

**The Project Gutenberg eBook of Memoranda on Tours and Touraine, by J. H. Holdsworth**

This ebook is for the use of anyone anywhere in the United States and most other parts of the world at no cost and with almost no restrictions whatsoever. You may copy it, give it away or re-use it under the terms of the Project Gutenberg License included with this ebook or online at [www.gutenberg.org](http://www.gutenberg.org). If you are not located in the United States, you'll have to check the laws of the country where you are located before using this eBook.

**Title:** Memoranda on Tours and Touraine

**Author:** J. H. Holdsworth

**Release Date:** August 20, 2010 [EBook #33473]

**Language:** English

**Credits:** Produced by Chuck Greif and the Online Distributed Proofreading Team at <http://www.pgdp.net>

\*\*\* START OF THE PROJECT GUTENBERG EBOOK MEMORANDA ON TOURS AND TOURAINE  
\*\*\*

---

Aside from the correction of obvious typographical errors, the text has not been modernized; the original (some archaic) spellings have been retained (Maderia for Madiera; marjorem for marjoram; Marsilles for Marsailles; horison for horizon). [Note of etext transcriber.]

**MEMORANDA**  
**ON**  
**TOURS, TOURAINE**  
**AND**  
**CENTRAL FRANCE.**

---

Tours.—Printed by A. MAME and Co.

**MEMORANDA**  
**ON**  
**TOURS AND TOURAINE**  
**INCLUDING**  
**REMARKS ON THE CLIMATE**  
**with a sketch**  
**OF THE**  
**BOTANY AND GEOLOGY OF THE PROVINCE**

ALSO ON THE  
**WINES**  
AND  
**MINERAL WATERS**  
OF  
**FRANCE**

**The maladies to which they are applicable, and their effects upon the constitution.  
To which is added an appendix containing a variety of useful information to**

**THE TOURIST**

BY

**J. H. HOLDSWORTH, M. D.**

**TOURS,  
A. AIGRE, rue Royale.**

Messrs. CALIGNANIS, No 18, rue Vivienne, PARIS;  
HENRY RENSCHAW, No 356, Strand, LONDON;  
And all other Booksellers.

**1842**

«Thou, nature, art my Goddess; to thy law my services are bound.»  
SHAKSPEARE.

TO  
**LAWSON CAPE, M. D.**

**Lecturer at Saint-Thomas's Hospital**

**THIS SMALL VOLUME**

**IS INSCRIBED**

**As a slight testimony of friendship and esteem**

**BY THE  
AUTHOR.**

**PREFACE.**

The author of the present little volume in offering it to the public is sensible how crude and imperfect is its form. The haste with which from unavoidable circumstances, it has been composed and the difficulties he has had to contend with in printing it in a foreign country will, he trusts, be considered an excuse, however insufficient, for errors which would otherwise be unpardonable.

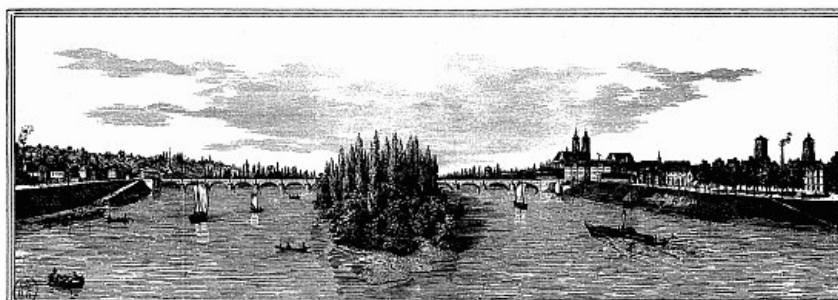
His object has been to convey information on subjects new to the generality of those who resort to France for the restoration of their health. In England, independent of the valetudinarian, not only the man of wealth and fashion, but the economist of time and means,—in these days of locomotive mania,—deem a visit to the continent almost indispensable; and in the majority of cases, after the resolution to take a trip abroad is formed the resolvent with a perfect indifference as to *route* or *locality*, becomes anxious to obtain information concerning such places as may in reality be most calculated to conduce to his health, pleasure, instruction or amusement,—either *en route*, or as a temporary place of residence.

Under a due consideration of these circumstances the author trusts having endeavoured to blend information with utility and amusement in so unpretending and general a form; he may be deemed to have accomplished the ends to which he has humbly aspired. And should his professional occupations at some future period, permit him to revise his work, he will render its style more worthy of the reader.

Tours, september 1842.

## CONTENTS.

	Page
Description of the scenery of Touraine	1
Remarks on the climate of Touraine	8
Beneficial effects of the climate considered	13
Directions for invalid travellers	25
Hydropathic treatment	32
Wines of France	34
Description of various routes to Tours	42
Notices respecting Tours and its neighbourhood	49
Sporting	54
Ancient Châteaux of Touraine	55
Mettray Colony	73
Remarks on society at Tours	81
Botany of Touraine	88
Information respecting the growth and varieties of the vine	97
Geology of Touraine	105
Spas of France	123
Spas of central France, their respective localities, medicinal virtues, diseases to which they are applicable, etc.	139
Classification of French wines, places where grown, character, comparative qualities, etc., etc.	186
Alcoholic strength of various wines and liquors	192
Meteorological Register for Tours	194
Reaumur's Thermometric scale turned into Fahrenheit's	208
Appendix.—Passports, Cash, Coinage	209
Useful information for travellers, etc., etc.	217
Expense of living in France, etc.	230



Lith. CLAREY-MARTINEAU.

VUE DE TOURS

r de la harpe 16, TOURS.

---

**MEMORANDA**  
**OF**  
**TOURS, TOURAINE,**  
**AND**  
**CENTRAL FRANCE.**

---

**CHARACTER OF THE SCENERY OF TOURAINE.**

Although there is little that can be denominated bold, or strikingly romantic, in the general aspect of the country around Tours, it nevertheless, possesses charms of a peculiar and novel nature, alike calculated to gratify a lover of the picturesque, tranquillize the mind, and renovate the enfeebled energies of the valetudinarian.

Hence it has long been famed as a favourite resort, more especially, of these classes of British Tourists, etc.; many adopting it as a temporary place of residence, whilst others have permanently established themselves in some of the beautiful sylvan retreats which characterize the more immediate vicinity of the city.

Throughout a vast area, the surface of the surrounding country is pleasingly diversified by gentle undulations, considerable tracts of which are adorned by dense masses of foliage, occasionally presenting deeply indented vistas, embosoming some modern country house or ancient Château, with its spacious, but somewhat formal pleasure grounds. Many picturesque vales with their meandering streams, verdant meadows, and towering poplars, also present themselves to the eye of the traveller, but the characteristic rural features of this portion of France are its wide spread *vineyards*, which may almost be said to occupy every slope, and crown every upland.

As throughout nearly the whole of these extensive tracts of fluttering verdure, the walnut, the apple, and in many instances the peach, apricot, cherry and almond, with innumerable elms, oaks, and gigantic specimens of the Lombardy poplar are thickly and pretty uniformly interspersed, the whole country assumes a remarkably foreign and sylvan character; the peaceful beauty of which is much heightened by the sequestered and vine clad abodes of the rural population, of the majority of which, it may almost literally be said, that they are surrounded by a terrestrial paradise, teeming with the most luscious and grateful productions of all bounteous nature.

Although such is the agreeable aspect of much of what may be termed the table lands of Touraine, the picturesque character of the landscape is much enhanced as we gradually descend into the capacious valley of the Loire.

On approaching the *Barrière de la Tranchée*, the ancient and handsome city of Tours, with the dome capped towers of its magnificent cathedral, and other churches, presents itself full in view, occupying a considerable area on the opposite banks of the river, and being encircled by a girdle of luxuriant foliage formed by its celebrated *Mall (le Mail)*, a spacious avenue of fine elms; beyond which, a fertile plain of about two miles broad extends to the Cher; which is immediately succeeded by the richly wooded southern slopes of the vale, thickly bespangled with the handsome white residences of the French noblesse.

The broad and voluminous waters of the Loire, are here, as in many other localities, adorned by two rather large and well planted islands, between which the noble bridge with its fifteen elliptic arches stretches across the stream; opening a direct communication with the spacious Rue Royale, said to be one of the handsomest streets in Europe.

The two opposite slopes of the beautiful vale of the Loire, which are sometimes deeply furrowed or intersected by denudated vallies, being thickly studded with pretty villas, surrounded by ornamental grounds, and intersected by thriving vineyards, with their sequestered villages, sometimes alone detectable by the tall taper minaret of the Parish church, piercing through the sombre masses of foliage that occasionally project far into the hurrying current, or abruptly recede to crown some bold projection of the adjacent heights, necessarily present, many

exceedingly interesting views, whose charming realities can alone be correctly depicted by the pencil of the artist, and many of which do in fact, merit to be delineated by the genius of a Claude.

The expansive plain through which this noble river gracefully serpentines, possesses an exceedingly fertile alluvial soil on a substratum of gravel, and is chiefly devoted to agricultural purposes; but, occasionally contains extensive tracts of pasture land, which fattens the majority of the cattle consumed in the adjacent districts. The soils of the table lands are comparatively poor and infertile, being for the most part constituted of a light sandy loam and tenacious calcareous marl, in which frequently a gravelly debris prevails, or innumerable flint stones are interspersed.

The subformations of the country being chiefly composed of sandstone and porous calcareous and siliceous rocks, renders the thin soils on these higher tracts extremely dry and arid. And perhaps this is more particularly the case where the white sandstone forms extensive mural terraces along the northern borders of the vale of the Loire. At *la Tranchée* this rock being barely covered, and where it happens to be so to any depth, by a porous loamy and gravelly deposit only,—this fact is peculiarly and very happily demonstrated by the healthiness of the place.

---

### CLIMATE OF TOURAINE, ETC.

A characteristic freedom from terreous moisture and aqueous exhalations, tends in no small degree to augment the natural salubrity of the Tourainean climate, and perhaps it is mainly indebted to its peculiar geological structure, which we shall presently consider more in detail, for the preference awarded to certain of its localities by invalids, over the somewhat milder but generally speaking more humid resorts of southern France.

The topographical situation also of Tours secures to it some advantageous peculiarities not possessed by many of the frequented places of the south. Pau in the south-west of France, one of its most formidable rivals, is, in consequence of its proximity to the Pyrenees, subject to considerable variations of temperature, and although a considerable distance from the coast, is very much under the influence of the Atlantic. All the changes though in some degree modified to which it gives rise extending as far as that place. These effects cannot be properly said to reach Tours, which is situated in a fine campaign country, and is at least twice the distance of Pau from the sea, or about one hundred and fifty miles; the temperature however of Tours is subject to rather frequent but decidedly not great vicissitudes, the thermometer being rarely above 80° in summer or below 40° in winter.

The comparative statements given by D<sup>r</sup> Playfair respecting the climates of several places in the north and south of Europe, may somewhat serve to illustrate that of Tours with regard to those respective localities:<sup>[A]</sup> «The mean annual temperature of Pau is 4½° higher than that of London, and about 3° higher than that of Penzance; it is about 5° lower than that of Marsilles, Nice, and Rome, and 10° lower than that of Maderia. In winter it is 2° warmer than London, 3° colder than Penzance, 6° colder than Nice and Rome, and 18° colder than Maderia. But in *spring* Pau is 6° warmer than London, and 5° warmer than Penzance; only 2½° colder than Marsilles and Rome, and 7° colder than Maderia.

The range of temperature, between the warmest and coldest months at Pau is 32°; this at London, and likewise at Rome is 26°; at Penzance it is only 18°, and at Maderia 14°. The daily range of temperature at Pau is 7½°, at Penzance it is 6½°, at Nice 8½°, at Rome 11°.»

At Tours the prevailing winds are south westerly. Between however the vernal equinox (the 21<sup>st</sup> of march and the latter part of april), easterly winds are rather frequent, but the city is pretty effectually protected from the effects of these and the north winds by the high range of country which stretches out from nearly east to west along the northern banks of the Loire. The long succession of handsome villas pleasantly situated opposite Tours at the base of these high grounds, occasionally climbing their slopes, and which are chiefly occupied by English families, being entirely protected from them.

The autumn which is peculiarly mild and may be said to be here exceedingly charming,—especially where the red tinted leaves of the vine impart a glowing richness to the vineyard clad landscape,—advances with an agreeable and smiling aspect into the more dreary month of december, when cold weather may, generally speaking, be said to have commenced; though the middle of most days is still cheered by a warm and genial sunshine. A good deal of heavy rain usually falls about the autumnal equinox, but is quickly absorbed by the porous soil and prevailing arenaceous formations of the neighbourhood, consequently, the atmosphere is particularly free from humidity.

A peculiar absence from cold winds may be strictly said to prevail the greater portion of the year, but perhaps the characteristic qualities of the climate are the equability of its seasons, and

the comparative mildness of its spring. Constituting in a high degree, that healthful atmosphere so indispensable to the preservation and improvement of our native energies both physical and mental.

In all chronic pulmonary affections, the quality of the air which is inspired into the lungs is well known to be a point of the most vital consequence, and therefore invalids affected by inflammatory affections of that organ experience much benefit by repairing to a climate like this, more particularly during the vernal exacerbations of the disease. Indeed experience has proved the climate of Tours to be peculiarly efficacious in bronchial affections, being very beneficial in almost all cases of irritation of the air passages, whether or not accompanied by increased secretion.

The mild equable temperature of the Touraine climate is peculiarly adapted to afford essential relief to persons predisposed to phthisis or consumption, and those suffering from laryngeal, bronchial, and catarrhal affections, assimilating that disease. Also to invalids labouring under chronic dyspepsia, gout, and rheumatic affections, a *winter's* residence particularly, in Tours, has frequently proved highly serviceable, and no inconsiderable benefit is experienced by persons who have contracted local disease from a residence in a tropical or unhealthy climate.

Most of the above mentioned diseases being generally induced by a continued subjection to the suddenness and excess of atmospherical vicissitudes, and which the efforts of medicine alone too frequently fail to eradicate or alleviate, it is sufficiently evident, that a removal to localities where these causes can be in a great measure obviated, is in most cases, the more commendable course the afflicted can pursue, as the one assuredly the most calculated to expedite the remedial skill of the Physician through the renovating virtues of those powerful and efficient agents, travelling and *change of air*.

When it is considered how much the natural character of the subtle and elastic fluid which surrounds the earth is changed and modified in different localities by the geographical position and physical peculiarities so variously distinguishing the respective regions of the globe, it will, we trust, readily be conceived from what has been stated of such circumstances, respecting Tours and its neighbourhood, that its prevailing climatic qualities cannot fail to be of a highly healthful tendency.

Tours, we have intimated, is too remote from the Ocean, to be prejudicially affected by its mutable influences, or by the vast stream of aqueous vapours perpetually arising from the great western waters;—it is environed by moderately elevated *absorbing* formations,—it is situated in a broad and extensive vale, whose fertile soils are based upon a thick alluvial deposit of gravel;—while its walls are bathed by the purifying waters of a wide, rapid and limpid river.

It is from such a happy combination of natural circumstances that its atmosphere possesses the transparency and elasticity which so strikingly characterizes it; and on which of course its peculiar adaptation for the due and healthful performance of the animal functions mainly depends.

Lord Bacon thinks the best air is to be met with in open campaign countries; where the soil is dry, not parched or sandy, and spontaneously produces wild thyme, wild marjorem, and the like sweet scented plants.

It is in fact sufficiently obvious, that wherever the aerial currents have a free and unobstructed circulation those injurious mixtures, in the form of vapour known under the name of *miasmata*, cannot disseminate their baneful seeds, the whole ingredients of the atmosphere being thereby continually amalgamated together.

The greater portion indeed of central France, it may justly be said, has as strong and palpable claims to a genial and equable climate, as the province of Touraine, with all its acknowledged local advantages. The winters are of very short duration, and a powerful sun during the greater part of the year dispenses heat and life through a cloudless and lucid atmosphere.

The present winter (1842), like its immediate predecessor has been somewhat remarkable for an unusual though partial severity. This was only experienced at Tours during the month of January, when a keen but dry atmosphere prevailed. The cold about this period however, seems to have been severely felt in the south of Europe generally, and in countries where the temperature is usually very mild. At *Rome* on the ninth January 1842, there was a fall of snow which remained on the ground several hours, and on the thirteenth the hills of Albano and Tusculum were still covered with snow. The cold was twenty two degrees below freezing point, which is a very rare circumstance in the Roman states. At *Carthagera*, where severe cold is seldom known, the thermometer fell for the first time to a degree and a half below zero. The hills for the first time for many years were covered with snow. At *Madrid*, the great basin of the Buen-Retiro was covered with ice several inches thick, and two sentinels of the queen's palace were frozen to death at their posts. At *Valencia* the thermometer fell seven degrees below freezing point. At *Burgois*, *Barcelona*, and *Cordova*, the weather was equally severe. Even the shores of *Africa* experienced a similar visitation;—at *Algiers* the thermometer stood at three degrees below zero. So low a temperature had not been experienced for twenty years. At *Trieste* on the third of January, the roads were blocked up with snow, and the Mails from France and Italy were two days in arrears.

During the same month at *Tours*, but a few very slight falls of snow were experienced, and which throughout the whole winter, with the exception of one or two days, did not cover the

ground for more than a few hours duration.

On the third, the thermometer here, stood at thirty-six degrees of Farenheit in the shade, on the ninth at 24°, the thirteenth at 31°, the fifteenth at 39°, the twentieth at 34°, and on the twenty-fifth at forty-six degrees; the latter being the highest point the mercury attained during the month, and seventeen at nine o'clock in the morning of the tenth, the lowest, and which at midday rose to twenty-five degrees. There were thirteen clear, sunny days, and but six in which rain or snow fell. The north east winds prevailed until the tenth, when west and south west winds set in, and continued until the end of the month. The average daily range of temperature was four and a half.

The weather of the succeeding month rapidly became still more propitious, and the many days which a genial sun shone forth in uninterrupted splendour, produced a very sensible effect upon vegetation, the swelling buds of many of the deciduous trees, appeared on the eve of expanding into full form and beauty, while the green mantle of the plain assumed a lively and luxurious appearance.

During the month of march the thermometer continues generally to range between forty and fifty degrees; the vegetable world now resumes its wonted vigour and activity with astonishing rapidity, and the whole face of nature begins to wear a smiling and cheerful aspect. The warm glowing sunshine of April completes the lovely picture, the tender plant is no longer held in bondage by the opposing elements, a thousand pretty odoriferous harbingers on every side remind us that the season of universal floescence is at hand, regenerated, benificent nature, rejoices beneath a serene and cloudless sky, and whilst a magical brilliancy illumines the new born verdure, the embryo bud, the expanded blossom, and the vigorous plant of spring, silently but eloquently give joyful promise of the abundant fruits of Autumn.

This is a pleasing but not overwrought picture of the forwardness and redundant beauty of the springs of central France:—

Where the resplendant orb of day  
Imparts the magic of his ray  
Een'through the wintry blast!  
And dormant nature forthwith springs,  
Mounting to life with vig'rous wings  
Triumphant oer the past.  
For now the rural gods do reign,  
Oer vine-clad hill and verdant plain,  
To grace the teemful earth;  
The clear, *elastic* air is fill'd,  
With sweets the flowerets have distill'd,  
To consecrate their birth.  
Redolent zephyrs play around,  
And *health* inspiring hills abound,  
Beneath these bright blue skies;  
New energy, new life to man they give,  
Bidding his drooping spirit live,  
And taste the *new-born-joys*.

---

## DIRECTIONS FOR INVALID TRAVELLERS.

It being a matter of the first importance to the valetudinarian to adopt every precaution against the atmospheric effects to which he is necessarily exposed in his transit from place to place, and also of great consequence to be provided with such comforts and necessaries as are probably not to be obtained in his route through the country; a few observations on this point may here with propriety be introduced, and which we think cannot be more judiciously stated than in the words, of a popular writer, who has spent many years in travelling on the continent. «It will add materially to the comforts and advantage of invalids who travel *en poste*, to have a courier who rides before, to avoid the delays at the post-stations, at frontiers, etc., and to have apartments at the hotels ready prepared on the arrival of his employers, as these circumstances often occasion a good deal of discomfort and annoyance to persons in bad health. An easy English-built carriage from a maker's on whom reliance can be placed, fitted up with conveniences, and springs and wheels suited to the continental roads, is requisite for those who wish to travel in comfort. Many of the roads are paved, which sometimes occasions considerable fatigue. For elderly and delicate persons who are liable to be affected by the transitions of temperature, a post-chariot is the best: for others a light travelling britscka, or *chaise de poste* will best answer the purpose.

It is very advisable for invalids, as well as persons in health, not to sit too long at a time in the

carriage, but to get out now and then to walk up the hills, or at the post-stations, as by so doing the fatigue consequent upon the muscles being kept long in the same position will be avoided.

Those persons who labour under affections of the air passages should be provided with a Jeffrey's respirator, though its too frequent use is not to be recommended, as tending to render the respiratory organs more susceptible. A pair of leather sheets may be placed beneath the seat-cushions, as a precaution against damp beds, which, however, are seldom met with in France or Italy. Essence of ginger is a useful stimulant, and a teaspoonful in a cup of tea on arriving after a days journey is very refreshing. Those who are in weak health, and travellers in general, should eat very sparingly of animal food when on a journey, as it tends to produce heat and flushing. Black tea is one of the most useful articles travellers can be provided with, as it is seldom good in small towns or at inns on the road. As an evening meal, tea, with a little cold meat or chicken, is much preferable to a hot dinner or supper, which not unfrequently is a cause of sleeplessness. Those who are subject to cold feet should be provided with short boots of coarse cloth, to slip on and off, over their ordinary boots, as occasion may require, and a small feet-warmer should be placed in the carriage. A large medicine chest, which is a constant companion of many families, will be cumbersome and unnecessary, as almost all medicines of good quality may be obtained in all the towns frequented by invalids. A small chest containing a few articles likely to be required at out of the way places (as lint, soap-plaster, James's powder, a small quantity of calomel, laudanum, extracts of henbane and colocynth, a box of aperient pills, spirits of ammonia, tartarised antimony, castor oil, rhubarb, weights and scales,) will, however, be a useful precautionary addition to the luggage.»

The cheering and beneficial influence of travelling through a succession of novel and agreeable scenes, to a mind under the distressing moral influences of grief, anxiety, or disappointment,—so frequently the precursors of disease,—is too apparent to need any expatiatory remarks on the subject; but we would particularly remind the valetudinarian who naturally, may be tempted to a frequent enjoyment of the prevailing sunshine of the winters of Touraine, that more, than an apparently sufficient warmth of clothing is necessary for such occasions; for, when the still powerful rays of the sun occasionally become suddenly obscured by clouds, or after that luminary has disappeared below the horizon, a rather formidable transition from a comparatively high to a low temperature is here the common result. The proper time for such persons to take exercise at this season of the year, is between twelve and three o'clock.

Nothing conduces more to a healthful action of the digestive functions, a free circulation of the blood, and the due performances of the various secretions, than a sufficiency of *daily walking exercise*, indeed than the neglect of it, a more common predisposing cause of disease does not exist:—a congestive state of particular organs, an impaired action of the muscles of respiration thereby inducing a tendency to consumption; and habitual cold feet, are among the multitudinous evils emanating from a listless and sedentary mode of life.

To persons addicted to travelling or who are necessarily much exposed to atmospheric vicissitudes, we would particularly recommend the hydropathic treatment, or perhaps more properly, what Dr Johnson terms the «*Calido-frigid sponging, or lavation.*»

This consists in sponging the face, throat, and upper part of the chest, night and morning, with *hot* water, and then immediately with *cold* water. Children also should be habituated to this sponging all over the body, as the means of inuring them to, and securing them from, the injuries produced by atmospheric vicissitudes. It is the best preservative against face-aches, toothaches (hot and cold water being alternately used to rinse the mouth), earaches, catarrhs, etc., so frequent and distressing in England. But its paramount virtue is that of preserving many a constitution from pulmonary consumption, the causes of which are often laid in repeated colds, and in the susceptibility to atmospheric impressions.

Invalids, on their arrival, should also pay great attention to their diet and regimen.

---

## WINES.

The wines of this country, should at first be but sparingly taken, for, on account of their acidity, an ordinary use of them at the outset, will frequently occasion considerable derangement of the digestive functions, but when persons become sufficiently accustomed to them, they constitute a light and wholesome beverage.

It is indeed worthy of remark that the wines of France, rank before those of other countries for their *Purely vinous* qualities, and so multitudinous are their diversities, that it is confidently affirmed there is no variety in the world which might not find an approximation to some one or another of her growths, and which invariably are manufactured according to well-fixed scientific principles.

The wines grown near Tours, are divided into three classes, namely, what is called *rouge noble*,



*vin du Cher*, and *rouge commun*.

Those of Saint-Nicolas-de-Bourgueil, Joué, Saint-Cyr, Chambray, and Saint-Avertin, are the most esteemed growths of Touraine.

The *Champigny* of Richelieu, and *Clos-Baudouin* of Vouvray and Rochecorbon, are also much in request. These red wines if of a genuine quality, are remarkable for their flavour and soft bouquet, which is balmy to the palate, and moderately taken are wholesome and exhilarating.

The price of the best Bourgueil is from one hundred and thirty francs to one hundred and fifty francs per barrique, of about three hundred and fifty bottles; and the Joué and Chambray from eighty to ninety francs per barrique. Some tolerable effervescing white wines are produced in the neighbourhood of Tours, the prices of which are a little under the red, but they are for the most part heady and treacherous, and want the perfume and vinosity of Champagne.

The highly esteemed rose coloured champagne may be purchased for seven francs per bottle, very tolerable may be had for three francs, and the recently, and most successfully *Champagnized* red Joué for two francs. A very good effervescing wine is grown on an extensive scale at Villedandry, about twelve miles from Tours, and which is exported in large quantities to Russia.

Of the sounder, most delicate and *recherché* of the red wines to be readily obtained at Tours, we may particularly enumerate Bordeaux—which even when prepared for the English markets, still possesses the fine qualities of the pure wine;—and Burgundy, of which, the Romanée Saint-Vivant, and Romanée Conti, are the best and most perfect. It may also be observed that the *vin crémant d'Ay* which is the least frothy and fullest bodied of the effervescing wines, is held in high repute, being grateful and stomachic.

The Champagne wines are divided into sparkling (*mousseux*), demi sparkling (*demi-mousseux*), and still wines (*non mousseux*). Their effervescence is owing to the *carbonic acid gas*, produced in the process of fermentation. And we are told that as this gas is produced in the cask or (as more quickly) in the bottle, the saccharine and tartarous principles are decomposed.

If the latter principle predominates, the wine effervesces strongly, but is weak; if the saccharine principle be considerable and the alcohol found in sufficient quantity to limit its decomposition, the quality is good. Wine of moderate effervescence is invariably selected by connoisseurs in Champagne, and such wine carries the best price.

Of the still class, a wine put into bottles when about ten or twelve months old designated, *ptisannes* of Champagne, is greatly recommended as aperient and diuretic.

The champagne wines are light in quality in respect to spirit, the average of alcohol in the generality of them, according to professor Brande, being but 12.61 per cent.

It is a remarkable and well ascertained fact, that the alcohol in wine combined in the *natural way*, when drank in that state, is not productive of those complaints of the liver, and other diseases, which arise from drinking the brandied wines of Portugal, in which the *spirit is foreign*. The union of the alcohol, being mingled with the other ingredients of the wine by artificial means, is never perfect, and is beyond calculation more pernicious than the strongest natural product.

The light wines of France may not on first acquaintance prove so relishing or pleasant to the English palate accustomed to adulterated or brandied wines; they however in reality, not only impart a cheerfulness and exhilaration, a kind of pleasant easy buoyancy entirely different from what arises from the use of port, or the spirituous heavier wines but have when taken largely a much less injurious effect upon the constitution.

This remark would perhaps seem more strictly to apply to the wines made for home consumption, as a small per centage of Brandy and syrup of raisins are generally mingled with the French wines to please the foreign palate.

The generous juice of the grape, was undoubtedly bestowed upon man by his beneficent Creator, to impart health and vigour to his physical energies, and a wholesome cheerfulness to his soul; and if he would wish to avoid enervating the one or brutalizing the other, he will do well to eschew all «mixed wine», which before the period of its scriptural denunciation to the present, has ever and anon manifested itself in the «living temples» of its besotted votaries in the character of indigestion, apoplexy, dropsy, gout, delirium, tremours, and a long train of diseases.

«Strong drink is raging, and whosoever is deceived thereby is not wise»; but *pure* wine upon a *healthy* stomach, is grateful and precious as the light of truth and the exercise of discretion, to a sound and well-regulated mind.<sup>[B]</sup>

Such are the facilities for travelling afforded by the two countries, that a journey may now be performed with ease and comfort between London and Tours, in the short space of fifty hours! being a distance of about four hundred miles. This is to be effected by the railway from the metropolis to Southampton, and thence by the splendid steam packets to Hâvre, from which place a well appointed *malle-poste* daily runs to Tours.<sup>[C]</sup>

The nearest way from Hâvre to Tours, being a distance of about one hundred and sixty miles, is by Honfleur, Lizieux, Alençon and Le Mans, which diligences regularly perform. But perhaps the most picturesque routes are by way of Rouen. The post road from Hâvre to Rouen, along the northern banks of the Seine, frequently presents the most beautiful and varied prospects; but if possible, the picturesque scenery which successively presents itself in an ascent by steam vessel up the Seine to Rouen is of a more exquisitely charming character. Passing between Harfleur and Honfleur, which are pleasantly situated on the opposite elevated slopes, near the mouth of the river, a small but most beautiful bay presents itself bounded by a series of gently rising, well wooded hills, occasionally decorated with a spacious mansion, or bespangled with neat cottages and elegant villas. On approaching Quillebeuf, near which there is a spot, said to exceed in picturesque beauty the banks of the Rhine, the river becomes narrower, and as we continue to follow its exceedingly tortuous course, a rapid succession of lovely sylvan scenery gratifies the eye.

The heights which border the Seine, and which are constituted of the chalk formation, are deeply furrowed by a continuous series of transverse vallies, forming a succession of rounded elevations, which together, present a remarkable natural phenomena, well worthy the particular attention of the speculative geologist. Many of these heights are clad with a rich garb of foliage, as are also most of their concomitant vales, in some of which a pretty neat village is sequesteredly ensconced, while its neighbouring hills are adorned by a château, or the semblance of some noble ruin, in the bold indentations of a grey rocky precipice peering through dense masses of foliage.

As the vicinity of Rouen is approached, the opposite hills gradually expand, leaving at their base an extensive plain of luxuriant pastures and waving corn fields, around which the Seine winds in graceful folds, till, on reaching the environs of Rouen, it encircles islands of the richest verdure. At this point, the ancient capital of Normandy appears in view, with its venerable temples, noble buildings, quays, and hosts of sea and river craft; the whole being surrounded by an expansive amphitheatre of thickly timbered hills.

The distance from Hâvre to Rouen by land is fifty-three miles, but up the Seine it is about eighty miles; the extra length however of the journey occasioned by the extremely indirect course of the river, is amply compensated for by the exquisite and ever varying prospects afforded by the passage up the Seine.

Another extremely interesting and convenient route to Tours might be pointed out, to such as could bear the fatigues of a lengthened voyage and long land trip, by way of the channel islands to Saint-Malo, and thence by diligence, through the romantic primary districts of Brittany, to Rennes and Nantes, the chief place of the department of Loire-Inférieure, and one of the richest and most commercial towns of France; it is situated on the right banks of the Loire, at the confluence of the Indre and the Severe. From this place the traveller may reach Tours by the regular conveyances, through Angers and Saumur; or, by ascending the Loire in one of the neat steam packets which perform regular trips between Nantes and Orléans: the fare by which to Tours is but twelve francs, though the distance thus performed is upwards of one hundred and forty miles. The land journey which is about one hundred and thirty miles, is extremely diversified and pleasing, but that by water is of surpassing beauty; the delighted voyager wends his way where many a verdant isle smiles amid the stream, through an endless variety of lake-like scenery, enriched on either hand in the highest degree by rocky escarpments, and gently rising grounds clad with vineyards, and numerous other choice productions of the vegetable kingdom, now receding so as to form an expansive plain of verdant pastures, and anon abruptly projecting with their lovely sylvan burdens into the very centre of the broad and glittering stream.

In closing these few descriptive remarks on the character of the most prominent routes to Tours, from northern France, we must not omit to remind the invalided especially, that the one from Dover to Calais, or to Boulogne, and thence to Paris, Orléans, and Blois, is perhaps in many cases, to be preferred on account of the *shortness* of the sea passage; and although one of a circuitous character, it necessarily presents many natural and artificial features of stirring interest and beauty.

---

## TOURS.

The city of Tours, may be divided into two compartments, the *ancient* and the modern.

The modern portion is no less distinguished for its neatness and elegance, than is the ancient

for its antique character, and the number of monuments it contains, illustrative of the histories of remote ages.

Tours, now head quarters of the department of Indre-et-Loire, was before the revolution, the capital of Touraine, and the seat of the governors; it is one of the most ancient archbishoprics of France, and the station of the fourth military division.

Chroniclers have never been able to give a precise date and name to the foundation and the founder of Tours.

When *Cæsar* made his expedition into Gaul, it was the *Civitas Turonum* so often mentioned in the commentaries of the conquering historian. Conquest, however, gave the city another name, and the Romans called it Cessarodunum. It fell alternately into the power of the Goths and the Franks. In 732 Charles-Martel gained under its walls a celebrated victory over the Saracens, who attracted by the *mildness of the climate* tried to fix their wandering tents in its smiling plains: but it was only in 1202 after having suffered all the miseries of barbarism that Tours was at last reunited to the crown of France.

This city was become so important by its central position and the resources of its environs, that in the space of less than a century, from 1470 to 1506, the states general assembled in it three times. Henry 3<sup>rd</sup>, pressed by the League, transferred the parliament to it in 1587. If we believe the ancient chroniclers whom Froissart and Monstrelet copied, the city of Tours had a much more ancient origin. It is to a great prince named Turnus, who after the siege of Troy came into Gaul and died not far from this city, where, say these chroniclers, his tomb has long been seen, that Tours owes its origin and its name.

Tours and its neighbourhood afford many resources for the active and agreeable employment of the mind. It has long been pre-eminently distinguished for the *agrémens* of its society. Elegance and urbanity characterize the demeanour of the native noblesse; the British residents and visitants are composed of the most respectable grades, amongst whom, a reciprocation of friendly intercourse is cherished with perhaps more than the ordinary assiduity so generally productive of affable association among the English abroad.

The French language is considered to be spoken in its greatest purity in Touraine, a desideratum of much consequence to persons who resort to France for the education of their children, and it may also be proper to remark that there is a classical establishment for young gentlemen in the immediate vicinity of the city. Tours also possesses a library containing some valuable MSS., some of which are of the sixth century, a museum of painting and natural history, a college, a society of agriculture, science, art, and belles-lettres, a theatre, excellent baths, and extensive umbrageous promenades. There are two English episcopal chapels, one in Tours, and the other but recently opened is situated on the Tranchée; an English club has long been established; which is now supported with great spirit and liberality, affording all the usual attractions of such institutions, and where many of the English newspapers are daily received.

The theatre is frequently open, and balls and routs prevail during the winter season. The hôtels are replete with every comfort and accommodation.

Tours also possesses an excellent English boarding house; and elegant houses, villas and châteaux, well furnished, are to be readily obtained in the town and its environs. All kinds of provisions are exceedingly plentiful, which with the numerous fruits and wines are to be obtained at very moderate prices.

---

## SPORTING.

The lovers of rural sports and pastimes, may find much to interest them in this and the neighbouring departments. The Loire and the Cher afford excellent diversion to the angler, and occasionally to the fowler, being during the autumnal and winter months sometimes frequented by large flocks of aquatic birds. The wild boar and the *chevreuil*, a small but elegant species of deer, are to be found in the forest; the vast intermediate tracts of arable land are however for the most part but thinly stocked with game.

---

## CHATEAUX.

The ancient châteaux within an easy distance of Tours merit the attention of the antiquarian, some of them possessing historical associations of a highly interesting character. The principal are the châteaux of Loches, Chenonceaux, Chinon, and Amboise; of which respectively, for the gratification of those who feel a pleasure in journeying to gaze upon these sombre and for the most part dilapidated monuments of the «instability of all sublunary things,» we will proceed to enter upon a brief description.

### LOCHES.

The vast fortress of Loches,—which is twenty five miles from Tours,—has been the residence of many of the kings of France, since it was occupied by Philip Augustus.

Within the range of its former precincts the Tomb of the famous Agnès Sorel in black marble may still be seen. As may also the dungeon in which Ludovico Sforce duke of Milan was confined in 1500.

The castle, or rather prison, which it is said was founded during the Roman domination in this part of the country, presents some striking specimens of its pristine magnificence.

We are informed that in this abode of terror, there were dungeons under dungeons, some of them unknown even to the keepers themselves; men were frequently doomed to pass the remainder of their lives here, breathing impure air and subsisting on bread and water. At this formidable castle were also those horrible places of confinement called *cages*, in which the wretched prisoner could neither stand upright nor stretch himself at length.

The celebrated cardinal Balue was confined here by order of Louis 11<sup>th</sup>, for many years in one of these cages. The Duke of Alençon, Charles de Melun and Philippe de Commines were also imprisoned in this fortress. It was successively occupied by Charles 7<sup>th</sup>, Louis 11<sup>th</sup>, Charles 8<sup>th</sup>, Louis 12<sup>th</sup>, Francis 1<sup>st</sup>, Henry 2<sup>nd</sup> and Charles 9<sup>th</sup>.

### CHINON.

THE CHATEAU OF CHINON, which in ancient times was a place of great strength, it is said was once composed of three distinct castles, erected at three different epochs. Ten kings of France had occasionally made it their place of residence. Henry the second, and Richard the First died here. Joan of Arc had an interview with Charles the 7<sup>th</sup> at this place; the remains of the room in which it occurred are still shewn. But a few dismantled towers and dilapidated walls now alone remain to mark the elevated site of the magnificent superstructure, which in days of yore proudly towered above the lovely sylvan scenery of the fertile vale of the Vienne.

Chinon is about thirty miles from Tours.

### AMBOISE.

THE CASTLE OF AMBOISE is a noble structure of great antiquity; and from the beauty of its elevated situation on the southern banks of the Loire, and the drive to it from Tours, of about twelve miles, being of a romantic and very interesting character, it is an object of much attraction to the general Tourist.

Constantine rebuilt the fort soon after its destruction by Diocletian. Charles the 8<sup>th</sup>, resided at this his birth place many years prior to his ascending the French throne; and in 1498 he here expired.

The two large towers which form a protected communication between the castle and the town below, were built by this monarch. One of the towers is remarkable for its internal spiral roadway, up which cavalry may ascend four abreast.

Louis 12<sup>th</sup>, Francis 1<sup>st</sup>, Henry 2<sup>nd</sup>, and Francis 2<sup>nd</sup> respectively contributed towards the improvement and adornment of the castle, and which by an act of Louis 16<sup>th</sup>, became the property of the Orléans family.

The small detached chapel dedicated to St.-Hubert is much admired for its sculptural embellishments in alto-relievo.

The pleasure grounds attached to the castle which are partially laid out in the English fashion, are extensive and diversified, and the view of the adjacent country from the terraces is remarkable for its picturesque beauty.

The glittering waters of the princely Loire studded with its numerous little green Isles, and white sails of commerce, are seen rapidly coursing in intricate windings through the broad, rich plain of corn-fields, for many miles in extent, both to the east and west, and which is bordered by bold elevations, and cliffs of chalk and calcareous sandstone, surmounted by a succession of beautiful vineyards. And perhaps the most singular feature in this varied landscape, is the vast chain of human habitations, which, like a whitened irregular stratum may be seen stretching out as far as the eye can reach in opposite directions, along the whole slope of the southern elevations just adverted to. They contain a large population, principally constituted of the cultivators of the adjacent plain and hills, the slopes being chiefly occupied by pretty white villas belonging to the better classes, while in the abrupt intermediate precipices of rock, the poor have scooped out their indestructible dwellings. And which, certainly possess some considerable advantages over those of their more pretending neighbours, being warm in winter, cool in summer, and dry in all seasons. These subterranean abodes, together present an exceedingly curious and novel spectacle. Sometimes the excavations are continued a considerable height up the cliff, and the numerous doors and windows in the face of it, apprise the spectator that, his species here literally «live and have their being» in the foundations of the earth! A kind of fret work or fantastically wrought sculpture not unfrequently over-arches the entrance, or hangs like an ornamental frieze above entire dwellings, which on a close inspection we discover to be the mystical workings and embellishments of nature herself, being actually constituted of a bed of fossil zoophytes, which in the very spot they now occupy, vegetated at the bottom of the antediluvian Ocean! How strange the transformation! How astounding the physical revolutions time has here effected!—The identical *bed of coral*, over which the turbulent waves of the Ocean rolled for centuries, and amid which the finny tribe disported, now, in its pristine position, forms a roof for the permanent dwellings of man! Which, with their fruitful vines flourishing around the doors, and the smoke from the domestic hearth rising in graceful curls through the submarine production, or as sometimes seen, peering through some verdant knoll, present a singular, but pleasing picture of humble contentment security and peace.

Near the western visible extremity of these thickly peopled hills, the lofty turrets of Tours cathedral are distinctly visible in the horizon.

But in our enumeration of the more striking features of this interesting panorama, we must not omit to mention the long island in the middle of the river, immediately below the castle, and which communicates with the town by a stone bridge of ten arches, and with the opposite bank by a curiously constructed wooden bridge of eleven arches. The portion of the island above the bridges, being covered with a verdant turf, and tall trees, affords a very agreeable and favourite promenade, while the part contiguous to the bridges being entirely occupied by houses, presents the curious appearance of a small town floating as it were on the hurrying current.

Visitors from Tours to this place sometimes extend their drive on the same day to Chenonceaux, a distance of ten miles through the extensive forest of Amboise, and return from thence to the city, a drive of twenty miles, along the interesting banks of the river Cher.

### **CASTLE OF CHENONCEAUX.**

This a large and majestic structure, and being built upon arches constructed across the Cher exhibits a singular appearance, and its approach through a noble avenue of trees is one of striking beauty.

This beautiful chateau, supposed to have been erected in the thirteenth century, became crown property in 1535.

It was greatly improved and embellished by Diana of Poitiers, mistress of Henry 2<sup>nd</sup> who however was afterwards compelled by Catherine de Médicis to exchange this splendid gift of her munificent lord, for Chaumont-sur-Loire.

Its extensive picture gallery contains a considerable variety of interesting paintings and ancient portraits. In short the general character and internal decorations of this spacious and antique building, its neat and extensive pleasure grounds, with the pretty sylvan park attached thereto, together render the place an object of very general interest.

### **PLESSIS-LES-TOURS.**

In the plain, about a mile to the west-ward of Tours, a few comparatively inconsiderable

remains of the royal Castle and appendages of Plessis-les-Tours, are still to be seen; they consist of an extensive wall about 15 feet high enclosing about 60 acres of arable land, an uninteresting habitable portion of the ancient structure, and a remnant of the once famous and beautiful Saint Hubert's Chapel. These solitary relics in fact barely suffice to attest the spot where high in the air, arose the noble and massive pile, which during the feudal times of darkness and of danger, was watched and defended with the most extreme and jealous care.

This castle was the favourite residence of Louis XI, and many were the strange and plotting scenes enacted here during the period it was dignified by the presence of his mysterious court. He is said to have been excessively superstitious, crafty, vindictive and cruel, and the vigilance and surveillance he caused to be exercised in the vicinity of his palace, by his not over scrupulous agents, continually filled the surrounding neighbourhood with awe and apprehension.

A vast enclosed chase, termed in latin of the middle ages, *Plexitium*, encircled the external enclosures surrounding the open esplanade which sloped up to the castle walls, rendering the precincts of the Royal domain as sombre and portentous in aspect, as were the dark and multiplied battlements which frowned above the monarchs of the surrounding forests.

The cruel and treacherous cardinal La Balue was a great favourite at this court, and for a considerable period basked in the smiles of royalty at Plessis-les-Tours, but Louis having strong grounds for suspecting that he had been mainly instrumental in betraying him to the duke of Burgundy,—his feuds with whom were highest about 1460—he ultimately caused him to be immured in one of the iron cages, we have referred to in our notice of Loches. In this horrid den, the invention of which some ascribe to Balue himself, he was confined eleven years, principally it is said at Plessis-les-Tours, nor did Louis permit him to be liberated till his last illness.

Such are a few of the historical facts associated with the crumbling memento which as yet remain of this favourite and beautiful demesne of a great and powerful monarch. All its proud bulwarks have long since fallen beneath the ruthless hand of time, and its noble and extensive forests been laid prostrate by the active axe of the cultivator, while the march of rural improvement which has entirely renewed the face of the plain, will ere long have swept every ancient vestige away leaving the antiquary to search for the locality of Plessis-les-Tours, alone in the page of History.

But what reasonable and enlightened mind will regret even such a consummation, for, as moral improvement advances towards the climax of perfection, we every day see the face of nature rejoicing in its progress, and her children enjoying the fruits of their industry in the fullness of freedom and of unrestricted liberty.

The clustering vine and the golden waving corn, now deck the place of the arbitrary halls, and the dismal dungeons of the castle, the peaceful hamlet with its neat and assiduously cultivated gardens, covers no inconsiderable portion of the once exclusive and lordly precincts, while its unsophisticated population pursue their daily avocations in fearlessness and in peace.

Old tottering ruins and dismantled Towers may of themselves under many circumstances be justly deemed very picturesque objects, and merit to be valued accordingly, but to preserve and venerate *all* solely for their historical associations, which at best, are but too frequently the dark and ignominious doings of a clandestine and barbarous age, would seem to argue a morbid sensibility, more befitting the devoted and infatuated antiquarian, than the true and enlightened philosopher who sees "language in stones and God in everything."

There are a few other ancient Châteaux and some inconsiderable architectural remains in the arrondissement, but as they present few or no features of general interest, it would be a work of supererogation to particularize them; we cannot however close these brief notices without particularly adverting to a very laudable and attractive modern institution, situated at the pretty sequestered village of Mettray, about three miles from Tours. And this we shall do with the more pleasure, as its philanthropic object, judicious development of its practical plans, moral and religious administration, would do honor to any nation in the world.

The purport of this Institution, which is denominated an "Agricultural Colony", is to reform juvenile delinquents; and by the inculcation of moral and religious principles, aided by sober methodical and industrious habits, to effect the great work of penitentiary reform. The founders and devoted benefactors of the colony are Mr de Metz and viscount de Bretignères. These benevolent gentlemen took the sublime idea of such a project from the reform colony founded by the worthy and excellent Hickerr, at Horn near Hambourg in 1834. And they have so zealously and skilfully executed their designs, as to have already realized in all essential particulars, a beautiful model of their admirable prototype.

The colony is composed of a certain number of uniformly built houses;—Each house contains forty children, divided into two sections, and forming one family, headed by a chief, who has subject to his orders two under teachers.

The first Sunday of each month, a colonist is elected in the respective sections, who takes the title of elder Brother; and serves as mediator between the masters and the pupils. The houses are erected (30 feet) distant from each other, and are united by sheds. The ground floor of the "Maison de la Ville de Paris" occupied by the family A,—is organized like the work shops at Horn, it contains work rooms of tailors, shoemakers, saddlers, etc., and the rest are arranged in nearly the same manner. The house of Count d'Aurches on the ground floor contains six prison cells on the first story, the director's room, and that of the agent of the agricultural works. On the second

story, the office and the lodging room of the accountable agent,—a forge and a braziers work shop for the service of the house, are established under the fourth shed. The adjacent large building is intended for a class of 300 scholars; the chaplain and the professor of gymnastics occupy the house opposite those of the colonists. A handsome chapel has recently been added to the establishment.

The instruction given to the colonists is regulated by the station they are likely to fill in the world.

For the suppression of vice, a tribunal composed of the colonists inscribed on the honourable list, is deputed to try serious offences, the directors reserving to themselves the right of softening those judgments which may be too severe.

The heads of each family (young men of irreproachable conduct, selected on the formation of the colony from poor but respectable families) conduct their children to the fields, and the work rooms, which are separated into several divisions by a partition of a yard in height; by the manner of which distribution a single chief can at the same time overlook the works of the whole. After the ordinary occupations of the day, the children return to their respective families, where it is sought to instil in their hardened minds those affections and good feelings which the carelessness or depravity of their parents had blighted.

When a fresh pupil arrives at the establishment, he is placed under the peculiar care of an intelligent person who studies his disposition, and who each day gives to the director an account of the results of his observations; after a certain period of trial, the child is admitted in a family, where is performed a religious ceremony, and a sermon preached to prove the blessing of finding a safe asylum after many temptations;—it is then the new comer is reinstated in the eyes of the colony and its directors; who take it on themselves, if he conducts himself well, to place him, and to appoint him a zealous patron who enjoys public esteem.

Such is the philanthropic nature of the system adopted in this admirable institution, already productive of the happiest results; and so judiciously and efficaciously have the economical and industrial departments been conducted, that it is confidently expected, the colony will in two years support itself.

The visitor will be highly gratified by a trip to this establishment, the *tout ensemble* of which on a fine summer's day, particularly, is one of surpassing loveliness. Its pretty white Swisslike buildings are completely environed by woods, groves, vineyards, and tastefully decorated pleasure grounds, which, viewed as the hallowed precincts of practical humanity and piety, are highly calculated to inspire the reflective mind with the most pleasing thoughts and emotions.

Peaceful abode! with rural beauty rife,  
And charms that smooth the rugged paths of life;  
Here human aid assumes a power divine,  
And *Virtue's* fix'd her gentle, hallowed shrine;  
Erring, untutor'd youth, enraptur'd pause  
Mid wild career, to recognize her laws.  
*Vice* with her direful train abash'd retires,  
Nor dares to light her soul-consuming fires;  
*Industry* with her sober, powerful arm,  
Guards the young mind, and keeps the passions calm:  
While benign *religion*, with sweet controul,  
Gently compels, the wild and wayward soul  
To taste the various joys her truths impart,  
And kiss the rod that rectifies the heart.

The customary paved roads having in this department as in many other provinces of France been broken up, and superseded by well formed macadamized ones, trips into the surrounding country can be performed with as much ease and facility as is afforded by the unequalled highways of England.

The steam packets which navigate the river as far down as Nantes, and up to Orléans, offer every facility for agreeable excursions.

---

## SOCIETY.

It is presumed that in closing these multifarious notices, a few words touching the social habits and condition of the little *coterie* of English located at Tours, may prove acceptable to the general reader, as well as to persons who contemplate an abode within its interesting precincts.

The established etiquette is, for those who have resolved on a period of residence, *first* to call upon such of the British residents as they may feel disposed to visit, which acts of courtesy, are, generally speaking, the prelude to a reciprocity of agreeable and social intercourse.

An air of high respectability, and elegance, is characteristic of the Anglo-French circle of acquaintance pervading Tours and its environs; the newly arrived man of social habits and fashion, may if he chooses, soon possess the happy consciousness of feeling, that, though distant from friends and native land, he has his customary social comforts, and habitual pleasures and refinements of life, completely at his command.

It is true, these enjoyments exist in a limited and circumscribed form, but for this very reason, facility of intercourse and goodfellowship, are distinguished by an acuteness of character, rarely to be found in the far more expansive arrondissements of English society at home.

The warm, generous heart of the Englishman, like the concentrated rays of the genial orb of day, here, glows with the greater intensity on all who come within the sphere of its vivifying influence.

Behold him seated at his hospitable board, which groans beneath the cheapened luxuries and substantial fare, alike of his native and his adopted land, and gladdened by the presence of his selected countrymen, who perhaps like himself, have quitted their native shores, to seek for renewed pleasure, wonted repose, health, or it may be economy, abroad. The sparkling champagne speedily thaws the icy formula which too often envelopes and conceals the best, inherent feelings of his nature, and in the exuberance of his zeal for the universal cultivation of the *social principle*, and his lively sense of national toleration and liberality, he rises to toast, with equal sincerity, the beloved Queen of old England, or the citizen King of France.

And in what a pretty sylvan retreat has he snugly domiciled himself!—his white freestone villa, which presents a pleasing display of architectural elegance, is replete with every internal comfort; a smiling *parterre*, decked with many a fine specimen of the stately cypress, a garden stored with rare and luscious fruits, and the generous vine every where hanging in graceful festoons, are the most prominent adjuncts of his sequestered retirement.

There is in short, an exclusiveness, a completeness, spaciousness and peacefulness, about this his foreign abode, which comports well with his native feelings, and closely assimilates with the home of his childhood.

Such are the brighter parts of a pleasing picture, and it would hardly appear fair, were we to recount them without a glance at its darker shades, which, circumscribed like some of the former; are also of an intense character, and in the busy workings of the ill disposed curiosity monger, often appear, as the concentrated essence of bold conjecture. In plain terms, here, as in other small communities, the condition, and character of individuals, are constantly subjected to the microscopic investigations of the vigilant, and not over scrupulous retailers of flying news, and *interesting on dits*.

The good feeling of the well-bred, and liberal minded Frenchman, is ever here, manifested towards the English, in a variety of pleasing demonstrations, constituting a series of practical illustrations of that native politeness, for which he is pre-eminently distinguished.

And no one can, we think, be a spectator of these mutual good offices, and growing interchange of kindly feeling, between the subjects of two nations which have so long been led to regard each other as inveterate foes,—without rejoicing at the liberal and peaceful policy which maintains inviolate the present order of things. Beneath its fostering and genial sway, the acceleration of the respective national interests and energies, the reciprocal cultivation of the arts and sciences, the advancement of true religion and benevolence, and the consolidation of domestic happiness, though amongst the most prominent, are but a meagre catalogue of the mutual benefits, which the two neighbouring nations, cannot fail to realize, as the blessings of a *permanent peace*.

---

## BOTANY OF TOURAINE.

In this rapid enumeration of the more prominently interesting features of Indre-et-Loire, it would appear unpardonable were we to pass over wholly unnoticed, the Botanical productions of the department, the great variety and successful culture of which, have long since obtained for it the enviable *sobriquet* of the *garden of France*. And perhaps it behoves us the more especially to glance at it in an essay of this character, as the study of Botany has become so favorite and fashionable a pursuit, that scarcely a person of any pretensions to elegant taste, or to refined intellectual occupations, traverses a new or distant region without endeavouring to increase the interesting riches of his *Hortus siccus*: or at least to bestow some attention to its natural floral and arborescent productions.

It is justly observed that a Botanical taste, of all sources of amusement, is, to an invalid,



perhaps the most desirable. When exercise is the only object it becomes irksome even in the loveliest scenery; the Botanist is however beguiled onwards with a never ceasing fascination, yet so leisurely as not to induce fatigue; and when his strength is unequal to excursions of higher attainment, he can find beauties in the humblest paths.

Frenchmen take much delight in their gardens, which are often very extensive and characterized by great neatness and uniformity, indeed in the majority of instances regularity is carried to excess;—clipped hedges, alleys laid out in straight lines, flower beds tortured into fantastic shapes, trees cut in the form of pyramids, birds, animals, etc., are the order of the day. The principles of good taste are however beginning to manifest themselves in the adoption of a more natural and elaborate style in the laying out of grounds which surround many of the more modern mansions, etc. And they are frequently enriched by choice and rare collections of exotic plants. Among the most conspicuous of the arborescent kinds, which adorn the pleasure grounds of such establishments, may be named the cypress de la Louisiane, the *Pinus Silvestris*, the graceful Weeping-willow, and *Acacia*, which here grow to great perfection; the *Arbutus*, Bay tree, Laurel, Fig tree, Chesnut, and Majestic Cedar of Lebanon. They also frequently contain some fine specimens of the beautiful family of mimosas, a variety of *Pelargoniums*, with the elegant *Coronille*, and *Annas*.

Between four hundred and five hundred plants are said to be cultivated in the gardens. And upwards of twelve hundred wild plants have been enumerated as belonging to Touraine, besides the *cryptogamia*, such as the mosses, ferns, liverworts, and mushrooms.

In the woods and forests are found from one hundred and fifty to two hundred plants; amongst which may be mentioned the genera *Amentaceæ*, which flower and blossom. In the month of April the woods are bespangled with the violet. *Viola*. *Ficaria*. Wind-flower. *Anemone nemorosa*. Lung-wort. *Pulmonaria Officinalis*. etc. In May and June we there also find the *Orchis Mellitis*. Periwinkle. *Vinca Major*. Hyacinth or Blue Bell. *Hyacinthus non-scriptus*. Hare Bell. *Campanula rotundifolia*. St. John's Wort. *Hypericum-pulchrum*. Crane's Bill. *Geranium Molle*. Bitter vetch. *Orobus tuberosus*. Strawberry leaved cinque-foil. *Potentilla Frargariastrum*. Wood Angelica. *Angelica Sylvestris*. The star of Bethlehem. *Ornithogalum pyrenaicum*. Black centaury. *Centaurea Nigra*. Forget me not. *Myosotis palustris*. The above are to be found in the Woods of Chatenay, etc. in the immediate neighbourhood of Tours.

On the commons and higher arid tracts, are seen the cross leaved Heath. *Erica Tetralix*. Fine leaved Heath. *Erica cineria*. Male Fern. *Aspidium Felix Mas*. Common Broom. *Sparticum scoparium*. And the Furze. *Ulex Europæus*. When these hardy natives of the wold and the waste, happen to be grouped together, which is very commonly the case, the varied and vivid hues of their blossoms, present a striking contrast, and a very pleasing appearance.

Between two hundred and three hundred plants are common to the cultivated fields, of which, may be named, the Corn Blue Bottle. *Centaurea cyanus*. Red Poppy. *Papaver Rhœa*. Venus's Mirror. *Campanula speculum*. Corn Cockle. *Agrostemma Githago*. Corn Spurrey. *Spergula Arvensis*. Common yellow Rattle. *Rhinanthus Crista-Galli*. Great White Ox Eye. *Chrysanthemum Leucanthemum*. All flowering in July and August.

In the meadows which occupy the vales, subject to occasional inundations, a very great variety of plants luxuriate, consisting for the most part of the Family *Graminaceæ* amongst them may be seen shining the Pile-wort. *Ranunculus Ficaria*. Crow-foot. *Ranunculus sceleratus*. And many others of this genus. The Cuckoo flower. *Cardamine Pratensis*. Ragged Robin. *Lychnis Floscuculi*. White Champion. *Lichnis vespertina*. Tale Red Rattle. *Pedicularis palustris*. Queen of the Meadows. *Spiræa Ulmaria*. *Upatoria Cannabinum*. Common Loosestrife. *Lysimachia vulgaris*. Also the *Parnassia Palustris*, *Gentiana cruciata*, and *Colchicum Autumnale*.

On the surface of the Pools and Brooks, many beautiful specimens of the *Nymphæa* are to be seen reposing, as those of the white water Lilly. *Nymphæa Alba*, and yellow water Lilly. *Nymphæa Lutea*. On their banks may also be found the Water Iris, or Flower de Luce. *Iris Pseudacorus*.—The emblem of France. The Flowering Rush. *Butomus umbellatus*. Arrow Head. *Sagittaria sagittifolia*, and Water ranunculus. *Ranunculus aquatilis*.

Our limits will not admit of a further enumeration, but perhaps sufficient has been stated to signify the interesting character of the Botanical productions of the Province, and to induce the scientific visitor, or the lover of nature, to prosecute his researches through its sequestered glades and rural retreats; where in fact, he may on every hand, behold prolific nature displaying her exquisite charms, in elaborate perfections, rich profusion, and endless diversities.

Of cultivated Fruit trees, the Pear, Peach, and Prune, are justly famed for their size and richness of flavour; the Meddlar, Quince, and a great variety of choice Apple trees are thickly dispersed throughout the vineyards; some of the latter of which during the winter, present a very singular appearance, from their being often thickly studded over with the sombre tufts of the parasitical *Viscus*, or Misleto. A considerable quantity of excellent cyder is made in the neighbourhood of Tours.

The vineyards which occupy so large a portion of this district, contain a great many varieties of the vine, which circumstance, together with the prevailing difference of *soil* and *aspect*, naturally produces wines of very various flavour and opposite qualities.

It is affirmed, that the first requisite to make good wine seems to be a peculiar quality in the soil in which the fruit is grown, more than in the species of vine itself; the second requisite to

good wine is the species of plant, aided by a judicious mode of training and cultivation. It would naturally be supposed that the wine is excellent in proportion to the size and luxuriance of the plant, but such is not the case, on the contrary, good rich soils invigorating the growth of the tree never produce even tolerable wine, but it is best as the soil is lighter and drier;—sandy, calcareous, stony and porous soils are found to be most friendly to the growth of the vine. The chalky soils particularly produce wines of great freshness and lightness.

Hence we may in a great degree account for the superiority of many of the vinous productions of the neighbourhood of Tours; on both sides of the vale of the Loire, the denudated or furrowed elevations naturally afford many genial sites, whose southern aspects are always exposed to the direct rays of the sun and which favoured situations are perhaps more prevalent on the northern banks of the river; where, as on the opposite slopes, the rather lofty chalky elevations, are mostly covered by deep accumulations of adventitious and heterogeneous materials, principally constituted of the debris of that cretaceous formation, and partly composing the extensive deposit termed the *argile et poudinge*.

It moreover appears, that the species of plant which is a favourite in one district is discarded in another; and also that very celebrated wines are produced in vineyards where the species of plant is by no means held in high repute; but the most inexplicable circumstance respecting the culture of the vine, is the fact, that the most delicious wine is sometimes grown on one little spot only, in the midst of vineyards which produce no others but of the ordinary quality: while in another place the product of a vineyard, in proportion to its surface, shall be incredibly small, yet of exquisite quality, at the same time, in the soil, aspect, treatment as to culture, and species of plant, there shall be no perceptible difference to the eye of the most experienced wine grower. Possibly this may in some measure be accounted for by the peculiar nature of the substratum which the roots of the respective vines may chance to penetrate.

The grape called *caux* or *cos*, common on the banks of the Cher, imparts colour and body to the red wines.

The best vines for the more valuable white wines, are the species denominated *sauvignon*, *semilion*, *rochalin*, *blanc doux*, *pruneras*, *muscade*, and *blanc auba*. The *semilion* should form two-thirds of a vineyard consisting of these seven species of plants.

Red Hermitage is produced from two varieties of plants named the little and great *Scyras*. White Hermitage is produced from the greater and lesser *Rousanne* grape.

The esteemed red wines of Saumur, are made from the *pineau* plant. The Haut Rhin is classed under the generic title of the *gentil*. Some excellent black wines are produced from a grape named *côte-rouge*, as also from *auxerrois*, or *ped de perdrix* grape, so called because its stalk is red.

The best Bordeaux wine *de côtes* is made with the grape called *noir de pressac*, the *bochet*, and the *merlot*.

The first class Burgundies, called *les têtes de cuves*, are from the choicest vines, namely; the *noirien* and *pineau*, grown on the best spots of the vineyards having the finest aspect.

The black grape called the «golden plant» (*plant doré*), is cultivated in all the most distinguished vineyards of Champagne, and from which is produced the finest of those celebrated wines.

The vines called the *semilion* and *muscat-fou* are very extensively cultivated, those most noted are the black *morillon*, of two varieties, the *madaleine* and the vine of Ischia; the latter produces fine fruit as high as north lat. 48°.

The bloom upon the grape, which so delicately tints the skin, is considered in proportion to its prevalence a proof of attention or negligence in the culture.

The age of which the vine bears well, is from sixty to seventy years, or more, but in the common course of things it is six or seven years before it is in full bearing. The vines are pruned three times before they bear fruit, when this operation is again repeated. In France the vine is propagated by layers of buds, which are taken up after the vintage, and by slips chosen from among the cuttings; vines from the latter live longest and bear most fruit, though those from the layers shoot earliest. The general method of training the vine in France, is the «*tinge bas*» or low stem training, the young shoots of the year being tied to stakes from four to five feet in height.

The season of the vintage is one of stirring interest and alacrity, the merry groups of grape gatherers now to be seen in almost every field, commence their employment as early as possible after the sun has dissipated the dew, and the gathering is uniformly continued with as much rapidity as possible, if the weather continue fair, so as to terminate the pressing in one day.

In concluding this subject, we may very well exemplify the general distribution of the vegetable tribes in this part of France, by observing that merry *Bacchus* presides over the cheerful hills, *Flora* and *Pomona* grace the laughing vallies and the sylvan shades, while the bountiful *Ceres* extends her dominion over the upland plains, and the smiling prairies of the fertilizing Cher and Loire.

## GEOLOGY OF TOURAINE.

*The GEOLOGY of Touraine*, being of a nature particularly worthy the attention of the scientific enquirer, we may properly close these restricted remarks, by a few cursory observations on so interesting a subject. In contemplating the geognostic structure of this department, the eye of the investigator encounters none of those strikingly bold and sublime operations of nature, almost every where to be met with in the primitive and volcanic regions of the globe.

Here with but a few solitary exceptions, the whole surface of the province presents a continuous series of rounded and gentle undulations, exhibiting to the careless glance of the unobservant, and to the uninitiated, one vast homogeneous mass of earthy and stony materials.

But when this wide spread, and apparently uninvestigable aggregation of particles, comes under the scrutinizing *eye of science*, a beautiful and systematic arrangement of undigenous formations are clearly developed. Individually containing within themselves the marvellous and decisive evidence of their comparative existence, in their present relative positions.

Those «*medallions of Nature*,» the fossils which they contain not only furnishing us with a chronological knowledge of the progressive formation of the Earth's crust, but recording in language the most intelligible, what were the peculiar states, and characteristics of animal and vegetable existences at the distinct, and distant epochs of the World.

By the aid of these silent but eloquent intelligencers, we discover that the strata which now constitute the table lands of Touraine, were among the last, in the whole geological series, that emerged from the waves of the Ocean. That, that grand instrument of transposition and renovation, has in a general sense, ever since been restrained within its mighty confines. And that at the time its waters last prevailed over these regions now high and dry, many of the types of living testacea, etc. were become identical with those of existing species.

Touraine, or the department of Indre-et-Loire, may be said to be the grand repository of the *tertiary* formations of central France. It constitutes the southern divisions of the great *Paris basin*, formed by a vast depression in the chalk, and which is about 180 miles long and 90 miles broad. This cretaceous or chalk basin terminates to the south a short distance from Poitiers, where the oolites and certain other formations older than the chalk, crop out from beneath it, and thence forward, principally constitute the formations of the more southern departments of the kingdom: and occasionally extend to the summits of the gigantic Pyrénées.

The long range of rocky precipices often constituting rather lofty escarpments, along the northern borders of the valley of the Loire, are a portion of the extensive cretaceous formations which surround Paris. In the vicinity of Tours and many other places where its strata are alike exposed to view, many beautiful specimens of some of its characteristic fossils may be readily obtained; this formation here also frequently contains its usual layers of flint, and which often assumes the exact form of the zoophytes, and other organic structures, into which it has percolated.

But in this locality, as also in many instances in the chalk region south of Angoulême, the mineralogical character of the formation is often completely altered, chiefly appearing as a fine white calcareous sandstone, occasionally passing into a compact siliceous limestone, similar to the *calcaire siliceux* of the superior freshwater limestone, but for the most part destitute of the small sinuous cavities the latter commonly contains.

This calcareous sandstone is directly succeeded, in ascending order, by the most extensive surface deposit of Touraine, termed by the French geologist, *argile et poudinge*; a rather thick argillaceous deposit, in which flint boulders are sometimes thickly embedded, and on which reposes the *calc d'eau douce* or freshwater limestone, both formations belonging to the uppermost subdivision of the Parisian tertiary strata, or newer Pliocene deposits.

Immediately above the freshwater limestone just named, a series of isolated masses occur, consisting of marine sand and marl, the whole rarely exceeding fifty feet in thickness, and containing for the most part a different and immense assemblage of fossils. This tertiary formation which is provincially termed *faluns*, (broken shells) is considered to belong to a period intermediate between that of the Parisian and subapennine strata, and to assimilate in age to the crag formation of England, which belongs to the Miocene or middle Tertiary.

M<sup>r</sup> Lyell who has closely examined the *faluns*<sup>[D]</sup>, says that most of the shells they contain do not depart from the Mediterranean type, although a few would seem to indicate a tropical climate, among these may be mentioned some large species of the genera *conus*, *terebra*, *rynula*, *tasciolaria*, *cerithium* and *cardita*.

The species he considers for the most part marine, but that a few of them belong to land and fluviatile genera. Among the former, *helix turonensis* (faluns Touraine) is the most abundant.

Remains of terrestrial quadrupeds are here and there intermixed, belonging to the genera mastodon, rhinoceros, hyppopotamus, deer and others, and these are accompanied by cetacea, such as the lamantine, morse, sea calf, and dolphin, all of extinct species.

Out of two hundred and ninety species of shells from the *faluns* M<sup>r</sup> Lyell says he found seventy-two identical with recent species, and that out of the whole three hundred and two in his possession forty-five only were found to be common to the suffolk crag. Nevertheless a similarity

of mineral composition, and the general analogy of the fossil shells and zoophytes, together with the perfect identity of certain species, strongly justifies the opinion that has long been pronounced, that the faluns of Touraine, and the Suffolk crag are nearly contemporaneous.

To this brief outline of what may properly be termed the regular stratifications of Touraine, it only remains to be stated, that they are frequently concealed by considerable deposits of alluvial and diluvian beds of flinty gravel, sand, and adventitious clays, in some of which numerous specimens of the rocks and fossils to be found existing in *situ* in the neighbourhood are interspersed.

It is almost impossible to contemplate even the comparatively scanty catalogue of geological facts just adverted to, without being forcibly reminded of the remarkable physical transformations which the surface of the country must have undergone, at distinct, and incalculably distant epochs; and to speculate on the causes which effected; and the peculiar circumstances characterizing those revolutionizing periods.

Geology, may indeed, be truly said to be an inductive science, and while pondering over its natural inferences we find ourselves most marvellously progressing through a long concatenation of pre-existing realities, which at every remove may be said to assume more and more the features of romance!

During the cretaceous period, *Touraine* had not emerged from the Ocean, which here was probably studded with Islands constituted of the primary rocks of Brittany, and those of the older secondary formations we have noticed as now principally occupying the more southern provinces. These lands, we may reasonably infer, were adorned by the luxuriant vegetation of a tropical climate, the fossil remains of which, are found abundantly dispersed throughout the first formed members of the tertiary series.

Subsequent to the deposition of the chalk, a retiring of the sea from this region, and a period of repose, are indicated by the presence of the *freshwater formation*, but on examining the overlying deposits of *faluns*, we have the most indubitable evidence, that this quiescent state, was succeeded by another irruption of the Ocean, which desolated the land, and deposited the wrecks of its animal and vegetable productions as now discovered in that formation. As yet, the geologist maintains, man had not been called into existence, and therefore the huge quadrupeds whose remains are found in the *faluns*, unmolestedly ranged through the umbrageous wilds of nature absolute Lords of the creation.

While the imagination is startled at the mystic nature of these successive cosmological revolutions, it is no less puzzled to account for the mighty causes which have effected them. The geologist however has discovered in various parts of the world, the most positive evidence of the upheaving and subsidence of immense tracts of territory, by the stupendous operations of subterranean convulsions.

At Alum Bay in the Isle of Wight we have an extraordinary and complete example of this description; in the remarkable *vertical* position of the beautiful and variously coloured arenose stratifications of the plastic clay, we are enabled to discover that the ponderous substrata of chalk were uplifted subsequently to the deposition of the tertiary formation. And it would not be unreasonable to believe that the same, or a similar convulsion, finally raised the lands of Touraine to their present elevation above the level of the sea.

We have however in this country, as in almost every other part of the globe, the most striking proofs of the mighty modifying operations of the last grand *cataclysm*, the erosive power of whose turbulent waters have denudated or scooped out deep vallies, frequently leaving—as instanced in the faluns detached and widely scattered masses of pre-existing formations, and heaping up their *debris* in the vast and variously shaped accumulations designated as diluvial deposits.

These popular speculations have been touched upon rather with the view of exciting the attention of the curious, and inviting the disquisitions of the able student of nature, than a desire to attach any absolute importance to existing theories; for in a progressive science like geology, new and amazing facts are continually being developed, and it is only when an immensely increased accumulation of such existing evidences has been thoroughly scrutinized by the penetrating and comprehensive genius of a *Newton in geology*, that we can hope to arrive at any thing approaching a correct explication of its remarkable and interesting phenomena.

To the commonest observer however the present state of geology presents an astounding exposition of divine power and goodness, and distinctively marks the gigantic footsteps of that creative energy, which out of stupendous confusion and disorder, the rocking earthquake, and the «wreck of worlds,» has caused to spring forth the existing order of things; whose beauty, perfection, utility and harmony, charm our senses, enhance our knowledge, and demand for their Creator, the constant tribute, of our most grateful emanations.

There are a few Chalybeate, and many calcareous springs in the department, some of the latter of which incrust every substance over which they flow, and it is not uncommon to find an assemblage of most fancifully shaped stalactical incrustations in the caves of the calcareous freestone, etc., being often singularly imitative of the works both of nature and of art. Caves of this description known by the name of the caves gouttières are to be seen near the *village of Savonnières* on the road from *Tours* to *Chinon*, not far from the banks of the *Cher*. But perhaps no less remarkable in the estimation of the curious are the extraordinary series of excavations

ranging nearly opposite Tours. These artificial caverns which are hewn out of the white calcareous sandstone rocks on the banks of the Loire, frequently constitute entire dwellings, and are so free from humidity as to be occupied by the peasantry during summer and winter, while others are formed into extensive storehouses for the wines of the country.

From the general and impartial review we have here taken of some of the more attractive features, climatic advantages, and geological structure of Touraine, it cannot but be admitted that it possesses inducements of no ordinary description to the searcher after health or recreation. Considerations, of more special importance to the hypochondriac and the valetudinarian, who may feel themselves obliged to abandon the soothing comforts of the domestic circle, for the purpose of obtaining relief from a temporary residence abroad.

In our just estimation of any country or locality, much however depends on the spirit and manner in which we scrutinize its resources, to the eye of the vacant and unobservant mind, the most beautiful and soul-stirring facts and scenes possess neither novelty nor charms, while the attentive and *intelligent investigator* seldom fails to discover and appreciate those extraordinary assemblages of creative perfections, and wonders, with which the all bountiful hand of the Supreme Creator has most amply stored every portion of the material Universe.

---

## SPAS OF FRANCE.

A small work of this description will not admit of our entering into a minute detail of all the mineral waters of France; we shall therefore merely give a sketch of their physical characters, medicinal properties, and of the different localities where they are found, to serve as a superficial guide to Invalids; and conclude by giving a more general description of the *Spas of Central France*.

Mineral waters may be arranged into the four following classes; *Saline; Acidulous; Chalybeate; and Sulphureous.*

*Saline.* These waters owe their properties altogether to saline compounds. Those which predominate and give their character to the waters of this class are either,

1. Salts, the basis of which is Lime.
2. Muriate of Soda and Magnesia.
3. Sulphate of Magnesia.
4. Alkaline Carbonates, particularly Carbonate of Soda.

They are mostly purgative, the powers of the salts they contain being very much increased by the large proportion of water in which they are exhibited.

There are but few *Cold Saline Springs* in France, viz: those of Andabre or Camares in the department of Aveyron; Jouhe, dep: Jura; Pouillon, dep: Landes; Niederbronn, dep: Lower Rhine. They are employed in diseases which require continued and moderate intestinal evacuations; such as dyspepsia hypochondriasis, chronic hepatitis, jaundice and strumous swellings. They are more grateful to the stomach when carbonic acid gas is also present; and when they contain Iron as in the springs of Camarès, their tonic powers combined with their purgative qualities, render them still more useful in dyspeptic complaints and amenorrhœa.

To this class the water of the Ocean belongs. The quantity of saline matter *Sea Water* contains varies in different latitudes thus, between 10° and 20° it is rather more than  $\frac{1}{24}$ ; at the equator it is  $\frac{1}{25}$ ; and at 57° north it is only  $\frac{1}{27}$ . The saline ingredients in 10,000 parts of sea water according to the last analysis of Dr. Murray, are, muriate of Soda 220.01; muriate of lime, 7.84; muriate of Magnesia, 42.08; and Sulphate of Soda 33.16. When brought up from a great depth, its taste is purely saline; but when taken from the surface it is disagreeably bitter, owing, perhaps, to the animal and vegetable matters suspended in it. Its specific gravity varies from 1.0269 to 1.0285; and it does not freeze until cooled down to 28.5° Fahrenheit. Its medicinal properties are the same as those of the saline purgative waters, but more powerful; and as a bath, its efficacy is much superior to that of fresh water.

The general effects of mineral waters are modified by temperature, whether they be taken internally, or applied externally.

In some *Warm Saline Springs* as those of Plombières, and Bains, in the department of Vosges; Luxeuil, dep. Haute Saône; Bourbon-Lancy, dep. Saône-et-Loire; Bourbonne-les-Bains, dep. Haute-Marne; Chaudes-Aigues, dep. Cantal; Avène, Balaruc, dep. l'Hérault; La Motte, dep. l'Isère; Bagnols, dep. l'Orne; Aix-en-Provence; dep. Bouches-du-Rhône; St.-Laurent-Les-Bains, dep. l'Ardèche; Sylvanès, dep. l'Aveyron; Cap-Bern, Bagnères, Bigorre, dep. Upper Pyrénées;

Encausse, dep. Haute-Garonne; Nérès, dep. l'Allier; their virtues depend principally on the height of temperature. And in others which have been found to contain scarcely any foreign matter, the simple diluent power of the pure water seems to produce the benefit that results from drinking them.

**ACIDULOUS.** Waters of this class owe their properties chiefly to Carbonic Acid. They sparkle when drawn from the spring, or when poured into a glass; have an acidulous taste, and become vapid when exposed to the air. Besides free carbonic acid, on the presence of which these qualities depend, acidulous waters contain generally carbonates of Soda, of Lime, of Magnesia, and of Iron; and sometimes muriate of Soda.

They may be divided into *thermal* or *warm acidulous waters*, and *cold acidulous waters*.

The temperature of the former rarely exceeds 72° F. while that of the latter is generally about 55° F. Of the warm acidulous waters are those of Mont-D'or, Saint Nectaire, Clermont-Ferrand, in the department of Puy-de-Dôme; Vichy, Bourbon-l'Archambault, dep. l'Allier; Audinac, Ussat, dep. l'Arriège; Chateauneuf, Saint-Mart, Chatel-guion, dep. Puy-de-Dôme; Dax, dep. Landes; Saint Alban on the left of the river Loire.

Of the *cold acidulous waters* there is Pougues in the department of Nièvre; Chateldon, Bar, Saint-Myon, Médague, Vic-le-Comte, dep. Puy-de-Dôme; Mont-Brison, Saint-Galmier, dep. Loire; Langeac, dep. Haute-Loire. They are tonic and diuretic; and in large doses produce a sensible degree of exhilaration.

They all afford a grateful and moderate stimulus to the stomach, but the *warm acidulous springs* are to be preferred as there are few of this kind that do not contain a small portion of Iron and a larger portion of carbonic acid gas, and are especially useful in all cases of impaired digestion; while those which contain alkaline carbonates, as Pougues and Saint-Galmier, are more particularly employed as palliatives in calculous affections.

**CHALYBEATE.** Waters thus named owe their properties to iron in combination generally with carbonic acid; and as the latter is usually in excess, they are often acidulous as well as chalybeate. The metal is found also in the form of a sulphate, but the instances of this are very rare.

Chalybeate waters have a styptic or inky taste: they are, when fresh drawn, transparent, but become black when mixed with tincture of nut-galls; but an ochery sediment soon falls, and the water loses its taste. If the iron be in the state of sulphate, however, no sediment falls; and the black colour is produced by the above test, even after the water has been boiled and filtered. Chalybeate springs are very numerous in France, some of the following are much frequented: Rennes-Les-bains, in the department of l'Aude; Saint-Honoré, Passy, near Paris; Forges, Aumale, Rouen, dep. Seine-inférieure; Contrexeville, dep. Vosges; Bussang, Provins, dep. Seine-et-Marne; La Chapelle-Godefroi, dep. of l'Aube; Saint-Gondon, Noyers, dep. Loiret; Fontenelle, dep. Vendée; Watweiler, Upper-Rhine; Cransac, dep. l'Aveyron; Sainte-Marie, dep. Cantal; Sermaise, dep. Marne; Ferrières, Segray, dep. Loiret; Alais, dep. Gard; Boulogne-sur-Mer, dep. Pas-de-Calais; Vals, dep. l'Ardèche.

Chalybeate waters are powerful tonics, and are employed in dyspepsia, scrofulous affections, cancer, amenorrhœa, chlorosis, and other diseases of debility for which the artificial preparations of iron are used. Much of the benefit derived from the use of chalybeate waters depends on the extreme division of the metallic salts they contain, as well as the vehicle in which it is held in solution; while at the same time their operation is much modified by the carbonic acid gas by which the iron is suspended. When the water is a carbonated chalybeate, it should be drunk the moment it is drawn from the spring; but the same precaution is not necessary with a water containing sulphate of iron.

**SULPHUREOUS.** Waters classed under this head derive their character chiefly from sulphureted hydrogen gas; which in some of them is uncombined, while in others it is united with lime or an alkali. They are transparent when newly drawn from the spring, and have a foetid odour which is gradually lost from exposure to the air, and the water becomes turbid. When they are strongly impregnated with the gas, they redden infusion of litmus, and exhibit some other of the characteristics of acids; and, even in a weak state, they blacken silver and lead.

Besides containing sulphureted hydrogen gas, they are not unfrequently, also, impregnated with carbonic acid. They generally contain muriate of Magnesia or other saline matters, which modify their powers as a remedy.

The *warm sulphureous springs* in France are those of Barèges, Saint-Sauveur, dep. Upper Pyrénées; Cauterets, Bonnes, Cambo, dep. Lower Pyrénées; Bagnères-de-Luchon, dep. Haute-Garonne; Ax, dep. l'Arriège; Gréoult, Digne, dep. Lower Alpes; Castera-Verdusan, dep. Gers; Bagnols, dep. Lozère; Évaux, dep. Creuse; Saint-Amand, dep. Nord; Loèche, right of the Rhône; Aix-la-Chapelle. The *cold sulphureous waters* are those of Enghien-les-Bains, in the department of Seine-et-Oise; La Roche-Posay, dep. Vienne; Uriage, near Grenoble.

These waters are resorted to chiefly by patients who labour under cutaneous affections and are applied locally as well as drunk.

They are slightly sudorific and diuretic, and apt to occasion in some patients headache of short duration, directly after they are taken.

They are also employed for curing visceral and scrofulous obstructions, torpor of the intestines, chronic engorgements of the joints: sprains of long standing, obstinate catarrhs, rheumatism, etc, and in some dyspeptic and hypochondriacal cases.

The *warm* sulphureous waters are to be preferred; attention however should be paid to the state of the bowels during their course which ought to be kept free from any accumulation by the aid of some mild aperient medicine; Spa Doctors trust almost entirely to the aperient operation of the waters and doubtless, the crises, spa-fevers, and re-actions described by foreign writers on the spas are often attributable to the want of combining some mild mercurial alterative and aperient with the use of the waters, and that many cures are prevented or rendered ineffectual by the dread of mercury entertained by continental Physicians. The following what Dr. Johnson terms the *Auxilio-Preservative* will be found of essential service taken every night before drinking the morning waters.

R,  
Ext: Col: Co:  
Pil: Rhei: Co:    à à    gr. XL  
Pil: Hydrarg:    —    gr. X  
Ol: Caryoph:    —    gr. VI  
ft. pil: XX capt. 1 vel: ij hora somni.

It is however absolutely necessary on patients arriving at any spa, to consult the resident Physician.

With respect to the use of mineral waters in general, we consider them as most important, and extremely beneficial in the treatment of disease; some of the good effects of all of them however, must be allowed to proceed from change of air and scene; relaxation from business, amusement, temperance, and regular hours, and under these circumstances the drinking the waters at the springs possesses advantages which cannot be obtained from artificial waters, however excellent the imitations may be, nor even from the natural water, when bottled and conveyed to a distance from the springs.

---

## SPAS

OF

CENTRAL FRANCE.

---

**THERMAL SALINE WATERS,**

**PLOMBIÈRES.**

*Plombiers*, a small town in the department of Vosges, twenty-four leagues from Nancy, is situated between mountains in a deep narrow valley watered by the Augrome.

According to a careful analysis made by M. Vauquelin, these waters contain Subcarbonate of Soda, Sulphate of Soda, Chloride of Sodium, Subcarbonate of Lime, and Silex. He affirms that they also contain an animal matter greatly resembling gelatine, which performs an important part in their action upon the animal economy; to this ingredient he attributes the fetid odour which occasionally arises from the waters.

The thermal waters of Plombières, are classed as follows:—1<sup>st</sup> The *Bain des Dames*; having a heat of 126° Fah<sup>r</sup> 2<sup>nd</sup>—The *Source du Chêne*, or *du Crucifix*; this is the only one of the waters not used for bathing, but solely for drinking. 3<sup>d</sup>—The *source du Grand-Bain* or *du milieu*, the temperature of the former is 130°: and of the latter 142° Fah. The *Grand Bain* is called the *Bain des pauvres*. 4<sup>th</sup>—The *Bain-tempéré*, which is supplied by two sources; one at 90° and the other at 113° Fah. 5<sup>th</sup>—The *Petit-Bain* or *Capucins*, is 113° Fah. Its basin is divided into two parts, the temperature of the water there being 95° to 97° Fah. 6<sup>th</sup>—The *Bain-Neuf* or *Royal*, has a square basin which receives the waters from a source formerly called *l'enfer*, and had originally, a temperature of 153° Fah. being the hottest of the number. 7<sup>th</sup>—There is another source, called the source *de Bassompierre*, situated at the upper part of the town.

These waters are stimulant, giving increased activity to the circulation, and in great reputation for the cure of Chlorosis (green sickness) chronic enteritis, neuralgia, scrofula, and in the chronic

and painful stages of gout and rheumatism. Although rarely beneficial in severe cutaneous diseases they are in much esteem for their unctuous qualities, which impart softness to the skin and allay superficial irritations.

The season for taking these waters is from May to September, and this place is then much frequented; the accommodations are very good, in the principal street are arcades built by Stanislaus, king of Poland, under which the company promenade.

### LUXEUIL.

The great esteem in which these waters were anciently held is attested by the vast ruins and immense number of antiquities which have been found here; at present Luxeuil is a small but agreeable town in the department of the Haute-Saône, twelve leagues from Besançon, situated in a plain, and intersected by a street called the *rue des Romains*. The bathing establishment, which is much admired, was built about the middle of the last century, is adorned with a beautiful garden.

There are five Baths namely the *Bain des Femmes*; the *Bain des Hommes*; the *Bain Neuf*; the *Grand-Bain*; the *Petit-Bain*.

The analysis of these waters is very incomplete; they are stated to contain muriate of Soda, Lime, sulphate of Potash and a small portion of Iron.

They have proved very beneficial in chronic rheumatism, paralysis, chronic catarrh, alterations in the abdominal viscera, and in some nervous affections. As these waters are less exciting than those of Plombières, they are more suitable to persons of a feeble and delicate constitution.

The Baths are under the superintendance of a medical practitioner. A Hotel, called the Lion d'Or, affords ample accommodation for persons who come for the benefit of the waters. This place has been much frequented of late.

### BOURBON-LANCY.

The mineral waters of this place, containing a population of 2700, are in the department of Saône-et-Loire, twelve leagues from Autun and eighty from Paris.

D<sup>r</sup> de Verchère, a talented and philanthropic man, who long had the establishment under his management, reports numerous cures having been effected by the waters.

Their celebrity is of ancient date, and they have at various times been visited by several kings of France.

The town of Bourbon-Lancy is placed on the side of a hill, and constitutes a striking feature in a beautiful landscape. The air is extremely salubrious, and the place has long been remarkable for its freedom from epidemics.

It abounds in the comforts and luxuries of life, and commodious accommodations are provided for visitors, near the Baths.

The *Bread* made here is said to be of a very superior quality, which the inhabitants attribute to its being kneaded with the mineral waters.

Numerous kinds of excellent fish are furnished by the Loire.

The mineral waters of Bourbon-Lancy have apparently one common source but appear at the surface of the earth in seven distinct springs. The 1<sup>st</sup> is called *le Lymbe*, from its great heat, as much as 135° Fah. 2<sup>nd</sup> The *Fontaine de Saint-Léger* temperature 100° Fah. 3<sup>rd</sup> The *Fontaine de la Reine* temp: 108° Fah. 4<sup>th</sup> The *Fontaine des Ecures*, which take its name from the person who discovered the spring in 1600. temp: 140° Fah. 5<sup>th</sup> The *Bain Royal*, temp: 104° Fah.

M<sup>r</sup> Jacquemont's analysis of these waters exhibits the presence of Carbonic Acid, and Muriate of Soda in excess, also the Sulphate of Soda, Carbonate of Lime, Oxide of Iron and Silix.

It is to be regretted that a more minute analysis of the waters has not been effected, for their continual boiling, and the saline efflorescence which forms upon the sides of the pipes, would seem to indicate the prevalence of fixed and volatile principles, the proportions of which it would be important to demonstrate.

Their heat and stimulating qualities peculiarly adapt them for the cure of obstinate chronic rheumatism, diseases of the lymphatics, chlorosis, incipient disorganization of the stomach,



bowels, and other abdominal viscera. They have also been found highly beneficial in old gun shot wounds.

The Bourbon waters are administered in different doses, according to the constitution of the patient, and the nature of the disease, it is usual to take several glasses in the morning at intervals of a quarter of an hour.

The Baths varying in temperature from 90° to 104° Fah. are the most commonly used, and with the greatest success. But the most active baths are those varying from 113° to 122° Fah. but they require great caution in their administration.

There are several kinds of douches at Bourbon as the ascending, descending, fumigating, which are frequently used in torpidity of the intestines and obstinate constipations; resource is also had to them in some affections of the uterus and urinary organs. There are also *mud* baths at this place.

## BAGNOLES.

Bagnoles is a village in the department of l'Orne, the efficacy of the mineral waters at this place, was discovered by the following singular circumstance. An old horse having a disease of the skin, being covered all over with sores, was about to be delivered up to the knacker when his master calling to mind his good qualities, resolved upon turning him into the *Coppice of Roches-Noires*. Two months after happening to pass through the end of the valley, he descried an animal which he thought much resembled his own discarded steed. The horse trotted up, approached him familiarly, and though fat and sleek, was speedily recognised by his owner, who wishing to ascertain the cause of such an unexpected and astonishing cure, carefully watched the animal's movements, and presently saw him roll himself with much apparent satisfaction in a neighbouring bog, which upon putting his hand into it, he found to contain much internal heat. This circumstance occasioned the clearing out of the bog, when the source of a hot spring very limpid and very abundant was discovered.

This cure, originated the idea of forming the present establishment which since 1812 has been rapidly increasing in reputation. It stands at the foot of a mountain between two rocky escarpments, in one of the most beautiful and picturesque vallies in France.

Through this, winds the little river *la Vée*, the banks of which, adjacent to the Baths, are prettily planted, and intersected with numerous gravel walks, forming shady and agreeable promenades. The luxuriance of the trees and meadows which adorn this fertile valley, contrasted with the savage aspect of the vast rugged rocks by which it is bordered, together with the pretty scattered villas, and the salubrity of the air form a *tout ensemble* rarely to be witnessed, and which contributes not a little to the recovery of the numerous visitors who resort to this fine establishment.

The mineral springs are received into a square cistern from whence they are conducted into the bathing rooms; they are extremely clear, unctuous to the touch, taste slightly acid, and emit a sulphureted hydrogen odour: air bubbles continually ascend with the water, and break as they reach the surface. The waters are found on analysis to contain carbonic acid, and muriate of Soda, in excess; a very small quantity of sulphate and muriate of lime, and muriate of Barytes. The sediment of the general receptacle contains some sulphur and Iron.

The Bagnoles waters are at once tonic and purgative; they excite the appetite, giving more activity to the digestive system, and have a general tendency favourable to the promotion of healthy secretions and excretions; particularly of the skin kidneys and glandular organs generally.

Administered as Baths, they have a very salutary action upon the skin, imparting to it a remarkable flexibility and softness.

M. Piette, who was forty years physician to this establishment, published a report upon the efficacy of these waters, in obstinate rheumatism, chronic catarrh, paralysis, chlorosis, leucorrhœa, chronic gastritis, etc. After enumerating their other virtues he says: «On lit dans les vieilles chroniques que les dames de la Normandie allaient autrefois à Bagnoles pour porter remède à leur stérilité.»

From three to six glasses constitute a dose of the waters, they are taken in the morning.

The Bath rooms and appendages are judiciously arranged; when the natural heat of the water—(from 82° to 90° Fah.) is deemed insufficient by the physician, it can easily be increased by the aid of artificial heat, without materially deteriorating the medicinal virtues of the water.

Many Spa Doctors however assert (D<sup>r</sup> Granville amongst the number) «that the *caloric* of mineral waters is of a *specific* kind, analogous to the heat of the body.» A heat incorporated with the water by a chemico-vital process. And as no external warmth can supply the body with *vital* heat, so no artificially created temperature can be a real substitute for the natural heat of

thermal springs.

The temperature of the water of Bagnoles being about that of the blood—98° Fah. immersion in it produces but a slight sensation of heat; the temperature of our bodies being below that of our blood. The sensation is that of comfort.

Bagnoles is sixty leagues from Paris, and one league from the high road leading from Alençon to Domfront, lying nearly on the route from Havre to Tours.

### CHAUDES-AIGUES.

This is a small town in the department of Cantal, six leagues from Saint-Flour, on the road between Clermont and Toulouse, and derives its name from its thermal waters, which were much resorted to in the fifteenth century, and then called *Calentes Baiæ*.

The temperature of the springs vary from 167° to 189° Fah. The resident poor turn this high temperature to many economical purposes, frequently cooking their entire meals by the natural heat of the waters; an egg is boiled hard by five minutes immersion.

The waters are extensively used by Curriers, Tanners, stuff and Flannel manufacturers, etc, their alkaline principles being found peculiarly adapted to many essential processes in these respective trades; to coloured articles, they are considered to give brilliancy and permanence to the dyes.

The *Belle Fontaine du Parc*, the highest in temperature of the spring, contains muriate of Soda, carbonate of lime; carbonate of Iron, and Silex.

These waters were held in high repute by the Romans and are particularly mentioned by one of their historians; «*Calentes nunc te Baiæ, et scabris cavernatim ructata pumicibus aqua sulfuris atque jecorosis ac phthisiscentibus languidis medicabilis piscina delectat.*»

They have an *alterative* or *deobstruent* action, are therefore applicable to a long catalogue of maladies arising from congestion and obstructions of the abdominal viscera.

---

## WARM ACIDULOUS AND GASEOUS WATERS,

### VICHY.

Vichy is situated in the department of the Allier, 87 leagues from Paris, fifteen from Moulins and thirty two from Lyon, in a valley surrounded by beautiful and fertile hills. The excellent roads which lead to this town, the purity of the air, the comfort and amusement which may be found in it combine to render it one of the most frequented watering places in France.

Its mineral waters were known to the Romans, and vestiges of ancient baths, coins etc. have frequently been found here. In the 14<sup>th</sup> century a monastery of the order of Celestins was founded at Vichy by Louis 2<sup>nd</sup> Duke of Bourbon, and in the following century, during the wars of the Praguerie this town was besieged by Charles the 7<sup>th</sup>, and although fortified, taken by him in 1440.

Both Madame de Sévigné and the famous Fléchier speak in the highest terms of the charms of this delightful place and vie with each other in its praise. It was visited in 1814 by the duchess of Angoulême, since which it has rapidly risen into notice, and owing to the exertions of the inhabitants to accommodate the numbers who now flock to these justly celebrated waters, few towns offer more resources to the invalid than Vichy.

The names of the principal Baths are,

1<sup>st</sup>—The *Grande-Grille*, temperature 104° to 108° Fah:

2<sup>nd</sup>—The *Petit-Puits carré*, temp. 113° Fah:

3<sup>rd</sup>—The *Grande-Puits carré*, 113° Fah: which supplies the Baths. These three springs are in

the Bath house, under the gallery where persons taking the waters promenade.

4<sup>th</sup>—The *Petit-Boulet*, temp. 95° Fah:

5<sup>th</sup>—The *Gros-Boulet* or the *Hôpital*, temp. 99° Fah:

6<sup>th</sup>—The *source Lucas*, temp. 97°

7<sup>th</sup>—The *Fontaine des Célestins*, temp. 74° Fah:

All situated in a neat building near the Allier, and at the foot of a mountain.

The following is an analysis of the *Grande-Grille*;—free carbonic acid, carbonate of Soda, carbonate of Lime, carbonate of Magnesia, muriate of Soda, sulphate of Soda, oxide of Iron and Silex.

The other Baths contain the same ingredients, but the proportions slightly differ; from all the water presents nearly the same appearance. It is clear and colourless, and filled with a great quantity of bubbles rising continually to its surface: its taste is sharp and slightly acidulated.

The waters of Vichy are recommended in most chronic affections, particularly of the stomach, congestions of the liver and abdominal organs generally; hæmorrhoids, leucorrhœa, engorgements and indurations of the uterus, ovaries, etc; colic, cramps and epigastric pains; disorders of the urinary organs, nervous and intermittent fevers of long standing. Having a tranquillizing effect upon the nervous system, they are peculiarly adapted to cases of hypochondriasis, neuralgia, chorea, etc.

The season at Vichy begins on the 13<sup>th</sup> of May, and finishes on the 20<sup>th</sup> of September, but precaution must be used in taking these waters during excessively hot or stormy weather. Their general effects upon the constitution are said to be very analogous to those of the celebrated waters of Carlsbad in Germany.

#### SAINT-ALBAN.

This small hamlet two leagues from Roanne on the left bank of the Loire, is much indebted to being situated in the vicinity of Lyon, for the celebrity the waters have attained, and still maintain. Those invalids who come for the purpose of drinking the waters will find good accommodation.

These mineral waters are pungent and acidulous to the taste, and very limpid, the presence of carbonic acid is perceptible every moment by the immense quantity of bubbles which break on the surface of the water. Their temperature is 65° Fah:

Their analysis demonstrates the presence of nitrate of Lime, carbonate of Soda, sulphate of Lime, carbonate of Lime and oxide of Iron. Of the volatile principles carbonic acid gas predominates.

The waters are found very beneficial in almost all chronic diseases, they are taken chiefly in the spring, and are heated to be used as Baths.

---

### COLD ACIDULOUS AND GASEOUS WATERS,

#### POUGUES.

Pougues is a small well built town, upon the high road leading from Paris to Lyons by Moulins; it is situated between Nevers and Charité-sur-Loire, in a fine rich valley a quarter of a league long. The air is very salubrious, and the neighbouring vineyards produce excellent wine.

The accommodations for visitors are on an extensive scale, and from its proximity to Nevers, every necessary of life can be readily obtained.

The waters of this place greatly resemble those of Spa and Seltzer; they are received into two fountains, called *Saint-Léger* and *Saint-Marcel* which are surrounded by a prettily laid out garden

and a covered promenade.

The mineral waters of Pougues have been analyzed several times, but the preference is given to that of *Hassenfratz*, who shows the presence of free carbonic acid, carbonate of Lime, carbonate of Soda, muriate of Soda, carbonate of Magnesia, Alum, Silex, and the oxide of Iron.

Monsieur le docteur Martin affirms that these waters are essentially tonic and purgative, that they are suitable in all cases of debility of the digestive organs, in affections of the liver and spleen, in inveterate jaundice, irregular menstruation, nephritic complaints, removing heat of the kidneys and bladder and in expelling gravel.

These waters may be beneficially taken in various forms of dyspepsia, proceeding from a sedentary life, from torpor of the bowels; etc; also by corpulent persons who indulge too much in the pleasures of the table, taking but little exercise; and in obstinate constipations as they invigorate the primæ viæ, and dislodge from them all accumulations and impurities.

From four to six glasses of the waters constitute a dose, which should be taken fasting early in the morning; twenty or thirty days are considered necessary for a complete course.

### **SAINT-GALMIER.**

A small village situated upon the side of a hill near de la Coyse, in the department of the Loire, and three leagues from Mont-Brison. Its mineral spring is called *Font-Forte*.

The water is limpid and has a very agreeable vinous flavour, there arise from the spring, large bubbles of air which sparkle at the surface of the water, the source of which is lost in the little Brook *Couasse*.

The proportion of carbonic acid which the waters of Saint-Galmier contain is very considerable, one portion is found free, and the other combined with an alkaline base, which appears to be the carbonate of Soda a small trace of sulphate of Lime is also found.

The medical men who have observed the effects of these waters speak highly of their salutary action in chronic catarrhal diseases of old men, in calculous affections of the kidneys, and in Polysarcia, (Obesity).

They administer a pint in the morning for a dose, in lithontriptic complaints; it is commonly mixed with the wine drank at meals.

---

## **CHALYBEATE WATERS,**

### **SAINT-HONORÉ.**

Saint-Honoré is a small town agreeably situated in the hills of Morvan, thirteen leagues from Nevers, eight from Autun, and four from Chateau-Chinon. The inhabitants of this district are remarkable for their stature and their robust and healthy constitutions.

In ancient times the Baths of this place enjoyed great reputation. The Romans formed some magnificent establishments here, which have however long since disappeared.

M<sup>r</sup> Vauquelin's analysis of these waters exhibits the presence of the carbonates of Lime, Iron, and Magnesia, and the subcarbonate of Lime, muriate of Soda, and some Silex. As also a quantity of imponderable sulphur, and vegeto-animal matter.

The ordinary temperature of the Baths is 70° Fah:

The waters are successfully employed in chronic diseases of the abdominal organs, spasmodic asthma, rheumatism and gout. Besides their internal use, they are advantageously applied, in common, vapour, and shower Baths.

## PASSY.

Passy which has long been distinguished for its mineral waters is situated contiguous to one of the barrières of Paris, on the right bank of the River Seine.

This water is remarkably clear and has a chalybeate taste. It contains sulphate of Lime, proto-sulphate of Iron, sulphate of Magnesia, muriate of Soda, Alum, carbonate of Iron, carbonic acid and some traces of bituminous matter.

Owing to the very large proportion of sulphate of Iron and the saline substances, which are found in it, this water is seldom administered internally until it has been allowed to deposit for some time, it is then given in obstructions of the viscera, in dyspepsia, inappetence, hypochondriasis, and in all relaxed and cachectic states of the constitution. D<sup>r</sup> Alibert who has frequently prescribed it in debility of the digestive organs, chlorosis and in passive hæmorrhages, considers it may be classed amongst the most powerful of Chalybeate waters.

The dose is from two to three glasses daily, it is purgative when taken in a large quantity.

When used as Baths it is transported to the bathing establishment, or *maison de santé*, at a short distance from the spring.

## ROUEN.

Chief town of the department of the Seine-Inférieure, thirty leagues from Paris.

Mineral springs of a ferruginous and calcareous nature, abound in the town and neighbourhood.

Those of the *Fontaine Marecquérie* are the most common in use. The three sources which supply these fountains are respectively designated;

The *Royale*, the *Dauphine*, and the *Reinette*.

The waters have been analyzed by M<sup>r</sup> Duboc of Rouen, who thereby demonstrates that every pint of the *Marecquérie* water, contains one grain of carbonate of Iron, three grains of muriate of Lime, three fourths of a grain of carbonate of Soda, two grains of a vegetable extractive matter, and carbonic acid gas.

Several of the medical practitioners in Rouen, strongly recommend these waters in obstinate intermittent fevers, engorgements of the Liver, uterus and in leucorrhœa depending on general debility, and some cutaneous eruptions.

Three or four glasses constitute a dose of the waters of the *Marecquérie*, they should be drank at the fountain, as they soon become tainted.

## SAINT-GONDON.

A small town in the department of Loiret, near the banks of the Loire, three leagues from Sully; its mineral waters rise a short distance from the town.

The analysis of these waters is very incomplete, besides containing a little carbonic acid gas, they hold in solution the carbonates of Iron, Lime, Magnesia, etc.

The action of the Saint-Gondon mineral waters seem to affect more particularly the urinary organs, the secretions of which, they increase in a marked degree; they may be advantageously used in feebleness of the bladder, as also in chronic catarrh which attacks this organ in old men.

In some cases they are purgative. One pint every morning is the customary dose.

## FORGES.

A small town in the department of the Seine-Inférieure, situated on a height; twenty-five leagues from Paris, and nine from Rouen.

Its mineral waters, which have their source in the pleasant valley of Bray, were celebrated as

far back as the time of Louis 13<sup>th</sup> who with the cardinal Richelieu, derived signal benefit from their use.

There are three springs called the *Reinette*, the *Royale*, and the *Cardinale*.

M. Robert who analyzed these waters demonstrates that they contain in different proportions, according to their source, Carbonic Acid, Carbonate of Lime, Carbonate of Iron, Muriate of Soda, Sulphate of Lime, Muriate of Magnesia, Sulphate of Magnesia, and Silex.

The waters are under the superintendance of a physician. They are an excellent tonic, and administered in leucorrhœa, dropsy, engorgements of the abdominal organs, paralysis, and sterility.

We think this water might be prescribed with much advantage in all cases of pure debility, unattended with fever or local inflammation; and in leucoplegmic constitutions; the pallid female affected with complaints peculiar to her sex, may reasonably anticipate the glow of health, and a return of bodily strength to result from a proper course of these waters.

General preference is given to the *Reinette* spring, but when it is desired to produce a more powerful effect upon the system, as in paralysis, the *Cardinale* is recommended, and which must be commenced with by taking one glass only. The season for taking these waters is from July to the middle of September.

---

## SULPHUREOUS WATERS,

### LA ROCHE-POSAY.

These mineral waters are situated in the department of the Vienne, five leagues from Châtellerault, nine from Poitiers and sixty-six from Paris.

The springs of which there are three rise at the foot of a small mountain, about a quarter of a league from the town.

The accommodations for visitors are of a superior description, the surrounding country exceedingly picturesque, and the air salubrious.

According to the analysis of M. le docteur Joslé, the waters contain a large proportion of sulphureted Hydrogen gas, Sulphate of Lime, Carbonate of Lime, Muriate of Soda, and Carbonate of Magnesia.

They are recommended for their utility in rheumatism, scrofula, chronic affections of the abdominal viscera, leucorrhœa, chlorosis, but more particularly in diseases of the skin.

D<sup>r</sup> Johnson observes that the French and Germans are universally imbued with the doctrine that the repression of a certain malady which has got the musical sobriquet of (*Scotch-Fiddle*) is the cause of half the evils which flesh is heir to. On this account the continental folks have a great longing (or rather a violent itching) for sulphureous waters, and hence the slightest odour of sulphureted hydrogen gas in a newly discovered spring is considered a real treasure, and in the old ones it is sure to preserve a reputation for endless ages!

The sulphureous and alkaline properties of the waters of Roche-Posay may enable them to resolve obstructions, and free the functions of the skin, kidneys, and other secreting organs, to correct morbid bile as well as acidities, thus proving mildly aperient. Much benefit may also be expected to result from their use in cutaneous complaints.

The waters are drank at their source by the glass, the dose is from eight ounces to two pints; and some persons take them mixed with the wine drank during their repast.

### ENGHIEN-LES-BAINS.

This village four leagues north of Paris is situated in a district remarkable for its beautiful scenery on the banks of the lake of St. Gratien, between the heights of Montmorency and the wood of St. Gratien.

The sulphureous spring to which it owes its celebrity as a bathing place, was discovered in 1766, by Pere Cotte, the learned rector of Montmorency.

The celebrated Fourcroy ascertained by analysis, that the waters contain sulphureted Hydrogen gas, Carbonic acid gas, Sulphate of Lime, Sulphate of Magnesia crystalized, Carbonate of Lime, Carbonate of Magnesia, Muriate of Magnesia crystalized, Muriate of Soda, Silicium and Extractive matter.

The usual temperature of these waters is 59° Fah: but they may be heated to a much higher degree without materially losing their properties.

These waters are stimulating causing an abundant perspiration, and an increased secretion of urine. They are employed both internally and externally in many cases; in scabious eruptions and many other cutaneous affections, in chronic catarrhs, when it is necessary to stimulate in a gentle manner the mucous membrane which lines the bronchial and pulmonary cells, in the treatment of scrofulous affections, and of enlargement of the lymphatic glands.

They are also used with much success in asthma, particularly where this state depends upon latent gout, rheumatism, or repelled cutaneous affections, and in intestinal chronic affections, chlorosis, and nervous disorders.

Their alkaline properties empower them to resolve obstructions, and free the functions of the skin, kidneys etc. and to correct acidities, their intimate connexion with sulphureted Hydrogen and Carbonic acid gas enables them to give activity to the secreting vessels and evacuate unhealthy humours, while at the same time they give vigour to the whole organism oppressed by chronic disease.

Visitors will find ample accommodation in the commodious establishments, which are formed on the border of the lake, especially at the *Hôtel des quatre Pavillons*, the *Hotel des Cygnes*, the *Bain de la Pêcherie*: besides these are several good boarding houses, as well as public gardens and places of amusement. On the lake of St.-Gratien, in the centre of which is a small and pretty Island with a kiosk upon it, those fond of aquatic excursions will find boats adapted for sailing or rowing. Horses and Asses are kept ready saddled for those who may be inclined to visit the several delightful villages in the neighbourhood, and the balls which are given here during the season attract the Parisians in great numbers. The baths of Enghien are every year increasing in repute.

## CLASSIFICATION OF FRENCH WINES.

### WINES OF THE FIRST CLASS.

WINES.	PLACE.	CHARACTER.
Romanée Conti	Côte-d'Or.	The first and most delicate red wines in the world, full of rich perfume, of exquisite bouquet and fine purple colour, light, yet with body and spirit sufficient to render them pleasant and healthful in use.
Chamberlin	Ditto.	
Richebourg	Ditto.	
Clos Vougeot	Ditto.	
Romanée St.-Vivant	Ditto.	
La Tache	Ditto.	
St.-Georges	Ditto.	
Corton	Ditto.	
First growths of Prémaux	Ditto.	Burgundies, closely resembling the above growths in aroma, and in all their other qualities.
Musigny	Ditto.	
Clos du Tart.	Ditto.	
Saint-Jean	Ditto.	
Perrière	Ditto.	
Veroilles	Ditto.	
Morgeot	Ditto.	
Mont Rachtet	Ditto.	White, high perfume and nutty flavor.

Lafitte Latour Château Margaux Haut Brion	[ Gironde. Ditto. Ditto. Ditto.	[ Fine colour and delicate flavour, light, less warm than Burgundy, with a violet perfume, and rich purple hue.
Beaume Muret Bessas, Burges, Landes Méal and Gréfiex Racoule, Guionière	[ La Drôme. Ditto. Ditto. Ditto. Ditto.	[ Wines of the Rhône, darker in colour than the preceding. Red Hermitage the most noted of these of good body, and a fine flavour of the raspberry.
Sillery	[ Marne.	[ White, still, dry; of an amber colour; generally iced for drinking.
Ay.	[ Marne.	[ Fine effervescing wine, bright in colour, slightly frothing.
Mareuil Hautvilliers Pierry Dizy Epernay «Closet»	[ Ditto. Ditto. Ditto. Ditto. Ditto.	[ The best of the white wines of Champagne, being all of the first quality, but differing a little in colour and effervescence.
Saint-Bris Carbonnieux Pontac Sauterne Barsac	[ Gironde. Ditto. Ditto. Ditto. Ditto.	[ Fine white wines of excellent quality, lightish brown in colour, aroma most agreeable, and some of rather sweet taste.
Preignac and Beaumes Château Grillet	[ Ditto. La Loire.	[ Description resembles the preceding.
Hermitage	[ Rhône.	[ Full of body, spirit, and perfume. The finest of all white wines.
Rivesaltes	[ Pyrénées orientales.	[ A rich muscadine.
Colmar, Olwiller Kaiserberg	[ Haut-Rhin.	[ Straw wines, rich and luscious.
Kientzheim, Ammerschwin	[ Ditto.	[ Ditto.
Hermitage de Paille	[ Rhône.	[ Ditto.

The dry wines of the first class will bear no mixture, except with their own growths; are too delicate to be adulterated without instant detection; are the pure offspring of the grape, and rank nearest to perfection of any known wines, of ancient or modern times.

#### WINES OF THE SECOND CLASS.

WINES.	PLACE.	CHARACTER.
Verzy, Verzenay, Mailly, St.-Basle, Bouzy,	[ Marne.	[ Red wines of Champagne.



St.-Thierry		
Vosne, Nuits, Chambolle, Volnay, Pomard, Beaune, Morey, Savigny, Meursault	Côte-d'Or.	Excellent red Burgundies, very little inferior to first growths.
Olivotes, Pitoy, Perrière	Yonne	Good wines.
Préaux, Chainette, Migrenne	Ditto.	
Moulin à Vent, Torins, Thénas	Saône-et-Loire Rhône.	Red.
Hermitage, 2.d growths.	Rhône.	Red.
Côte Rôtie	Ditto.	Red.
Rozan, Gorze, Léoville, Larose, Branne-Mouton, Pichon-Longueville, Calon	Gironde.	Red.
Côteau Brûlé	Vaucluse.	Red.
Jurançon, Gan	Basses-Pyrénées.	Red.
Rousillon, Bagnols, Cosperon, Collioure, Torémila, Terrats	Pyrénées orientales.	Red.
Cramant, Avize, Oger, Menil	Marne.	White champagne wines, of good quality.
La Perrière, Combotte, Goutte d'Or, Genevrière, Charmes et Meursault	Côte-d'Or.	White Burgundies, of high repute in France.
Guebwillers, Turkeim, Wolxheim, Molsheim, and Rangen, in Belfont	Haut-Rhin. Bas-Rhin.	Dry, white, and <i>vins de paille</i> , of good repute.
Arbois, Pupillin, Château Châlons	Jura.	Good wine, <i>mousseux</i> and still.
Coudrieu	Rhône.	A white wine, which keeps long, of fine <i>sève</i> and perfume.
Langon, Cerons, Podensac.	Gironde.	White wines capable of endurance.
Montbazillac, Teaulet,	Dordogne.	Good white wines of

Raulis, Suma, Sancé.	[	the country.
Buzet, Amazon, Vianne.	[ Lot-et-Garonne.	[ Generous white wines, of good body.
St.-Peray, St.-Jean	[ Ardèche.	[ Delicate <i>mousseux</i> and <i>non mousseux</i> , of agreeable flavour.
Jurançon	[ Basses-Pyrénées.	[ White, with an agreeable perfume of the truffle.
Frontignan, and Lunel Mazet	[ Hérault.	[ Sweet, rich, and luscious; white.
Bagnols, Collioure, Rodez	[ Pyrénées Orientales.	[ Red, styled de <i>Grenache</i> , rich and sweet.
Maccabeo of Salces	[ Ditto.	[ Sweet, <i>vins de liqueur</i> .

---

#### WINES OF THE THIRD CLASS.

WINES.	PLACE.	CHARACTER.
Hautvilliers, Mareuil, Dizy, Pierry, Epernay, Taisy, Ludes, Chigny, Villers-Allerand, Cumières	[ Marne.	[ Red Champagne wines of the second quality; light and agreeable.
Ricey, Avirey, Bagneux la Fosse	[ Aube.	[ Resembling the preceding.
Gevrey, Chassagne, Aloxe, Savigny sous Beaune, Blagny, Santenay, Chenôve	[ Côte-d'Or.	[ Good Burgundies of the third quality.
Clarion, Bonvin	[ Yonne.	[ Ditto.
Fleury, Romanèche, Chapelle, Guinchay	[ Saône-et-Loire	[ Ditto.
Chantergues, Montjuset.	[ Puy-de-Dôme.	[ Not wines of note; red.
Crozes, Mercurol, Gervant	[ Drôme.	[ Resembling red Hermitage, a little less full and fine, might be called Hermitage of the third quality.
	[	[

Seyssuel, Revantin	[ Isère.	[ Red wines, very middling of the class.
Verinay	[ Rhône.	[ Resembling Côte Rôtie.
Pouillac, Margaux, Pessac, St.-Estèphe, St.-Julien, Castelnau de Médoc, Cantenac, Talence, Merignac, Canon	[ Gironde.	[ Pouillac, Saint-Estèphe, good light red wines; Castelnau mediocre; the other growths agreeable.
Farcies, Terrasse, Campreal	[ Dordogne.	[ Resembling St-Emilion; keeping well.
Cape Breton, Soustons	[ Landes.	[ Red; light coloured, with a harsh taste.
Chuzelan, Travel, St.-Genies, Virac, Ledenon, St.-Laurent-des-Arbres	[ Gard.	[ Red wines grown on the banks of the Rhône; will not keep good more than six years.
Chateauneuf	[ Vaucluse.	[ Good red wines; keep well.
Riceys	[ Aube.	[ Champagne, light and agreeable, white.
Rougeot de Meursault	[ Côte-d'Or.	[ Tolerable wine; not exported.
Vaumorillon, Grises, Valmure, Grenouille, Vaudesir, Bourgereaue, Mont de Milieu et Chablis	[ Yonne.	[ In considerable esteem in Paris as wines of the table. They are all white.
Pouilly and Fuissé	[ Saône-et-Loire	[ Much the same as the preceding.
Etoile Quintignil	[ Jura.	[ White.
Pujols, Ilats, Landiras, Virelade, St.-Croix du Mont, Loupiac	[ Gironde.	[ Ditto, of middling quality.
St.-Michel sous Condrieu	[ Loire.	[ Ditto; consumed in the country.
Frontignan and Lunel	[ Hérault.	[ Second growths of those famous and rich white wines.
Vins de Picardan of Marseillan Pommerols. Vins de Calabria, de Malaga	and [ Hérault.	[ Rich luscious sweet wines, prepared in the department of Hérault; and very little exported, also muscadines.
Roquevaire, Cassis,	[	[ Rich sweet wines, boiled

The above are the three first classes of French wines, including all which are commonly exported; there are, according to the best authorities, six classes of red, seven of white, and four of *vins de liqueur*. In these (exclusive of the list above comprising the choicest kinds), there are two hundred and forty-three white, nine *vins de liqueur*, and four hundred and sixty-three red wines classed, commencing with the fourth. The wines of Champagne descend six degrees in class and quality, hence the importance of ascertaining the proper class by those who purchase them.

***Alcoholic strength of Wines and Liquors; according to  
the analysis of professor Brande.***

	PURE ALCOHOL PER CENT.
Burgundy, average of four samples	14·57
Ditto, lowest of the four	11·95
Ditto, highest of ditto	16·60
Champagne, four samples; average	12·61
Ditto, still	13·80
Ditto, mousseux	12·80
Côte Rôtie	12·32
Frontignan	12·79
Red Hermitage	12·32
Sauterne	14·22
Lunel	15·52
White Hermitage	17·43
Vin de Grave	13·94
Ditto, second sample	12·80
Barsac	13·86
Rousillon	19·00
Ditto, second sample	17·26
Claret <sup>[E]</sup>	17·11
Ditto	16·32
Ditto	14·08
Ditto	12·91
Average	15·10
Grenache	21·24
Malaga, 1666	18·94
Ditto	17·26
Sherry; average of four kinds	19·17
Teneriffe	19·79
Vidonia	19·25
Alba Flora	17·26
Tent	13·20
Hockheimer	14·37
Hock	13·00
Ditto, old	8·88
Colares Port	19·75
Port; average of seven specimens	22·96
Lisbon	18·94
Carcavellos	19·20
Ditto	18·10
Bucellas	18·49
Madeira Malmsey	16·40

Madeira Malmsey, red	22:30
Ditto	18:40
Madeira	24:42
Ditto	23:93
Sercial	21:40
Ditto	19:41
Average	22:27
Marsala; average of two specimens	25:09
Lacryma Christi	19:70
Lissa	26:47
Ditto	24:35
Syracuse	15:28
Etna	30:00
Aleatico	16:20
Constantia, white	19:75
Ditto, red	18:92
Cape muscat	18:25
Ditto Madeira	22:94
Average of three samples	20:51
Shiraz, white	19:80
Ditto, red	15:52
Tokay	9:88
Nice	14:63
Raisin wine	26:40
Average of three specimens	25:12
Currant Wine	20:55
Gooseberry	11:84
Orange; average of six samples	11:26
Elder wine	9:87
Scotch Whiskey	54:32
Irish ditto	53:90
Rum	53:68
Brandy	53:39
Gin	51:60
Cider, 9.87 and 5.21 average	7:84
Perry; four samples	7:26
Mead	7:32
Burton Ale	8:88
Edinburgh	6:20
Dorchester	5:56
London Porter	4:20
Brown Stout	6:80
London small Beer	1:28

### METEOROLOGICAL REGISTER.

The annexed tabular statement exhibits the variation of temperature in the shade, direction of the wind, and state of the atmosphere, for each day, from February the fourth, 1840, to January the thirty first, 1841, as carefully noted, and registered, at TOURS, twice per diem; namely, at 9 o'clock in the morning, and 12 o'clock at noon.

#### FEBRUARY 1840.

DAYS OF THE MONTH.	FAHRENHEIT'S THERMOMETER.		DIRECTION OF THE WIND.		STATE OF THE WEATHER.	
	9 A.M.	Mer.	9 A.M.	Mer.	9 A. M.	Meridian.
4	43°	47°	S. W.	S. W.	Showery.	Showery.
5	42	47	N. W.	N. W.	Fair but Cloudy.	Ditto.

6	41	49	Ditto.	Ditto.	Clear.	Cloudy.
7	48	53	S. W.	W.	Misty.	Ditto.
8	45	50	W.	N. W.	Clear.	Clear.
9	41	51	Ditto.	W.	Ditto.	Ditto.
10	45	51	S. W.	S. W.	Cloudy.	Cloudy.
11	46	49	Ditto.	Ditto.	Ditto.	Clear.
12	42	53	S.	S. W.	Clear.	Ditto.
13	46	47	S. W.	Ditto.	Rainy.	Ditto.
14	42	48	N.	N.	Clear.	Ditto.
15	39	41	N. W.	N. W.	Ditto.	Cloudy.
16	45	48	S. W.	S. W.	Cloudy.	Rainy.
17	47	52	Ditto.	S. E.	Rainy.	Clear.
18	46	46	N. E.	N. E.	Clear.	Ditto.
19	35	36	E.	E.	Ditto.	Ditto.
20	27	29	N. E.	N. E.	Ditto.	Ditto.
21	29	33	Ditto.	Ditto.	Ditto.	Ditto.
22	23	25	Ditto.	Ditto.	Sunshine.	Sunshine.
23	25	35	Ditto.	Ditto.	Ditto.	Ditto.
24	31	38	Ditto.	S. E.	Cloudy.	Cloudy.
25	32	41	S. E.	Ditto.	Bright sunshine.	Bright sunshine.
26	31	38	N. E.	N. E.	Ditto.	Ditto.
27	30	38	Ditto.	Ditto.	Ditto.	Ditto.
28	30	38	Ditto.	Ditto.	Ditto.	Ditto.
29	30	39	Ditto.	Ditto.	Ditto.	Ditto.

### MARCH.

DAYS OF THE MONTH.	FAHRENHEIT'S THERMOMETER.		DIRECTION OF THE WIND.		STATE OF THE WEATHER.	
	9 A.M.	Mer.	9 A.M.	Mer.	9 A. M.	Meridian.
1	28°	36°	N. E.	N. E.	Bright sunshine.	Bright sunshine.
2	29	38	Ditto.	Ditto.	Ditto.	Ditto.
3	34	41	Ditto.	Ditto.	Ditto.	Ditto.
4	35	45	Ditto.	S. E.	Ditto.	Ditto.
5	37	48	S. E.	Ditto.	Ditto.	Ditto.
6	37	49	Ditto.	Ditto.	Ditto.	Ditto.
7	36	48	Ditto.	Ditto.	Ditto.	Ditto.
8	37	50	Ditto.	Ditto.	Ditto.	Ditto.
9	37	51	N. E.	N. E.	Ditto.	Ditto.
10	37	45	Ditto.	Ditto.	Cloudy.	Ditto.
11	45	49	Ditto.	Ditto.	Clear.	Clear.
12	39	45	Ditto.	Ditto.	Ditto.	Ditto.
13	43	46	Ditto.	Ditto.	Ditto.	Ditto.
14	45	48	N. W.	N. W.	Cloudy.	Ditto.
15	46	51	Ditto.	Ditto.	Clear.	Ditto.
16	45	47	Ditto.	N. E.	Ditto.	Cloudy.
17	40	46	N. E.	Ditto.	Cloudy.	Clear.
18	42		N. E.		Clear.	Ditto.
19	44		Ditto.		Ditto.	Ditto.
20	38		Ditto.		Ditto.	Ditto.
21						
22	44		Ditto.	Ditto.	Ditto.	Ditto.
23	42	48	Ditto.	Ditto.	A few flakes of snow.	Sunshine.
24	38	39	Ditto.		Snowing fast with hail.	
25	34		Ditto.		Snow in the morning.	
26	33		Ditto.		Snowing.	
27	38		Ditto.		Ditto.	
28	34		Ditto.		Clear.	
29	38		Ditto.		Dull and cloudy.	
30	43		Ditto.		Ditto.	
31	46		N. W.		Ditto.	

**APRIL.**

DAYS OF THE MONTH.	FAHRENHEIT'S THERMOMETER.		DIRECTION OF THE WIND.		STATE OF THE WEATHER.	
	9 A.M.	Mer.	9 A.M.	Mer.	9 A. M.	Meridian.
1	44°	56°	S.	S. W.	Bright sunshine.	Bright sunshine.
2	47	60	Ditto.	S.	Ditto.	Ditto.
3	50	62	E.	E.	Ditto.	Ditto.
4	49	57	N. E.	N. E.	Ditto.	Ditto.
5	46	58	Ditto.	Ditto.	Ditto.	Ditto.
6	52	59	N. W.	N. W.	Ditto.	Ditto.
7	52	46	W.	Ditto.	Clear.	Rainy.
8	46	48	N. W.	Ditto.	Rainy.	Ditto.
9	44	47	N. E.	N. E.	Cloudy.	Cloudy.
10	44	49	Ditto.	Ditto.	Ditto.	Clear.
11	49	56	Ditto.	Ditto.	Sunshine.	Sunshine.
12	54	62	Ditto.	Ditto.	Ditto.	Ditto.
13	56	63	Ditto.	Ditto.	Ditto.	Ditto.
14	51	62	W.	S. W.	Cloudy.	Sunshine.
15	55	62	N. W.	W.	Ditto.	Sunshine.
16	59	70	N. E.	N. E.	Sunshine.	Ditto.
17	57	66	Ditto.	Ditto.	Ditto.	Ditto.
18	58	67	S. W.	S. W.	Ditto.	Ditto.
19	55		S. E.	S. E.	Dull.	Rain in the even.g
20	62	69	N. E.	N. E.	Clear.	Sunshine.
21	57	67	N. W.	W.	Sunshine.	Ditto.
22	59	68	Ditto.	N. W.	Dull.	Sunshine.
23	62	71	N. E.	N. E.	Clear.	Sunshine.
24	65	74	E.	E.	Sunshine.	Ditto.
25	65	78	Ditto.	Ditto.	Ditto.	Ditto.
26	69	78	N.	N.	Ditto.	Ditto.
27	71	79	N. E.	N. E.	Ditto.	Ditto.
28	72	82	E.	E.	Ditto.	Ditto.
29	74	80	N. E.	Ditto.	Ditto.	Ditto.
30	74	80	E.		Ditto.	Ditto.

**MAY.**

DAYS OF THE MONTH.	FAHRENHEIT'S THERMOMETER.		DIRECTION OF THE WIND.		STATE OF THE WEATHER.	
	9 A.M.	Mer.	9 A.M.	Mer.	9 A. M.	Meridian.
1	71°	78°	E.	E.	Sunshine.	Sunshine.
2	70	76	Ditto.	Ditto.	Ditto.	Ditto.
3	69	76	Ditto.	Ditto.	Ditto.	Thunder and rain during the night.
4	64	72	S. W.	N. W.	Showery.	Showery.
5	70	76	N. W.	W.	Clear.	Sunshine.
6	69	76	W.	S. W.	Clear.	Rainy.
7	63	62	Ditto.	W.	Rainy.	Rainy.
8	64	69	Ditto.	S. W.	Clear.	Sunshine.
9	63	65	S. W.	Ditto.	Cloudy.	Cloudy.
10	60	68	S.	S.	Showery.	Showery.
11	55	62	N. W.	N. W.	Ditto.	Ditto.
12	59	61	S. W.	S. W.	Ditto.	Continued Rain.
13	60	66	Ditto.	Ditto.	Cloudy.	Clear.
14	61	65	Ditto.	Ditto.	Showery.	Showery.
15	62	66	W.	W.	Ditto.	Ditto.
16	60	61	Ditto.	Ditto.	Ditto.	Ditto.
17	61	66	Ditto.	Ditto.	Ditto.	Much rain in the night.
18	55	62	N. W.	N. W.	Cloudy.	Clear.
19	57	60	E.	E.	Clear.	Rainy.
20	53	59	N. E.	N. E.	Cloudy.	Sunshine.
21	55	59	N. W.	N. W.	Showery.	Showery.
22	57	60	Ditto.	Ditto.	Clear.	Sunshine.

23	61	63	N. E.	N. E.	Sunshine.	Ditto.
24	66	71	W.	W.	Sunshine.	Cloudy.
25	62	68	Ditto.	Ditto.	Cloudy.	Cloudy.
26	63	70	Ditto.	Ditto.	Clear.	Clear.
27	65	70	N. W.	W.	Gentle showers.	Sunshine.
28	71	75	E.	E.	Clear.	Clear.
29	67	73	N. W.	N. W.	Ditto.	Ditto.
30	69	72	N.	N. E.	Sunshine.	Sunshine.
31	73	75	E.	E.	Ditto.	Ditto.

### JUNE.

DAYS OF THE MONTH.	FAHRENHEIT'S THERMOMETER.		DIRECTION OF THE WIND.		STATE OF THE WEATHER.	
	9 A.M.	Mer.	9 A.M.	Mer.	9 A. M.	Meridian.
1	76°	81°	E.	S. E.	Sunshine.	Sunshine.
2	81	83	S. W.	S. W.	Ditto.	Ditto a thunder storm at 2 P. M.
3	67	69	N. W.	N. W.	Sunshine.	Sunshine.
4	67	69	N.	N.	Ditto.	Ditto.
5	72	73	N.	E.	Ditto.	Ditto.
6	75	75	S.	S. W.	Cloudy.	Gentle rain.
7	65	71	N. W.	N. W.	Cloudy.	Sunshine.
8	74	74	N. W.	S. E.	Sunshine.	Ditto.
9	74	72	S. E.	W.	Clear.	Cloudy.
10	70	74	W.	W.	Cloudy.	Showery.
11	67	71	N. W.	N. W.	Cloudy.	Clear.
12	72	76	Ditto.	Ditto.	Sunshine.	Sunshine.
13	73	76	Ditto.	Ditto.	Ditto.	Ditto.
14	78	81	E.	E.	Ditto.	Ditto.
15	76	80	N.	N.	Ditto.	Ditto.
16	76	79	N. W.	W.	Ditto.	Ditto.
17	76	80	W.	W.	Ditto.	Showery.
18	71	75	N. W.	N. W.	Sunshine.	Sunshine.
19	71	75	W.	W.	Ditto.	Ditto.
20	69	73	W.	N. W.	Cloudy.	Clear.
21	74	81	W.	W.	Sunshine.	Sunshine.
22	78	81	Ditto.	Ditto.	Ditto.	Ditto.
23	69	72	Ditto.	Ditto.	Ditto.	Ditto.
24	67	69	Ditto.	Ditto.	Ditto.	Ditto.
25	68	68	N. W.	N. W.	Ditto.	Ditto.
26	68	72	Ditto.	Ditto.	Ditto.	Ditto.
27	71	74	E.	E.	Ditto.	Ditto.
28	71	73	N. E.	N. E.	Cloudy.	Sunshine.
29	72	74	N.	N.	Sunshine.	Ditto.
30	75	77	N.	N. W.	Ditto.	Ditto.

### JULY.

DAYS OF THE MONTH.	FAHRENHEIT'S THERMOMETER.		DIRECTION OF THE WIND.		STATE OF THE WEATHER.	
	9 A.M.	Mer.	9 A.M.	Mer.	9 A. M.	Meridian.
1	75°	79°	W.	W.	Sunshine.	Sunshine.
2	73	78	Ditto.	Ditto.	Ditto.	Ditto.
3	69	72	S. W.	S. W.	Cloudy.	Rain-ceased-at 2 P.M.
4	64	69	W.	W.	Cloudy.	Cloudy.
5	66	66	Ditto.	Ditto.	Gentle rain.	Gentle rain.
6	68	71	Ditto.	Ditto.	Sunshine.	Sunshine.
7	69	71	Ditto.	Ditto.	Ditto.	Ditto.
8	66	71	Ditto.	Ditto.	Sunshine.	Showery.
9	65	68	Ditto.	Ditto.	Sunshine.	Clear.



10	68	70	Ditto.	Ditto.	Clear.	Clear.
11	64	68	N. W.	N. W.	Showery.	Clear.
12	65	71	Ditto.	Ditto.	Clear	Sunshine.
13	59	63	N.	N. W.	Showery.	Showery.
14	63	88	N. E.	N. E.	Sunshine.	Sunshine.
15	68	72	Ditto.	Ditto.	Ditto.	Ditto.
16	73	78	E.	E.	Ditto.	Ditto.
17	69	78	N.	N.	Ditto.	Ditto.
18	70	76	W.	W.	Ditto.	Ditto.
19	74	79	S. W.	S. W.	Ditto.	Cloudy.
20	69	74	W.	W.	Sunshine.	Sunshine.
21	67	69	Ditto.	S. W.	Clear.	Cloudy.
22	69	65	W.	S. W.	Sunshine.	Thundershowers.
23	66	69	S. W.	Ditto.	Sunshine.	Sunshine.
24	69	73	Ditto.	Ditto.	Ditto.	Ditto.
25	68	74	Ditto.	Ditto.	Cloudy.	Showery.
26	63	67	Ditto.	W.	Showery.	Ditto.
27	67	69	N. W.	N. W.	Sunshine.	Clear.
28	68	72	W.	W.	Sunshine.	Slight shower.
29	69	76	N. W.	N. W.	Cloudy.	Sunshine.
30	74	72	N.	W.	Sunshine.	Showery.
31	71	74	N.	N. W.	Sunshine.	Sunshine.

**AUGUST.**

DAYS OF THE MONTH.	FAHRENHEIT'S THERMOMETER.		DIRECTION OF THE WIND.		STATE OF THE WEATHER.	
	9 A.M.	Mer.	9 A.M.	Mer.	9 A. M.	Meridian.
1	66°	72°	S. E.	S. E.	Sunshine.	Sunshine.
2	69	74	Ditto.	Ditto.	Ditto.	Ditto
3	73	79	Ditto.	Ditto.	Ditto.	Ditto
4	76	83	Ditto.	Ditto.	Ditto.	Ditto
5	76	86	Ditto.	Ditto.	Ditto.	Ditto
6	72	82	S. W.	S. W.	Cloudy.	Sunshine (Thunder in the night.)
7	75	81	Ditto.	Ditto.	Sunshine.	Sunshine
8	68	71	Ditto.	Ditto.	Cloudy.	Sunshine
9	71	77	Ditto.	Ditto.	Sunshine.	Ditto
10	69	78	E.	E.	Ditto.	Ditto
11	70	76	S.	W.	Ditto.	Cloudy
12	67	73	W.	Ditto.	Sunshine.	Sunshine
13	67	71	S. W.	S. W.	Showery.	Showery
14	67	71	W.	W.	Ditto.	Ditto
15	67	73	Ditto.	Ditto.	Sunshine.	Sunshine
16	67	72	N. W.	W.	Ditto.	Clear
17	66	66	S. W.	S. W.	Clear.	Gentle rain
18	64	69	W.	W.	Showery.	Clear
19	67	75	S. W.	W.	Gentle rain.	Showery
20	68	74	W.	W.	Showery.	Sunshine
21	69	79	S. E.	S. E.	Cloudy.	Sunshine
22	69	76	N. W.	N. W.	Cloudy.	Clear
23	67	74	Ditto.	Ditto.	Clear.	Sunshine
24	69	76	N. E.	N. E.	Sunshine.	Ditto. (Thunder storm in the night)
25	70	78	N. W.	N. W.	Sunshine.	Sunshine
26	70	76	N.	N.	Ditto.	Ditto
27	73	80	S.	S. E.	Ditto.	Ditto
28	73	80	Ditto.	Ditto.	Ditto.	Ditto
29	77	85	Ditto.	Ditto.	Ditto.	Ditto
30	77	86	Ditto.	Ditto.	Ditto.	Ditto
31	75	83	Ditto.	Ditto.	Ditto.	Ditto

**SEPTEMBER.**

DAYS OF THE MONTH.	FAHRENHEIT'S THERMOMETER.		DIRECTION OF THE WIND.		STATE OF THE WEATHER.	
	9 A.M.	Mer.	9 A.M.	Mer.	9 A. M.	Meridian.
1	75°	80°	E.	S.	Sunshine.	Clear—Thunder storm P. M.
2	76	81	S. W.	S. W.	Sunshine.	Rain.
3	61	67	N. W.	N. W.	Rain.	Sunshine.
4	65	71	W.	W.	Sunshine.	Ditto.
5	65	69	Ditto.	Ditto.	Rainy.	Cloudy.
6	67	71	N. E.	N. E.	Sunshine.	Sunshine.
7	63	71	E.	E.	Sunshine.	Sunshine.
8	68	72	N.	N. W.	Clear.	Clear.
9	66	74	N.	W.	Sunshine.	Sunshine.
10	63	73	W.	W.	Clear.	Sunshine.
11	66	75	N.	N.	Sunshine.	Ditto.
12	65	71	N. E.	N. E.	Ditto.	Clear.
13	58	61	Ditto.	Ditto.	Rain.	Clear.
14	50	61	W.	W.	Clear.	Cloudy.
15	58	65	N. W.	N. W.	Sunshine.	Sunshine.
16	59	65	W.	W.	Rain.	Sunshine.
17	56	63	S. W.	W.	Showery.	Sunshine.
18	54	55	N. E.	N. E.	Heavy showers.	Heavy showers.
19	55	61	N. W.	N. W.	Clear.	Clear.
20	52	61	Ditto.	Ditto.	Sunshine.	Sunshine.
21	51	62	Ditto.	S. W.	Ditto.	Ditto.
22	59	63	S. W.	S. W.	Ditto.	Showery.
23	55	57	Ditto.	Ditto.	Heavy rain.	Rain.
24	55	63	W.	S. W.	Sunshine.	Showery.
25	57	61	W.	N. W.	Showery.	Cloudy.
26	57	63	N. W.	S. W.	Sunshine.	Cloudy.
27	61	63	W.	W.	Rain.	Rain.
28	65	68	W.	W.	Showery.	Cloudy.
29	63	»	W.	N. W.	Showery.	Heavy rain.
30	57	63	W.	N. W.	Sunshine.	Clear.

### OCTOBER.

DAYS OF THE MONTH.	FAHRENHEIT'S THERMOMETER.		DIRECTION OF THE WIND.		STATE OF THE WEATHER.	
	9 A.M.	Mer.	9 A.M.	Mer.	9 A. M.	Meridian.
1	52°	62°	N. W.	N. W.	Sunshine.	Sunshine.
2	55	63	N.	E.	Ditto.	Ditto.
3	55	57	N. E.	N. E.	Clear.	Clear.
4	51	57	Ditto.	Ditto.	Sunshine.	Cloudy.
5	51	59	Ditto.	Ditto.	Sunshine.	Clear.
6	51	61	N.	N.	Sunshine.	Sunshine.
7	51	61	E.	E.	Ditto.	Clear.
8	53	61	Ditto.	Ditto.	Ditto.	Sunshine.
9	51	57	Ditto.	Ditto.	Ditto.	Ditto.
10	50	59	Ditto.	Ditto.	Ditto.	Ditto.
11	49	57	N. E.	N. E.	Clear.	Clear.
12	51	59	Ditto.	Ditto.	Sunshine.	Sunshine.
13	51	59	E.	E.	Ditto.	Ditto.
14	50	59	Ditto.	Ditto.	Ditto.	Ditto.
15	50	61	Ditto.	Ditto.	Ditto.	Ditto.
16	46	51	Ditto.	Ditto.	Clear.	Hazy.
17	52	58	W.	W.	Cloudy.	Rain from 2 P.M.
18	53	60	N. W.	N. W.	Sunshine.	Sunshine.
19	53	58	W.	W.	Cloudy.	Cloudy.
20	53	57	N. W.	N.	Sunshine.	Cloudy.
21	50	55	N.	N. E.	Sunshine.	Sunshine.
22	49	57	W.	W.	Showery.	Showery.
23	52	56	N. W.	N. W.	Sunshine.	Clear.
24	53	55	W.	N. W.	Rain.	Sunshine.
25	49	54	N. W.	Ditto.	Sunshine.	Clear.

26	43	53	W.	W.	Sunshine.	Cloudy.
27	48	53	S. W.	S. W.	Rain.	Rain.
28	47	54	Ditto.	Ditto.	Showery.	Clear.
29	49	54	E.	S.	Clear.	Clear.
30	45	57	S. E.	S.	Sunshine.	Sunshine.
31	49	58	S. W.	S. W.	Ditto.	Ditto.

**NOVEMBER.**

DAYS OF THE MONTH.	FAHRENHEIT'S THERMOMETER.		DIRECTION OF THE WIND.		STATE OF THE WEATHER.	
	9 A.M.	Mer.	9 A.M.	Mer.	9 A. M.	Meridian.
1	47°	54°	S. E.	S. E.	Showery.	High winds.
2	49	59	Ditto.	Ditto.	Sunshine.	Sunshine.
3	53	61	Ditto.	S.	Ditto.	Ditto.
4	55	57	S. W.	W.	Clear.	Rain.
5	53	57	Ditto.	S. W.	Showery.	Sunshine, rain 4 P.
6	54	57	Ditto.	W.	Rain.	Showery.
7	51	51	S. W.	S. W.	Showery.	Rain.
8	52	58	Ditto.	Ditto.	Showery.	Showery.
9	55	57	Ditto.	W.	Clear.	Showery.
10	50	55	W.	W.	Showery.	Showery.
11	49	49	S. W.	S. W.	Showery.	Rain.
12	47	52	W.	W.	Dull.	Rain.
13	55	59	S. W.	S. W.	Rain.	Showery.
14	49	55	W.	W.	Sunshine.	Sunshine.
15	51	55	Ditto.	Ditto.	Rain.	Rain.
16	59	61	Ditto.	Ditto.	Ditto.	Ditto.
17	61	66	Ditto.	Ditto.	Ditto.	Sunshine and showers.
18	53	57	S.	S. W.	Clear.	Rain.
19	54	55	S. W.	Ditto.	Rain.	Rain.
20	43	48	N. E.	N. E.	Sunshine.	Sunshine.
21	42	45	W.	W.	Cloudy.	Rain.
22	48	53	N. W.	N.	Sunshine.	Showery.
23	39	47	N.	N. W.	Sunshine.	Sunshine.
24	47	49	W.	W.	Foggy.	Foggy.
25	46	49	E.	E.	Sunshine.	Sunshine.
26	36	42	Ditto.	Ditto.	Ditto.	Ditto.
27	38	41	Ditto.	Ditto.	Ditto.	Ditto.
28	33	41	Ditto.	Ditto.	Ditto.	Ditto.
29	33	41	Ditto.	Ditto.	Ditto.	Ditto.
30	32	41	Ditto.	Ditto.	Ditto.	Ditto.

**DECEMBER.**

DAYS OF THE MONTH.	FAHRENHEIT'S THERMOMETER.		DIRECTION OF THE WIND.		STATE OF THE WEATHER.	
	9 A.M.	Mer.	9 A.M.	Mer.	9 A. M.	Meridian.
1	34°	39°	E.	E.	Foggy.	Clear.
2	37	42	Ditto.	N. E.	Clear.	Rain.
3	38	42	N. E.	Ditto.	Sunshine.	Sunshine.
4	37	41	Ditto.	Ditto.	Ditto.	Ditto.
5	32	38	Ditto.	Ditto.	Ditto.	Ditto.
6	29	36	Ditto.	Ditto.	Ditto.	Ditto.
7	32	32	S. W.	S. W.	Cloudy.	Dull.
8	35	41	S.	S.	Clear.	Heavy rain.
9	33	40	W.	W.	Sunshine.	Sunshine.
10	31	35	E.	E.	Fog.	Fog.
11	37	46	W.	S. W.	Heavy rain.	Showery.

12	41	39	N. W.	N. W.	Dull.	Cloudy.
13	31	31	Ditto.	Ditto.	Cloudy.	Cloudy.
14	23	25	Ditto.	Ditto.	Sunshine.	Sunshine.
15	19	23	N. E.	N. E.	Ditto.	Ditto.
16	14	18	Ditto.	Ditto.	Ditto.	Ditto.
17	12	17	Ditto.	Ditto.	Ditto.	Ditto.
18	19	25	Ditto.	Ditto.	Snow.	Snow.
19	36	37	E.	S. E.	Thawing fast.	Thawing fast.
20	33	37	W.	W.	Foggy.	Thawing.
21	29	29	N. E.	N. E.	Sharp frost.	Snowing.
22	27	33	E.	E.	Sunshine.	Sunshine.
23	25	28	Ditto.	Ditto.	Clear.	Clear.
24	19	26	N. E.	N. E.	Sunshine.	Sunshine.
25	26	34	Ditto.	Ditto.	Ditto.	Ditto.
26	26	33	Ditto.	Ditto.	Ditto.	Ditto.
27	25	27	E.	E.	Clear.	Clear.
28	24	29	Ditto.	Ditto.	Ditto.	Ditto.
29	33	39	Ditto.	S. E.	Hazy.	Clear and thawing rapidly.
30	35	40	E.	E.	Thawing.	Cloudy.
31	34	37	E.	W.	Snowing.	Rain.

### JANUARY 1841.

DAYS OF THE MONTH.	FAHRENHEIT'S THERMOMETER.		DIRECTION OF THE WIND.		STATE OF THE WEATHER.	
	9 A.M.	Mer.	9 A.M.	Mer.	9 A. M.	Meridian.
1	36°	38°	N. W.	N. W.	Clear.	Hazy.
2	39	41	W.	N. W.	Fog.	Clear.
3	39	43	S. W.	S. W.	Cloudy.	Snowing.
4	31	36	W.	S. W.	Sunshine.	Cloudy.
5	30	35	N. W.	N. W.	Snowing.	Sunshine.
6	31	33	S. W.	S. W.	Cloudy.	Sleet.
7	29	33	Ditto.	Ditto.	Cloudy.	Sunshine.
8	18	17	N. E.	E.	Sunshine.	Ditto.
9	24	28	S.	S.	Cloudy.	Sunshine.
10	36	39	S. W.	W.	Foggy and Thaw.	Rain.
11	39	41	W.	S. W.	Sunshine.	Sunshine.
12	38	41	W.	W.	Cloudy.	Showery.
13	41	44	S.	S. W.	Rain.	Rain.
14	48	53	S. W.	Ditto.	Rain.	Clear.
15	45	49	W.	W.	Clear.	Clear.
16	49	52	S. W.	S.	Rain.	Showery.
17	50	57	S. W.	S. W.	Clear.	Sunshine.
18	48	52	S. W.	Ditto.	Clear.	Clear.
19	47	49	W.	W.	Clear.	Showery.
20	34	40	N. W.	N. W.	Sunshine.	Sunshine.
21	32	37	N.	N. E.	Cloudy.	Cloudy.
22	37	41	N.	N. W.	Clear.	Clear.
23	40	44	W.	W.	Rain.	Rain.
24	37	41	W.	S. W.	Rain.	Stormy.
25	33	39	N. W.	N.	Clear.	Sunshine.
26	35	41	W.	W.	Cloudy.	Rain.
27	45	48	Ditto.	Ditto.	Fog.	Clear.
28	43	47	N. W.	N. W.	Clear.	Sunshine.
29	37	41	Ditto.	Ditto.	Hazy.	Cloudy.
30	33	37	N. E.	N.	Sunshine.	Sunshine.
31	31	36	E.	E.	Sunshine.	Frost.

On a careful inspection of this interesting register, it will appear sufficiently obvious, that the climate of Touraine, is of a mild and equable character, and when it is recollected that the winter of 1840, was almost every where marked by extraordinary vicissitudes of temperature, and unusual severity, it would hardly appear a fair criterion of the *natural salubrity* of the climate of this country.

A really correct knowledge of the distinguishing characteristics of any climate can of course,

only be obtained by taking the average of correctly observed and registered, meteorological phenomena of a series of years; and too much credit cannot be awarded to persons who bestow a portion of their time and attention in the acquirement of such important data; which must, ultimately tend to the advancement of science, and public utility.

### Réaumur's Thermometric Scale turned into Fahrenheits.

R.	F.	R.	F.	R.	F.	R.	F.
80	212.00	51	146.75	23	83.75	5	20.75
79	209.75	50	144.50	22	81.50	6	18.50
78	207.50	49	142.25	21	79.25	7	16.25
77	205.25	48	140.00	20	77.00	8	14.00
76	203.00	47	137.75	19	74.75	9	11.75
75	200.75	46	135.50	18	72.50	10	9.50
74	198.50	45	133.25	17	70.25	11	7.25
73	196.25	44	131.00	16	68.00	12	5.00
72	194.00	43	128.75	15	65.75	13	2.75
71	191.75	42	126.50	14	63.50	14	0.50
70	189.50	41	124.25	13	61.25	15	1.75
69	187.25	40	122.00	12	59.00	16	4.00
68	185.00	39	119.75	11	56.75	17	6.25
67	182.75	38	117.50	10	54.50	18	8.50
66	180.50	37	115.25	9	52.25	19	10.75
65	178.25	36	113.00	8	50.00	20	13.00
64	176.00	35	110.75	7	47.75	21	15.25
63	173.75	34	108.50	6	45.50	22	17.50
62	171.50	33	106.25	5	43.25	23	19.75
61	169.25	32	104.00	4	41.00	24	22.00
60	167.00	31	101.75	3	38.75	25	24.25
59	164.75	30	99.50	2	36.50	26	26.50
58	162.50	29	97.25	1	34.25	27	28.75
57	160.25	28	95.00	0	32.00	28	31.00
56	158.00	27	92.75	1	29.75	29	33.25
55	155.75	26	90.50	2	27.50	30	35.50
54	153.50	25	88.25	3	25.25	31	37.75
53	151.25	24	86.00	4	23.00	32	40.00
52	149.00						

The circle is divided by the French into 400 degrees; by the English into 360. Hence 10 French circular degrees equal 9 English.

## APPENDIX.

### A FEW USEFUL HINTS FOR TRAVELLERS.

Passports.—The office for passports in London is at N<sup>o</sup> 6 Poland street, Oxford street, where an under-secretary of the embassy attends daily (generally from one till three.) Applications personal or written stating the name, profession and nation, is made one day and the passport is granted (gratis) the following one, on personal applications only.

To expedite the procuring of a passport, in a case of emergency, applications may be made to

the French Consul, N<sup>o</sup> 3, Coptal Buildings, where a fee of ten shillings is expected.

Members of the same family may have their names inserted in the same passport, but persons travelling in company should provide themselves with separate passports. Couriers and male servants should each have a passport.

A traveller intending to visit any other territory should have the passports *visé* (backed) by the Ambassador or Consul of each country traversed.

Consuls residing at the outports also give passports, so likewise do British Consuls resident at foreign seaports.

The British Ambassador's residence, in Paris, is N<sup>o</sup> 39, rue du faubourg saint Honoré.

If the traveller should omit to obtain a passport till he reach Dover, or Brighton, or Southampton, he may procure one from the French Consul at any one of these places, on the first application, it will cost him ten shillings.

CASH.—The traveller will find English Bank-Notes, particularly of large amount the most profitable money he can take to France. The course of exchange has for several years been about six per cent in favor of England. Should he however object to carry a large sum with him, he may take *Circular* or *transferable Exchange notes*. The object of these notes is to supply *travellers* on the continent with money where they may require it, without there being any necessity for determining the route before hand; and to supply *other individuals*, who may have remittances to make abroad, with bills upon any particular place that they may desire. For this purpose a correspondence is established with all the principal places in Europe.

Notes on this plan may be obtained of Messrs. Coutts and C<sup>o</sup>., Strand; Foreign Banking Company, (la banque Anglo-Etrangère), 82, Lombard Street, and of Messrs. Glynn and C<sup>o</sup>., Lombard Street.

COIN.—The modern gold coins of France are pieces of 40 fr. and 20 fr. The silver coins are 5 fr., 2 fr., 1 fr., ½ fr., ¼ fr.. The coins of billon (a mixed metal) and copper are pieces of one decime, or 2 sous, pieces of 6 liards, or 1½ sou, of 5 centimes, or one sou, and of one centime. There are also liards and double liards, which are ¼ and ½ of a sou.

In the monetary system of France, the coins, if accurately minted, may serve also as weights. Thus 5 francs in copper, 50 in billon, 200 in standard silver, or 3,100 in standard gold, should weigh one kilogramme. Hence the piece of one fr. weighs 5 grammes, and any other piece in the above proportion.

The gold coins of 20 fr. and 40 fr., struck under the government of Bonaparte, were called napoleons and double-napoleons, and such is the force of habit, that these, as well as pieces of the same value struck since 1814, continue to be so called.

They are also designated pièces de vingt francs and pièces de quarante francs. The silver coins of 5 francs each are frequently called pièces de cent sous; a piece of 2 francs is called pièce de quarante sous, and so on.

The only notes issued by the Bank of France are of 500 fr. and 1,000 fr. These are changeable into silver at the Bank, without discount, except the charge of 3 sous for the bag which contains the change; or, at a premium, into silver or gold, at the different money changers.

The French money, being divided into decimal parts, in reckoning, instead of 25 sous it is said 1 fr. 25 centimes, instead of 30 sous, 1 fr 50 cent., and so on. When the course of exchange is at par between France and England, 25 fr. are considered equal to the pound sterling.

The gold as well as silver coins of France contain 1—10th. alloy.

Since the English sovereign contains of pure gold 7.318444035 grammes, and the gold coin of 20 fr. contains of pure gold 5.806449 grammes, therefore the *intrinsic* value of the sovereign, in French money, is 25.2079 fr., or 25 fr. 20 c. Hence the respective intrinsic value of the following coins will be:

Guinea	26fr.47c.	Napoléon	15s.10¼d. .9
Crown	5fr.80c.	Franc	9 d.05
Shilling	1fr.16c.		

The rate of exchange, at Paris and the principal towns of France, is commonly 25 fr. 50 c. for L. 1 sterling: but it varies, and especially in the smaller towns, from 25 fr. to 25 fr. 75 c. If we assume it to be 25 fr. to L. 1 sterling, we have an easy proportion, by which we may find the value of the money of either country in the money of the other. Thus since 25 fr. are equal to 20 shillings, 5 francs are equal to 4 shillings, and therefore, any number of francs are equal to 4-5ths of the same number of shillings; and any number of shillings are equal to 5-4ths of the same number of francs. Thus 100 fr. will equal 80 shillings, or L. 4; and L. 5, or 100 shillings, will equal 125 fr. Hence.

Sovereign	25 fr.	Napoléon	16 s. 0 d.
Crown	6 fr. 25 c.	Franc	9 d. $\frac{3}{4}$ nearly
Shilling	1 fr. 25 c.	Sou	$\frac{1}{2}$ nearly.
Penny	10 c. nearly.		or $\frac{1}{4}$ 9.

This rule will be found very useful for all small sums and the common purposes of life.

## TRAVELLING.

LONDON TO CALAIS.—Persons who leave London by the evening coaches abridge their journey by not sleeping at Dover, and are equally in time for the packet-boats, the coaches always arriving before the packets sail, early the next morning either to Calais or Boulogne, whence safety coaches set out twice a day for Paris; by which, according to the quickness of the passage, the traveller pressed for time may go either that same evening or early the next morning, and will reach the French metropolis the day after.

Considerable saving will be experienced by booking throughout, and the best places secured in the coach. The coaches from the Golden Cross; 41, Regent Circus; and the Cross Keys, Wood-Street, are in connexion with the Messageries royales, rue Notre-Dame-des-Victoires, at Paris. Those from the spread Eagle office; Webbs hotel, 220, Piccadilly; and the Spread Eagle, and Cross Keys, Grace-church-street, are in connexion with the Messageries générales, Lafitte's company, Nos 9 and 24, rue du Bouloy, at Paris. Those from the White Bear Piccadilly, are in connexion with l'Aigle; the Eagle an opposition company, N<sup>o</sup> 23, rue du Bouloy, Paris. The office at Calais is in rue St.-Michel, that at Boulogne is at the Hotel du Nord.

Steam packets go from the Tower stairs to Calais three or four times a week during the summer months, and once or twice during the greater part of the winter. The passage is generally performed within twelve hours. Carriages and heavy baggage must be sent by twelve o'clock on the day previous to starting. The passage from Dover to Calais, is performed in three hours or three hours and a half.

LONDON TO HAVRE.—The voyage is performed by companies, one French, one English. Havre is now greatly preferred to Dieppe.

SOUTHAMPTON has become a favourite place for embarkation, owing to the *Railway*, the London terminus of which is at nine Elms, near Vauxhall. Steam-Packets go four times a week, during the summer months. They call off Portsmouth, for passengers, and on their arrival at Havre meet the steam vessel which plies between that place and *Rouen*. Further particulars may be obtained either at N<sup>o</sup> 25, Coventry street; at Portsmouth, or at Southampton. A sailing vessel also goes every week from Southampton to Hâvre; distance between the two ports, 139 miles.

POSTING. There are three modes of travelling in France: in private carriages (*voitures*), a hired carriage (*chaise de poste*), and the public diligence. As all English carriages have poles, it will be advisable, if the company do not exceed three in number, to have their poles replaced by shafts, by which means one-third of the expense of posting will be saved; for, instead of four horses and two postilions, they will only pay for three horses and one postilion. If more than three persons travel in the same cabriolet or limonière, the postmaster will charge one franc per post extra for each person beyond that number.

The arrangements for posting are attended to with scrupulous exactness. There is no competition: and those who arrive first are uniformly first accommodated.

A book called the *livre de poste* is published every year by the French government containing every information for the traveller which he may consult at any post-house, as the postmaster is compelled to keep a copy.

### TRAVELLING BY THE MAIL IN FRANCE.

Persons who wish to proceed rapidly may travel by the mails. These light and commodious vehicles are made to carry four persons, and are supplied with horses at the post-houses. Each passenger may carry a sac de nuit or portmanteau, weighing fifteen kilograms. The price of each place is 1 franc, 50 centimes per post, and 75 centimes per post to the guard.

There are mails on the following roads:—From Paris to Caen; Calais; Lille; Valenciennes; Mezières; Strasbourg, through Metz, and through Nancy; Belfort; Besançon; Lyons, through Châlons, and through Moulins; Toulouse, Bordeaux; Nantes, through le Mans, and through

Vendôme, and Brest.

Also from Tours to Havre, from Lyon to Strasbourg, and to Marseilles; from Avignon to Toulouse; from Toulouse to Bayonne; from Bordeaux to Bayonne and to Toulouse; from Limoges to Bordeaux; from Châlons-sur-Marne to Metz, from Bonnières to Rouen; and from Troyes to Mulhausen.

DILIGENCE.—A conductor is attached to each machine: his proper business is to take care of the baggage, and this duty he discharges with the strictest integrity. When the traveller's portmanteau or parcels have once been consigned to him, every fear with regard to their safety may be dismissed. He usually presides at the dinner table of the passengers, and does full justice to what is provided. He accompanies the diligence through the whole of the journey, and at the close of it expects a gratuity of four or five francs. The latter sum includes the driver.

Fifteen pounds of luggage are allowed, and twenty-one francs per cent is charged for the overplus. The usual charges for meals to the passengers in the diligence are, for dinner 4 fr.; for supper 3½ fr; for breakfast 3½ fr. The average expense of travelling by the diligence, including the pour-boire of the coachman and conductor, is about 75 centimes per league. They usually travel about two leagues an hour.

Offices in Paris from which the Tours diligences set out.—Rue du Bouloy, N<sup>os</sup> 9 and 24—Rue N.-D. des Victoires, N<sup>o</sup> 22.

On travellers arriving in Paris we would strongly recommend Lawson's Bedford hotel N. 323 rue St-Honoré and N. 24 rue Rivoli where they will meet with every attention and English comforts at reasonable charges. It is situated in the most agreeable part of Paris adjacent to the palace and garden of the Tuileries. Apartments may be had by the day, week, or month; breakfasts are served in the coffee-room or in private apartments, and visitors may dine at the table-d'hôte or in their own rooms. The greatest regularity prevails in forwarding and delivering letters, parcels, and information of every kind is furnished.

DILIGENCES start every day from Tours, to Paris, Bordeaux, la Rochelle, Poitiers, Nantes, le Mans, Caen, Chartres, Chinon, Orléans, Laval, and Mayenne.

The principal hotels in Tours are, the Boule d'Or; the Faisan; Hotel de Londres; Hotel d'Angleterre; and Saint-Julien.

### DISTANCE TABLES.

The following tables have been expressly calculated to give the exact distance and intermediate distances, with reference to posting between Havre and Tours, on some of the routes referred to in the Memoranda.

#### FROM HAVRE TO TOURS, THROUGH ROUEN.

	M	K	F	I	I
	y	i	u	n	n
	r	l	r	a	c
	i	M	l	F	h
	a	i	Y	e	e
	m	l	a	d	s
	è	l	r	e	
	t	e	g	s	
	r	s	s	t	
	e	s	s		
	.	.	.	.	.
<i>Havre to,</i>					
La Botte	1	6			
Lillebonne	1	9			
Caucleber	1	5			
Duclair	1	6			
Rouen	2	53	0	22	1 10½



Grande Couronne	1	2				
Bourg Theroulde	1	5				
Brionne	1	8				
Bernay	1	5				
Broglie	1	1				
Monnai	1	6				
Gacé	1	4				
Nonant	1	2				
Sééz	1	2				
Alençon	2	1	90	2	18	2 4 $\frac{1}{3}$
Le Mans	5	0	31	0	69	1 9
Tours	8	1	50	2	59	2 9 $\frac{1}{3}$
	36	3	224	4	171	2 9

**FROM HAVRE TO TOURS, THROUGH HONFLEUR.**

	M					
	y	K				
	r	i		F		
	i	l		u		
	a	o		r		I
	m	m	M	l	Y	n
	è	è	i	o	a	c
	t	t	l	n	r	h
	r	r	e	g	d	e
<i>Havre to Honfleur</i>	e	e	s	s	s	e
<i>by steam packet,</i>	.	.	.	.	.	s
<i>Honfleur to,</i>	.	.	.	.	.	.
Pont-Lévêque	1	7				
Lisieux	1	7				
Linarot	1	8				
Nimoutier		9				
Gacé	1	8				
Nonant	1	2				
Sééz	1	2				
Alençon	2	1	76	5	181	1 1 $\frac{1}{3}$
Le Mans	5	0	31	0	69	1 9
Tours	8	1	50	2	59	2 9 $\frac{1}{3}$
	25	5	158	0	80	2 7 $\frac{2}{3}$

**FROM HAVRE TO TOURS, THROUGH CAEN.**

	M					
	y	K				
	r	i		F		
	i	l		u		
	a	o		r		I
	m	m	M	l	Y	n
	è	è	i	o	a	c
	t	t	l	n	r	h
	r	r	e	g	d	e
<i>Havre to Caen per</i>	e	e	s	s	s	e
<i>steam packet,</i>	.	.	.	.	.	s
Langannerie	2	1				
Falaise	1	4				
Argentan	2	2				
Sééz	2	3				
Alençon	2	1	62	5	131	2 3 $\frac{1}{3}$
La Hutte	1	4				
Beau <sup>t</sup> -sur-Sarthe		9				
Bazoge	1	5				

Le Mans	1	2	31	0	69	1	9
Ecommoy	2	1					
Château-du-Loir	1	9					
La Roue	2						
Tours	2	1	50	2	59	2	9½
	23	2	144	0	41	0	9½

12 Inches, 1 foot.—3 Feet, 1 Yard, 220 Yards 1 Furlong, 8 Furlongs 1 Mile.

**TABLES OF FRENCH AND ENGLISH LONG MEASURE.**

	K	H	D	M	D	C	M
	i	e	é	è	é	e	i
	l	c	c	t	c	n	l
	o	t	a	r	i	t	l
		o		e		i	
<i>English measure.</i>	m		m	.	m		
	è	m	è	è	m	m	m
	t	è	t	t	è	è	è
	r	t	r	r	t	t	t
	e	r	e	e	r	r	e
	.	e	.	.	e	e	e
	.	.	.	.	.	.	.
One mile	1	6	1	0	4	0	0
Do. furlong		2	0	1	3	0	0
Do. yard					9	1	5
Do. foot					3	0	5
Do. inch					2	5	

<i>French measure.</i>	<i>Quantity.</i>	<i>English.</i>				
		M	F	Y	F	I
		i	u	a	e	n
		l	r	r	e	c
		e	l	d	t	h
		s	o	s	.	e
		.	n	.		s
			g			.
			s			
Myria-mètre.	10,000 mètres.	6	1	145	2	9
Kilo-mètre.	1,000 do.		4	212	1	9½
Hecto-mètre.	100 do.			109	0	9½
Déca-mètre.	10 do.			10	2	9½
Mètre.	Unity of length				3	3½
Déci-mètre.	Tenth part of a mètre.					3 <sup>15</sup> / <sub>16</sub>
Centi-mètre.	Hundredth part of a mètre.					
Milli-mètre.	Thousandth part of a mètre.					

On the Loire, the Rhone, the Seine, Garonne, and other large Rivers in France, steamers called *Coches d'Eau*, are established; the average expense of which conveyances is about 15 centimes per league.

The *Seine* has become a favorite route to *Paris*,—by way of Havre, Honfleur, Rouen, etc.

## IN FRANCE.

The vicinity of Paris is, of course, dearer than other parts of France, but families in good circumstances, who wish to be near the metropolis, should fix themselves at Versailles or St.-Germain.

Persons who wish to economize must resort to the banks of the Loire and Lower Normandy, which are both much frequented by the English, who may here enjoy the comforts of life at a third less than in one of the provincial towns of their own country. A still greater reduction of expense will be found in the retired parts of Brittany, or in the towns of Saumur and Avranches, where living is one-fourth cheaper than at Caen or Tours. These situations are, however, inconvenient, as there are neither good schools nor genteel society.

Rouen, Dieppe, Boulogne, are little cheaper than Paris.

From the following statement, some idea may be formed of the expenses likely to be incurred by a family, residing in Tours or any of the towns in the central and Northern parts of France:

RENT. An unfurnished house, of eight or ten rooms, with a garden, may be had from 30 l. to 50 l. a year.

TAXES. Payable by the tenant, about 5 l. a year.

FUEL. Three fires in winter, and a fire in the kitchen throughout the year, will cost 25 l. to 30 l. a year. The usual fuel is wood: coals may be had in some districts. They are in use in Tours, but are expensive; coke is however to be obtained at more reasonable prices.

MEAT.—Beef, mutton, veal, 4 d. to 5 d.; pork, 5 d. to 6 d. per pound.

POULTRY. Fowls, 1 s. 6 d. to 3 s. the couple; a goose or turkey, from 2 s. to 4 s.

EGGS. About 5 d. a dozen.

BUTTER. Fresh, in summer, from 9 d. to 1 s.

MILK. From 2 d. to 3 d. a quart.

BREAD. Generally very good, about 1½ d. the pound.

FISH. Near the coast, is plentiful and cheap.

GROCERY. Is much the same as in England.

TEA. Is rather cheaper, and sugar rather dearer.

WAGES. A man servant, 10 l. or 12 l. a year; a woman Cook, 8 l. to 12 l.; a house maid, 6 l. to 8 l. A mechanic 2 s. to 2 s. 6 d. per day; a labourer, 1 s. to 1 s. 3 d.

CLOTHES. Linens and silks cheaper; cottons dearer than in England; wollen articles dearer.

EDUCATION. Boarding-schools from 25 l. to 35 l. a year including extras. Board in a Family, with private tuition, boys 50 l. per year; girls from 35 l. to 40 l. Private lessons by the hour, in French, 2 s. to 4 s.; in music, 2 s. 6 d. to 5 s.

In the south of France wine is much cheaper, but other provisions are charged much the same as in the north and central parts. The brandy of the country, may be purchased in Tours for 1 s. 6 d. per bottle, and *Cognac* of the best quality for 2 s. 6. d. per bottle.

The *city of Tours*,—which contains upwards of 28,000 inhabitants,—is at all times most abundantly supplied with the common necessities and the luxuries of life. It has two market days, Wednesday and Saturday; the latter at all seasons presents an extremely animated and bustling appearance, it being frequented by great numbers of the surrounding rural population, who bring in vast quantities of marketable commodities from the adjacent districts. Such as fruit, vegetables, game, fowls, turkeys, geese, etc.; the latter being supplied in such abundance as to enable the venders after the ordinary sales of the market, to send off weekly, considerable quantities to Havre, Rouen, Paris, and other large towns.

Beef, mutton, and pork is also extremely plentiful and of very superior quality.

END.

### ERRATA.

(corrected in this etext)

- Page 7, *for* constituted, *read* constituted.
- 15, *for* continuous, *read* continued.
- 21, *for* Farehenit, *read* Fahrenheit.
- 77, *for* Family, *read* Families.
- 94, *for* Gramina, *read* Graminaceæ.
- 119, *for* thinks, *read* things.
- 136, *for* Fxt: *read* Ext:.
- 110, *for* ascending other, *read* ascending order.
- 120, *for* stalagmitical, *read* stalactical.
- 135, *for* rhumatism, *read* rheumatism.

### FOOTNOTES:

[A] See the meteorological Register.

[B] See Table of alcoholic strength of wines and liquors. As also the classification of french wines.

[C] See distance Table.

[D] The *faluns* may be seen to advantage near *Manthelan*, and *Semblançay*.

[E] Claret, from the French *Clairer*, signifying red or rose coloured, is a manufactured wine, being a mixture of several sorts, often of Beni Carlos and Bordeaux, and sometimes Hermitage or Alicant with Bordeaux.

---

\*\*\* END OF THE PROJECT GUTENBERG EBOOK MEMORANDA ON TOURS AND TOURAINE \*\*\*

Updated editions will replace the previous one—the old editions will be renamed.

Creating the works from print editions not protected by U.S. copyright law means that no one owns a United States copyright in these works, so the Foundation (and you!) can copy and distribute it in the United States without permission and without paying copyright royalties. Special rules, set forth in the General Terms of Use part of this license, apply to copying and distributing Project Gutenberg™ electronic works to protect the PROJECT GUTENBERG™ concept and trademark. Project Gutenberg is a registered trademark, and may not be used if you charge for an eBook, except by following the terms of the trademark license, including paying royalties for use of the Project Gutenberg trademark. If you do not charge anything for copies of this eBook, complying with the trademark license is very easy. You may use this eBook for nearly any purpose such as creation of derivative works, reports, performances and research. Project Gutenberg eBooks may be modified and printed and given away—you may do practically ANYTHING in the United States with eBooks not protected by U.S. copyright law. Redistribution is subject to the trademark license, especially commercial redistribution.

START: FULL LICENSE

#### THE FULL PROJECT GUTENBERG LICENSE

PLEASE READ THIS BEFORE YOU DISTRIBUTE OR USE THIS WORK

To protect the Project Gutenberg™ mission of promoting the free distribution of electronic works, by using or distributing this work (or any other work associated in any way with the phrase “Project Gutenberg”), you agree to comply with all the terms of the Full Project Gutenberg™ License available with this file or online at [www.gutenberg.org/license](http://www.gutenberg.org/license).

**Section 1. General Terms of Use and Redistributing Project Gutenberg™ electronic works**

1.A. By reading or using any part of this Project Gutenberg™ electronic work, you indicate that you have read, understand, agree to and accept all the terms of this license and intellectual property (trademark/copyright) agreement. If you do not agree to abide by all the terms of this agreement, you must cease using and return or destroy all copies of Project Gutenberg™ electronic works in your possession. If you paid a fee for obtaining a copy of or access to a Project Gutenberg™ electronic work and you do not agree to be bound by the terms of this agreement, you may obtain a refund from the person or entity to whom you paid the fee as set forth in paragraph 1.E.8.

1.B. “Project Gutenberg” is a registered trademark. It may only be used on or associated in any way with an electronic work by people who agree to be bound by the terms of this agreement. There are a few things that you can do with most Project Gutenberg™ electronic works even without complying with the full terms of this agreement. See paragraph 1.C below. There are a lot of things you can do with Project Gutenberg™ electronic works if you follow the terms of this agreement and help preserve free future access to Project Gutenberg™ electronic works. See paragraph 1.E below.

1.C. The Project Gutenberg Literary Archive Foundation (“the Foundation” or PGLAF), owns a compilation copyright in the collection of Project Gutenberg™ electronic works. Nearly all the individual works in the collection are in the public domain in the United States. If an individual work is unprotected by copyright law in the United States and you are located in the United States, we do not claim a right to prevent you from copying, distributing, performing, displaying or creating derivative works based on the work as long as all references to Project Gutenberg are removed. Of course, we hope that you will support the Project Gutenberg™ mission of promoting free access to electronic works by freely sharing Project Gutenberg™ works in compliance with the terms of this agreement for keeping the Project Gutenberg™ name associated with the work. You can easily comply with the terms of this agreement by keeping this work in the same format with its attached full Project Gutenberg™ License when you share it without charge with others.

1.D. The copyright laws of the place where you are located also govern what you can do with this work. Copyright laws in most countries are in a constant state of change. If you are outside the United States, check the laws of your country in addition to the terms of this agreement before downloading, copying, displaying, performing, distributing or creating derivative works based on this work or any other Project Gutenberg™ work. The Foundation makes no representations concerning the copyright status of any work in any country other than the United States.

1.E. Unless you have removed all references to Project Gutenberg:

1.E.1. The following sentence, with active links to, or other immediate access to, the full Project Gutenberg™ License must appear prominently whenever any copy of a Project Gutenberg™ work (any work on which the phrase “Project Gutenberg” appears, or with which the phrase “Project Gutenberg” is associated) is accessed, displayed, performed, viewed, copied or distributed:

This eBook is for the use of anyone anywhere in the United States and most other parts of the world at no cost and with almost no restrictions whatsoever. You may copy it, give it away or re-use it under the terms of the Project Gutenberg License included with this eBook or online at [www.gutenberg.org](http://www.gutenberg.org). If you are not located in the United States, you will have to check the laws of the country where you are located before using this eBook.

1.E.2. If an individual Project Gutenberg™ electronic work is derived from texts not protected by U.S. copyright law (does not contain a notice indicating that it is posted with permission of the copyright holder), the work can be copied and distributed to anyone in the United States without paying any fees or charges. If you are redistributing or providing access to a work with the phrase “Project Gutenberg” associated with or appearing on the work, you must comply either with the requirements of paragraphs 1.E.1 through 1.E.7 or obtain permission for the use of the work and the Project Gutenberg™ trademark as set forth in paragraphs 1.E.8 or 1.E.9.

1.E.3. If an individual Project Gutenberg™ electronic work is posted with the permission of the copyright holder, your use and distribution must comply with both paragraphs 1.E.1 through 1.E.7 and any additional terms imposed by the copyright holder. Additional terms will be linked to the Project Gutenberg™ License for all works posted with the permission of the copyright holder found at the beginning of this work.

1.E.4. Do not unlink or detach or remove the full Project Gutenberg™ License terms from this work, or any files containing a part of this work or any other work associated with Project Gutenberg™.

1.E.5. Do not copy, display, perform, distribute or redistribute this electronic work, or any part of this electronic work, without prominently displaying the sentence set forth in paragraph 1.E.1 with active links or immediate access to the full terms of the Project Gutenberg™ License.

1.E.6. You may convert to and distribute this work in any binary, compressed, marked up, nonproprietary or proprietary form, including any word processing or hypertext form. However, if you provide access to or distribute copies of a Project Gutenberg™ work in a format other than “Plain Vanilla ASCII” or other format used in the official version posted on the official Project

Gutenberg™ website (www.gutenberg.org), you must, at no additional cost, fee or expense to the user, provide a copy, a means of exporting a copy, or a means of obtaining a copy upon request, of the work in its original “Plain Vanilla ASCII” or other form. Any alternate format must include the full Project Gutenberg™ License as specified in paragraph 1.E.1.

1.E.7. Do not charge a fee for access to, viewing, displaying, performing, copying or distributing any Project Gutenberg™ works unless you comply with paragraph 1.E.8 or 1.E.9.

1.E.8. You may charge a reasonable fee for copies of or providing access to or distributing Project Gutenberg™ electronic works provided that:

- You pay a royalty fee of 20% of the gross profits you derive from the use of Project Gutenberg™ works calculated using the method you already use to calculate your applicable taxes. The fee is owed to the owner of the Project Gutenberg™ trademark, but he has agreed to donate royalties under this paragraph to the Project Gutenberg Literary Archive Foundation. Royalty payments must be paid within 60 days following each date on which you prepare (or are legally required to prepare) your periodic tax returns. Royalty payments should be clearly marked as such and sent to the Project Gutenberg Literary Archive Foundation at the address specified in Section 4, “Information about donations to the Project Gutenberg Literary Archive Foundation.”
- You provide a full refund of any money paid by a user who notifies you in writing (or by e-mail) within 30 days of receipt that s/he does not agree to the terms of the full Project Gutenberg™ License. You must require such a user to return or destroy all copies of the works possessed in a physical medium and discontinue all use of and all access to other copies of Project Gutenberg™ works.
- You provide, in accordance with paragraph 1.F.3, a full refund of any money paid for a work or a replacement copy, if a defect in the electronic work is discovered and reported to you within 90 days of receipt of the work.
- You comply with all other terms of this agreement for free distribution of Project Gutenberg™ works.

1.E.9. If you wish to charge a fee or distribute a Project Gutenberg™ electronic work or group of works on different terms than are set forth in this agreement, you must obtain permission in writing from the Project Gutenberg Literary Archive Foundation, the manager of the Project Gutenberg™ trademark. Contact the Foundation as set forth in Section 3 below.

1.F.

1.F.1. Project Gutenberg volunteers and employees expend considerable effort to identify, do copyright research on, transcribe and proofread works not protected by U.S. copyright law in creating the Project Gutenberg™ collection. Despite these efforts, Project Gutenberg™ electronic works, and the medium on which they may be stored, may contain “Defects,” such as, but not limited to, incomplete, inaccurate or corrupt data, transcription errors, a copyright or other intellectual property infringement, a defective or damaged disk or other medium, a computer virus, or computer codes that damage or cannot be read by your equipment.

1.F.2. LIMITED WARRANTY, DISCLAIMER OF DAMAGES - Except for the “Right of Replacement or Refund” described in paragraph 1.F.3, the Project Gutenberg Literary Archive Foundation, the owner of the Project Gutenberg™ trademark, and any other party distributing a Project Gutenberg™ electronic work under this agreement, disclaim all liability to you for damages, costs and expenses, including legal fees. YOU AGREE THAT YOU HAVE NO REMEDIES FOR NEGLIGENCE, STRICT LIABILITY, BREACH OF WARRANTY OR BREACH OF CONTRACT EXCEPT THOSE PROVIDED IN PARAGRAPH 1.F.3. YOU AGREE THAT THE FOUNDATION, THE TRADEMARK OWNER, AND ANY DISTRIBUTOR UNDER THIS AGREEMENT WILL NOT BE LIABLE TO YOU FOR ACTUAL, DIRECT, INDIRECT, CONSEQUENTIAL, PUNITIVE OR INCIDENTAL DAMAGES EVEN IF YOU GIVE NOTICE OF THE POSSIBILITY OF SUCH DAMAGE.

1.F.3. LIMITED RIGHT OF REPLACEMENT OR REFUND - If you discover a defect in this electronic work within 90 days of receiving it, you can receive a refund of the money (if any) you paid for it by sending a written explanation to the person you received the work from. If you received the work on a physical medium, you must return the medium with your written explanation. The person or entity that provided you with the defective work may elect to provide a replacement copy in lieu of a refund. If you received the work electronically, the person or entity providing it to you may choose to give you a second opportunity to receive the work electronically in lieu of a refund. If the second copy is also defective, you may demand a refund in writing without further opportunities to fix the problem.

1.F.4. Except for the limited right of replacement or refund set forth in paragraph 1.F.3, this work is provided to you ‘AS-IS’, WITH NO OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PURPOSE.

1.F.5. Some states do not allow disclaimers of certain implied warranties or the exclusion or limitation of certain types of damages. If any disclaimer or limitation set forth in this agreement violates the law of the state applicable to this agreement, the agreement shall be interpreted to make the maximum disclaimer or limitation permitted by the applicable state law. The invalidity

or unenforceability of any provision of this agreement shall not void the remaining provisions.

1.F.6. INDEMNITY - You agree to indemnify and hold the Foundation, the trademark owner, any agent or employee of the Foundation, anyone providing copies of Project Gutenberg™ electronic works in accordance with this agreement, and any volunteers associated with the production, promotion and distribution of Project Gutenberg™ electronic works, harmless from all liability, costs and expenses, including legal fees, that arise directly or indirectly from any of the following which you do or cause to occur: (a) distribution of this or any Project Gutenberg™ work, (b) alteration, modification, or additions or deletions to any Project Gutenberg™ work, and (c) any Defect you cause.

## **Section 2. Information about the Mission of Project Gutenberg™**

Project Gutenberg™ is synonymous with the free distribution of electronic works in formats readable by the widest variety of computers including obsolete, old, middle-aged and new computers. It exists because of the efforts of hundreds of volunteers and donations from people in all walks of life.

Volunteers and financial support to provide volunteers with the assistance they need are critical to reaching Project Gutenberg™'s goals and ensuring that the Project Gutenberg™ collection will remain freely available for generations to come. In 2001, the Project Gutenberg Literary Archive Foundation was created to provide a secure and permanent future for Project Gutenberg™ and future generations. To learn more about the Project Gutenberg Literary Archive Foundation and how your efforts and donations can help, see Sections 3 and 4 and the Foundation information page at [www.gutenberg.org](http://www.gutenberg.org).

## **Section 3. Information about the Project Gutenberg Literary Archive Foundation**

The Project Gutenberg Literary Archive Foundation is a non-profit 501(c)(3) educational corporation organized under the laws of the state of Mississippi and granted tax exempt status by the Internal Revenue Service. The Foundation's EIN or federal tax identification number is 64-6221541. Contributions to the Project Gutenberg Literary Archive Foundation are tax deductible to the full extent permitted by U.S. federal laws and your state's laws.

The Foundation's business office is located at 809 North 1500 West, Salt Lake City, UT 84116, (801) 596-1887. Email contact links and up to date contact information can be found at the Foundation's website and official page at [www.gutenberg.org/contact](http://www.gutenberg.org/contact)

## **Section 4. Information about Donations to the Project Gutenberg Literary Archive Foundation**

Project Gutenberg™ depends upon and cannot survive without widespread public support and donations to carry out its mission of increasing the number of public domain and licensed works that can be freely distributed in machine-readable form accessible by the widest array of equipment including outdated equipment. Many small donations (\$1 to \$5,000) are particularly important to maintaining tax exempt status with the IRS.

The Foundation is committed to complying with the laws regulating charities and charitable donations in all 50 states of the United States. Compliance requirements are not uniform and it takes a considerable effort, much paperwork and many fees to meet and keep up with these requirements. We do not solicit donations in locations where we have not received written confirmation of compliance. To SEND DONATIONS or determine the status of compliance for any particular state visit [www.gutenberg.org/donate](http://www.gutenberg.org/donate).

While we cannot and do not solicit contributions from states where we have not met the solicitation requirements, we know of no prohibition against accepting unsolicited donations from donors in such states who approach us with offers to donate.

International donations are gratefully accepted, but we cannot make any statements concerning tax treatment of donations received from outside the United States. U.S. laws alone swamp our small staff.

Please check the Project Gutenberg web pages for current donation methods and addresses. Donations are accepted in a number of other ways including checks, online payments and credit card donations. To donate, please visit: [www.gutenberg.org/donate](http://www.gutenberg.org/donate)

## **Section 5. General Information About Project Gutenberg™ electronic works**

Professor Michael S. Hart was the originator of the Project Gutenberg™ concept of a library of electronic works that could be freely shared with anyone. For forty years, he produced and distributed Project Gutenberg™ eBooks with only a loose network of volunteer support.

Project Gutenberg™ eBooks are often created from several printed editions, all of which are confirmed as not protected by copyright in the U.S. unless a copyright notice is included. Thus,

we do not necessarily keep eBooks in compliance with any particular paper edition.

Most people start at our website which has the main PG search facility: [www.gutenberg.org](http://www.gutenberg.org).

This website includes information about Project Gutenberg™, including how to make donations to the Project Gutenberg Literary Archive Foundation, how to help produce our new eBooks, and how to subscribe to our email newsletter to hear about new eBooks.