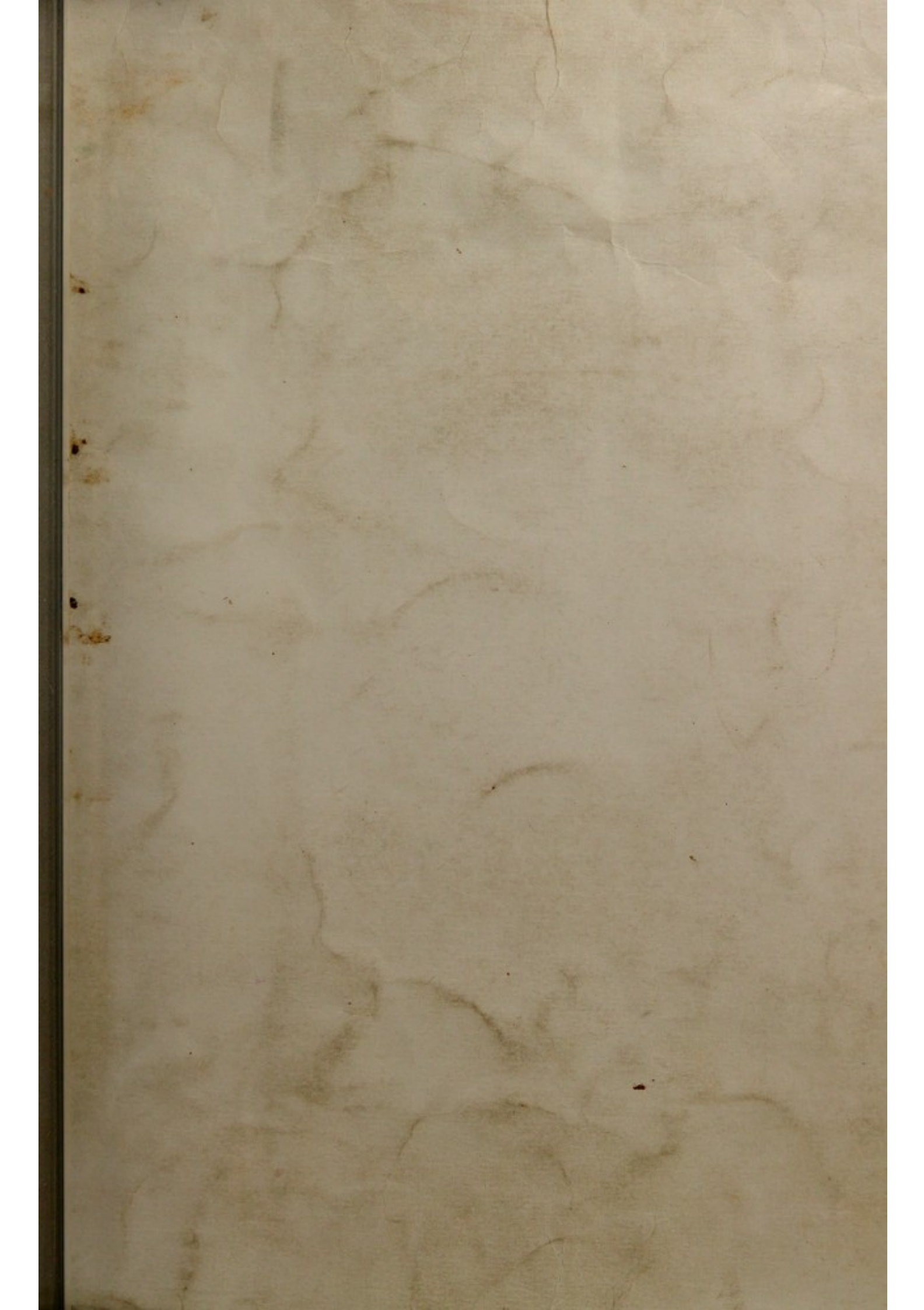
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12

NOTES OF VISITS

TO

CONTREXÉVILLE AND ROYAT-LES-BAINS.

BY

F. R. CRUISE, M.D., UNIV. DUBLIN;

PRESIDENT OF THE KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND;

CONSULTING PHYSICIAN TO THE MATER MISERICORDIÆ HOSPITAL, DUBLIN.

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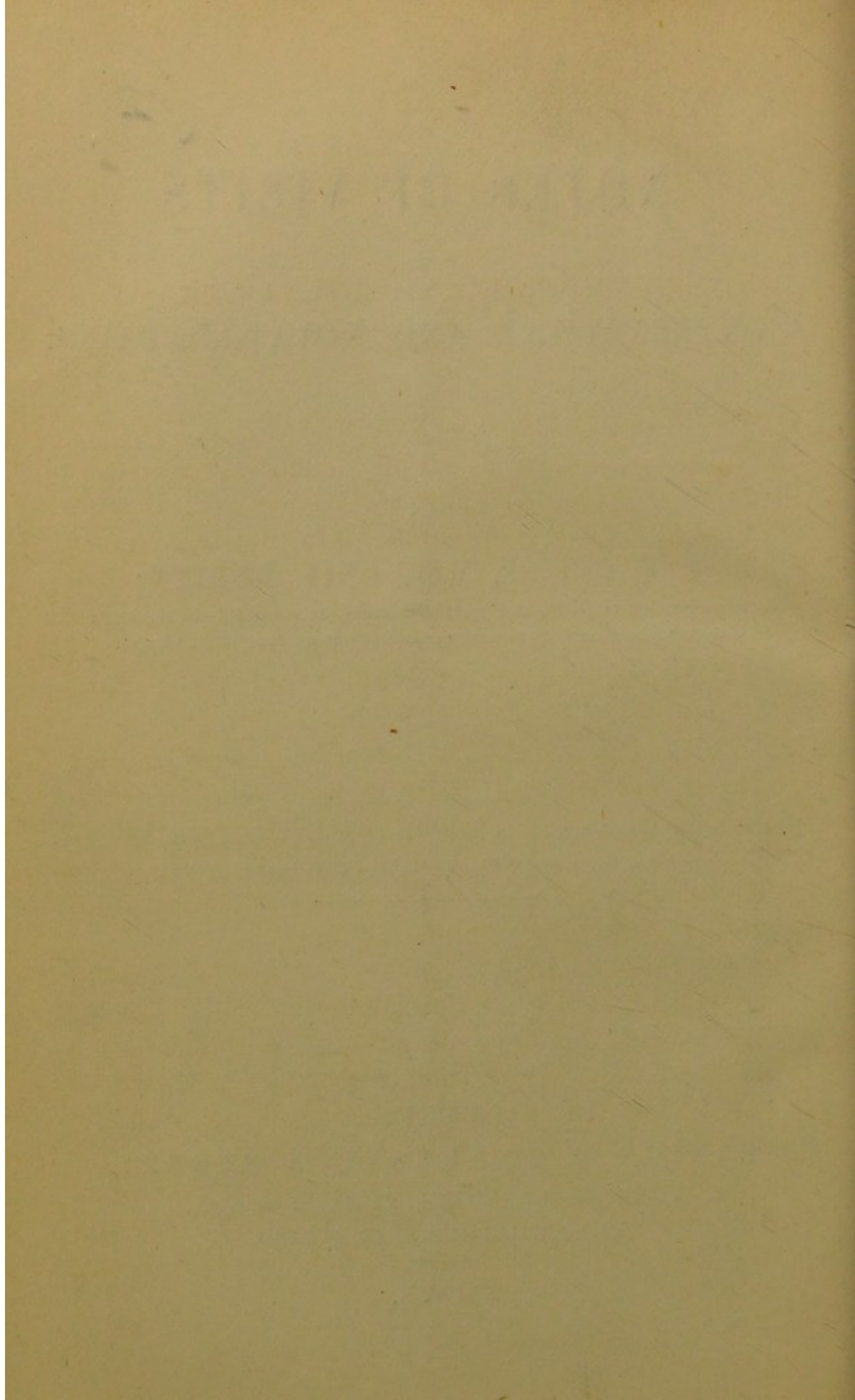
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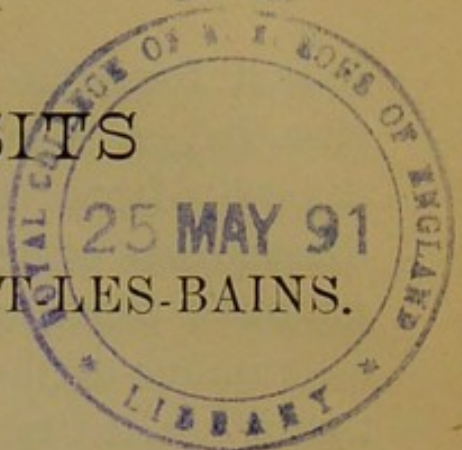
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1885.



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NOTES OF VISITS
TO
CONTREXÉVILLE AND ROYAT-LES-BAINS.



MR. PRESIDENT AND GENTLEMEN,

It is well known to all physicians of experience, that one of the most powerful agents we possess in the treatment of many chronic ailments, is the use of mineral waters, especially when taken at their sources. However, if it be needful to prescribe the most efficacious drugs for each case we meet, it is no less important to select for each of our patients the mineral water best suited for his disease.

To do this requires a somewhat special training and experience, not easily attainable. It is most important, both for patient and physician, that no mistake should be made in the choice, as a visit to a Thermal Station is not unfrequently a very laborious and a very expensive undertaking.

For these reasons I venture to make the present communication to the Academy of Medicine of Ireland, in the hope of giving to others some information, derived from personal experience, of two celebrated French watering-places, namely, Contrexéville and Royat-les-Bains.

A brief history of the circumstances which led to my visiting Contrexéville in the year 1877, may add to the interest of the subject, and therefore I will relate it.

Just fourteen years ago Sir George Porter and I attended a young lady (Miss M.) who suffered severely from chronic cystitis. The origin of the disease was obscure, but, from our knowledge of the patient's constitution, we inclined to the belief that a strumous diathesis was to blame. I regret to add that we failed to cure her.

After some time Miss M.'s mother took her abroad, and while in Paris, consulted the late Dr. Acosta about her case. Dr. Acosta recommended a visit to Contrexéville, and a course of the waters and baths there. His advice was followed, and the result was a perfect cure.

I need hardly say that this rapid cure of so obstinate a disease, by a visit to a mineral water of which we had never even heard, made a very strong impression upon Sir George Porter and on me, and we resolved to profit by the experience.

Before adverting to the many cases in which we advised a visit to Contrexéville, I may here record the fate of Miss M.

A few years subsequent to her cure of cystitis, she died suddenly. I learned that her death was preceded by very violent headaches. Although neither Sir George Porter nor I had attended Miss M. during the fatal illness, the family wished us to be present at the post-mortem examination, which was deemed advisable on account of her sudden and unexplained death. The examination showed that the cause of death was a large effusion of blood at the base of the brain. The membranes and adjacent cerebral substance were found extensively infiltrated with tubercular deposits.

Sir George Porter and I felt anxious to ascertain the condition of the bladder, which had formerly been so much affected, and accordingly we examined it. As a result we found that organ, and all its appendages, kidneys included, *perfectly healthy*.

Shortly after our favourable experience of the effects of Contrexéville in Miss M.'s case, Mr. C., an elderly gentleman of high position in the legal world, came under Sir George Porter's and my care. His case was one of chronic cystitis, the result of stricture, and prostatic disease. The dilatation of the stricture gave but little relief to the cystitis and accompanying sufferings. So we advised him to go to Contrexéville. He went there two summers consecutively. His case, as you will understand, was not a hopeful one for cure, but he derived very marked relief, and his life was evidently prolonged considerably.

The next case I shall allude to was that of a distinguished ecclesiastic, the President of one of the Provincial Colleges of Ireland, who suffered intensely from renal colic, caused by oxalate of lime gravel. His cure, accomplished by one visit of three weeks (in 1877) was complete and permanent.

A similar case, in the person of a well-known and much respected Dublin merchant, occurred (in 1883) within my own experience.

In the summer of 1882, Dr. James Little asked me to see a medical confrère (Dr. L.), who was quite broken down by chronic pyelitis. We decided to send him to Contrexéville, where he derived

much relief, and, finding this cold, damp climate unendurable, he emigrated to Australia, whence he sends me good accounts of his health and progress.

I shall not occupy your time by relating details of cases. preferring to state, in brief, that since I have known of Contrexéville I have either sent there, or treated here with the imported waters, most of the obstinate cases of irritable bladder, or cystitis, which have come into my hands ; and that all have derived benefit, and the more hopeful quite a satisfactory result. It so happens that my endoscopic studies have brought under my care a large proportion of cases of urinary disease, so that my experience has been somewhat extensive.

When first I learned the therapeutical value of Contrexéville, I sought in various directions for information concerning it, and encountered much difficulty in my research. Although so celebrated in France and on the Continent, this watering-place appeared unknown in England, and with the exception of the brief notice of it in the French Manual on Mineral Waters by Dr. Constantine James, of Paris, I could obtain no details. At last, one of the patients whom I had sent thither brought me two Essays on the subject—one by the late Dr. Victor Baud, who had practised there for a quarter of a century, and another, more brief, by Dr. Tamin-Despalles, who was then in practice at these waters. More recently I have found an Essay on the subject by Dr. Debout D'Estrées, the Government

Inspector of the Station, which, on the whole, is the most satisfactory I know of.*

Wishing much to see Contrexéville, and urged to do so by Sir George Porter, I took an opportunity while at leisure in Paris, in the autumn of 1877, to run down there and make a personal visit.

Taking the night mail from Paris, by the Chemin de fer de L'Est, I reached Neufchâteau, in the Vosges district, about six o'clock in the morning. Having breakfasted I hired a *voiture* and drove to Contrexéville, a lovely drive of about fifteen miles, through a pretty mountainous country, not unlike our own county Wicklow.

I may observe here that now-a-days the train from Paris goes straight through to Contrexéville, making the journey shorter and easier than formerly.

On my arrival I was most hospitably received by Dr. Tamin-Despalles, who showed me all that was to be seen, and explained the uses and effects of the waters. I regret much to say that this experienced practitioner has since died, after a long attack of brain disease. His place is ably filled by several other physicians of eminence, amongst whom I may specially mention Dr. Debout D'Estrées, who has treated several patients I sent to him with judgment and success. I had the pleasure of making his personal acquaintance in the year 1883. To show how little was known of Contrexéville, except on the Continent, I may mention that Dr. Tamin-

* This Guide Book can now be had, in English, from Messrs. Churchill, of New Burlington-street, London.

Despalles told me, in 1877, that so far as his knowledge went, and it extended over a long term of years, I was the first English-speaking physician who had ever visited it. Since that time it has come under marked notice, and has been visited by many of our Irish, English, and American confrères ; however, as I have not seen any account of their visits, in our language, I think a brief note of my experiences may interest the Members of the Academy of Medicine in Ireland.

I found Contrexéville a pretty little town, or rather village, made up, for the most part, by the hotels and boarding-houses which accommodate the great influx of patients, who come to it for the season, from May until about the 15th of September. In former days it belonged to the kingdom of Lorraine, but now it is in the department of the Vosges.

Situated on the river Vair, in a valley open from north to south, it is placed at a height of over a thousand feet above the sea level. Its situation explains the sudden changes of temperature to which it is subject, especially in the morning and evening. This fact must be borne in mind by visitors, who should always be provided with woollen garments, even in the height of summer.

Though the waters of Contrexéville have been locally celebrated time out of mind, they were only made known to the Medical world in 1760, by a Report read before the Society of Science and Arts of Nancy, by Dr. Bagard, Physician to Stanislaus, King of Lorraine.

I shall read a short extract from this quaint report which will show that even at that distant time Contrexéville was resorted to by patients suffering from gravel, bladder diseases, gout, and liver complaints :—

“ The mineral waters of Contrexéville are a sovereign remedy in diseases of the kidneys, of the ureter, of the bladder and the urethra, stone, gravel, glair, suppuration. We can assert that these waters are efficacious against the stone, which they loosen and drive out of the bladder, when the stone is not of a considerable size ; that they dissolve and break larger stones, when the latter are chalky. We keep a list of patients of all ages who, during several years, have got rid of a stone through the effect of these waters.

“ They prevent fresh attacks of gout by restoring the suppleness of the nerves, and of the membranous parts which the disease has dried up.

“ As these waters contain ferruginous matter, a mineral acid and soap, they will be very useful in cases where the bile becomes too thick and where the liver is obstructed—the more so as they are purgative.”

Dating from the time of Dr. Bagard's Report we find the celebrity of Contrexéville steadily growing. Analysis upon analysis has been made of the waters—the Government has taken the Station under its protection. Capitalists have expended large sums in making the place attractive to visitors, and year by year the number of these visitors has increased, so that now, owing to the crowds, it is necessary to secure accommodation in advance before venturing

to undertake the journey. The accommodation at present is quite first-rate. There are capital hotels and boarding-houses to suit various means ; also a well-regulated Etablissement for baths, douches, &c., a very pretty park, with suitable amusements, Casino, theatre, covered promenades, music, reading-rooms, &c.

It is right to add that travellers who seek amusement alone are likely to be disappointed. The place is remote and somewhat dull, the patients who go there not young or lively ; but the cures are numerous and remarkable, and the patients generally very well satisfied.

I was greatly struck in observing the wisdom of the French Executive, which, like all other Continental Governments, takes under its guardianship all places possessing mineral waters of value, developing their utility, and doing full justice to their virtues and capabilities ; a contrast very humiliating to anyone familiar with the neglect exhibited by our Government towards places similarly gifted in Great Britain and Ireland.

Contrexéville is prettily situated in the heart of the Vosges mountains, surrounded by agreeable walks and drives, and within easy reach of many interesting places. Amongst others I may mention Domrémy, the birthplace of Joan of Arc ; Mirecourt, a flourishing town, celebrated for the manufacture of musical instruments ; Neufchâteau, the valleys of Viviers and Bonneval, the Baths of Plombières, and similar places of interest. Trips to these various resorts pleasantly fill in the leisure hours of the patients staying at Contrexéville.

As already mentioned, I visited the different springs, and ascertained their properties.

Four principal springs are used, which I name in the order of their importance—namely :

The Pavilion ;

The Prince ;

The Quay ;

The Sovereign.

A fifth, named “ Le Cler,” is also used, and its water exported, but it is weak compared with the Pavilion. All these springs are cold.

The Pavilion may be taken as the typical and most important water. I give here a table, showing the result of M. Debray’s analysis.

ANALYSIS OF THE PAVILION WATER.*

Free Carbonic Acid	...	...	0·080
Bicarbonate of Lime	...	...	0·402
„ Magnesia	...	...	0·035
„ Iron	...	...	0·007
„ Lithium	...	...	0·004
Sulphate of Lime	...	...	1·165
„ Soda	...	..	0·236
„ Magnesia	...	...	0·030
Silica ... ..	...	...	0·015
Chloride of Potassium	...	...	0·006
„ Sodium	...	...	0·004
Fluoride of Calcium	...	...	traces
Arsenic ... ..	...	...	traces
			2·384

While we may take the Pavilion water as the most important and typical in its composition and

* Grammes per litre.

effects, it is right to observe that the other springs are similar, on the whole, with some variations.

Thus, the Prince is richer in iron, and hence of great repute in the treatment of anaemia and diseases of females. According to Dr. Victor Baud it is specially efficacious in functional sterility.

The Quay Spring contains more magnesia, and is particularly suited to the gouty.

The Sovereign is much weaker than the others, and contains no iron, or, at all events, none worth notice.

The "Le Cler" resembles the Pavilion, but is weaker. I draw attention to this fact as it is now imported, but it is by no means as efficacious as the Pavilion.

It is very important to observe that these waters bear carriage well, the only difference observable in the analysis made at the springs, and after importation, is that the latter show a certain falling off in strength.

My friend Dr. Tichborne, who has lately brought out an important work on mineral waters, in conjunction with Dr. Prosser James, of London, was kind enough, two years ago, to place in my hands the results of his analysis of the imported waters of Contrexéville. According to his researches the solid constituents of the imported water amount to 166·7 grains per gallon, as against 229·5 found in the water fresh from the spring. The "Le Cler" water shows only 149 grains per gallon.

It will be seen from the foregoing analysis that the spring belongs to the class of calcareo-sulphated

waters—that it is alkaline, with a preponderance of salts of lime, that it contains aperient salines in the form of sulphates of soda and magnesia, also iron and arsenic, and traces of fluoride of calcium. It holds, moreover, sufficient free carbonic acid to make it bright and pleasant to the taste, when fresh from the source, thus masking its somewhat inky flavour.

Its effects, when used internally, may be anticipated. It is—

1st—Diuretic.

2nd—Laxative.

3rd—Tonic.

When taken in suitable doses it purges gently, improves the appetite, stimulates the circulation and skin, promotes the flow of bile, and *especially* it increases the urinary secretion in a very remarkable manner.

It is upon the urinary organs that the water of Contrexéville exercises the most powerful effect. It acts rapidly, producing a diuresis far in excess of the quantity of fluid ingested; it dissolves the mucus met with in the passages, and loosens and carries out small concretions.

It has been observed to subdue quickly excessive acidity of the urine, clearing it remarkably of deposits, and, strange to say, in certain cases it is found to restore alkaline urine to its normal acidity. This seemingly paradoxical effect is due to its efficacy in curing morbid conditions of the urinary mucous membranes, which so often lead to ammoniacal decomposition, and consequent alkalinity of the urine.

Its effects in cases of gravel and stone are remarkable. When the calculi are small, they are frequently washed out bodily by the diuresis. When large and soft they are disintegrated and broken up to such an extent that some actual cures have been recorded; but the more common effect of Contrexéville water on large calculi is to strip them of mucous and phosphatic coatings, thus exposing the central calculus in its rough outline, and increasing the calculous symptoms.

In this way the waters act as a valuable test, quickly revealing the presence of the stone, and compelling the patient to seek surgical aid, and waste no time in hesitancy, the too frequent result of procrastination, due to the fluctuation of symptoms.

In cystitis, whether essential or symptomatic, the waters of Contrexéville are useful beyond all controversy, often curing the former, and mostly alleviating the latter cases, even when all other remedies have failed.

I can speak with confidence on this subject, from an experience extending over fully fourteen years.

The highest Continental authorities are agreed upon the therapeutic value of Contrexéville waters in urinary diseases. As I stated before, my knowledge of their utility arose from Dr. Acosta, of Paris, sending thither a case which had long resisted other treatment, and both the late Dr. Civiale, a specialist of European fame and historical celebrity, and Dr. Durand-Fardel, another specialist on the subject of mineral waters, speak in the highest praise of them. Dr. Civiale particularly advised their use

in cases of atony of the bladder, arising from long-standing stricture, cystitis, and following the operation of lithotrity.

The *essential* difference observable between the Contrexéville waters and those of other alkaline sources, such as Vichy, Vals, and so forth, is that they are *tonic*, and thus, while beneficial to the local ailments, are, at the same time, restorative of the general health and strength. Such a combination of virtues cannot, by any means, be affirmed regarding many other alkaline waters.

Besides their internal administration, the waters of Contrexéville are also used externally, in baths, douches, &c.

I have some doubts of their possessing any very powerful effect when applied to the skin, except perhaps as a stimulant in douches, and thus an adjuvant to their internal exhibition; all the more so, as I observed at the time of my visit that the waters, when heated, freely deposit the solid ingredients, lining the boilers with thick incrustations.

Although my principal object in reading this Paper to-night is to explain the value of the waters of Contrexéville in diseases of the urinary organs, I would ask permission to notice briefly their utility in some other ailments.

First—in Gout these waters will be found most serviceable, especially in the chronic or atonic forms. This might be anticipated from their usefulness in calculous disorders, which are largely due to gout. In them we find properties at once *diuretic*, *laxative*, and *tonic*, fulfilling the most important

indications for treatment. Moreover, being moderate in the degree of their mineralization, they are much safer, especially for the weakly, than the waters of Vichy, Vals, Carlsbad, and other more powerful alkaline spas, which suit best for the plethoric. Trousseau, as also Charcot, dwells on this point in favour of Contrexéville.

Another class of cases in which these waters are found particularly useful are those in which the liver is congested and inactive from one cause or other, and the bile inspissated and tending to the deposition of concretions or gall-stones. Numbers of patients thus affected are sent by the French physicians to this Station, and obtain remarkably favourable results. This, as in the case of gout, is just what we might expect from the composition and effects of the waters.

Another ailment in which Contrexéville waters are used with advantage, is Nocturnal Incontinency of urine in children. I can speak decisively on this point from my own experience. I believe that in such cases the action of the water is two-fold. In the first place, it corrects irritating conditions of the urine, and secondly, it restores tone to the organs. Whether this is the correct explanation or not, of one thing I am certain, that the use of the Pavilion water, as a diet drink, has cured a number of very obstinate cases.

Another disease in which Contrexéville water has been found very serviceable is Diabetes. I do not mean to affirm that it will accomplish the cure of confirmed cases of diabetes with progressive

wasting, but certainly in the group of patients who are gouty, and more or less diabetic, it materially reduces the glycosuria, and proves a useful adjunct to a regulated dietary. In this effect it closely resembles the famous American mineral water, the *Bethesda*.

To recapitulate :

The waters of Contrexéville are—

Mildly alkaline, especially from lime salts.

Saline, from sulphates of soda and magnesia.

Tonic, being ferruginous and arsenical, with traces of fluoride of calcium.

The diseases in which they prove useful are—

Chronic affections of the urinary organs, especially when complicated by gravel, renal or vesical.

Gout, especially its atonic forms, these waters being tonic, and thus markedly contrasting with many other alkaline waters.

Diseases of the liver, especially those complicated by gall-stones,

Nocturnal enuresis in children.

Diabetes, especially when associated with gout.

Let me add a word as to the use of the imported waters of Contrexéville.

I advise the Pavilion spring, and none other. Of this I give half a bottle daily as a diet drink, either with milk, wine or spirit, as otherwise indicated. Watching the effect I increase the quantity up to a whole bottle, but have not exceeded that amount.

As to the method of using these waters at the Springs, I do not touch the subject. Taken fresh they are far too powerful to be used without the

regular supervision of a physician familiar with their employment. Under such direction I believe they will be found an invaluable adjunct to the resources of the practical physician and surgeon.

Allow me, before concluding, to add some notes of a visit which I paid to Royat-les-Bains, in June, 1884, and of the circumstances which brought me there :—

One day, in the spring of last year, I happened to complain to my friend and colleague, Dr. Patrick Hayes, about the great annoyance I had suffered from eczema. This affection, presumed from many special symptoms to be of a gouty nature, had been treated in various ways, but with very partial success. Dr. Hayes told me that a patient of his, very similarly affected, had been sent by a London physician to Royat-les-Bains, and had been effectually cured.

A few enquiries satisfied me that this mineral watering-place enjoyed a well-merited celebrity in the treatment of chronic forms of gout, and I felt that it was well worth my while to pay it a visit. Accordingly, to Royat I went, in June, 1884, and, to make a long story short, I was cured so completely that with a little attention to diet, and some other hygienic details, I have escaped ever since all annoyance from my troublesome ailment.

It is but truthful to add that I have kept up the use of the waters, and observed the rules of life laid down for me. Many patients who are careless about these matters blame very unjustly the remedy which

they unreasonably expect will cure them despite of themselves.

Anyone who has undergone for years the indescribable worry of eczema, will understand that I naturally feel very grateful to Royat, and am anxious to make known to the Members of the Academy of Medicine of Ireland some details concerning it.

Leaving Paris by the Lyons Railway Station, a journey of some nine hours brought me to Clermont-Ferrand, the wealthy capital of the Auvergne district, and in ten minutes more I arrived at the picturesque village of Royat-les-Bains, one of the most celebrated mineral stations of France. Once settled in my hotel (Chabassière's), which it is but just to say combined every comfort with moderate charges, I sought the advice of Doctor Alexandre Petit, whose *brochure* on Royat I had already studied. Under his guidance I commenced the course, which lasted three weeks.

The routine was much as follows:—At 7 a.m. I took a glass of the Eugenie water, hot from the spring, then a reclining bath in the same water, at a temperature of 95° F. After the bath I had another glass of the water. Then I returned to my hotel, and had coffee and strawberries. At one o'clock déjeuner à la fourchette. At 4 to 5 p.m. two glasses of the St. Mart spring, with fifteen minutes between. At 6 o'clock dinner.

Thus I passed the days, spending the leisure intervals in exploring Royat and its environs, and in observing the use and effect of the waters. Day by day I improved in health and spirits—the eczema

cleared off, and no new spots appeared. As already stated, I have remained well, now just a year.

Royat-les-Bains is a village, consisting mainly of the Etablissement for the waters and baths, the hotels, boarding-houses and villas, which accommodate the visitors in the season, from May till the end of September.

It is beautifully situated in the Auvergne mountains, about 1,500 feet above the sea level, in a valley stretching from the base of the Puy-de-Dôme to Clermont-Ferrand, and following the course of a torrent of lava, which, at some remote age, poured down from the neighbouring volcanoes, now completely extinct. The lowest portion of this valley conveys the Tiretaine, a mountain stream of some considerable size.

All that a lovely country, an agreeable bracing climate, a wealth of interest, historical, geological, and botanical, combined with health-giving waters, can offer to satisfy the visitor, will be found in plenty at Royat-les-Bains. To those who love mountain scenery, as I do, no day spent there can feel irksome or tedious.

It is right to add that it is a very quiet spot, to which the world of fashion has not yet penetrated; but its fame is of old standing, it is thoroughly appreciated by the Medical faculty and people of France, and yearly becomes better known to the world at large.

To prevent confusion about names, let me observe that Royat, the original village, is situated about fifteen minutes' walk higher up in the valley than

Royat-les-Bains, and, though most interesting to visit, is not the mineral station known as Royat.

The original village is evidently of great antiquity, resembling a miniature old Roman town. The photographs which I exhibit, many of which I took myself on the spot, show the curious old streets in which it abounds, and the castellated and battlemented Church, a Romano-Byzantine edifice, dating from the twelfth century.

There are clear evidences that the ancient Romans knew Royat well, and used its hot springs, both for separate baths, and for the piscine or general swimming tank. Just below the railway bridge may be seen the remains of Roman baths, and piscine, close to the St. Mart spring, which were discovered in 1843. These are some of the many ruins which prove the Roman occupation of Royat in ancient times.

The entire neighbourhood of this Station abounds in interesting places, which serve to occupy the leisure hours of visitors to the waters.

Clermont-Ferrand, to which I have already alluded, is a little over a mile from Royat, and may be reached by omnibus in about ten minutes. Expeditions are made thither almost daily, and I know no more agreeable stroll than to wander through its beautiful Gothic Cathedral, and then walk down to the Place Pascal, in which we find the statue of the great philosopher, so placed as to look to the distant towering Puy-de-Dôme, upon the heights of which he performed the experiments which led to such advance in barometric science.

Selecting a clear day, a journey of some two and

a-half hours brings to the summit of the Puy, with its ruined Temple of Mercury, now replaced by an Observatory, from which a magnificent view of the surrounding country stretches out on all sides.

In every direction about Royat we find beautiful mountain passes, to ride, drive, or walk ; picturesque old towns and villages, and ruins of ancient castles and chateaux. Not a day of the whole course of three weeks need pass without a pleasant excursion, amid scenery lovely enough to please every eye, and monuments of the old feudal times, like Tournoël, grim and gaunt enough to make one rejoice that we do not live in such wicked and awful days of savagery. I shall not attempt to enumerate the various points of interest around Royat, as the local guide-books offer all needful information, and I only allude to them here to illustrate the attractiveness of the place. As a matter of course, all the usual recreations of watering-places are found at Royat; a pretty terraced park, reading-rooms, Casino, theatre, music, and so forth.

Let us now see what the waters of Royat are—what is their nature—and in what diseases they may be used with benefit.

There are four springs, which much resemble each other, though differing in certain details.* As follows :

The Eugenie.

The Caesar.

The St. Mart.

The St. Victor.

* It is important to know that these waters bear carriage remarkably well, and suffer little loss in the process.

Taking the Eugenie spring, as the one both typical and most important, let us examine its constitution. I append M. Lefort's analysis :

ANALYSIS OF ROYAT WATER.*

Eugenie Spring—(Temperature 95° F.).

Bicarbonate of Soda	...	...	1.349
„ Potash	...	...	0.435
„ Lime	...	..	1.000
„ Magnesia	...	...	0.677
„ Iron	...	...	0.040
„ Manganese	...	...	traces
Sulphate of Soda	...	...	0.185
Phosphate of Soda	...	...	0.018
Arseniate of Soda	...	...	0.004
Chloride of Sodium	...	...	1.728
Iodide and Bromide of Sodium	...	...	traces
Silica	...	...	0.156
Alumina and Organic Matters	...	...	traces
Chloride of Lithium	...	...	0.037
Total Solids	...	...	5,623
Free Carbonic Acid	...	...	0.377

From the foregoing table it will be seen that this spring belongs to the class of alkaline-chlorinated waters, with the addition of salts of lithium, iron, and arsenic.

The effects of the water, when used internally, may be surmised from its composition. It is—

Stimulating to the circulation.

Diuretic.

Laxative, and

Tonic.

* Grammes per litre.

The diuretic effect is the most manifest, often doubling the quantity of urine excreted, and at the same time raising the specific gravity one-third or more. In its diuretic properties I observed a strong similarity to our own mild sulphur water at Lisdoonvarna, which, although quite different chemically, is famous also for the cure of gouty and cutaneous affections.

The laxative effect of the Eugenie water is mild, but unmistakable, the sulphate of soda mainly accomplishing this end.

The tonic properties, due to iron and arsenic, are very pronounced, and, together with the chlorides, serve to mark the difference between Royat and the stronger and more purely alkaline springs, such as Vichy, Vals, Pongues, and others, indicating, moreover, their greater suitability for lymphatic and debilitated patients. In fact, for strumous subjects, no waters, excepting alone those of La Bourboule, which is quite near, enjoy an equal reputation. At some future time I hope to bring La Bourboule under your notice.

As already stated the four springs of Royat, although resembling each other, differ in certain points.

Thus, we have seen the composition and effects of the Eugenie spring.

The Caesar is the least mineralized of all these waters, but is very agreeable and piquant in flavour, and is found very useful in dyspepsia. It stimulates the mucous membrane of the stomach, improves the appetite, helps digestion, and increases the flow of bile and urine.

The St. Mart water contains a considerable quantity of chloride of lithium, and is particularly suited for gout and rheumatism, and all allied affections.

The St. Victor spring is the richest in iron, and is specially useful for anaemia, diseases of females, and for the weak and debilitated.

All these springs are used, according to the necessities of the cases, in three different ways—

1st. Internally.

2nd. Externally—as baths, reclining or swimming (piscine), and douches.

3rd. By inhalation, while in a state of pulverization, or minute division.

It is easy to see that with such a repertory of potent agents as these various waters afford, a judicious physician wields immense therapeutical power.

I shall now briefly enumerate the principal diseases in which they may be used with advantage. These may be divided, for practical purposes, into three great classes :—

1st—*All forms of Gout and Rheumatism*, especially the atonic phases.

It is almost needless to say that a mild alkaline water, modified by chloride of lithium and ferro-arsenical salts, is certain to benefit this class of ailments, and accordingly we find them improving from day to day at Royat; including gouty and rheumatic affections of joints, muscles, fasciae, nerves, skin, especially eczema, gouty dyspepsia, gastralgia, asthma, and so forth.

2nd.—*Anaemic and lymphatic affections.*

The combination of chloro-alkaline waters with iron and arsenic, improves the appetite and digestion, and speedily reconstructs the blood in anaemia. It is found very useful also in atonic dyspepsia, and in all the nervous troubles appertaining thereto. For Insomnia, Royat enjoys a special and most favourable reputation.

3rd.—*Affections of the throat, lungs, and uterus.*

The utility of the waters of Royat in this third class of ailments is what we might expect from the strong similarity between them and the waters of Ems—Royat being in fact the French counterpart of Ems, enjoying however the great advantage over the latter of a climate both bracing and tonic, in place of relaxing and debilitating.

Accordingly, we find chronic affections of the larynx and pharynx, bronchial catarrh, asthma, and even the earlier stages of pulmonary phthisis, improving at Royat, and the crowds which frequent the inhaling rooms give proof of the beneficial results felt by all who resort to this form of medication.

Chronic affections of the uterus are likewise found to derive immense service from these waters.

For myself I am strongly disposed to believe that the efficacy of the waters of Royat are greatly augmented by the climate, which is, like all mountain air, revivifying in a marked degree. It is, moreover, temperate and dry, and its salubrity is proved by the abundance of fruit and flowers for which the whole district is celebrated.

I shall not dilate further upon the virtues of

Royat, trusting that I have already given a sufficiently clear outline to enable my hearers to select the cases best suited for the use of its waters.

Mr. President and Gentlemen, I have to thank you for the patience with which you have listened to me this evening. My earnest conviction of the great value of the waters of Contrexéville and Royat-les-Bains is the best excuse I can make for trespassing so long upon the attention of the Academy of Medicine in Ireland.

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