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BY
HENRY VIZETELLY.

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1875

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See "TIMES" Special Report and 1

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CHARACTERIZED & CLASSED:

WITH
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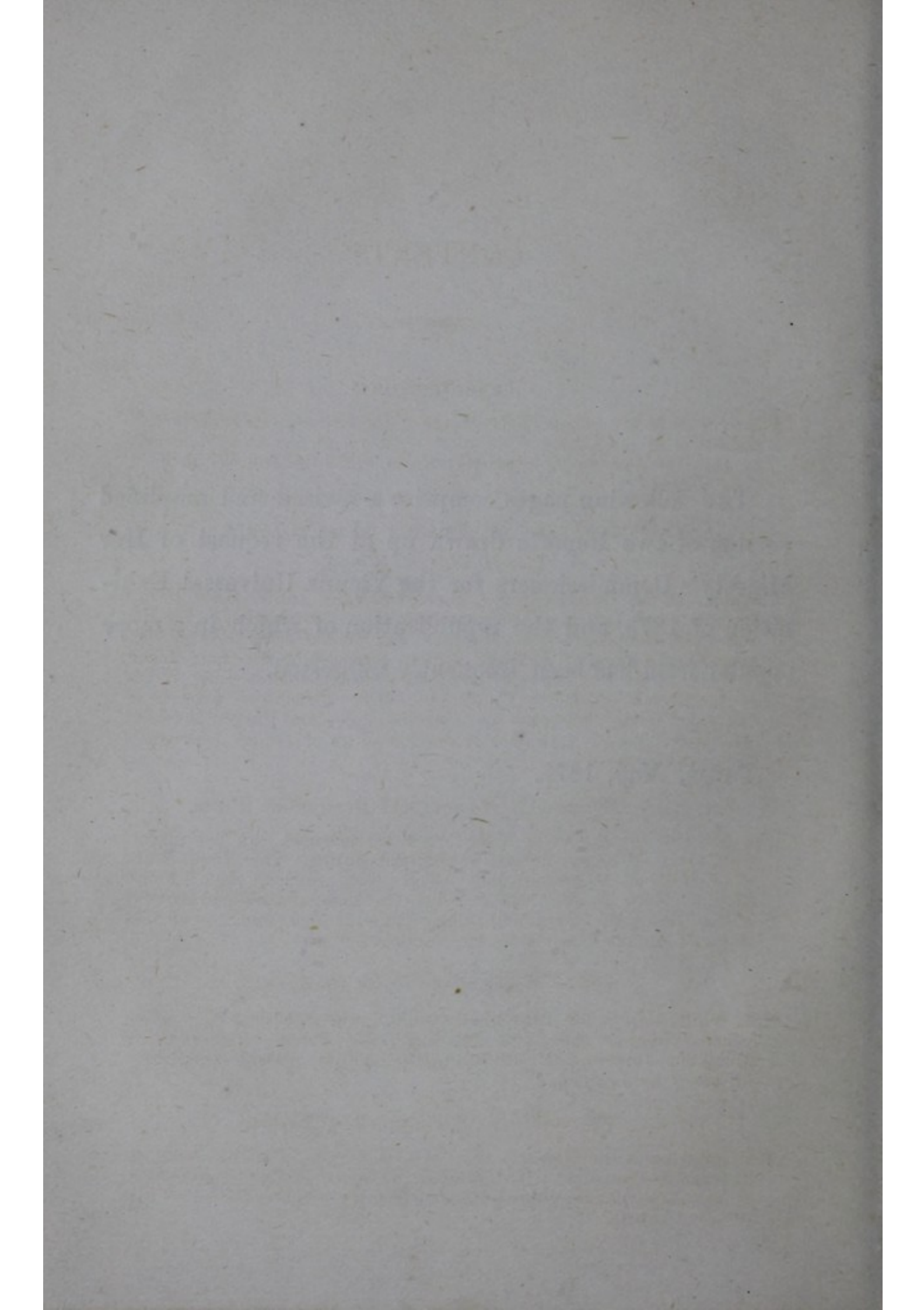
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1875.



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THE following pages comprise a revised and amplified version of two Reports drawn up at the request of Her Majesty's Commissioners for the Vienna Universal Exhibition of 1873, and the republication of which in a more popular form has been frequently suggested.

PARIS, *May*, 1875.



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STRENGTH OF WINES.—The Commissioners of Customs availed themselves of the opportunity afforded by the prominence given to wine in the last International Exhibition to obtain further information on the subject of the usual alcoholic strengths of wines manufactured with or without the addition of distilled spirit. The Commissioners employed for this purpose one of their acting inspectors of gaugers, Mr. Keene, and samples of 1,264 different wines were tested, no less than 1,011 of these being furnished by Spain and Portugal. It will be borne in mind that the Governments of these countries maintain that the bulk of their natural wines are of a strength higher than that which would allow of their admission into this country at the lowest duty—namely, 1s. per gallon when containing less than 26 degrees of proof spirit. The Commissioners state that of the 554 samples of Spanish wines submitted for test on this occasion, only 282 were found to be natural—that is, free from the addition of spirit not produced by the fermentation of the juice of the grape. Of these 282 samples of natural Spanish wines, the average strength was ascertained to be 24.10 degrees. Of the 457 samples of Portuguese wines submitted, 381 were found to be natural. Of these 381 the average strength was ascertained to be 24.27 degrees. The Commissioners observe that it is misleading to give the average strength of the fortified wines, because strength produced by the addition of distilled spirit may be carried up to any degree which the interest of the merchant or the taste of the consumer may require, and has actually, in one instance, of wine supplied by Spain, been brought up to 56.7, a strength not much inferior to that of old Cognac brandy. It may be mentioned, however, that the average strength of the whole of the Spanish wines tested, including the 272 which had been more or less fortified, amounted to 28.10; and that the average strength of the whole of the Portuguese wines, including the 76 which had been fortified, amounted to only 25.96. The average strength of the whole of the 1,264 wines of all countries, including the fortified and the natural, was 26.34. The average strength of the whole of such of the 1,264 wines as were natural, amounting to 901 in number, was 24.09. The Commissioners consider that these results are altogether confirmatory of the justice and expediency of the principles adopted and of the rates fixed at the final settlement of the wine duties in 1862. These were:—First, that natural wines might be admitted at an exceptionally low duty; secondly, that 26 deg. of proof spirit represented fairly the full strength of almost the whole of the natural wines of the world; and, thirdly, that any additional strength derived from extraneous spirit should, in justice to the British distiller, against whose fair competition the foreign distiller would otherwise be protected in the same industry, be taxed in relation to the spirit duties, and at a rate equivalent to that imposed on British spirits.

Funded Five per Cents. closed at 104 to 104½.

The following are the closing quotations on the business of the day:—Egyptian Seven per Cent., 1868, 78 to $\frac{1}{2}$ —a fall of $\frac{1}{2}$; ditto, 1873, 75 to $\frac{1}{2}$ —a fall of $\frac{1}{2}$; ditto, 1873, 75 to $\frac{1}{2}$ —a fall of 5-16; French Three per Cent. Rentes, 1868, 66½ to $\frac{1}{8}$ —a fall of $\frac{1}{8}$; ditto, Five per Cent. Rentes, 1868, 66½ to $\frac{1}{8}$ —a fall of $\frac{1}{8}$; Peruvian Six per Cent. Bonds, 1868, 51½ to $\frac{1}{4}$ —a fall of $\frac{1}{4}$; ditto, Five per Cent., 36½ to $\frac{1}{4}$ —a fall of $\frac{1}{4}$; Portuguese Three per Cent., 52½ to $\frac{1}{4}$ —a rise of $\frac{1}{4}$; Russian Five per Cent., 1870, 103½ to $\frac{1}{4}$ —a fall of $\frac{1}{4}$; Turkish Five per Cent., 35½ to $\frac{1}{4}$ —a fall of $\frac{1}{4}$; ditto, Six per Cent., 1869, 41 to $\frac{1}{4}$ —a fall of $\frac{1}{4}$; ditto, Nine per Cent. (B and C), 71 to $\frac{1}{4}$ —a fall of $\frac{1}{4}$; ditto, Six per Cent., 1870, 40½ to $\frac{1}{4}$ —a fall of $\frac{1}{4}$; United States Six per Cent., 1868, 104½ to $\frac{1}{4}$ —a fall of $\frac{1}{4}$; ditto, Five per Cent., 104½ to $\frac{1}{4}$ —a rise of $\frac{1}{4}$; ditto, Funded, 105 to $\frac{1}{4}$ —a fall of $\frac{1}{4}$; and Uruguay Six per Cent., 1868, 105 to $\frac{1}{4}$ —a fall of $\frac{1}{4}$.

The following are the 3 23 p.m. prices from the Paris Bourse, which, compared with the quotations of yesterday, show the changes noted.

Three per Cent. Rentes, for money, 65f. 80c.—a fall of 5c.; ditto, for the account, 65f. 80c.—a fall of 5c.; Five per Cent. ditto, for money, 104f. 35c.—a fall of 10c.; ditto, for the account, 104f. 45c.—a fall of 10c.; Five per Cent., 72f. 60c.; Lombards, 22½— a rise of 2f. 50c.; Austrian Railways, 617f. 50c.—a rise of 1f. 25c.; Suez Canal, 745f.—a rise of 21f. 25c.; Bank, 546f. 25c.—a fall of 5f.; Turkish Five per Cent., 35f. 50c.—a fall of 60c.; Peruvian Six per Cent., 51½— a fall of 1f. 31c.; Spanish Three per Cent., 1868, 18½— a fall of 18½c.; Egyptian, 1873, 380f.—a fall of 10f. Market weak.

At the Bank to-day, £11,000 in sovereigns have been withdrawn for Lisbon, and the discount was moderate.

The Douro, from the West Indies, has been sold at £53,155.

The Mexican dollars brought by the Villa de San Carlos and the Republic (about £200,000) have been sold at 55½d. per ounce, being a decline of 1½d. on the last quotation.

The Crown Agents for the Colonies are preparing to issue at their offices the Bonds for the Cape of Good Hope Government Four-and-a-half per Cent. Debenture Loan of £660,000, in exchange for the

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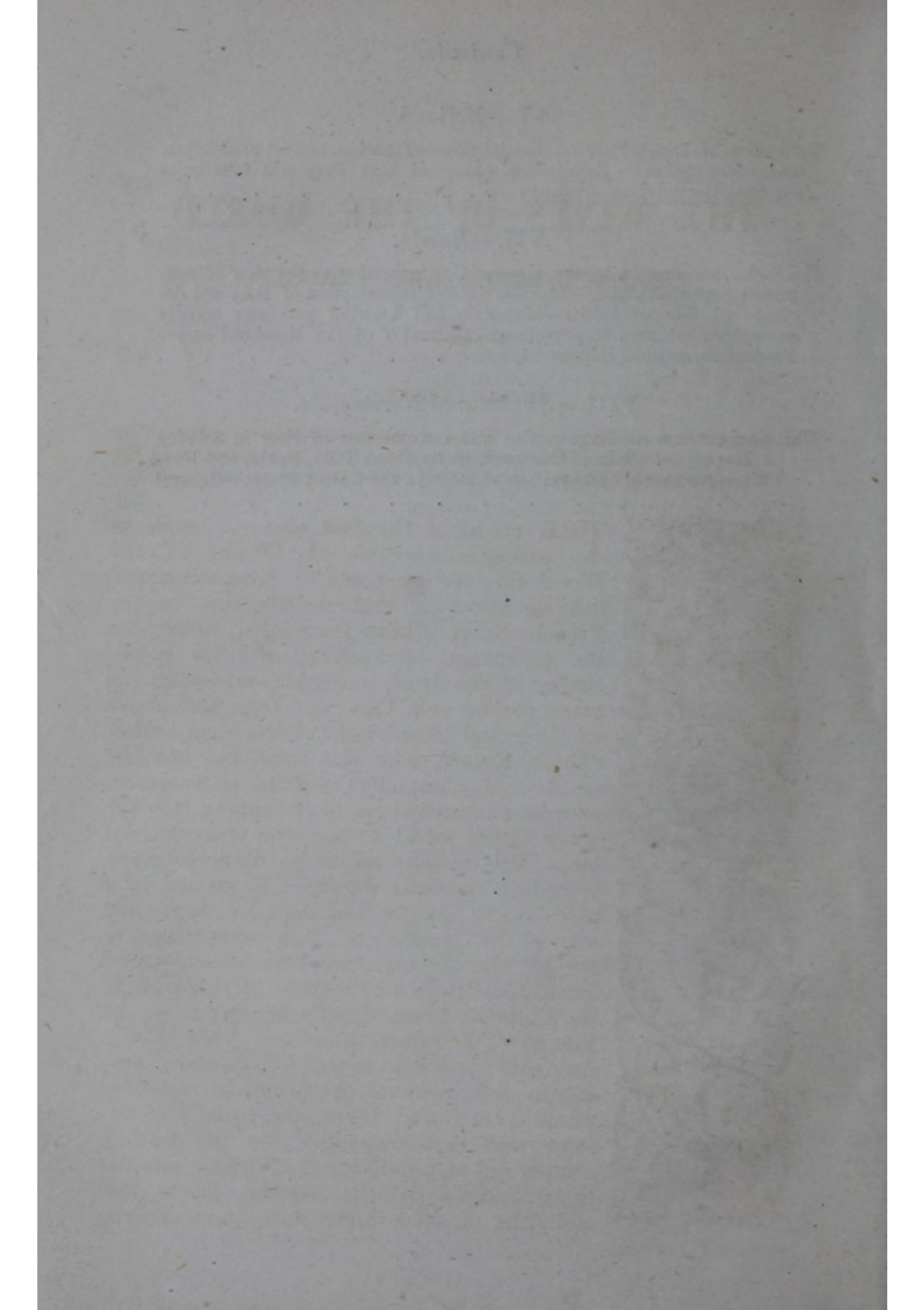
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THE WINES OF THE WORLD

CHARACTERIZED AND CLASSED.

INTRODUCTORY.

The first public assemblage of the Wines of the world—Onerous nature of the duties of the Vienna Wine jury—Vastness of the area comprised by the Wine-producing districts—Rules which guided the jury in their awards.



THE credit of the first attempt made to assemble together the Wines of the World for the purposes of comparing and judging them is undoubtedly due to the French King, Philip Augustus, noted for his patronage of learning and his persecution of the Jews, a friend and enemy by turns of our own Cœur de Lion, and above all the grand consolidator of the regal authority in France, who sent forth his heralds, as the old chroniclers tell us, to summon, with due flourishings of trumpets, all the wines of the world to his royal and convivial table, that honour might be rendered them according to their deserts. If instead of a mere score or two of samples there had arrived in answer to this comprehensive appeal the twenty thousand specimens of fermented drinks which came in response to the Emperor Franz Josef's invitation to the Vienna "Weltausstellung" of 1873, Philip Augustus and his bibacious chaplain, who sat in judgment on the wines in question, would have found their task equally wearisome and embarrassing. For the tasting, comparing, and judging the Vienna samples taxed incessantly the palates, heads, and stomachs of some thirty jurors and experts,

divided into four or more separate groups, for a period of nearly two months; whereas the French King and his gustatory adviser, hobnobbing at their ease over the Cyprus and the Malaga, experienced no kind of difficulty in conferring the fanciful dignities of pope, cardinal, king, count, and peer on the few wines they found most to their liking.

At no former Universal Exhibition were the same number of samples of wine exposed as were brought together at Vienna. Generally speaking, all the wine-producing districts of the world were represented, and some idea may be formed of the vastness of their area when we explain that the northern limit of the zone, within which the vine is cultivated for the purpose of producing wine, commences at the Azores, passes south of England, and proceeding from Vannes in Brittany, beyond Mazières to Alençon in Normandy, mounts thence to Beauvais in the Isle of France, and subsequently striking still more northwards, through Rhenish Prussia, and above Dresden, ascends as high up as Königsberg, which forms as it were the apex. It then inclines southwards across the Carpathian mountains, traversing both Little and Eastern Russia to the upper shores of the Caspian, whence it stretches to the river Amoor and the Pacific, intersecting North America just above San Francisco and Colorado, and skirting Lakes Michigan, Erie, and Ontario. The southern limits of the vine, which grows only at certain elevations and in particular localities within the tropics, after including Africa, Australia, and New Zealand, terminate in South America at Valdivia, in Chili, and Bahia Blanca, in the Argentine Republic. Although samples of wine came to Vienna from fully half the habitable globe, several of the grand *crûs* nevertheless made default, including far more than a moiety of the finer growths of the Gironde, together with all the more noted brands of Champagne, of which last-named wine the finest samples were exhibited by an English firm, James Anderson and Co., of London and Epernay.

Carefully considered and sufficiently judicious preliminary regulations were laid down by the jury to facilitate their proceedings, but from a variety of circumstances these had to be continually departed from. One broad rule, however, was invariably kept in view: not only were the individual intrinsic qualities of the different wines to be taken into account, but considerations of country and even of district were to have due weight. To have instituted anything approaching a comparison between the wines of different countries, and have decided on their relative merits, would have been impossible, and was, of course, not attempted.

THE WINES OF FRANCE AND ALGERIA.

I.—*Bordeaux Wines.*

Character of the Grand Gironde Wines, Châteaux Lafite, Haut Brion, Margaux, and Latour—Tendency towards over-production—The St. Julien, St. Estèphe, Catenac, Margaux, and Pauillac crus—Pressing the grapes to the sound of fifes and fiddles—Situation of the Haut Médoc—Wines of St. Emilion—Château Lafite of 1811—The White Wines of the Gironde—Châteaux Yquem and Latour Blanche—Vintaging of Château Yquem—Sauternes and Barsac—Vines and Vineyards in the Gironde—Vineyard area and production—List of Grand Vintages—Prices and Exports.

AT Vienna the wine jury commenced its labours with the wines of France, which has been termed not inappropriately the vineyard of the earth, its grand red wines for *finesse* and bouquet being unrivalled throughout the world, and its white wines, led off by Château d'Yquem, rivalling those of any other country, not omitting even the renowned Johannisberg, and the still more renowned Tokay, while as regards its sparkling wines France is universally acknowledged to be without a peer. Unfortunately the arrangements of the French Commission were very imperfect, the wines being tasted in the open air with the thermometer at 85° in the shade, added to which, instead of having been previously stored in cool cellars like the majority of the samples intended for tasting, they had remained in many instances exposed to a tropical temperature, which, as may be imagined, had a serious effect on the condition of certain specimens, necessitating their absolute withdrawal from competition.

Seated around three or four small tables placed on the *perron* of the pavilion of the French Commission, and in the little garden square surrounding the latter, with a fierce sun shining overhead, the jury entered upon its labours. It was a matter of regret that the grand red wines of the Gironde were represented merely by two of the four *premiers crus*, four out of the sixteen *crus* officially classed as second, and two of the thirteen *crus* classed as third, the fourth and fifth *crus* being altogether ignored. Not a single sample of Château Lafite, renowned alike for its magnificent colour, exquisite softness, delicate flavour, and fragrant bouquet, recalling the perfume of the almond and the violet, with a marked predominance of the latter, was exhibited. If one may believe the gossip in the neighbourhood of the Château, this splendid wine has of late years depreciated in quality, through some former proprietor having "run out" the land. By dint of heavily manuring the largest possible yield is said to have been obtained, at the sacrifice of those special mineral properties pertaining to the

soil on which the excellence of the wine mainly depended. Considering, however, that the first quality of the 1874 wine was instantly bought up at 5,500 francs the tonneau (containing nearly 1,200 bottles) it would appear that not much reliance is placed on the rumour. The second important absentee from Vienna was Château Haut Brion, the one superb red *vin de Graves*, which, if scarcely so delicate and fragrant as its rivals of the Haut Médoc, is on a par with them as regards its splendid colour, besides possessing rather more body. Talleyrand was at one time the owner of this famous vineyard, the wines of which take equal rank with the three *premiers grands crus* of the Médoc. Of Château Margaux, a wine which in good years has certainly no superior and scarcely an equal, the Vicomte Aguado exhibited a collection of fine samples; generous without potency, it refreshes the stomach while respecting the head, and boasts of a bouquet that clings to the lips and perfumes the breath. Of recent years the ancient reputation of this grand wine has been again and again challenged in print, arising from a rumour of the Vicomte having signed a treaty with several large firms who engaged themselves to take for a specific number of years, and at a fixed price of 4,000 and 3,000 francs the tonneau respectively, the whole of the wine produced on the Château Margaux estate, a contract which, if it exists, undoubtedly points to an increase of quantity to the possible disregard of quality.

The other grand Médoc wine, of which samples were sent to Vienna by its proprietor the Marquis de Flers, was Château Latour, deriving its name from an existing ancient massive round tower which the English assailed and defended by turns during the wars in Guienne—a wine distinguished from Châteaux Margaux and Lafite by greater alcoholicity, a more pronounced flavour, and a more powerful bouquet which has been compared to the odour of almonds and noyau combined. The seductive bouquet common to all the grand wines of the Gironde is understood to be due to an extremely fugitive volatile oil the elements of which are contained in the skins of the grapes, and requires time for its development. Particular conditions, met with only in certain soils, temperatures, and aspects, are requisite to the formation of this perfume, which rarely exists in wines of a generous character, either because the odour of the alcohol conceals it, or because the long fermentation necessary to decompose all the various principles causes it to completely disappear.

To such distinguished wines as Château Margaux and Château Latour, medals for progress—which the jury had formally determined should rank immediately after the diplomas of

honour, and be but sparingly conferred—were naturally awarded. The same medal was also given to Baron Sarget de Lafontaine for his samples of Gruaud-Larose-Sarget, a wine, like all the higher class St. Julien growths, of deeper colour and greater body and vinosity than the more delicate products of Latour and Lafite, and the bouquet of which closely resembles the raspberry. This wine ranks as one of the first of the St. Julien *crûs*, and requires, as these wines generally do, to be kept for several years in the wood to develop all the qualities of a grand wine. MM. Erazzu and Dollfus likewise obtained medals for progress for samples of two famous St. Estèphe *crûs*; the one, Cos d'Estournel, where the grapes are invariably *foulé à pied* to the accompaniment of fifes and fiddles; the other Château Montrose, and both combining that agreeable flavour and slight alcoholicity which distinguish the wines of this district, with a delicacy of perfume in a faint degree suggestive of noyau, and rivalling the bouquets of Margaux and Lafite. The finer St. Estèphe growths on attaining a certain age become highly tonical and suitable to elderly people and weak digestions. Other medals for progress were awarded to MM. G. Roy and A. Lalande for their Château d'Issan and Boyd-Cantenac, the former of a deep ruby tint, derived from the Tarney-Coulant species of grape, and both of them wines of considerable repute, grown in the commune of Cantenac and classed in the third category of Gironde *crûs*; also to M. Beaucourt for a wine of fine flavour and delicate perfume from the vineyard of Château La Bégorce, which ranks simply as a bourgeois *crû* in the highly-favoured commune of Margaux, whose vineyards were in grand repute so long as five centuries ago.

In addition to the two *premiers grands vins* of the Gironde, of which, as already mentioned, no samples were sent to Vienna, there were absent from the Exhibition wines of such celebrity as Branne-Mouton, next-door neighbour to Château Lafite, and noted for its nutty aroma, and which, although classed in the second category, is deserving, in the estimation of many connoisseurs, of being ranked among the *premiers crûs*; also a couple of other grand Pauillac wines, Pichon-Longueville and Pichon-Longueville-Laland, with four wines of equal mark belonging to the commune of Margaux, and but slightly inferior to the famed Château Margaux itself. There were moreover five high-class St. Julien wines absent, three of them being growths of the ancient vineyard of Leoville and distinguished for their bouquets resembling the odour of violets, while a fourth was the original Gruaud-Larose of which the *crû* of Gruaud-Larose-Sarget already spoken of forms an offshoot. During the last

century when the M. Gruaud who has given his name to the vineyard owned the property, it was his practice at the conclusion of each vintage to hoist above his château the flag of the particular nation which he thought his wine most likely to suit. Thus whenever it was thin and poor, and consequently cheap, he ran up the German colours; if full of flavour and body, and correspondingly dear, the British standard was unfurled; and on those occasions when it proved to be of an intermediate character the Dutch flag floated over the square tower of the Château Gruaud.

With a single exception all the grand red wines of the Gironde are produced in the celebrated Médoc district, within the space of some 20 miles, and along a mere strip of undulating ground, narrow in size, but boundless in renown, bordering one of the principal rivers in France—namely, the Garonne—and forming, so to speak, one vast vineyard cultivated as carefully as a garden. Above 45 degrees of north latitude, which includes the district in question, the culture of the vine becomes extremely difficult and uncertain, and there are particular provinces where in special seasons the vintage entirely fails. Indeed, it is only by dint of incessant labour and care in the cultivation of the vine and in making the wine that successful results are to be secured. Strange to say, the marked superiority of the Haut Médoc wines, which has rendered them famous throughout the civilised world, is due more to the loose gravelly and flinty soil and its ferruginous ingredients—the presence of 9 per cent. of iron having been ascertained by analyses—combined with the particular aspect of the slope (ordinarily N.E.), than to the species of grape, which is principally the Cabernet, the exceptional care bestowed upon its culture, or to any special climatic influences to which it is exposed. And it has been remarked that wherever wine of a superior quality is produced, the soil, no matter what its particular composition may be, is invariably found to be mixed with fragments of rock in a greater or less degree and of varied shapes and sizes. The rounded, polished, and light-coloured pebbles with which the soil of the Médoc is strewn act, it seems, as so many reflecting agents, which, directing the solar rays upwards, concentrate the full power of the sun upon the grapes and bathe them, as it were, in a continual flood of light and heat. These pebbles, too, by reason of their peculiar composition, have the quality of retaining the heat imparted to them long after the sun has sunk to rest, thereby rendering the evening coolness less sudden, and extending the time during which a favourable temperature prevails. Moreover, in summer, when rain is rare and the heat of the sun

intense, the stones and pebbles on the surface of the ground assure to the soil a moisture and a coolness which are highly beneficial to the roots of the vines.

Of the dozen or so wines of the Gironde which obtained medals for merit at Vienna only a few need be particularised. The well-known red *vin de Graves* of the vineyard of La Mission in the neighbourhood of Château Haut Brion, and which is chiefly remarkable for containing a larger proportion of natural alcohol than any other red wine of the district, had this medal awarded it, as had also M. Dussaut of St. Emilion, M. Pailhas of Libourne, and M. Bouffard of Bordeaux, for their collections of the wines of St. Emilion, the generous character of which has secured for these growths the appellation of the Burgundies of the Gironde. In the eyes of many their deep ruby tint, body, and vinosity compensate for any deficiency in *finesse* and delicacy of bouquet perceptible in them. Like all wines containing plenty of tannin and natural alcohol, the St. Emilion growths require time to arrive at perfection, and are scarcely at their best until they are 10 or 12 years old. Under very special conditions they may be kept for as many as 40 years, which no other *vin rouge* of the Gironde would bear without becoming sensibly deteriorated. Those who have tasted the famous Château Lafite of the great comet vintage of 1811, by far the grandest vintage within living memory, and which on the occasion of the sale at the Château in 1868 commanded the high price of 5*l.* the bottle, are forced to confess that they found the wine utterly worn out, and simply interesting as a curiosity. The same result was apparent in the remarkable wines of ancient vintages exhibited at Vienna by the Grand Duke of Nassau, as I presently shall have occasion to point out.

Merman and Co., of Bordeaux, secured a medal for merit for some St. Estèphe of remarkable *finesse*, unusual body, and delicate bouquet from the vineyard of Le Crock, one of the superior bourgeois *crûs* of the Haut Médoc. A like medal was also awarded to M. Deynaud for his samples of the unclassed wine of Château de Laforest near Pellegrue. Some few red Bordeaux wines met with honourable mention, including one or two *vins de côtes*—wines of the slopes—devoid of the earthy flavour common to these growths, and several *vins de palus*—wines of the marshes—notably those of Queyries, which have the merit of developing a powerful perfume of violets as they grow old. Of those wines which secured no kind of recognition one may particularise a light Médoc wine, of splendid colour, and with a perceptible bouquet, but a trifle harsh to the taste, from the Château Malecasse, and a wine of considerable

body with fine colour and a certain brisk flavour from the Salesse and Frechina vineyard near Blanquefort, both of them well-known bourgeois *crûs* in the Haut Médoc.

Among the white wines of the Gironde which obtained the higher class reward two require to be especially mentioned. One, the renowned Château d'Yquem of the Marquis de Lur Saluces, the most luscious and delicately aromatic of wines, which for its resplendent colour resembling liquid gold, its exquisite bouquet and rich delicious flavour, due, according to the chemists, to the presence of mannite, is regarded in France as unique, and which at Vienna naturally met with the recognition of a medal for progress. Mannite, the distinguished French chemist Berthelot informs us, has the peculiar quality of not becoming transformed into alcohol and carbonic acid during the process of fermentation. For a tonneau of this splendid wine 12 years old, bought direct from the Château, the Grand Duke Constantine paid some few years since 20,000 francs, or 800*l*. The other wine calling for notice was La Tour Blanche, one of those magnificent liqueur-like Sauternes ranking immediately after Château d'Yquem, and to some fine samples of which, of the vintages of 1864 and 1865, a medal for merit was awarded.

The characteristic qualities of Château d'Yquem, which certain *soi-disant* connoisseurs pretend to pooh-pooh as a mere ordinary *vin de liqueur*, are due in no degree to simple accident. On the contrary, the vintaging of this wine is an extremely complicated and delicate affair. In order to insure the excessive softness and rich liqueur character which are its distinguishing qualities, the grapes, naturally excessively sweet and juicy, are allowed to dry on their stalks, preserved, as it were, by the rays of the sun, until they become covered with a kind of down, which gives to them an almost mouldy appearance. During this period the fruit, under the influence of the sun, ferments within its skin, thereby attaining the requisite degree of ripeness akin to rottenness. On the occasion of the vintage, as it is absolutely essential that the grapes should be gathered, not only when perfectly dry, but also warm, the cutters never commence work until the sun has attained a certain height, and invariably suspend their labours when rain threatens or mists begin to rise. At the first gathering they detach simply the *graines rôties*, or such grapes as have dried after arriving at proper maturity, rejecting those which have shrivelled without thoroughly ripening, and from the former a wine of extreme softness and density termed *crème de tête* is produced. By the time the first gathering has terminated other grapes will have sufficiently ripened and rotted, or dried, and both sorts are now detached, yielding

the wine called *vin de tête*, distinguished by equal softness with the *crème de tête*, but combined with a larger amount of alcohol, and greater delicacy of flavour. At this point a delay generally ensues, which is long or short, according to the state of the weather, it being requisite towards the end of October to wait while the rays of the sun, combined with the night dews, bring the remaining grapes to maturity, when the third gathering takes place, from which the wine termed *centre*, frequently very fine and spirituous, is produced. Another delay now ensues, and then commences the final gathering, when all the grapes remaining on the stalks are picked, which when the vintage has been properly conducted is usually only a very small quantity, yielding what is termed the *vin de queue*.

The grapes being dried and shrivelled considerable pressure is requisite to extract the juice from them, and at the Château d'Yquem this is accomplished by means of the ordinary wine-press. The "must" is at once put into casks, where it is left to ferment for three weeks or a month, and even longer, according to the state of the temperature and the quality of the wine, during which period it throws off whatever impurities it contains; but only becomes perfectly limpid after being racked in from one to three months' time.

Altogether there were a considerable number of Sauternes exhibited at Vienna, including some of superior character, subtle, sapid, and delicate, generally sub-luscious, frequently over-sweet, and occasionally dry and pleasantly acidulous, while scarcely any were undistinguished by a perceptible and fragrant bouquet. From the circumstance, however, of these wines being exhibited by *negociants* and not by the growers, they met with no distinct recognition at the hands of the jury. The samples of Barsac were less numerous, still many of them exhibited equal *finesse* with the higher class Sauternes, combined with greater body, perfect dryness, a more powerful perfume, and that generous warmth in which the last-named wine is altogether deficient. The majority had that flinty flavour, the well-known *pierre à fusil* taste, so characteristic of the Barsac growths, and ascribed by the chemists to an excess of salts of iron, and by the vignerons of the district to the calcareous nature of the subsoil in which the vines are planted. It was evident that many of the French sweet white wines had been sulphured, so as to arrest their fermentation, and prevent the whole of their sugar from becoming converted into alcohol. Several jurors regarded the use of a considerable quantity of sulphuric acid as no disadvantage in itself, which very likely may be the case, provided, however, the fermentation has been completely sup-

pressed by its application, and that the whole of the sulphuric acid has been subsequently removed by proper tapping.

A visit to the vineyards of the Gironde suffices to dissipate any fanciful notion one may have previously entertained respecting the so-called luxuriance of the vine growing at its own sweet will, and bending beneath its load of luscious fruit. On the contrary, the vines, trained for the most part to low espaliers, rarely exceed four feet in height, and are kept as low as even a couple of feet in the Médoc to admit of the yoke of the oxen employed in ploughing up the ground between the rows passing clean over them. The grapes, moreover, growing invariably in masses, and never in detached clusters, hang quite close to the ground, where the stem of the vine, as thick, perhaps, as one's wrist, is capable of supporting half a hundredweight or more without yielding. The species of vines principally cultivated in the Médoc, and from which the finest red wines in the world are produced, are the gros and petit Cabernet, the fruit of which is highly perfumed, and yields a soft, delicate, fragrant, and brilliant, though light-coloured wine. A variety of the same species, termed indifferently the Cabernelle or Carmenère, much less fertile, but producing wine of considerable body and fine colour, is likewise cultivated in this district, together with the Cruchinet rouge, distinguished for the fine bouquet which it imparts to the wines. The two first-named are also the dominant vines in the Graves of Bordeaux, so called from the pebbly character of the soil, where they are known as the grosse and petite Verduze. In the vineyards of the Côtes the prevailing species is the Malbec, which produces a wine deeper in colour and almost equally soft and delicate, but difficult to keep; while in the vineyards of the Palus it is the Verdot variety to which preference is given. This grape yields a sound, pleasant, rich-coloured wine with a bouquet resembling the violet, a wine which requires age to develop all its better qualities, and repays any care bestowed on it by keeping for many years.

Commonly five other varieties of grape enter more or less into the composition of the wines of the Médoc, one the Merlet, the distinguishing characteristics of which are lightness, delicacy, and softness; another the Mancin, an abundant bearer; next the Tarney-Coulant and the Teinturier, both of which, and more particularly the latter, impart depth of colour; and, lastly, the Sirrha, the grape of the Hermitage vineyards, from which the wine derives both body and firmness.

The fine white wines of the Gironde are produced from the Sauvignon and Semillon grapes, the former of which yields a limpid, perfumed, delicate-flavoured, amber-coloured, heady

wine, while the latter gives a sweet, agreeable-flavoured wine, partaking largely of the character of a liqueur, and deepening considerably in colour with age. They are more or less mixed with other varieties, notably the Rochalin, believed to be of the Sauvignon species; the Muscadelle, having a certain affinity, as its name implies, with the well-known Muscat grape; the Blanc doux, the berries of which are sweet and highly transparent; the Pruéras, almost equally sweet in character; the Blanc Auba; and the Blanquette, a variety of the famous table grape, the Chasselas, which, in Europe at any rate, rarely produces good wine. The favourite grape cultivated in the upper plains of the Gironde is the Enrageat, belonging to the same species as the Folle Blanche, or crazy vine, which prevails so extensively in the Deux-Charentes, and from whose fruit *fine champagne* cognac is distilled.

In the department of the Gironde 145,121 hectares, equivalent to 358,614 English acres, being one-eighth of the entire cultivated surface, are planted with vines. In 1870, the vintage of which year gave more than the average yield, these produced 74,811,610 gallons of wine, whereas in 1873, when the vintage was a most indifferent one, they produced merely a little more than a third of this quantity, or 27,322,559 gallons, valued in official documents at £3,540,460. A very rigid classification, influencing the prices which the wines command, exists of the superior vineyards, the red wines being divided into five separate categories, while the white, forming merely 9 per cent. of the wine production of the Gironde, are classed into three, of which Château d'Yquem ranks as the unique *premier cru*. The classed wines form only 2 per cent. of the total production, the superior table wines 12 per cent., the medium 20 per cent., and the *vins ordinaires* the remaining 66 per cent.

Since the year 1840 the vintages of the grand red wines of the Gironde have been of the following character:—Very good: 1841, '44, '46, '47, '48, '51, '58, '64, '65, '68, '70. Good: 1857, '62, '63. Bad and indifferent: 1840, '42, '43, '45, '49, '50, '52, '53, '54, '55, '56, '59, '60, '61, '66. The white wines may be thus classed:—Good: 1840, '41, '46, '47, '51, '52, '54, '58, '59, '61, '64, '69. Bad: 1842, '43, '45, '50, '53, '56, '60. The alcoholic strength of the wines of the *premiers grands crus* ranges from $13\frac{1}{2}^{\circ}$ to 17° of proof spirit, Château Lafite being the least spirituous of all, Château Margaux coming next, Château Haut Brion ranking third, the most alcoholic being Château Latour, which is about two degrees stronger than Lafite, and on this account is known locally as the *vin d'Hercule*. Wines lower in the scale are more spirituous than those occupying the highest rank, the St. Emilion growths showing at times even as much

as 20° of proof spirit. The difference between the white wines is very great, the more alcoholic occasionally indicating as many as 26°, and the least spirituous as few as 12°.

Recent Bordeaux quotations of Gironde wines give the following as the prices: The *premiers crus* of 1869 vintage 6,300 francs, of 1870, 8,000 francs the tonneau (containing nearly 1,200 bottles). The second *crus*, among which the wine of Branne-Mouton commands an exceptionally high price, range from 4,000 to 5,000 francs, the third, fourth, and fifth descending gradually in price until the last-named reach 2,400 francs per tonneau for 1869 wine, and 1,300 francs for 1872 wine. Just in the same gradual way do the prices of the *bourgeois* and *paysans crus* decrease until we come to the wines of the *paysans des paroisses ordinaires*, which are quoted as low as 700 francs. The foregoing applies exclusively to the Haut Médoc. Of the Graves the one *premier cru* corresponds with the prices already given, the second *crus*, together with the first St. Emilion *crus*, ranging from 1,000 to 2,800 francs, and the lowest-priced wines of all being the *artisans* and *paysans* growths of the Palus, quoted at from 500 to 650 francs. The quotations of wines in bottle give the grand wines, such as Châteaux Lafite and Margaux, at 6 and 7 francs the bottle for vintage 1862; 12 to 15 francs, 1864; and 9 and 10 francs, 1868; the second *crus*, such as Leoville, Gruaud-Larose, Cos d'Estournel, Montrose, &c., ranging from 15 to 50 per cent. below these figures. The quality of the vintage, it should be understood, has far more to do with the price than mere age, and there have even been instances when the grand wines, which ordinarily command 6,000 francs and upwards, have been sold off, as was the case in the year 1860, at merely 1,000 francs the tonneau.

With regard to the white wines, Château d'Yquem for 1865 commands 7,000 francs the tonneau, the best Sauternes and Barsac *crus* ranging as high as 5,000 francs for 1869, and as low as 1,000 francs for 1872 vintages. From these prices the scale descends gradually until it ends at the *petites Graves* and the *vins blancs* of Entre-deux-Mers, which are quoted respectively at from 400 to 600 francs, and 350 to 525 francs the tonneau.

The total value of the exports of wine from the Gironde during the year 1872 was £5,662,000, 28 per cent. of which, consisting almost entirely of red wines, and valued at £1,670,400, was shipped to British ports. During the same year Great Britain consumed 3,257,130 gallons of French red wines, and 1,514,272 gallons of white, equivalent to upwards of 35 per cent. of its total consumption. An increase was apparent the year following, when 4,099,704 gallons of red and 1,614,326 gallons

TO THE EDITOR OF THE TIMES.

Sir,—As in England, so here, the season has been trying. In the critical month of April last reports appeared in the French journals of a snow storm, the effects of which had been lamentable in the Médoc, and the most terrible which the vine lands of that district had experienced for many years.

Knowing the immense stocks of wines on hand, coupled with the current low prices and the fact of another vintage coming on, we were disposed to accept these accounts with some reservation, more especially as later in the month of June we read as follows:—

"The appearance of the vine lands has completely changed; in place of the branches which the frost had stripped of their buds and the black poles which alone struck the eye—in place of those straggling branches decked with leaves and of a sickly appearance painful to see, we discover a vigorous vegetation of a sombre green, which seems to be hastening to overtake the time lost."

After all, it cannot be concealed, however, that there is a serious deficiency in the quantity of the Bordeaux vintage of 1876, variously estimated, until, by the more despondent, the result is assessed as from one-half to a third only of an average year; or, in place of the 110,000 tuns of 1875, 35,000 tuns only for 1876.

While almost general, this deficiency is not, however, universal, as in the neighbourhood from whence we are writing, and more particularly in some of the districts along the river, there are places where the quantity is good. Fortunately, too, with the large stock of wine still unsold, the deficiency is not such a serious matter as it might have been in other years. This is proved by the fact that present prices, allowing for the four months which have elapsed, are not much in excess of what they were in the month of May last. To give some idea of the abundance of the vintage in 1875, we may state that in one of the other large and more northern districts of France some thousands of hogsheads of wine were recently sold at a price of about 30s. for nearly 50 gallons, including the value of the cask. Confining our remarks, however, to the Médoc districts and to the class of wines known to Englishmen under the general name of claret, it is not difficult to realize what an important district this is, if we bear in mind that the long triangular strip of land stretching from Bordeaux on the south to Le Verdun on the north, watered on the east by the Garonne and the Gironde and on the west by the Atlantic Ocean, comprises in the six cantons forming the Médoc a superficies of about 625,000 acres, every foot of which is prolific with vines as the hop gardens of Kent are with hops, and each separate strip of which is as carefully tended as some choice flower garden in one of our English parks, every acre being a veritable gold mine, and each little plot of a few strips of vines giving the means of livelihood to its possessor.

We have read lately in some English papers a good deal on the subject of the artificial colouring of French wines, and have made it our duty, in consequence, in the course of recent excursions through the various parts of the Haut and Bas Médoc, to institute careful inquiries on the subject. As the result, we pledge ourselves to the honesty of the following statement, that in no single instance have we been able to find a trace of such a practice, and that the mysterious stranger represented by some of your contemporaries as going about from district to district with all sorts of subtle nostrums for improving and increasing the colour of wines deficient in that respect is, we believe, a pure myth, at any rate so far as the Médoc is concerned. This opinion is confirmed by that of one of the most influential brokers of Bordeaux, who assures us that the practice in question is unknown here. However, as this bugbear of artificially-coloured wines has been started, it may afford some consolation to the large and increasing class of claret drinkers to know that while it is impossible to form a trustworthy opinion at present upon the character of the wines of the Médoc, of the 1876 vintage, the generally prevailing opinion of the district is that the wines are *bien coloré*, and have such an amount of saccharine as to give reason to hope that they will prove of a good and possibly high character.

A few words in conclusion as to the prospects of the present year in the white wine districts. The vintage having terminated in the neighbourhood of the Médoc, we availed ourselves of the opportunity to visit some of the more important estates, including the Château Yquem in the Sauterne district. Here, again, we regretted to find that the vintage is likely to be a small one. The average quantity of white wines made is about 15,000 tuns annually, and the process an entirely different one, the grapes being picked singly from the bunches as they become, not to say ripe, but positively dry and withered, and presenting more the appearance of dried raisins.

Both in the case of Clarets and Sauternes the process of making the wine is exceedingly simple, Claret being the juice of the grapes slightly pressed and allowed to run, together with the fruit itself, into large vats, where it remains the necessary time until the fermentation is completed, when the juice is drawn off into hogsheads, which are placed in cool, dark stores above ground. In England, grapes being such an expensive luxury, it is difficult to picture the load after load of fresh-gathered fruit arriving at the press-houses hour after hour on long narrow carts drawn by pairs of magnificent oxen, which it would do an English butcher's heart good to look at. The process in the Sauterne districts is somewhat different, the grapes, or dried fruit, being carefully picked one by one; and for this reason if the fine weather lasts the vintage in these districts extends over some weeks, while in the event of a

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We tasted some specimens of Sauterne which had been made on the previous day only, and which had a sweet, mawkish taste, resembling in character the beverage which forms a child's idea of wine, when he takes an orange and squeezes the juice into a wine glass. It seemed scarcely possible to believe that this modest and homely-looking beverage could, in the course of a few years, become the highly prized wine of Château Coutet or Yquem.

It is a custom with the growers in the Sauterne districts to put their wines into hogsheads precisely as they are made, and hence in tasting the wines of any vintage it is usual to commence by first of all tasting the *queue*, or least valuable wines of the vintage; next the *ensemble*, or average of the year's produce; and lastly, the *tête*, or finest specimen of the wine made. This latter is in reality more a liqueur than a wine, excessively luscious, and cloying to the palate. After tasting the first, and some of the wines of the second, growth, we came to the conclusion that the growers have carried this point of sweetness to excess, which will no doubt account for the fact that the quantity of Sauterne consumed in England is very trifling, the greater quantity going to Russia.

Upon expressing this view to the proprietor of one of the most important vineyards, he informed us that in the year 1870 he tried the experiment of making his wine in a manner somewhat similar to claret, gathering the grapes when ripe, and before they had become dry and withered. The result was that he made a much larger quantity of wine during that year, and of a drier character, resembling the finer wines of Germany. We tasted a sample of this wine, and were so pleased with it that we can commend the process as worthy of the consideration of other proprietors.

The quantity of the 1876 vintage in the white, as well as in the red, wine districts of Bordeaux will be small this year; while in 1875 the quantity was also small and the quality valued at about half that of 1874, which was, as in the Medoc, an exceptionally fine year.

Both in the Sauterne and Medoc districts one is constantly met with the puzzling problem, Why vines grown within a few feet of each other should vary so much in the value of their produce, that the grapes on your left hand producing Château Lafitte may be worth £40 per hogshead, while those immediately adjoining on your right realize only a fourth or fifth part of that sum. And yet experience proves that the classification of these wines into "*Crus*," or growths, which has been admitted for so many years, is strictly correct. As an illustration take a wine of the first growth 1874 vintage, and compare it with that of a fourth or fifth growth. During the first year or so a good judge may, perhaps, not see the wide difference which the variation in price demands; but let these wines remain for 10, 12, or 15 years, and then the correctness of the classification asserts itself, for while the lower quality will have, perhaps, attained its greatest stage of perfection, or even have commenced to deteriorate, the higher growth will show, by contrast all the more strongly, its backbone and breed; and, though the most thorough connoisseur would admit that if you give him a wine of one of the first growths he might not be able to say with certainty that it was Château Lafitte, Margaux, or Latour, he will tell you that, if you show him a sample of either of these three wines beside that of one of the same year's vintage of any of the lower growths, the uninitiated would have no difficulty in detecting the difference in value.

It is a frequent complaint that in England consumers know so little in regard to the manner of production of the various wines they consume, and are led so much simply by names of districts and estates, which are comparatively of little value unless accompanied by a knowledge of the year of vintage and other circumstances, that we are induced to give the above particulars with the view of adding to the general knowledge.

To those who, next Autumn, may be in search of "fresh woods and pastures new" for their customary vacation, we would recommend a visit, about the middle or close of September, to the Claret and Sauterne districts around Bordeaux, and we are convinced that the beauty of the country, the sight of mile after mile of laden vines, the genial and happy population, the comfortable quarters to be found in the quiet villages and out-of-the-way nooks will afford a pleasant change to the never-ending round of Swiss climbing and visits to Continental cities.

Yours obediently,

W. AND A. GILBEY.

Château Loudenne, Medoc, France. Oct. 20.

of white wine were consumed, still these amounts were only equal to $31\frac{1}{2}$ per cent. of the total consumption. Last year the returns showed a falling off to 3,568,526 gallons of red and 1,510,776 gallons of white wine, or less than 30 per cent. of the whole consumption.

II.—*Burgundy, Mâcon, and Beaujolais Wines.*

The generous vinous growths of the Côte d'Or, Romanée, Clos de Vougeot, Chambertin, Musigny, Volnay, Corton, and Beaune—The White Wines of Montrachet, Meursault, and Chablis—The principal Mâcon wines, Moulin-à-Vent, Thorins, and Pouilly—The more remarkable growths of the Beaujolais—Burgundy Vines, Vineyards, and Vintages—Prices of the Burgundy, Mâconnais, and Beaujolais Wines.

THE deep purple, full-bodied, velvety wines of the Côte d'Or carried off at Vienna half-a-dozen medals of progress, four of which were secured by the descendants of Monge, the famous mathematician, a native of the district, and who, as Louis XVI.'s Minister of War and Marine, signed the order for that monarch's execution, and after narrowly escaping the guillotine himself, shared in the honours and emoluments of the First Empire. The Monge family among them exhibited a varied and extensive collection of the grand wines of Burgundy, many of which were in fine condition. Their own vineyards are managed very much in their ancestor's way—that is, mathematically; order reigns everywhere, everything has its place, the people employed work with the regularity of machines, and all manner of mechanical appliances are in use to economise manual labour.

The generous vinous growths of Burgundy have always been in high renown, and centuries ago wines and vines alike of this favoured province passed as presents from one royal personage to another, just as grand *cordons* are exchanged now-a-days. Burgundy was then the wine of nobles and churchmen, one of the latter of whom chants—

“ Nous les boirons lentement,
Nous les boirons tendrement,
Ton Clos Vougeot ! ton Romanée ! ”

The vigneron of the Côte d'Or, or golden slope, for the purpose of classifying their products, divide the district into the Côte de Nuits and the Côte de Beaune, the former boasting of what the Burgundians technically term their best *climats*, the most esteemed being at Vosne, whence come Romanée-Conti, La Tâche, and Richebourg, with Romanée-St. Vivant, La Grande Rue, Gaudichot, Malconsort, and several others. Of these Romanée-Conti is recognised king.

The characteristics of this splendid wine are body combined with extreme *finesse*, velvety softness, rich ruby colour, and delicate bouquet. Genuine Romanée is rarely to be met with, for a prolific vintage never exceeds 4,000 bottles. The name may figure in thousands of prices current and *cartes de vin*, but at the best you can only expect to obtain Romanée-St. Vivant, or some other member of the extensive family of Romanée; good enough wines in their way, but occupying merely second or third rank among the Burgundy *climats*. La Tâche and Richebourg are equally fine wines with Romanée-Conti, and the former has the extra merit of being what the French term *corsé*, meaning a stout wine all the component parts of which are intimately mingled. Moreover, a wine of this character forms a deposit without becoming thin. Ordinarily, even moderate age wears out the best Burgundies, as was shown by several of the samples, and one found a Richebourg of 1869 far superior to the more ancient vintages.

Clos de Vougeot is usually classed after Richebourg, although connoisseurs generally are disposed to give the palm to Chambertin, which is a finer kind of Volnay, and the *vin velouté par excellence* of the Côte d'Or. It was this latter quality which made it a favourite with Napoleon I. To considerable body it unites a fine flavour, and a suave bouquet with great *finesse*, and has, moreover, the much-prized merit of not becoming thin with age, as the majority of the Burgundy growths do. It was for some fine samples of this wine that Madame Marey-Monge had a medal for progress awarded to her. The Clos de Beze on the northern side of the Chambertin vineyard produces a wine of a more piquant character, less soft and delicate, still one which, while impressing the taste, suggests neither the smallest sense of acidity nor any excess of vinosity. Clos de Vougeot can certainly lay claim to a more decided and characteristic bouquet than Chambertin can boast of. It is likewise a firm wine, less refined in flavour, it is true, than Romanée and the other grand Vosne *crús*, with a suggestion, too, of bitterness such as exists in the Médoc growths when young, and which is due to their tannin. On this account it requires to rest four years in wood. The mention of Clos de Vougeot naturally recalls the well-known story of its enthusiastic military admirer, who, while marching his regiment to the Rhine, commanded his men to halt before the vineyard and present arms in its honour. At Vienna the merits of Clos de Vougeot were recognised less ostentatiously; the wine was found excellent, and a medal was awarded to it.

One of the most delicate wines of the Côte de Nuits is

Musigny, and the sample which secured to Count Vogué a medal for progress, if in some degree deficient in that velvety softness distinguishing the grander *crûs*, possessed considerable *finesse* and roundness, combined too with a fuller flavour, which the wine has the advantage of retaining when old. Among the more spirituous growths distinguished by remarkable body and flavour, but deficient alike in refinement and bouquet, pre-eminence must be given to St. Georges, a highly generous, robust, and even harsh wine, which tones down advantageously with age without losing substance, and some excellent samples of which had been sent to Vienna. The adjoining vineyard of Les Cailles, yielding a wine far more delicate in character, was equally well represented. Among commoner growths one may mention those of Morey, and especially the Clos de Laroche, which furnishes a remarkable wine; also the Clos de Tart and Bonnes-Mares, yielding sound, strong, and full-flavoured wines, devoid alike of bouquet and *finesse*. Some samples from Prémieux exhibited more of these latter qualities, while others from the *crû* of the Marcs d'Or, near Dijon, while possessing a certain delicacy, were entirely deficient of perfume. The wines from the Clos de Crébillon, near Brochon, attracted attention, simply as coming from the place whence two once-famous writers of the last century — Crébillon the lugubrious, who composed sombre tragedies, and his son, Crébillon the gay, who indited licentious novels—filched their family name.

The wines of the Côte de Beaune secured merely three medals at Vienna against eleven awarded to the vintages of the Côte de Nuits. Two circumstances contributed to this result, the smaller number of samples from the former district and the damaging influence of the temperature on certain of those which had been forwarded.

The grand wines of Volnay, firm and delicate, with a distinctive and refreshing flavour slightly suggestive of the raspberry, and a seductive bouquet unrivalled by any other growth of the Côte d'Or, were well represented. One sample from Les Petits Caillerets was exquisitely round; another from the Clos du Chêne was firm, and perhaps a trifle harsh; while a third from Les Bouches d'Or was vinous, delicate, and velvety, but all exhibited that refined flavour which distinguishes the genuine wines of Volnay. From the neighbouring vineyard of Santenay at Meursault came a red wine which in fine years is ranked by connoisseurs above Corton as uniting all the richness of the *grands crûs* of the Côte de Nuits with the *finesse* characterising Volnay. It has the merit, moreover, of retaining its richness and remaining firm with age.

From Aloxe came some samples with that fine, full, and even grand flavour which distinguishes the Corton wines, combined with more bouquet than is met with in any other *crû* of the Côte de Beaune, Volnay alone excepted. Corton takes equal rank with Volnay, and is not unfrequently classed above it, owing no doubt to its greater richness and its quality of outliving less robust rivals. When at ten years of age these are becoming dry and withered, Corton will still preserve all the qualities of a grand wine.

The samples from Beaune, for certain of which M. Arnoux obtained a medal, included a variety of firm, intimately blended wines, with a clear pure flavour, the finest being the produce of the Fèves vineyard. The Clos des Mouches furnishes a somewhat delicate and mellow wine, the Cras one of a stouter growth, and the Grèves a wine remarkable for body combined with *finesse*. Of the Pommards some were singularly round, but inclined to be dull and heavy, while others combined robustness with an almost vivacious flavour; and others, again, from the Clos de Citeaux, were agreeably delicate and mellow. Santenay, a wine possessing roundness and body, with the drawback of an occasional *goût de terroir*, was unrepresented at Vienna, but there were some soft delicate Chassagne wines resembling certain inferior Volnay growths, together with a sample of Savigny, having very much the character of a fine Corton, and for which M. Lefèvre secured a medal for merit.

Chassagne, whose red wines are not especially remarkable, enjoys, with Puligny, the honour of producing the finest white wine of the Côte d'Or—at once its Château d'Yquem, Johannisberg, and Tokay—the renowned Montrachet, which every native-born Burgundian maintains to be the grandest white wine in the world. The distinguishing characteristics of Montrachet are *finesse*, fulness, absolute homogeneity, and softness, combined with a powerful yet delicate flavour and immense richness. It has, moreover, a most characteristic and eminently suave bouquet very distinctly developed, and will keep, as is said of all the grand white wines, almost any length of time without losing a single one of its splendid qualities. This is the Montrachet *ainé*, the veritable wine coming from a vineyard half-way up the slope of the hill whence it takes its name; two other and less commendable varieties, known as the Chevalier and the Bâtard, being severally vintaged, the one at its summit and the other at its base. The former of these wines has great and even delicate flavour, whereas the latter, although with a taste slightly resembling the real Montrachet, is heavy, harsh, and altogether wanting in *finesse*. Genuine Montrachet commands a fabulous price, and

even the Bâtard in good condition sells at from 60s. to 70s. the dozen, retail.

MM. Serre and Co., of Meursault, and Forest and Co., of Beaune, were the principal exhibitors of white Burgundies, for which the latter firm carried off a medal. The best samples of Meursault came from the vineyard of Les Charmes, and were fine, firm, soft wines with a fragrant vivacious flavour. Those from Les Perrieres and Les Combettes are full, dry, and delicate, the first-named, however, having a faint taste of sulphur. Others from Les Gouttes d'Or, perfect, as their name would imply, as regards colour, are full and mellow, but deficient in *finesse*; while others, again, from Les Genevrières are rich, velvety, and liqueur-like. Age commonly renders these wines thin and weak, but when well preserved they develop a fragrant vinous dryness.

Chablis is not a product of the Côte d'Or, but of the department of the Yonne, which sent to Vienna most of its white wines, under that well-known name. Thin, pale, dry, and delicate, and with the distinguishing *pierre à fusil* taste which is their recognised characteristic, the genuine wines, affected by the high temperature, had merely honourable mention accorded to them. Among other wines from the Chablis district was a red variety named Clos Thorey of the vintage of 1857, which, thanks to time, had developed some commendable qualities, and a *vin rouge mousseux* of Epinail, quite on a par with the best sparkling red wines of the Côte d'Or.

There were a fair number of exhibitors from Mâcon, and among them the wines of the surrounding districts were satisfactorily represented. The finest samples were those exposed by MM. Piot frères and Ferret, to both of whom medals were awarded. The Mâconnais and Beaujolais growths of any repute, red and white varieties included, may be easily counted on one's fingers. There are a couple of tolerably good red Mâcon wines, and a single distinguished white one, with less than half-a-dozen Beaujolais, light and agreeable wines enough, but occupying inferior rank. And even the two red Mâcon wines of repute require very special conditions to merit even an approach to the character of fine wines. Possessing no high vinous qualities, they are ordinarily at their best as early as their third or fourth year, still there was a perfectly sound Moulin-à-Vent of the vintage of 1865 exhibited, light and delicate alike in flavour and bouquet, and for which M. Ferret received his medal. Of Thorins there were several samples with considerable character about them, and others possessing the drawback of unmistakable harshness. The inferior red growths from the vineyards of Prissé, St. Amour, and Creusenoir offered nothing requiring

comment. The better specimens of Pouilly, the one really good white wine of the Mâconnais, were more satisfactory. They were distinguished by a certain *finesse*, were dry and spirituous, with a slight nutty flavour and fine bouquet. Of other white Mâcon wines those of Fuissé, Solutré, and Chaintré often lack *finesse* and generosity, although the first-named at times exhibits considerable character.

The vineyards of Mont Brouilly, Chénas, Juliéas, St. Etienne, Fleurie, and Morgon on the southern slopes of the Beaujolais hills—the last-named taking its name from the little river which flows close by—all sent samples of their produce, the best the district yields, to Vienna. The majority had a delicate bouquet, were fresh and light in body without being at all thin, as well as soft and pleasing to the palate, although most of them had that slight medicinal flavour, due in all probability to some peculiarity of soil, which characterises these wines. All without exception were remarkable for their rich sparkling colour, scarcely excelled by any wine in the world.

The species of vines most cultivated in Burgundy are the Pineau noir and the Gamay, the former of which produces wine of high quality, deep in colour, and spirituous, while the latter, which is the most prolific bearer and the prevailing grape throughout the Mâconnais and the Beaujolais, yields wine paler in colour as well as somewhat acidulous. All the white wines are produced mainly from the Pineau blanc.

The aspect of the grand Burgundy vineyards is principally south-east, and the soil, which is calcareous, is impregnated with iron. Indeed, ironstone exists in a greater or less degree in all the more celebrated vineyards of France, including the Médoc, the Côte d'Or, the Champagne, the Hermitage, Roussillon, &c. Carbonate of lime is also prevalent in many of them, still its presence is by no means inseparably associated with the growth of all the higher-class wines, for scarcely any trace of it is to be found in the vineyards of the Médoc, the Hermitage, or the Côte Rôtie. French oenologists deduce from this that oxide of iron is essential to the production of fine wine, and they are further of opinion that wines grown on an ironstone soil possess keeping qualities to which those from a limestone soil can lay no claim, although the prevalence of lime is believed to be largely conducive to alcoholic strength.

A practice prevails throughout Burgundy of plastering the common wines during the process of vinication, as a precaution against acetous fermentation, and in the course of the anxious nursing which the grand wines undergo they are frequently sulphured as well as fortified with a moderate quantity of spirit,

more especially when sugar has been added, as it sometimes is, to the must.

Since the year 1840 the grand Burgundy vintages number less than half a score, and include merely the following years:—1842, '46, '49, '54, '57, '65, '68. The natural strength of the finer Burgundy growths ranges from 19 to 22 per cent. of proof spirit, although in exceptional years they have shown as much as 24, and as little as from 13 to 15 per cent., while wines vintaged from the Gamay species of grape frequently contain even less than 10° of proof spirit. The fine white wines ordinarily contain from 20 to 30°, the Mâconnais and Beaujolais growths averaging from 18 to 20 per cent. of proof spirit.

The wholesale prices on the spot of the grand wines of the Côte d'Or range from 400 to upwards of 1,000 francs the pièce of 50 gallons (300 bottles), or from 3 to 8 francs the bottle according to vintage and age. Inferior growths are quoted from 200 francs upwards, and *vins ordinaires* as low as from 100 to 150 francs the pièce. The finer wines of the Mâconnais command from 200 to 400 francs, and those of the Beaujolais from 150 to 250 francs the pièce of 47 gallons, young *vins ordinaires* ranging from 90 francs upwards.

III.—Wines of the Côtes du Rhône.

Red, White, and Straw Hermitage—Côte Rôtie—Condrieu—The Rose-colour Wines of the Côtes du Rhône—St. Peray, commended by Alexandre Dumas—Châteauneuf-du-Pape and its ravaged Vineyards—Prices of the foregoing Wines.

It was principally the higher-class wines of the Côtes du Rhône, such as Hermitage, Côte Rôtie, Condrieu, and St. Peray which made their appearance at Vienna. Of undoubted Hermitage there were only a couple of exhibitors, one of whom carried off a medal. The samples were commendable, still not to be compared to the Hermitage one has tasted in the growers' cellars at Tain, including the exceptional vintage of 1808 belonging to the Marquis de Florens, one of those unquestionably grand wines which for 63 years had gone on improving in quality and perfume, and more than all had retained much of its original richness of colour. The Hermitage which secured the Vienna medal had the recognised bouquet recalling the raspberry, a remarkably clean, fresh, full, vinous flavour combined with great firmness and softness, and was, moreover, of the indispensable rich deep purple hue. The white Hermitage of a pale yellow tint, and with an ambrosial perfume that may

be pronounced unique, was exquisitely suave, rich and spirituous in flavour, and perfectly dry. Of the vinous, luscious, almost unctuous Hermitage *paille*, with its volume, its marrowy richness, its delicious smoothness, combined with an indescribable refreshing sharpness free from the slightest acidity, not a solitary sample was exhibited.

Some Côte Rôtie of the years 1867 to 1870 exhibited by M. Paret failed to show this peculiar wine at its best. In the first place only the 1868 vintage was at all remarkable, and in the next the wine was too young. Côte Rôtie, which is due to the mixture of the Terine noir with the white Vionnier grape, when of a really good vintage, requires keeping from three to four years in the wood and as many as ten years in bottle, if it is desired to develop its recognised higher qualities. Its purple hue will by this time probably have become a rich maroon, still there will be a bright limpidity about the wine combined with considerable *verve*, a faint tonical bitterness and a fruity fragrant perfume resembling a compound of raspberries and violets. Côte Rôtie is not a wine to sip by itself, but to drink with rich dishes, or, better still, juicy viands which bring out all its peculiar and fascinating flavour. A theory, I believe, prevails that Côte Rôtie affects the nerves, but they laugh it to scorn at Ampuis, where those who have the chance drink the wine, of which the little village is so proud, all their lives.

Of the few samples of the white wines of Condrieu, some with a rich dry nutty flavour were remarkably pale and almost as spirituous as a cordial, while others were deep amber coloured and more luscious in character. Of the rose-colour wines of the Côtes du Rhône, such as the dry and insidious Tavel, the firm and generous Lirac, and the robust Roquemaure, with the luscious Chusclan and St. Geniès, and the pleasant light sparkling Laudau, the majority made default, the district being more or less overrun by the *Phylloxera vastatrix*. Some good growths of the Côtes were, however, exhibited by MM. Tête and Barthélemy, who were accorded medals for merit. Honourable mention was also made of the dry St. Peray exposed by M. Boode—a wine extolled by Alexandre Dumas in his *Impressions de Voyage* for its briskness and pleasant spirituous flavour. Of the once-famous wine Châteauneuf-du-Pape, intensely deep in colour, of great volume, and with a peculiar sweet bitterish taste, and which was once the daily beverage of the Avignon popes, not a single sample was exhibited. In former years Châteauneuf-du-Pape used to produce annually its 12,000 hogsheads of wine, instead of the hundred or less it does at present. The wine, indeed, appears to have gone completely

out of fashion, condemned either by its licorice-like flavour or by its headiness, and to-day the produce from the few vineyards which the Phylloxera has not utterly ravaged is principally consigned to the Côte d'Or to impart some of its superfluous body and colour to the poorer Burgundy growths.

The alcoholic strength of the Hermitage wines varies between 21 and 25 per cent. of proof spirit, the Côte Rôtie wines being about the same, while white St. Peray will frequently indicate as many as 27°. Hermitage ranges in price from 400 to 700 francs the pièce of 46 gallons, the straw wine commanding 6 to 8 francs the bottle. Côte Rôtie is priced at from 300 to 450 francs, Condrieu at 200 francs, and dry St. Peray at from 200 to 300 francs the pièce. All these are the prices on the spot.

IV.—Wines of the South of France.

The growths of the Hérault, the Gard, the Aude, and the Pyrénées-Orientales—Roussillon—The Muscats of Lunel, Rivesaltes, and Frontignan—The Rancio Wines—Prices—The dry White and sweet Red Wines of Corsica.

VIENNA was deluged with the cheap, and in many instances coarse and characterless, and more or less spirituous products of the departments of the Hérault, the Gard, the Aude, and the Pyrénées-Orientales, the majority of the samples being of the 1872 vintage, and scarcely one in a hundred having arrived at a moderate age, although the growers of these southern wines claim for some of them the merit of keeping for at least half a century. This was, however, possibly of no very great moment, as age, however much it might improve, could scarcely develop any high character in them. Their one unquestionable merit was extreme lowness of price, some of the samples being in ordinary years as low as 13 francs the hectolitre of 22 gallons. They were no doubt well adapted to the purpose for which they are largely employed—that is, mixing with the pale, feeble, and acidulous wines of the centre of France. With respect to the specimens from the Hérault, the Agricultural Society of Montpellier had the higher-class medal awarded to it for samples of St. Georges, the single wine, with the exception of its *vins de liqueur*, of any particular character produced in the department, being of a lively colour, highly spirituous, and boasting a faint bouquet; medals for merit given to MM. Vidal and Gemeys for red and white wines respectively, and to MM. Richard and Sabatier for their collection generally of wines of the Hérault. Among the red wines ranking after St. Georges came St. Chrystol and St. Drézery with Aramons *légers*, *mi-couleur*, and *de choix*; the

white wines including Clairettes *sèches* and *douces*, Bourrets *blancs*, and Piquepouls-Bourrets. The Muscats were numerous, and there was one sample of Tokay grown in the Hérault which secured the approval of those who knew the wine at its best in the Hegyalja, its natural home. Some Vin Rancio exposed by Count Cassagnac received honourable mention, which was likewise accorded to a dry spirituous Picardin wine from the Château of Canet near Clermont, the produce of the Clairette grape (a variety of the Malvoisie), and having a decided Madeira character about it; also to a sweet wine from Valros, near Pézenas, the latter the so-called garden of the Hérault, and noted as the place where Molière wrote *Les Précieuses Ridicules*, and engaged in his first dramatic enterprise. In addition to these various recognitions honourable mention was made of 23 other exhibitors of wines from this department.

The samples from the Gard were the most numerous of all, scarcely one of its known and unknown wines being unrepresented. In addition to those already enumerated among the growths of the Côtes du Rhône, there were the bright purple, full-bodied, spirituous and robust St. Gilles with its unmistakable *goût de terroir*, the more delicate Langlade, the powerful Florac, the locally-admired Costières, Uchard, Jonquières, and Vauvert, with Lédénon from the vineyards in the neighbourhood of Nîmes. For some excellent samples of the last-named wine a medal for progress was given to M. Thurney.

In consideration of the completeness of the collection of the wines of the Gard and of the great progress made of recent years in viticulture and vinification throughout the department, the one diploma of honour given for French wines was conferred on the Agricultural Society of the Gard. In addition the medal above alluded to was awarded, and no less than 20 exhibitors secured honourable mention for their wines, in the list of which those of St. Gilles occur again and again.

The wines from the Aude were deep in colour, full in flavour, highly spirituous, and, generally speaking, perfectly new. Spite, however, of this drawback, there was a kind of softness about the majority of the samples, and with regard to the others the French experts sought to reconcile us to their unpleasant rawness by explaining that in about 16 years' time they would be positively delicious. The Limoux wines were found to be of a more delicate character.

The old province of Languedoc was originally planted with vines from Spain at a period when it was under the same crown with Arragon, and principally Spanish varieties are still cultivated there as well as in neighbouring southern

departments. Hence the marked similarity which exists between certain red wines of the south of France and those of Spain.

The Pyrénées-Orientales sent samples of its Rivesaltes and its Roussillon, its Opoul, Salces, Monnai, and Estargel, its Vins Rancio and its Muscats. Good Roussillon is deep in colour, sound, fruity, spirituous, full-bodied as a Burgundy, and has, moreover, the merit of a bouquet. Altogether it would be an excellent ordinary wine were it not invariably fortified with extraneous spirit to enable it to travel while young. One of the best growths matured by moderate age is still, I believe, imported to England under the name of Masdeu, but only if it bears the "Durand" brand can it be relied on. Considerable quantities of Roussillon, mellowed by artificial heat, and dosed to excess with raw spirit, according to the process I have witnessed in operation at Cette, are palmed off in England and elsewhere as "vintage port." The red wine of Rivesaltes is of the Roussillon type, as are Opoul, Salces, &c., except that the last-named are somewhat inferior varieties.

The Muscat wines of the Hérault and the Pyrénées-Orientales were almost as varied in flavour as they were in colour. Those from Lunel were luscious, delicate, and spirituous, and had the approved muscadine aroma; those from Rivesaltes were even sweeter and altogether more unctuous and powerful both in flavour and perfume, while those from Frontignan had more *finesse* and less vinosity, and were smoother, mellower, and more fragrantly aromatic, confirming the impressions I had previously formed of these wines at their seat of production. For samples of Frontignan exposed by MM. Chevet and Co., of Paris, this well-known firm received a medal for merit, the same reward being accorded to M. Bellard for his Muscat of Lunel.

The Rancio wines made from the black Grenache grape and fermented after a peculiar fashion turn tawny in the course of their second or third year and become lighter with age (just as the Muscat wines grow darker) until they attain the colour of the topaz, when they are regarded by their producers as perfect. In flavour they resemble a sweet, spirituous Port. The prevailing grapes from which the dry red Roussillon wines are made are the Grenache which gives sweetness, the Carignan which imparts colour, and the Mataro which yields quantity. Judging from their names, these vines, like most of those of Languedoc, would appear to be of Spanish origin.

The wines of the Hérault, the Gard, and the Aude, which are invariably sold quite new, can ordinarily be bought soon

after the vintage from as low as 13 francs up to as high as 35 francs the hectolitre of 22 gallons for red wines, and as high as 60 francs for the sweet white varieties. The Roussillon wines command from 30 to 50 francs the hectolitre, and the superior Muscats as much as from 150 to 400 francs, according to quality and age.

There were two exhibitors of wine from Corsica and three from Nice, but only the samples of the dry white wines of Capo Corso, the sweet red wines of Sartena, and some Santa Lucia Rancois with a fine bouquet, contributed by M. Pingliesi of Ajaccio, were considered deserving of recognition. There are 24,000 acres under cultivation with the vine in Corsica, which are estimated to yield annually about six and a half millions of gallons of wine.

V.—*Champagnes and other Sparkling Wines.*

Champagnes and their substitutes—Sparkling St. Peray, Lons-le-Saunier, Vouvray, and Saumur—Champagne of High Life—Imitation Wines—Vineyard area of France and its average production—The departments producing the finest growths and the largest quantities—The ravages of the *Phylloxera vastatrix* and proposed panaceas—Value of a full Vintage in France—Exports of Wine in 1870 and 1873.

AMONG the 13 exhibitors from the Champagne, exposing exclusively sparkling wines—not a single sample of rare red Bouzy or fresh and delicate still Sillery made its appearance at Vienna—none of the leading Champagne firms were represented. Content with renown more or less merited, neither *the* Cliquot, nor *the* Roederer; neither Mumms, Moet, Marceaux, Pommery, Perrier-Jouet, Piper, Deutz and Geldermann, Giesler, Heidseck, Ruinart, nor Roussillon honoured the Exhibition with their presence. There were, however, plenty of samples of wines which, if enjoying less repute, were still of the very first character, it being well known that some of the finest wine is produced by Rheims and Epernay firms of whose existence even the ordinary connoisseur is ignorant; the jury therefore had no hesitation in according awards to Dosse and Co., Minet jeune, and Fenwick and Co. of Rheims, and Anderson and Co. of Epernay, Dufaut and Co. of Pierry, and Bumiller of Avize, for the samples they exhibited. All were remarkable for delicacy and bouquet, and for that more or less refined flavour inherent only in the genuine products of the vineyards of the Champagne; but especial recognition is due to the samples of the rare vintages of 1857 and 1865, exhibited by James Anderson and Co. of Epernay. The 1857 wine was of the very highest character,

otherwise in the course of 16 years its constitution would certainly have become impaired, whereas it was exactly the reverse. Rather deep in colour and with a full perfume and rich ambrosial flavour, undisguised by that fussy frothiness common to the inferior qualities, it was evident in a moment that the wine was the result not merely of an exceptional year but of fully-ripened grapes from one of the first vineyards in the Champagne. The newer wine had a dry delicate flavour, with a little less richness, and was lighter both in colour and body. The bouquet of both was exquisite. It is strange that in no other corner of the globe can a sparkling wine of the same high character be produced as is obtained from the poor and chalky soil of the Champagne, where it is essential to plant the vines as close as possible that the natural warmth which they communicate to each other may force, as it were, the ripening of the fruit.

The wines of Roper frères of Epernay, exhibited through their London agents, J. R. Parkington and Co. of Crutched Friars, met with due recognition from the jury; firstly, on the score of quality; secondly, on that of price. In addition to being unquestionably genuine growths of the Champagne, they were of agreeable flavour, and possessed both delicacy and bouquet. After standing the test of an almost tropical temperature for upwards of a month these wines were found not to have suffered in the slightest degree, proving, what is a rare quality with moderate-priced Champagnes, their complete capability of resisting the trying influences of a hot climate.

With the exorbitant prices commanded by the leading Champagne brands, which, owing to increased consumption, contain every year less and less of the Champagne grape, attention may be advantageously directed to the sparkling wines produced in other districts of France and offered at about one-half the rate of high-class Champagnes. Foremost among these may be instanced St. Peray, a purer wine than Champagne itself, as its natural saccharine is in such excess that it does not require dosing with sugar and spirit like all Champagnes from the finest to the commonest. Some remarkably good sparkling wines came from Lons-le-Saunier in the Jura, inferior qualities coming from St. Cher and Bar-le-duc, while Barsac on the Drôme sent some sparkling rose Muscat, with the perfume of the rose very distinctly developed. The French sparkling wines, however, which furnish perhaps the best substitutes for Champagne are, first, those from Vouvray in the neighbourhood of Tours, notably the Mitre brand of Dupanloup and Co., which possesses the requisite lightness and exhilarating qualities of a *vin mousseux* combined with pleasant

flavour, besides being what cheap sparkling wines very frequently are not—namely, the genuine juice of the grape. Secondly, those from Saumur, sound, wholesome wines, sufficiently light, and, what is largely in their favour, the reverse of sweet, for coming as they do more from the South, the natural richness of the fully ripened grape renders only a moderate addition of syrup requisite. As a general rule the less sweet a sparkling wine is the better its original quality is likely to be, the flavour in this instance being altogether undisguised by adventitious aids.

A medal was awarded to M. Vielhomme for some sparkling red Burgundy, and, singular to say, to M. Soucard for what he termed “Champagne of High Life,” a compound of wine and brandy—the latter predominating—in a state of effervescence. Stranger than all, medals for progress and merit were given to MM. Blouquier fils and Wachter respectively for their imitation wines, a well-known house in Cette, the hotbed of this nefarious industry, being simply rewarded by honourable mention for its efforts in the same objectionable direction.

The subjoined tabular statement, constructed from documents issued by the French Minister of Finance, shows the vineyard area of France, with its average production, together with the quantity and value of the wine vintaged in 1873. The total yield being small, the estimated prices are exceptionally high. The first six departments are those which produce the finest growths—namely the Gironde, producing the Bordeaux wines; the Côte d’Or, the Burgundies; the Marne, the Champagnes; the Drôme, the Hermitage; the Rhône, the Côte Rôtie and the Beaujolais; and the Saône-et-Loire, the Mâcon wines. It will be noticed that the vintage of 1873 in the above departments was sometimes as little as a third, and rarely more than half of an average one. With regard to the Marne, which comes within the first of these categories, even if every gallon of wine that it produced that year were converted into Champagne—and it is well known that a considerable portion is not adapted to this purpose—the total quantity would still be insufficient by four millions of bottles to meet the demands of the annual consumption, which for the year 1872-3 attained the high figure of 22,381,838 bottles, or double what it was ten years ago.

In the seven remaining departments, which are those ordinarily producing the largest quantity of wine, the contrast is scarcely so striking, the yield from three of these being largely in excess of an average one. The principal deficiency is in the brandy-producing district of the Deux Charentes, both of which departments show an immense falling off, one, indeed, yielding

VINEYARD AREA AND PRODUCTION AND VALUE OF THE VINTAGE IN FRANCE.

Departments.	Vineyard area in acres.	Produce per acre in 1873 in gallons.	Average annual produce during the last 10 years in gallons.	Total produce in 1873 in gallons.	Value of the Vintage, 1873, in pounds sterling.		Total Value, 1873.
					Fine Wines.	Vins Ordinaires.	
Gironde	358,614	76.18	64,304,329	27,322,559	£ 2,308,958	£ 1,231,502	£ 3,540,460
Côte d'Or	81,295	99.7	16,684,658	8,107,305	279,946	530,412	810,358
Marne	40,185	78.14	8,735,593	3,140,097	1,062,340	60,277	1,122,617
Drôme	88,642	42.4	6,713,873	3,763,543	22,944	306,432	329,376
Rhône	96,802	81.8	20,562,546	7,926,561	183,215	613,614	796,829
Saône-et-Loire	107,329	73.6	24,322,884	7,907,611	112,120	543,416	655,536
Hérault	541,071	547.3	230,243,224	296,132,885	720,000	18,620,533	19,340,539
Charente Inférieure	384,173	104.59	118,871,333	40,180,453	—	2,922,929	2,922,929
Charente	273,787	50.5	77,050,345	13,849,693	—	1,132,659	1,132,659
Gard	204,741	152.4	42,318,957	31,215,233	—	1,924,095	1,924,095
Aude	167,239	387.5	42,159,519	64,814,026	3,600	4,492,227	4,495,827
Gers	220,122	81.9	32,671,371	18,041,963	—	1,194,363	1,194,363
Pyrenées-Orientales	138,673	195.5	15,084,722	27,112,133	246,366	1,773,838	2,020,204
Sixty-two other departments, Corsica not being included.	3,180,985	74.2	476,352,845	236,574,854	237,115	19,243,162	19,480,277
Total	5,883,658	—	1,176,076,199	786,088,916	5,176,604	54,589,465	59,766,069

only a little more than a sixth of what it ordinarily does. The remarks made with reference to Champagne will therefore be equally pertinent if applied to Cognac.

In certain localities the falling off in the 1873 vintage was due entirely to that new scourge of the vine in Europe, the *Phylloxera vastatrix*, erroneously supposed to have been originally imported into France in 1823 with certain specimens of the *vitis cordifolia* of the United States for the Jardin des Plantes, but which only manifested itself in the French vineyards some eight or nine years ago at Pujault on the right bank of the Rhône and in the department of the Gard, whence it spread to Roquemaure and Villeneuve-les-Avignon in Vaucluse, appearing in the course of 1866 in the vineyards of the plain of La Crau in the Bouches du Rhône, when M. Delorme, of Arles, called the attention of the scientific world to its ravages. By 1867 all the vineyards of Vaucluse, together with several of those of the Gard, were more or less attacked by this insect, and in the following year the scourge, spreading along the banks of the Bas-Rhône, eventually made its appearance in the department of the Drôme. In 1869 it spread westerly in the direction of Nîmes, and easterly in that of Aix, showing itself, moreover, in the vicinity of Toulon and at Lunel-Viel, since which time it has attacked the vineyards around Montpellier, and extended its ravages to the Dordogne, as well as travelled along the banks of the Rhône to Lyons, and manifested itself in the departments of the Isère and the Basses-Alpes. In 1873 it appeared in the Charente, and no doubt its ravages influenced the falling off in the produce of that department. With regard to the Gironde an isolated case originally showed itself in 1868 in the vineyard of M. Laliman at Floirac, a few miles from Bordeaux, and since then the scourge has spread through other communes of the Entredeux-mers. It has not, however, as yet touched the Médoc, although great fears are entertained for the future of the renowned *crûs* of that district. The vineyards bordering the Rhône have suffered severely, those of Châteauneuf-du-Pape being almost destroyed, while the Condrieu, Côte Rôtie, and Hermitage vineyards are already assailed.

In 1871 the Minister of Agriculture offered a prize of 20,000 francs, which the Bordeaux Chamber of Commerce petitioned to have increased to a million, for the discovery of a means of ridding France of the scourge. Small as the prize is in comparison with the vast interests at stake, it has, nevertheless, sufficed to quicken the zeal alike of *savans* and empirics, who have come forward with a legion of nostrums more or less inefficacious. Insecticide powders innumerable have been brought

into requisition ; manure mingled with plaster, lime, sulphur, salt, soot, and tar has successively been tried ; experiments have been made with carbolic, arsenic, and sulphuric acids, with sulphuret of carbon, creosote, ammonia, and petroleum ; the roots of the vines, moreover, have been swaddled in green tobacco-leaves, and in some localities even an attempt has been made to eradicate the pest with fire. The chymical agents occasionally revived ailing plants, but failed to annihilate the *Phylloxera*. Out of 140 proposed panaceas which the Agricultural Society of Montpellier thought it worth while to put to the test, 34 produced some slight beneficial results, and 9 injured or killed the vines, the remainder exercising no influence whatever for good or evil. Sulphuret of potash was the substance that had the most favourable effect ; still the submersion of the vines under water is the only remedy that has hitherto been tried with great success. At a session of the *Société des Agriculteurs de France*, an engineer, M. Aristide Dumon, proposed to draw off a quantity of water from the Rhône in the neighbourhood of Condrieu, and by means of a canal to inundate from 20,000 to 25,000 acres of vineyards situated along the *Côtes du Rhône*. Several deputies brought the subject before the National Assembly, but the proposal was rejected by the Budget Committee from want of funds to dig the canal in question. In the autumn of 1873, M. Planchon, a well-known French naturalist, visited the United States, and ascertained that certain species of American vines are left untouched by the *Phylloxera*, and that their ravages among the others are reduced to a mere bagatelle, thanks to the activity of a parasitic insect termed "a cannibal," which feeds upon the *Phylloxera* with remarkable voracity. M. Planchon, delighted with his discovery, brought back with him a large number of these so-called cannibals, but at present it is not known whether he has succeeded in multiplying them as he proposed, and meanwhile the *Phylloxera* continues its ravages unchecked. The French Government, alarmed at the devastation, has now offered a prize of 300,000 francs for an efficacious and economical means of arresting the further progress of this veritable scourge.

A full vintage in France, such as that of the year 1869, yields its 70 millions of hectolitres of wine, or one-third more than the vintage of last year, the increased value of which would be an extra four millions sterling, besides nearly two millions and a quarter additional for the *eau-de-vie* distilled from the husks and stalks of the pressed grapes. The after-value of these as food for cattle and as manure, combined with the value of the pruned branches of the vine, both as fodder and fuel,

will, according to the estimate of Dr. Guyot, adopted by M. Drouyn de Lhuys, a former Minister of Agriculture and Commerce, bring up the total value of a full vintage to £76,178,310 sterling. Although the vineyard area comprises less than a twentieth part of the soil of France, the yield amounts in value to almost a quarter of the total agricultural revenue, and furnishes the means of existence to one-fifth of the entire population. The total exports of wine from France during 1870 amounted to 66,456,970 gallons, valued at £8,673,040; in 1873, however, these attained to the value of £11,250,000.

VI.—*Wines of Algeria.*

Condition of the Vienna samples—Vineyard area and production—Rewards awarded to Exhibitors of Wine from France and her Colonies.

THE wines from Algeria, which comprised 73 red and 55 white varieties, had suffered considerably from their exposure to the high temperature of the Vienna Industrial Palace. Although highly spirituous they are singularly deficient in robustness, and were consequently among the first to be affected. The high temperature during the autumn season, and above all the droughts which prevail when the grapes are ripening, interfere materially with the quality of the wine. The largest number of specimens came from Milianah and Barkadem, but, excepting the straw wines of the Agricultural Society of Crescia, none were of a high character. Two red wines exposed by MM. Gilles and Merlé-Senia secured medals, and no less than 24 samples, of which the majority were red wines resembling the inferior growths of the Hérault, received honourable mention.

In 1866 the area of vine cultivation in the province of Algiers was 12,580 acres, and in that of Oran 8,842 acres, the total amount of wine produced being about a million and three-quarters of gallons. Since that period the production has risen to about $2\frac{1}{4}$ millions of gallons, one-sixth of which are *vins de liqueur*, and said to be of excellent quality.

The contributions from the vineyards of France and her colonies to the Vienna Exhibition may be thus summarised:—Only 20 out of her 76 wine-producing departments were represented by 278 exposants, two-thirds of whom were from the Hérault, the Gard, the Aude, and the Pyrénées-Orientales. They contributed altogether 920 samples, and had awarded to them one diploma of honour, 21 medals for progress, 38 medals for merit, and 83 diplomas of recognition, equivalent to honourable mention. The exhibitors from Algeria, who forwarded 128 samples, obtained two medals for merit and 24 diplomas of recognition.

THE WINES OF GERMANY.

1.—*Rhine Wines.*

Archaic and modern samples from the cabinet of the Grand Duke of Nassau—Steinbergers, Hochheimers, Marcobrunners, and Rudesheimers—Schloss-Johannisberger—Other grand Wines of the Rheingau, Rauenthaler berg, Geisenheimer Rothenberg, and Kiedricher—Auslese Wines and their demerits—The Rudesheim Vineyards—Special characteristics of the grand Rhine Wines—The Rheingau—The Hochheim Vineyards—Varieties of grape cultivated on the Rhine—Red Rhine Wines, Heidesheimer, Ingelheimer, Assmannshauser, Kreutzberger, and Daltenberger—The Red Wines of the Ahr, Walporzheimer, Ahrweilerer, and Bodendorfer—Liebfrauenmilch—Grand Rhine Vintages—The Gallization process.

THE wines from the Rhine comprised as large a number of historical examples as came from all the other wine-growing districts combined. The Grand Duke of Nassau contributed samples from his celebrated collection of the great wines of the Rheingau, formerly stored in the antique vaulted cellar of the Bernardine Abbey of Eberbach, world-renowned as the Grand Ducal cabinet. These included not only the famous vintages of the present century, but several of the past, and together were thirty-one in number. There was, for instance, one archaic Hochheimer no less than a hundred and sixty-seven years old—that is to say, of the vintage of 1706. Fancy drinking a wine of the year when Marlborough gained the battle of Ramillies, and which it is not unlikely the founder of the reigning dynasty in these islands drank more than one bottle of on his journeys backwards and forwards, between Great Britain and Hanover. Other Hochheimers followed coeval with the war of American Independence, and then came a comparatively juvenescent wine of the same renowned *crû* which was fermenting in the vat while the battle of Jena was being fought, with a Steinberger of the year preceding the disastrous retreat of the French from Moscow.

The truth, however, must be told, and unfortunately the wines recalling these remarkable historical reminiscences proved to be completely worn out. Indeed, the majority of those anterior to the grand year 1846 were but phantoms of their former selves, having lost not only their fine high flavour, but their other vinous attributes, including nearly all that fragrant aroma for which the higher-class Rhine wines are so justly celebrated, and retaining, in fact, little of their ancient splendour save their brilliant colour. Hochheimers and Marcobrunners were *in extremis*, and even the noble Steinberger of the famous comet vintage of 1811 had succumbed, besides which so few as one-and-thirty years had sufficed to utterly vanquish the fiery Rudes-

heimer, as was proved by the sample of the year 1842. It should be remembered, however, that not one of these wines had had a drain of extraneous alcohol imparted to it since the hour of its birth. To fortify a grand Rhine wine would be in the eyes of the humblest "winzer" of the Rheingau a sin which nothing could atone for. The marked difference observable in the wine of 1846, and every bottle of subsequent years, exhibiting, as it did, more or less high character, body, and *finesse*, seemed only to be accounted for by some great improvement having taken place, not alone in the process of vinification pursued, but also in the culture of the vine itself in the great vineyards of the Rheingau. The foregoing wines, it should be observed, were all tasted under the most advantageous circumstances in an apartment of some government building in the vast and antique cellars of which the samples had been stored in company with those of the wines of Austria, Hungary, Italy, Russia, Greece, Turkey, and Roumania.

The crown of the Grand Ducal collection was unquestionably the Steinberger cabinet of 1862, a most superb wine which for bouquet, refined high flavour, combined richness and delicacy, and sub-acidulous freshness was considered by several of the jurors to be unrivalled by any white wine in the exhibition. The other examples of Steinberger, comprising all the grand vintages, were every one of them remarkable wines, and fully sustained the world-wide renown of this famous *crû*. It is simply within the last fifty years that the practice has prevailed of employing only over-ripe grapes in the production of Steinberger, after the fashion which a doubtful tradition reports to have been in vogue for nearly a century past, with regard to Schloss-Johannisberger. The vintage rarely commences until late in the autumn, and is sometimes delayed even into the winter. The pickers, sturdy peasant girls of 18 and 20 years of age, have their gowns looped up kirtle fashion, according to regulation, so as not to brush the over-ripe grapes off as they pass between the rows of leafless vines, thus affording them the opportunity of displaying the very brightest printed flannel petticoats and the gayest coloured stockings which money can purchase at Mayence. The season being cold most of them wear mittens, and have woollen comforters tied over their heads so as to allow of the ends falling down their necks behind. The men who perform the heavier work occasionally get themselves up in jäger costume—grey suits piped and faced with green, boots half-way up the legs, and tufts of feathers stuck jauntily in their mountaineers' hats.

Singing in chorus some song in praise of the Rhine and its wine, the pickers commence at the foot of the slope, one to

each row of vines, and move steadily forward in a compact line with all the precision of disciplined soldiers. With little spring shears which they carry secured to their waists they snip off the riper bunches as they pass along, picking from them, at the same time, the shrivelled and ripely-rotten berries, and throwing them into a separate receptacle. This is what is termed the "auslese," and from these selected grapes a special and luscious class of wine is made of fine flavour, and more or less sweet according as the grapes have attained the stage known as *edelfaide*—in other words, a "noble rottenness"—or are merely ordinarily ripe.

When the pickers have filled their tubs men go round and collect the contents in oval-shaped wooden vessels called "legeln," which they carry strapped to their backs. From these the grapes are consigned to the hand-mills stationed by the roadside, and after being thoroughly crushed are emptied together with the expressed juice into a large cask, fastened by strong chains to a kind of dray, which requires a couple of horses to drag it up the steep winding roads. The aperture of the cask is invariably secured by a padlock before the dray leaves the vineyard, although the press-house at the neighbouring Abbey of Eberbach can be reached within ten minutes, and there is no other habitation beyond a large lunatic asylum within a couple of miles of the spot, so jealously guarded is the produce of the famous Steinberg vineyard.

In connection with this vineyard is a farm of 370 acres, kept up mainly for the manure which it yields, and which, beyond the straw it produces, consumes 12,000 trusses annually for the littering the score or more of horses and the hundred head of cattle kept upon it. Yet with all this the supply of manure is still insufficient, and more has to be purchased of the farmers for miles around. The vines on the Steinberg are manured once in three years, and every year one-third of the vineyard, of which less than 60 acres are ordinarily under cultivation, has 32,000 cubic feet of manure spread over it. Certainly no vineyard in the world is maintained on so grand a scale, and at so great a cost.

A Marcobrunner, likewise of 1862 vintage, and a Rüdesheimer berg of the year preceding, proved inferior merely to the superb Steinberger cabinet already alluded to. All the wines, in fact, of the Grand Ducal collection from the year 1846 to 1868, comprising the majority of the finest growths of the Rheingau, were of the highest character, and sustained, it must be admitted, the reputation which German connoisseurs persistently claim for the rarer produce of this remarkable district.

Although some Schloss-Johannisberger was included among

the samples sent by the Grand Duke of Nassau, this aristocratic and somewhat overrated wine was far more completely represented by the small collection exhibited by Prince Metternich, owner of the world-renowned vineyard, and embracing the best vintages between the years 1857 and 1868, every bottle being sealed and every cork duly branded with the Prince's crest. It was Jules Janin who, when the Prince expressed a desire to include his autograph in a collection he was then forming, sent a receipt for twelve bottles of Schloss-Johannisberger in reply. The Prince, of course, took the hint, and had a dozen of the very best cabinet wine forwarded; still we doubt if it equalled in quality the samples sent to Vienna from the cellars of the historical Schloss which Napoleon I. deprived the Prince of Orange of to bestow on Marshal Kellermann, whose name, at any rate, suggested a certain appropriateness in the gift, and who in his turn was compelled to resign it to Prince Metternich, the father of the present owner.

Much admired as the wines were that the Prince sent to Vienna, the excessive sweetness of several of them masked, in a great measure, their distinctive characters. One of the drier varieties of 1868 vintage was singularly soft, and had that faint bitter flavour characteristic of higher-class Rhine wines, while another was slightly sharp, and gave forth a remarkably rich perfume. A sample of 1862 proved to be exceedingly delicate, with great softness, yet with a suggestion of that pungent flavour and subacidulous freshness which are invariably more or less apparent in the grand Rheingau growths. On the other hand, several of the Prince's wines were so excessively luscious in character that they might almost have been mistaken for the finer growths of Frontignan and Lunel. The *bonne-bouche* of the collection was a highly-prized auslese of 1861 vintage, a rich limpid amber-coloured wine which formed beads round the glass, tasted singularly fresh in the mouth, was deliciously soft, yet with a pronounced and almost pungent flavour, and possessing a bouquet of remarkable fragrance and strength. On the whole, the 1862 vintage proved to be the more delicate wine, 1859 the higher flavoured, while that of 1861 was the more luscious. These selected wines were quoted at the uniform price of 35s. the bottle, and the inferior vintages at the rate of 24s. At the very time the jury were tasting these wines the last remaining cask of the 1861 vintage, containing 1,500 bottles, was sold from the cellars of Schloss-Johannisberg to Consul Bauer, of Moscow, at the rate of 33s. 4d. per bottle. These extravagant prices are the result rather of the factitious reputation which Schloss-Johannisberger enjoys than of the

special qualities which the wine undeniably possesses. As a matter of course both the Grand Duke and the Prince had medals for progress assigned them for their unique collections.

Among other wine-growers of the Rheingau who sent the best productions of their vineyards to Vienna one may instance Baron Cunibert, who forwarded samples of Oestricher auslese, made, as he was careful to inform us, from the most perfect and ripest grapes, grown, moreover, in the very best situations. The baron's wines were certainly remarkable for their seductive softness and exquisite richness. The price quoted for the 1862 and 1863 vintages was £870 the stück of 240 gallons, or rather beyond 12s. per bottle. A medal for merit was awarded for these wines as well as for the samples exhibited by Herr König of some superb Rauenthaler berg auslese of the vintages of 1862, 1865, and 1868, the first-named with the full fragrant bouquet for which this wine is celebrated, while the latter, known as the "non plus ultra," possessed great softness and limpidity combined with a magnificent flavour in which the agreeable suppressed bitter after-taste was especially discernible. Herr Lade sent some splendid Geisenheimer Rothenberg of 1859, 1861, and 1862, from vineyards in close proximity to Johannisberg, and priced at from £600 to upwards of £850 per stück, but which his position on the jury rendered *hors concours*; while Herr Müller of Eltville contributed an excellent sample of Rauenthaler berg auslese (1865), valued at £560 per stück, a fine Eltviller Sonnenberg (1868), a Rüdesheimer berg Riesling (1862), estimated somewhat more moderately, and a Hallgarten auslese (1868) of superior character. A medal for progress was given for these admirable wines. Burgomaster Crass sent Erbacher auslese of the year 1868 valued at £600 per stück and rewarded by a medal for merit, and Count von Fürstenberg Stammheim forwarded an interesting collection of Kiedricher Gräfenberg ranging from the comet year of 1811 down to 1861, and a few samples of Gräfenberger auslese of more recent date—wines closely approximating in character and flavour to Schloss-Johannisberger and vintaged on the steep slopes of the Gräfenberg, a lofty hill planted from base to summit with vines, and crowned by the shattered walls of the castle of Scharfenstein.

Some Erbacher Marcobrunner and admirable Nonnenberger, both estimated at rather more than £400 the stück, were exhibited by Baron Rossum of Erbach and Herr Herber of Eltville, and we had Marcobrunner of 1868 at a slightly lower figure from the cellars of Burgomaster Hofmann. The Marcobrunn, which gives its name to the well-known wine, rises among the hills some little distance from the Rhine, and works

its way to the south-west corner of the vineyard, in the wall surrounding which is a semicircular recess, ornamented with fluted columns and having a tiny stream of water flowing into a small metal basin in the centre. The railway intersects the vineyard and has reduced its area, so that now in ordinary years it yields no more than from 8,000 to 10,000 bottles of wine, or scarcely more than a fiftieth part of what is annually sold under the popular name of Marcobrunner. Of Winkler, a wine grown in the immediate neighbourhood of the Johannisberg, there were four exhibitors at Vienna exposing several varieties, such as Duchsberg, Hasensprung, &c., among which an 1868 vintage sent by Herr G. Müller obtained a medal for merit.

Herr Willelmj of Wiesbaden forwarded no less than 50 auslesen of different vintages ranging from 1857 to 1868, and comprising Hochheimer, Hattenheimer, Geisenheimer, and Rauenthaler, with some remarkably choice Trockenbeer auslese vintaged from several of the best vineyards of the Upper Rhine, but which, although in its twelfth year, had not yet perfectly cleared itself. Only one or two samples of 1868 wine were included, as the finer varieties were not in sufficient condition to support a journey without considerable risk. Nearly all the earlier years had been rewarded with first prizes at the Paris Exhibition of 1867, and on the present occasion the Vienna jury assigned them a medal for progress. The racy flavour one looks for in Rhenish wines was not entirely lacking, although, as with several of the auslesen already spoken of, these samples exhibited a surprising softness combined with a richness that could scarcely be excelled. Unfortunately, however, these exceptional qualities are produced at the cost of the natural development of the wine, the fermentation of which being checked by the addition of sulphur in order to retain the saccharine element, causes much of the flavour and raciness properly belonging to the best growths of the Rhine, as well as their fragrant bouquet, to be sacrificed. Real connoisseurs are of opinion that it is a grand mistake to encourage the growing taste for these luscious products, in which the sacchariferous element predominates, to the detriment of the finer vinous qualities. The preservation for any length of time of over-rich wines of this description, notwithstanding the skilful manipulation by means of which the fermentation is checked, is at the best a very doubtful matter. Wines of this character, moreover, can only be partaken of but sparingly, besides which such little as is drunk serves to cloy rather than to refresh the palate. Their expensive character is easily accounted for when it is considered that the entire growth of a vineyard suffers more or less by the system pursued of pick-

ing out all the finest and over-ripe grapes. It was stated that the prices of these wines ranged from 15s. to 45s. per bottle, the latter amount being about 30 per cent. beyond that demanded for the finest Schloss-Johannisberger.

The firm of Dilthey, Sahl, and Co. secured a medal for merit for their remarkable collection of Rudesheimer of various growths and vintages, ranging from the medium qualities to the very finest, and which were quoted from as low as 3s. to as high as 30s. per bottle. A "cabinet" wine of the year 1859 proved remarkably delicate, with the merest suggestion of a faint bitter flavour, which gave it, moreover, a certain distinction, while a Rudesheimer Rottland of a splendid golden colour and of great lusciousness had all that exquisite subdued sharpness which distinguishes the finer auslesen, combined with a slight flinty taste evidently derived from the soil where it was grown. The finest Rudesheimer berg comes from vineyards bordering the Rhine, and which extending in steep terraces half-way up the mountain allow of the grapes basking in the summer sun. The Rottland vineyards have the same aspect, and their terraced stone walls when viewed from the river convey the impression of a Cyclopean staircase. Some very fair wine came to Vienna from the slopes of the Rochusberg immediately opposite Rudesheim. Readers of Goethe will remember the sermon he heard here, in the course of which the preacher glorified God in proportion to the number of bottles of good wine it was daily vouchsafed him to stow inside his waistband. Herr Rosenstein of Wiesbaden was rewarded with a medal for merit for ten picked samples of Rauenthaler, a wine of the highest repute already more than once alluded to grown at the southern extremity of the Rheingau, and the 1865 vintage of which secured the gold medal at the Paris Exhibition. The finer qualities of these wines were priced at 25s. the bottle.

Although the flavour and bouquet of the grand wines of the Rheingau are equally pronounced, it is exceedingly difficult to characterise them with precision. After gratifying the sense of smell with the fragrant perfume which they evolve—and which is no mere evanescent essence vanishing as soon as recognised, but often a rich odour which almost scents the surrounding atmosphere—you proceed to taste the wine and seem to sip the aroma exhaled by it. Now and then you are conscious of a refined pungent flavour, and at other times of a slight racy sharpness, while the after-taste generally suggests more of an almond flavour than any other you can call to mind. No wines vary so much in their finer qualities as the grand growths of the Rheingau. The produce of a particular vineyard, although

from the same species of grape cultivated under precisely similar conditions, will differ materially in flavour and bouquet, not merely in bad and good years, but in vintages of equal excellence. Moreover, these wines need the most skilful cellar treatment during the long years they are maturing. All great wines, it should be remembered, ripen slowly, and cannot be "pasturised" into perfection—that is to say, cannot be rapidly matured by heating them to a certain temperature, as ordinary wines may be.

Tourists will readily recall to mind that portion of the Rhine immediately above Bingen, at which latter place it will be remembered on descending the river the gorge of the Rhine is entered. It is within this limited territory, some ten miles long by about four broad, that all the famous wines of which we have been speaking are produced, with the single exception of Hochheimer, which, although it comes from vineyards on the banks of the Main, several miles above its confluence with the Rhine, has supplied us with a generic name under which we indiscriminately and improperly class the entire productions of the Rhine vineyards. What is called the Rheingau comprises the district both above and below Bingen, between the Walluf and the Wisper brooks, and it is on the range of hills along the right bank of the river between Rüdesheim and Eltville that all the best vineyards are to be found. At Schierstein, a little higher up, a tolerably good wine is grown, which is frequently employed in the fabrication of *vins mousseux*.

The one exceptionally fine Hochheim growth comes from the vineyards of the Dom Dechanei, the gentle slopes of which are favoured not merely with the direct southern aspect common to the majority of the Hochheim vineyards, but are most effectually sheltered on the north by the neighbouring church and the adjacent dilapidated weather-stained building known as the Deanery. The vineyard, moreover, unlike the surrounding vine-lands, is planted almost exclusively with vines of the Riesling species, and is subject, moreover, to a higher degree of cultivation. True Hochheim is a remarkably aromatic wine, and possesses both body and fire. Indeed, it contains as large a percentage of alcohol as the so-called noble Steinberger—the most spirituous of the Rhenish growths—with more sugar, and consequently lacks that subdued acidulous freshness of flavour which is a marked characteristic of the wines of the Rheingau.

On the other side of the Rhine some fair red wines are produced in the vineyards of Heidesheim and Ober-Ingelheim, and samples of the last-named of the vintages of 1865 and 1868 exhibited considerable softness and *finesse*. The bend which the

river assumes at the Rheingau is said to have the effect of concentrating the sun's rays, reflected from the surface of the water as from a mirror, upon the vine-clad slopes, and it is to this circumstance, combined with the favourable nature of the soil, and to the vineyards being completely sheltered from the north winds by the Taunus range, that the marked superiority of the wines of the Rheingau is ordinarily attributed. The grape most extensively cultivated and supposed to be indigenous to the district is the Riesling, which imparts to the Rhine wines their marvellous bouquet. The Riesling is a small vine, so trained as to develop its fruit for the most part near the ground, where the grapes profit by the reflected heat from the soil, and thereby ripen the more readily. The skin of the Riesling grape being very thick enables it to withstand the inclemency of the season and defy the early frosts to which it is exposed. The berries are remarkably small, and the bunches, which are irregular in shape, rarely attain any particular size. The other varieties of vine chiefly grown are the pink colour Traminer, the Elbling—for a long time believed to be identical with the Pedro Jimenez of the Jerez district until the error was exposed by Count Odart, the distinguished French ampelographist—the green Orleans, the *Estricher*, and the Pineau noir, or black Burgundy. The soil consists of different kinds of clay schist intermingled with quartz, and largely impregnated with iron and occasionally covered with layers of clay, loam, or gravel. The vines are heavily manured, the principal vineyard proprietors keeping a considerable number of cows solely for this purpose. The annual produce of the entire Rheingau averages 1,100,000 gallons.

Within the gorge of the Rhine itself the only wine of particular repute produced is Assmannshauser, made from the Pineau noir above mentioned, and the one really fine red wine of the Rhine district. There was no lack of samples of the so-called Burgundy of the Rhine, but none were considered entitled to a medal. And yet Assmannshauser is indisputably an admirable wine, although it is absurd to describe it as resembling Burgundy. Soil and climate have here transformed the produce of the Burgundy vine as in the Champagne, the red wines of which, and notably still red Bouzy, have a striking affinity with fine Assmannshauser. The low temperature at which the last-named wine is fermented, owing to the lateness of the vintage, exposes it to certain disadvantages, and although the growers pretend it will travel well, it is quite certain that it is always at its best on the spot. One drawback of Assmannshauser is that, compared with the white

wines of the Rhine, it is deficient in keeping qualities ; moreover, although it will keep six years in cask, it certainly will not improve, and often deteriorates after having been six months in bottle, when it begins to lose its colour. Close by Assmannshausen are the Bodenthaler vineyards, yielding an excellent white wine, while those of Lorch, some little distance beyond, yield third-class red wines, with a decided *goût de terroir*. Some samples of the 1868 vintage tasted at Vienna had honourable mention made of them. Still lower down the stream is Bacharach, famous in the middle ages for its wine, held in high favour by the Popes, but which retains none of its ancient repute at the present day :—

“ The old rhyme keeps running in my brain ;
At Bacharach on the Rhine,
At Hochheim on the Main,
And at Würzburg on the Stein,
Grow the three best kinds of wine.”

As late even as the 17th century Bacharach wine was much esteemed in England, Howell in his letters mentioning that the cunning Hollander had a trick of putting some infusion into a poor wine of Rochelle (in the French brandy district) to give it a whiter tincture and more sweetness, so that he might pass it off in England as good Bacharach. It has been, however, suggested that it was rather to Bacharach being the port of shipment for Rhine wines generally than to any particular merit in the wines vintaged in its neighbourhood that the Bacharach *crû* became so renowned.

From the vineyards in the rear of Ehrenbreitstein came samples of Kreutzberger, a rather agreeable red wine, while Linz, a few miles lower down the river, sent a capital specimen of its red wines, known as Dattenberger, and thought worthy of a medal for merit. From the valley of the Ahr, which falls into the Rhine near Sinzig midway between Coblenz and Bonn, came the superior red wines of Walporzheimer, Ahrweilerer, and Bodendorfer, fine, if not deep, in colour, slightly astringent, somewhat akin to a natural Port, and exhibiting really refined vinous qualities. It is in this valley of vineyards, and in the neighbourhood of the jagged basaltic mountain known as the Landskron, that the celebrated Apollinaris brunnen takes its rise. This water, which issues from the pure limestone rock, is incomparably the best of all mineral waters for mixing with wine on account of its exceeding softness and remarkable delicacy of flavour, while its effervescent qualities render it especially refreshing. But more than all it is of recognised organic purity—which artificial aerated waters too frequently are not—as well as an invaluable

dietetic agent, being antacid, useful in assisting digestion, and a preventitive against gout and rheumatism.

Of the wines produced on the left bank of the Rhine, above Mayence, some favourable specimens of Nachenheimer, including one of particularly marked character, were exposed by Herr Kraetzer, who received a medal for progress, while for a collection of Bodenheimer of various vintages, exhibited by Herr Dolles, a medal for merit was awarded. Of the well-known Liebfrauenmilch, a Riesling wine with a tolerable bouquet, from the vineyards adjoining the Liebfrauen Kirche, near Worms, and which owes its reputation rather to the singularity of its name than to any inherent qualities of its own, the best samples were sent by Herr Valkenberg, who had a medal for merit allotted to him. Honourable mention was made of some Guntersblumer auslese Riesling exhibited by Herr Hartmann. There was neither Niersteiner nor Laubenheimer calling for remark, but a fine Herrenberger Riesling of 1870 exposed by Dr. Forster had the honour of being classed in the first rank; a medal for merit being given to Herr Stephan for a Hesslocher of refined flavour of the year before.

There are no purer nor better made white wines in the world than the finer growths of the Rhine, which, excepting in the case of the sweet auslesen, are always perfectly fermented; but, unfortunately, their higher qualities are entirely dependent on the perfect ripening of the grapes, which, as may be supposed in so northern a latitude, is a matter of considerable uncertainty. During the last 20 years there have been seven good, nine bad, and four medium vintages of Rhine wines. The good years included 1857, '58, '59, '61, '62, '65, and '68; whereas the bad comprised 1856, '60, '63, '64, '66, '67, '69, '71, '72. As when the vintage is good the wine-growers have to recoup themselves their losses in bad years, when the wine, exceedingly acid, fetches a mere percentage of its ordinary price, and as, moreover, Rhine wines require several years to mature themselves, during which interval they are the object of unceasing attention, it naturally follows that the normal price of the best Rhenish growths rules high, far higher indeed in proportion than the *premiers crus* of the Médoc command. Again, mere rarity alone in the case of the superior growths causes these to attain a purely fantastic figure, which year by year exhibits an increase as Germany grows richer, for the great bulk of the grand Rhine wines is patriotically consumed at home.

With regard to the inferior growths it has been the fashion of late years to more than repair any deficiency, of which Nature may have been the cause, by aid of the well-known process of

Dr. Gall, who first taught his fellow-countrymen how to emulate the miracle of Cana, and turn water into wine, thus quintupling the produce of a vintage. A Cologne newspaper was the first to call attention to the circumstance, in the following terms:—

“In the district of Neuwied things have come to a sorry pass indeed. The evil has been imported by wine-dealers from abroad, who come in numbers every autumn, and, whether the vintage promises well or ill, buy up the growing grapes, and make from them five or six times the quantity of wine which the press of an honest vintner would produce. The reader will ask, How is that possible? Here is the explanation:—

“During the vintage, at night, when the moon has gone down, boats glide over the Rhine freighted with a soapy substance manufactured from potatoes, and called by its owners sugar. This stuff is thrown into the vats containing the *must*, water is introduced from pumps and wells, or, in case of need, from Father Rhine himself. When the brewage has fermented sufficiently, it is strained and laid away. The lees are similarly treated three, four, or five times over. When the dregs are so exhausted that further natural fermentation has become impossible, chemical ferments and artificial heat are applied. This cooking, or stewing, is continued often until midwinter, producing wines of every description for the consumption of every class. The noble fluid is sent away by land and water to its places of destination; and the dealers are seen no more until the next vintage season. Their business lies in the most distant parts to which the beverage can be carried, where, of course, there is no end to their praises of its purity, its sources, and of the rustic simplicity of its producers.

“The example thus set by strangers has been only too closely followed at home. The nuisance is largely on the increase, and the honest vintner is the greatest sufferer. He rarely succeeds in selling his entire vintage at once, partly because the quantity of grapes required by these manufacturers is constantly diminishing, and partly because the practices described have driven away desirable purchasers from the localities. The ‘Gallization’ of wine benefits none but the professional adulterators and the poorest class of small growers, who are indebted to it for a sure market for their small and inferior crops. Some grapes are still required for the fabrication of wine, although an infinitely small quantity is sufficient.”

In face of all these facts, a tourist with no more experience of Rhine wines than that gained from German hotels, where, with occasional exceptions, the qualities are ordinarily of the lowest, and the labels on the bottles rarely indicate the real name

of the wine he is drinking, may make up his mind that he knows nothing whatever of the finer vinous growths, which have procured for the Rheingau its well-merited renown.

II.—Moselle and other German Wines.

Moselle Wines at their best—Berncastle Doctor Wine—The Vineyards and Wines of Trêves—Artificial Vineyards at Winnengen—The Wines of the Saar and Nahe valleys—The dominating Vines of the Moselle—The growths of the Bavarian Palatinate—Deidesheimer and Forster auslesen—Stein and Leisten Wine—The Baden growths, Markgräfler, Affenthaler, and the Wines of the Bergstrasse—The Vintages of Alsace and Lorraine—The Drie Manner Wein—Silesian Wine—Alcoholic strength of German Wines.

THE wines of the Moselle exhibited at Vienna, though “innocent” enough, according to the popular German definition of them, were certainly superior to the pale, thin, feeble, and more or less acidulous growths that figure on the *karten* of German hotels under the head of “Mosel-wein.” Instead of common *tisch-wein* of the Rhine and the Palatinate labelled Brauneberger and Piesporter, we had the wines themselves, and in their best condition. All of them were comparatively young, for they lack the robustness of their brethren of the Rhine, and no attempts had been made to prolong their vitality with adventitious alcohol. If the majority wanted character and the higher vinous qualities which result from age, and their bouquet was oftener artificial than natural, they were at any rate light and delicate, and possessed a fresh and at times even a decided flavour, rendering them highly palatable.

There were several collections more or less complete of these wines forwarded from Trêves, and in one or the other samples were to be found of all the good varieties, including the red wines produced principally along the lower Moselle, besides the more noted growths of the Saar valley. Thus we had the well-known Piesporter, Grünhauser, and Brauneberger at their best, for which Herr Richter obtained a medal; next Graach, Zeltinger, and the Berncastle wine, known locally as “the doctor,” all three of such excellent quality as to secure a couple of medals to their exhibitors. This so-called “doctor” wine is grown at the foot of some dilapidated feudal castle crowning a lofty eminence on the banks of the Moselle, and the origin of its name is purely legendary. One version, which we trust is not the true one, says that a priest, and another that a knight, being ill beyond hope of recovery, determined on a final deep potation

of his favourite beverage before shuffling off this mortal coil. The effect, contrary to all expectation, was to restore him to perfect health, and hence the wine obtained the name by which for centuries past it has been universally known. The neighbouring vineyards of Unsberg, Aalfang, Muhlrecherberg, Münchenroth, and Landfurberg, in the environs of Trarbach and Traben, carried off three medals between them, while for several samples of Piesporter, and an especially racy Josefshofer, one of the best of the Moselle growths, Count Kesselstadt had a medal for progress awarded him. Josefshofer, with Grünhauser, Thiergartener, Adelsbacher, and Olewig Neuberger, are vintaged in the neighbourhood of Trêves, the last-named wine being grown near the vast Roman amphitheatre where Constantine had his barbaric captives torn in pieces by wild beasts, and the ruins of which to-day stand solitary in the midst of vines. A medal for merit was given for the wines of the lower Moselle, the best of which are produced at Winnengen, where along the banks of the river the vineyards rise in steep terraces one above the other to a considerable altitude, the huge masses of rock having been blasted by engineers of the Coblenz garrison, at the instance of the wine-growers, who, determined upon producing wine, smote the rock for it, as Moses did for water. For a remarkably fine Scharzhofberger, from the Saar valley, and with Wiltingener and Ober Emmeler, the only growths of mark which it produces, Herr Baulwitz received a medal for progress, a medal for merit being given to Herr Görtz, of Saarburg, for samples of Saar wines generally.

The wine-growers of the Nahe valley contributed some common table specimens of their products, including a brisk Itzsteiner, with a decided though by no means unpleasant flinty taste, some excellent Schlossberger, and several varieties of their justly-prized Scharlachberger, a wine usually produced from the Orleans grape, although the best sample, highly commended for its great character and delicacy, was from the Riesling variety. This wine, even when purchased in cask, commands as much as between four and five shillings the bottle. In addition to the foregoing there were half a score of Nahe wines, the names of which are rarely heard outside the district, such as Kausenberger, Norheimer, Monzingener, Ebernburger, Bosenheimer, &c., wines without delicacy and with an unmistakable flavour of the flinty soil whence they come, but all of them fresh tasting. Herr Soherr, of Bingen, secured the single medal for merit given for still Nahe wines.

The species of grape cultivated in the Moselle vineyards, the steep slopes of which have all a more or less southern aspect, are

mainly three, the Elbling, the Riesling, and the Pineau noir, the latter, as already observed, the prevailing grape in the vineyards of Burgundy, and the one from which the red wine of the lower Moselle is exclusively made.

The vintage growths of the Bavarian Palatinate, where the closed and open low training of the vine is a kind of tradition, were favourably represented at Vienna by some very fine "auslesen"—Deidesheimers and Forsters—distinguished, spite of their almost too luscious character, by remarkable fulness of flavour and fragrance of perfume. The exhibitor of these samples, ten in number, and nearly every one of them with a distinctive character of its own, was Herr Jordan, of Deidesheim. The most syrupy of all was the Deidesheimer Kirchenstück of 1859, a gorgeous golden-coloured wine of such excessive richness that to sip it was sufficient. Considering its age and the prices demanded for Rhine auslesen, which this wine certainly equalled, the latter could scarcely be considered dear at the sum demanded—namely, £150 the hogshead, equivalent to 10s. the bottle. The same wine of 1862 was equally soft and seductive, with the advantage of lacking the excessive richness of the elder type. A Deidesheimer Gräin of 1868 proved singularly fine and delicate, and a Deidesheimer Kieselberg of 1870, although a little sweet, was distinguished by its fresh delicious flavour. Most of these wines assimilated in a measure to the finest Haut Sauternes, still they possessed very distinct qualities of their own. Moreover, with one or two exceptions they were hardly to be classed as mere *vins de liqueur*. One specimen in particular, a Forster auslese of the year 1865, was a remarkably delicate dry wine with a tender tonical flavour that was especially captivating. A medal for progress was given without hesitation to the exhibitor of these wines, which are entitled to rank with the finest Rhine growths, more particularly when we learn that their superior quality is mainly due to excessive care and labour on the part of the vinedressers, who to compensate for the natural deficiencies of the soil constantly replenish it by basaltic earth, and perform the entire labour of the vineyards with their hands like the vinedressers in the terraced vineyards on the precipitous banks of the Rhine, scorning altogether ploughs and such-like mechanical appliances.

In the Palatinate, which yields about a tenth of the entire wine produce of Germany, it is the practice to make the wine from a mixture of several sorts of grapes. Thus the Traminer is largely employed because it gives smoothness and body, the Riesling for its perfume and the keeping powers it imparts to the wine, while the Sylvaner and the Oestricher merely conduce towards quantity.

Bavaria further contributed some excellent samples of Stein and Leisten wine from the Hof Kellerei of the King of Bavaria in the palace of Würzburg, the combined flavour, fulness, and delicacy of which indicated the great progress that had been made of late years with regard to these wines. The so-called "Holy Ghost wine," and which was originally the only Stein wine sold in the squat bocksbeutel now extensively used to palm off inferior growths as genuine Stein, was not represented at Vienna. The majority of London wine-merchants will supply what they call Steinwein at from 24s. to 30s. the dozen, but how far this is likely to be genuine may be judged from the fact that in the autumn of 1874 the lowest price demanded for this wine at the cellars of the King of Bavaria, who is the largest grower of it, was at the rate of 60 florins, or £5, per dozen. Leisten wine was even dearer, ranging from 10s. to 12s. per bottle. Genuine Stein of a good vintage is a potent beverage of singular vigour and fire, utterly different from the feeble growths largely palmed off for it. Of a splendid gold colour, with no kind of harshness, but a considerable amount of mellowness, combined with great consistency, *finesse*, and aroma, the Stein and Leisten wines at their best are entitled to rank among the grand wines of the world. The points whereby Leisten differs from Stein are a greater mellowness and delicacy. With age their mellowness vanishes, as does much of their body; but, on the other hand, these growths gain immensely in bouquet and *finesse*. They are reputed to keep good for 100 years, and to improve to the end, when they are popularly known as "Kranken Weine." That they may be kept for this period I have no doubt, but all my experience induces me to discredit their assumed progressive improvement. After the Stein and Leisten wines one of the most noticeable of the Bavarian growths was a Hohenlohe-Langenberger, a white wine of the comet year, 1811, which, although wanting in character, proved remarkably well preserved, whereas an Erlenbacher of the same year, a red wine of the Odenwald which chanced to be uncorked at the same moment, was found to have lost all its colour and almost all its flavour.

From Baden came samples of Markgräfler-Hallingerberg, one of the rare centenarian wines of the exhibition, having attained the ripe old age of 107 years, and one, moreover, which had sufficiently preserved its vinous character without adventitious aid to merit the medal awarded for it to Blankenhorn and Co. of Müllheim. It was stated that new wines of the same type ordinarily contain no more than 12 degrees of absolute alcohol, equal to 21 degrees of proof spirit. The peculiarity of Markgräfler is its being made from the Chasselas

grape, which, highly esteemed as it is for eating, rarely produces good wine. The same firm exhibited an Ihringen auslese from the vineyards at the foot of the Kaisersstuhl, in the Black Forest, with a rich bouquet and a refined high flavour, although with a tendency to sweetness. The red Affenthaler grown in the neighbourhood of Baden exhibited no special character. A sample of 1868 vintage made from grapes separated from the stalks before being pressed proved a remarkable failure, and some wine of the following year, quoted, however, at merely half a florin per bottle, seemed almost as poor in character. For a Clevener of 1869, a neat pleasant wine but singularly spirituous, and some samples of Klingelberger Baron von Zorn obtained a medal for merit. Six medals in all were awarded for Baden wines, a similar number of exhibitors from the Grand Duchy being accorded honourable mention.

From the vineyards lying between Heidelberg and Zwingenberg along the western slopes of the Odenwald, the richly-wooded character of which renders it one of the most beautiful in all Germany, came the locally-celebrated wines of the Bergstrasse, the best of which, Hubberger, is grown in the neighbourhood of Weinheim. Of these wines, which resemble in character some of the inferior growths of the Rhine, and the fame of which could hardly have previously travelled far beyond the picturesque region of their native Odenwald, there was a collective exhibition by the vine-growers of the district, two of whom were recompensed with medals for merit for the superior character of the samples of Kirchberger and Hemsberger they had contributed. It was with a white wine of the neighbouring Odenwald that in bygone times the huge Heidelberg tun, holding its two-and-thirty thousand gallons, was accustomed to be filled. Würtemberg exhibited samples from the Riesling, Clevener, and Trollinger species of grapes, the former occasionally rather harsh, still at times with a very fine bouquet, while the Trollinger was even inferior to the German red wines generally.

The wines of the recently-conquered provinces of Alsace and Lorraine naturally attracted more than ordinary attention. The samples were numerous, but simply a few exhibited any special character. Their principal merit is that spite of their ordinary indifferent quality they will keep for at least a generation. Certain of them made from the Riesling grape will carry their 30 years as jauntily as though they were merely three, retaining moreover their strong *pierre à fusil* flavour as in their most juvenile days. The collections exhibited by the communes of Rappoltsweiler and Reichenweyer were the most important, and

had medals for progress awarded them. All the specimens, red as well as white, assimilated far more to the German than the French type, and as a rule they were estimated beyond their deserts owing to a certain sympathetic feeling on the part of both the French and German jurors which was easily understood. With the first it was, as it were, "Adieu!" or, at any rate, "Au revoir!" with the others "Willkommen!" Impartial judges, however, arrived at the conclusion that considerable improvements in viticulture are necessary before the provinces in question will occupy that rank among the wine-producing districts of Europe to which climate, soil, and a favourable aspect for the development of the vine and its fruit entitle them. The *vin de pays* of Alsace goes under the name of the "drie manner wein," from three men, it is jocularly said, having to assist at its imbibition, one being seated on a chair, in which he is forcibly held by a second while a third pours the wine down the unwilling bibber's throat.

Of the Rappoltsweiler wines the best were white varieties—Hunneweyers and Osterbergers, and notably a fine Zahnacker—red wines being rare and generally inferior in Alsace. The few samples of mark from Reichenweyer comprised an excellent Schonberg Riesling, a St. Hippolyte, some fair Beblenheimers and Mittleweyers, all of them white wines, and both red and white growths from the Kaisersberg and Kientzheim, several of the former being remarkably good, having less of that harsh flavour common to both red and white varieties, from allowing the must to ferment too long on the skins of the grape. Other red wines of poorer qualities came from Ammerschwir, Walbach, and Olweiler, the remaining white ones of any character coming from Wolxheim, Bergholt-Zell, Sultzmelt, and Guebweiler, the last sending samples of its Oberlinger, and its famous Kütterlé, while Colmar contributed its Kissibél, and Türkheim an admirable wine with high flavour and perceptible bouquet. There were numerous samples from the Tokay grape, several Muscats, and some Malmsey and "strohwein" from Beblenheim, the more famous straw wines of Colmar, and other districts enjoying a reputation for these *vins de liqueur*, being unrepresented. Beyond the couple of medals for progress already mentioned, ten medals for merit were given to Alsace and Lorraine wines, which received, moreover, honourable mention in eight instances. The principal vines cultivated in Alsace are the Riesling, the Traminer, and the Elbling, but the system of training is one scarcely adapted to the climate, as it admits of many of the grapes growing at too great a distance from the ground, the consequence being that they ripen with difficulty and are often

watery, acid, and flavourless. Before the annexation the Alsace wines, the price of which *in loco* ranges from two to three francs the gallon, used to be largely exported to Switzerland.

Beyond some "moussirender-wein" made up at Magdeburg, the only wine which Prussia proper sent to Vienna was of that famous Grüneberger growth which for a long period was the butt of the small wits of Berlin, but which had so far improved in quality of late years as to have been found deserving of a medal for merit at Vienna, awarded to Herr Ravéné for the samples of Theresienberger of 1868 exhibited by him. This wine comes from Prussian Silesia, and is grown just within the 52° of north latitude, the most northern point contributing wine of its own production to the Vienna Exhibition. The same district also sent some samples of sparkling wine. The Grüneberg vineyards yield about 150,000 gallons of wine yearly.

I am happy to chronicle that only one exhibitor of wines from Hamburg obtained a medal, and further that this was for a genuine wine exposed under its true name. On the other hand a Würzburg exhibitor of an imitation wine was, I regret to say, considered deserving of honourable mention.

The alcoholic strength of the principal German wines ranges between 15° and 25° of proof spirit. The grand wines of the Rheingau commonly contain from 20° to 22°, but in exceptional instances as many as 25°, the red varieties indicating about 20°. Some of the Moselle wines contain as few as 17°, while the robuster varieties show as many as 22°. The best of the Saar valley wines average from 20° to 21°, the finer Bavarian growths ranging from 21° to 25°. The Baden wines, both red and white, take the wider range of from 17° to 22°; while as regards those of Würtemberg some of the white varieties contain as little as 15 per cent., and others as much as 25, the red averaging merely 18 per cent. of proof spirit.

III.—*Sparkling Rhine, Moselle, and other Wines.*

Improved character of German sparkling Wines generally—Their qualities and prices—Great increase in their production of late years—The Vineyard area of the different German States—Their produce, exports, and small annual consumption—Rewards to exhibitors of German Wines at Vienna.

THE sparkling wines from all parts of Germany, including the Rhine and Moselle, the Nahe valley, Bavaria, Würtemberg, Saxony, Hesse-Nassau, Alsace, &c., were exceedingly numerous and far more difficult to assign proper rank to than the still varieties. Many of them showed that marked progress had

been made by the manufacturers of these wines of recent years. If the lightness and delicacy of flavour of the finer Champagne brands were in a great measure missing, the better varieties had the merit of retaining their own distinct individualities, instead of being, as they too often formerly were, poor imitations of a wine which in its highest qualities they can scarcely hope successfully to emulate. The Moselle wines, too frequently artificially scented, were as usual the lightest of all, still the samples from the Rhine, with their rich natural perfume and higher character, were much less heavy than those from other districts. The specimens which secured medals for progress were exhibited by Herr Kroté of Coblenz, Lauteren and Son of Mayence, the Hochheim Association, and Herr Müller of Eltville, the latter of whom exposed numerous varieties, the highest priced of which was a Blume von Johannisberg at 60s. the dozen. The wines of Dietrich and Ewald, who obtained a medal for merit, ranged from 36s. to 48s., the cheapest of all being sparkling Hocks, Schiersteiners, and Moselles at a couple of shillings the bottle. The so-called sparkling Hocks are invariably made from white grapes, but recently an excellent effervescing wine, of fine flavour and remarkable bouquet, has been produced at Ingleheim exclusively from red grapes of the same species from which the higher class Champagnes are principally made. The best Bavarian effervescing wines came from Würzburg, and were found of such a superior character that a medal for progress was given to their exhibitor, Herr Siligmüller; the best Würtemberg samples were from Esslingen, the best Moselles from Trêves and Coblenz. Stock and Sons sent the most satisfactory collection of the sparkling wines of the Nahe valley, and Herr Hatterer of Berbheim the best specimens of those of Alsace. Silesian Grüneberg also contributed some samples of excellent quality, and in all five medals for progress, and twice that number for merit, were distributed among exhibitors of German sparkling wines, none of the red varieties of which proved deserving of recognition.

During the past few years the production of these wines has about doubled, and is still steadily on the increase. At the present time it forms a grand total of upwards of a couple of millions of bottles annually, three-fourths of which are exported, the largest proportion being sent to England.

The cultivation of the vine is distributed over the following states of the German Empire, the vineyard area of which has been extracted from the latest available official and other documents. The estimated production has been based in every instance upon an average of several years, including the most

recent for which returns have been published. On comparing the subjoined table with the one on p. 35, it will be noticed that the entire annual wine production of the German Empire amounts to only one-fifteenth of an average vintage in France, and to little more than one-fourth of last year's yield from the department of the Hérault alone. The recently-annexed provinces of Alsace and Lorraine supply, moreover, upwards of one-third of the total produce. During the year 1870 Germany imported 8,341,664 gallons of wine, and exported only 4,014,563 gallons. Still this, combined with its then annual production, averaging about 50 millions of gallons, only allowed for the yearly consumption of about a gallon and a quarter by each head of the population.

States.	Vineyard area in acres.	Produce per acre in gallons.	Total Produce in gallons.
Prussia—The Rheingau . . .	5,424	204·3	1,108,477
„ The remainder of Nassau . . .	3,096	197·9	612,784
„ Around and below Coblenz, including the Ahr valley . .	10,290	} 222·8	6,831,800
„ The Upper Moselle . .	9,425		
„ The Lower Moselle . .	5,548		
„ The Saar and Nahe valleys, &c. . . .	5,844		
„ Silesia, &c. . . .	14,418	79·3	1,129,624
Hesse	49,185	124·6	6,133,126
Bavaria—The Palatinate . .	26,258	120·2	3,156,309
„ Franconia and Suabia . .	28,289	133·5	3,779,500
Baden	50,001	328·8	16,441,222
Württemberg	54,862	120·8	9,627,931
Alsace and Lorraine . . .	72,424	379·6	27,496,431
Total	335,064	—	76,317,204

At Vienna there were 256 exhibitors of wine from Germany, contributing amongst them 618 samples of white, 78 of red, and 131 of sparkling wines, or 827 specimens in all. Of these 21 exhibitors received medals for progress, of which eight were given for Rhine and Moselle wines, and 65 medals for merit, 29 of which were for Rhine and Moselle wines, while 71 had honourable mention made of their samples. In proportion to the number of white wines exhibited, remarkably few were found positively bad in quality, in comparison with those of other countries.

THE WINES OF SWITZERLAND.

Absence of the finer growths from Vienna—Excellent White Wine of Loys Châtelanat, vintaged 2,700 feet above the sea—The Thurgau Wines—Rewards accorded to Swiss exhibitors—Deficiency of tannin and consequent want of keeping power in the Swiss Red Wines—Alcoholic strength and characteristics of the principal Wines of Switzerland—Vineyard area, production, and value.

SWITZERLAND, environed as it is by three such celebrated wine-producing countries as Italy, Germany, and France, and distrustful, it would seem, of her own capabilities in a similar direction, sent merely a few samples of her wines to Vienna, and these unfortunately not her best. Of fifteen exhibitors contributing forty-seven specimens, nine were from the canton of Thurgau, the wines of which occupy simply the third rank. The excellent red wines of Neuchâtel and the white wines of the Vaud, the best which Switzerland produces, were represented by a single exhibitor each. Three other exhibitors belonged to the Valais, and the remaining one to Ticino. There were no specimens either from the Rhine or Lake Lemman, not a sample of Yverne, or of the so-called "wine of blood," of which the guide-books speak, and reported to come from vineyards in the neighbourhood of Basle, on the site of some desperate struggle for freedom which has its place in the annals of Swiss independence.

The sample which met with most approval was a Vaud white wine, delicate, spirituous, and aromatic, and only slightly acidulous, termed La Côte, vintage 1870, and which came from Loys Châtelanat, in Perroy, 2,700 feet above the sea level, and was rewarded with a medal for merit. Some red and white Thurgau wine, of the years 1865 and 1868, exhibited by Orlandi of Mammertshofen, and all the samples of which were classed 1, received a medal for progress. The excellent condition of these wines proved that they had been well made, and subjected to judicious after-treatment in the cellar, which was by no means the case with several of the Valais samples, that were not merely cloudy, but had a disagreeable odour. Four other Thurgau exhibitors obtained medals for merit, three for red wines from the blue Cleves grape, and one for white wine, the whole of 1865 and 1868 vintages, while honourable mention was made of some red Karthauser and Hallauer, of the year 1870, as well as of three other red wines, one of the vintage of 1834 from

Frauenfeld, all belonging to the same canton. If the exhibitors and samples were relatively few, the proportion of rewards they received was large, comprising as these did in the whole one medal for progress, five medals for merit, with honourable mention in seven instances.

One drawback of the Swiss red wines is their deficiency of tannin, compared with those of more southern countries, and although red wines can be excellent enough without the presence of this acid, which is a continual cause of change with many wines, any deficiency interferes materially with their keeping powers. If a wine with plenty of tannin requires time to develop all its higher qualities, this disadvantage is certainly compensated for by its retaining them in perfection for the greatest possible length of time. The alcoholic strength of the Swiss wines ranges from as low as 10 to as high as 25 per cent. of proof spirit.

Respecting the wines of Switzerland, one of my Vienna colleagues, Herr Adolph Ott, of Berne, writes to me as follows: "The best red wines come from the canton of Neuchâtel, and the Cortaillod and the Faverge of a ruby colour and Burgundy-like flavour occupy the first rank; after these may be placed the wines of Boudry, Concise, and Colombier. The canton of Vaud is distinguished for its white wines, including those of Deselay, St. Saphorin, Chebres, and La Côte, fine, strong, and aromatic wines with much body, very little acidity, pleasant tasting, and not unlike some of the Rhine growths. Among the red varieties are the highly-spirituos and rich-coloured wines of St. Prex and Salvaguin, made from the Burgundy grape. Geneva produces the celebrated and fiery red wine known as Gringet, while Montreux, at the upper end of Lake Lemman, is noted for its table wines, and one or two others of a superior character, such as those of Aigle and Yverne, gold-coloured, a little spirituous, sub-acidulous, and agreeable in flavour.

"The canton of Valais produces wines which may be classed among the best growths of the country, notably its liqueur-like Malvasia, which unites the richness of Tokay to the force of a spirituous southern wine, the variety called Glacier, held in considerable local esteem, and the growths of Coquembay and La Marque. The red wines include those of Visp, Baillio, and Ardon, which are strong and full-bodied, and endowed with good keeping powers. The Grisons yields but few wines; the best known are the somewhat powerful red Oberlander, the Costamser, and the white variety termed Completer. Schaffhausen produces only ordinary growths, including the red

Hallauer and the white Siblingener, Aargau simply some common table wines, whereas the canton of Ticino, although viticulture and vinification are but in their infancy there, already yields such promising red wines as those from Mendrisio, Locarno, Bellinzona, and Lugano. A fine field exists here for a person of enterprise who would give his attention to the cultivation of the grape and the making of wine on scientific principles, now that railway communication with Interlachen is on the eve of being assured."

The area of vine cultivation in Switzerland is estimated at 80,000 acres, and comprises 1.60 per cent. of the land under tillage. In the canton of Ticino alone there are nearly 20,000 acres of vineyards, and in those of the Vaud and Zurich upwards of 14,000 and 13,000 acres respectively. The greatest altitude of any Swiss vineyard is 3,000 feet above the level of the sea. The annual yield of wine ranges from 26,000,000 to 30,000,000 of gallons, representing a value of from £1,100,000 to £1,350,000. The best wines command about half-a-crown per bottle retail. Excepting the Neuchâtel Champagne scarcely any Swiss wine is exported, the production, in fact, falling short of home requirements, which are supplied to the extent necessary from France. Prior to the recent war between France and Germany, Switzerland was the best customer that Alsace and Lorraine had for their wines.

THE WINES OF AUSTRIA.

I.—*Wines from the North.*

Singularly diverse character of the Austrian Wines—Growths in the neighbourhood of Vienna: Vöslauer, Gumpoldskirchner, Klosterneuburger—Vines growing in loam, sand, gravel, chalk, stones, and even coal—Vins verts northwards of Vienna—White country Wines of Lower Austria—Vineyard situations and species of vine cultivated in the archduchy—Produce and price—Wines of Moravia—Its raw and mild growths—Curious vintage custom at Znaim—Primitive state of vinification—Produce of the Moravian Vineyards and estimated value—The Red and White Wines of Labin, in Bohemia—Produce of the Bohemian Vineyards and the high price it commands—Backward condition of vinification in Voralberg and Bukowina.

THE wines of Austria are as diverse as its population. At the extreme south they are so dark and full-bodied that when mixed with an equal quantity of water they are quite as deep in colour and as spirituous as the ordinary wines of Bordeaux, while in less favourable districts they are excessively poor and so sour as to rasp the tongue like the roughest cyder. Many have the luscious character of Constantia and the Muscat growths of Frontignan and Lunel; several, on the other hand, are disagreeably bitter, others, again, are so astringent as to contract the windpipe while swallowing them, whereas a few of the lighter varieties possess the delicacy, if not the fragrance, of certain growths of the Rhinegau. It must be confessed, however, that although the specimens were remarkably varied and numerous, the better qualities were extremely rare.

Lower Austria.—Of the various wines which came from that mere fraction of the empire known as Lower Austria, those of Vöslau and Gumpoldskirchen, in the vicinity of the fashionable and picturesque summer watering-place of Baden to the south of Vienna, and of Klosterneuburg on the banks of the Danube north-east of the capital, attracted most attention. From Vöslau, which produces the best Austrian red wines, came a collection of Herr Schlumberger's finest growths, white as well as red, including Vöslauer Ausstich, Goldeck, and Steinberg. The red varieties are produced from a combination of the early blue Portuguese, Burgundy, St. Laurent, and Limberger grapes, the first-named species evidently predominating, and imparting, spite of a slight astringency, a soft sweetish taste to the wine, which is very deep in colour and full-bodied, has a fragrant fruity bouquet, and readily rounds off any roughness pertaining to its youth as it grows old, when the finer qualities develop considerable *finesse*. It improves greatly by being kept from

three to four years in cask, being continually racked during that period, and the same number of years in bottle. And yet some wines of 1869, and even 1872, exhibited considerable delicacy. The finest, however, that we tasted was more than 20 years old. Of white Vöslauer made from the Riesling, Traminer, and Rulander grapes, there are the still and the sparkling varieties, both being amber-tinted, and exhibiting considerable vinosity, the still Steinberger cabinet, as it is called, resembling the white wines of the Côte d'Or. Some 20,000 hogsheads of Vöslauer, only a portion of which comes from the place itself, the remainder being vintaged in the neighbouring localities, are annually produced. By far the largest portion is consumed in Austria, the remainder, principally red Vöslauer, being exported to Germany, Russia, Turkey, Egypt, and Great Britain. The travelling qualities of the wine were put some years ago to the test of a three years' voyage round the world in the "Novara" frigate, and came back again not merely unimpaired, but greatly improved. The yield from the Schlumberger vineyards, comprising exclusively the first growths, is about 1,000 hogsheads, and the price of the wine duly matured in casks ranges from £15 to £20 per hogshead, the finer qualities mounting up as high as £30. White Vöslauer is somewhat dearer than the red, and the sparkling wine commands from 46s. to 64s. per dozen. Herr Schlumberger being a member of the wine jury, his samples were of course *hors concours*, but a couple of other exhibitors of Vöslauer, Herren J. Romer and Sons, and A. Schneider, received medals for progress for their collection of Austrian wines generally, in addition to which two Vöslau wine-growers had honourable mention made of their products.

The specimens of Gumpoldskirchner, one of the best white wines which the archduchy of Austria produces, and made, as a general rule, from the Zierfandler and Riesling grapes, were very numerous, and, on the whole, of admirable quality, certified by as many as five medals for merit being distributed among their exhibitors, six others of whom had honourable mention made of their samples. Some remarkable specimens of Gumpoldskirchner auslese were contributed by Herr F. Faseth, including gold Riesling, Muscat, and silver Riesling, all beautiful wines of singular softness and delicacy. The first, which was the driest of the three, had a pleasant subdued sharpness of taste; the next was a trifle sweet, with the same agreeable suppressed acidulous flavour, while the third, which was also inclined to be sweetish, had a slight bitter taste, which gave it considerable character. All these wines were of the first order, comparable, indeed, with the finest Sauternes, and were rewarded by a medal

for merit. Ordinary Gumpoldskirchner is a delicate pleasant wine with no high character, still with none of the harshness or poverty of flavour common to the majority of growths in the neighbourhood of Vienna. Traiskirchen sent some samples of the better kind, to one of which a medal for merit was given.

From the quaintly-carved mediæval tuns in the vast three-storied cellars of the ancient and palatial Augustine monastery of Klosterneuburg, in the neighbourhood of Vienna, and to which upwards of two-thirds of the immediate environs of the Austrian capital are said to belong, came a large collection of samples, the superiority of which over the Klosterneuburger exhibited by private growers was very marked. They were, without exception, sound well-made wines, one or two even possessing considerable delicacy, the best being, perhaps, a Riesling of the vintage of 1868. Not only had these wines been vintaged with care, but it was mentioned that their ordinary crude character had been effaced by scientific treatment, either during the process of vinification or else in the cellar, which included the addition of a moderate quantity of alcohol—five per cent., or thereabouts. However much the addition of spirit to wine may ordinarily deserve to be deprecated, it is quite certain that the effect in this instance had been to render wines that are commonly disagreeably acidulous and next to worthless pleasantly palatable.

The treatment these Klosterneuburg wines undergo is due to Baron von Babo, principal of the "School for Vine Cultivation and Cellar Management," an imperial institution, although attached to the conventual establishment. In the adjacent vineyards under the Baron's charge numerous varieties of vines are planted and cultivated on thoroughly scientific principles. The institution had a special exhibition at the Vienna Industrial Palace, in one section of which vines were shown grown in every variety of soil, such as loam, sand, gravel, chalk, stones, and even coal. The vine planted in the latter formation required, of course, occasional artificial moisture, and the plant itself was deficient in strength. The purpose of the exhibition was to show that the vine will really grow in all kinds of soil, though in some very much better than in others.

From Nussdorf, north of Vienna, and from Mödling, Rudolfsheim, and Brunn, on its southern side, came various white wines ordinarily of very indifferent quality, being cold and spiritless—in fact, *vins verts* in the fullest sense of the term. The best specimen of Nussberger vintaged in 1868 came from the monastery of Zwettl, and had honourable mention made of it. Similar recognition was accorded to six samples from the remaining

localities, which proved superior to the general run; also to various white wines from Guntramsdorf, Enzerdorf, Pfaffstetten, Grinzing, Landstrass, Hangsdorrf, and Mailberg, all in the environs of Vienna, as well as to some straw wine, which is rarely made in Lower Austria. A medal for progress was given to Count Kinsky for his excellent samples of red Matzner, produced from the early blue Portuguese and some black French grape, and medals for merit were awarded for samples of Mauerer, of white Strasser from Shiebbbs, and of another white wine grown at Hadres, on the road from Vienna to Krems.

There were numerous samples from Retz, Retzbach, and Markersdorf, to the north of Lower Austria, where the growths which pass under the name of white country wines are produced in great abundance, the predominating vine in the mixed plantations being the Veltliner; a variety of the Muscat, together with the Traminer, being frequently, and the Riesling rarely, met with. For these wines Herr Witzmann secured a medal for progress, four medals for merit being distributed among other exhibitors of the district. A medal of the last-named description was given for a well-made and slightly spirituous wine, of agreeable flavour, and with a slight bouquet, vintaged in 1869 at Langenlois. Several Vienna wine-merchants rather unfairly secured rewards for exhibits of Hungarian wines, and from the little town of Brück, on the river Leitha, which forms for a certain distance the boundary between Austria proper and Hungary, came several samples of Hungarian Ruster ausbruck, of which honourable mention was made.

The vine is cultivated in Lower Austria, on the banks of the Danube, and of the smaller rivers and streams running parallel with it, the vineyards, of which those in the southern part of the archduchy have by far the finest aspects, stretching alike over hills, slopes, and plains, and the steeper heights being laid out in terraces. The grapes principally used for the white wines are the Zierfandler, the Veltliner, and the Riesling; while for the red the prevalent varieties are the early blue Portuguese, the blue Frankish, as it is termed, the Schubkörner, and of late years the black Burgundy. Vineyards planted exclusively with one kind of vine are very rarely met with, the different species being generally indiscriminately mingled. In the north, as already observed, the Veltliner predominates, while in the south the Zierfandler and the Riesling are the more general. In the immediate neighbourhood of Vienna the Riesling, Traminer, and other varieties are found in connection with the original vine of the province—namely, the Austrian white, common on the Rhine under the name of the Oestricher.

With certain exceptions, the wines of Lower Austria are at their best when three years old; after this period they are liable to turn mouldy, ropy, or sour. If the white varieties are legion, the red are exceedingly limited, being confined simply to Vöslauer, Matzner, Merkensteiner, Falkensteiner, and Schratenthaler.

Lower Austria produces on the average 20,000,000 gallons of wine annually, and between the years 1870 and 1872 the price ranged from 1s. 8d. to 3s. 10d. per gallon.

Moravia.—The samples of Moravian wine were necessarily not particularly numerous, the vine-growing districts of that province being limited to the banks of the Schwarza, Zwittava, Iglava, and Thaya rivers, in the southern portion of their course, and only extending from Baumöhl, near the frontier of Lower Austria, to Sumic, on the confines of Hungary. Some little wine is produced north of Brünn, but by far the greater quantity is vintaged between that town and the borders of the archduchy of Austria.

The best specimens came from the neighbourhood of Bisenz, on the line of railway from Vienna to Olmutz, and from around Joslowitz, lying between Grussbach and Znaim. The growths of the former locality, in their spirituous nature, resemble the Hungarian wines, while the others assimilate in their raw and *pierre à fusil* flavour to those of Lower Austria. Count Reichenbach received a medal for progress for Bisenz wines, and for improvements effected by him in the old-fashioned system of viticulture and vinification; Count Hompesch-Bollheim, of Joslowitz, also obtained a like distinction.

The wines of Baumöhl, Rausenbrüch, Schattau, and Gnadlersdorf, vintaged to the extreme south of the province, almost on the frontiers of Lower Austria, and known as the Moravian mild wines, were represented by a variety of samples, one of them a Gnadlersdorfer of the year 1859, the majority, however, being only a few years old. Three medals for merit were given to exhibitors from Schattau, and medals of the same class were awarded for Znaim, Neunmühlen, and Luggau wines.

There is a vintage law in Moravia forbidding the gathering of the grapes prior to the time officially fixed upon, but it is very little observed. In Znaim the local custom prevails of allowing widows and orphans to complete their vintage before any one else commences. The primitive practice of crushing the grapes with a couple of pestles is common throughout Moravia, where all that relates to vinification is in a very backward state. With occasional exceptions, the Moravian wines are offered for sale when only a few months old, and are com-

monly consumed within the year, simply because the majority of them will not keep beyond. The total quantity of wine produced in Moravia during the year 1872 was about 2,600,000 gallons, the price of which ranged from 11d. to 3s. per gallon.

Bohemia.—In Bohemia, where beer is the staple beverage, the cultivation of the vine for the purpose of vinification is not without importance, and during the past seven years a rather good wine of the Burgundy type, known as Labin, and taking its name from the river Labe or Elbe, has been produced there from the Burgundy grape, a species of vine which was originally imported into Bohemia direct from Burgundy several centuries ago. Labin, of which there is a white variety as well as a red, comes from the vineyards in the Melnik district, near Prague, where a considerable amount of red wine is produced, with a small quantity of very good white from the Riesling, and a combination of the Riesling, Sylvaner, and pale red Traminer grapes. A few years added on the age of these wines greatly improves their flavour and develops a decided bouquet. Other white wines from the green Traminer and the Chablis grape are of inferior quality.

There were only a couple of exhibitors of wine from Bohemia, one from Leitmeritz, who sent samples of Cerneseker, a wine of some local repute, and Prince Ernest Windischgrätz, whose numerous samples of Trojer, from his Troja vineyards near Prague, had honourable mention made of them.

In 1870 Bohemia produced rather more than 80,000 gallons of wine, which when new varied in price from 2s. 4d. to 4s. 6d. per gallon, while wine from six to twelve years old commanded from 3s. to 6s. 6d. per gallon, according to quality.

The province of Voralberg, lying north-east of the Tyrol, sent no samples of its wine to Vienna, and yet it produces nearly four times the quantity Bohemia does. Unfortunately, however, the system of vinification prevailing there is of the most primitive description. Grapes and stalks, after being left lying in heaps for three days after the vintage, are thrown together into the vats, and the mass is allowed to ferment in little wooden huts, the temperature of which is never regulated. As a consequence, the wine suffers from too much heat when the hot south wind prevails, but more frequently from too great cold, and, indeed, is known to have been even frozen.

The duchy of Bukowina, at the extreme eastern end of the Austrian empire, grows considerable quantities of grapes, chiefly, however, for table purposes, and such little wine as is made there is extremely poor in quality.

II.—*Wines from the South.*

Favourable natural conditions for producing Wine enjoyed by Styria—Varieties of the Luttenberger growths—Peculiarities of Wines from the Mosler grape—The Marburg Wines and the Styrian Muscats—Wines vintaged on the Windisch hills—Red and Schiller Wines of Styria—Varieties of Vine cultivated—Annual production and price—Inferior growths of the German in comparison with those of the Italian Tyrol—Red and White Wines of the former—The excellent Red Wines of Roveredo and Trent—Different systems of viticulture and vinification in the German and Italian Tyrols—Produce and price—Wines of Carinthia and the primitive mode of making them—The Carnolian growths—The Wippach mountain region, its inclement climate, and character of its Wines—The favourite Wine of the Empress Livia Drusilla—The dark and bitter Friauler—Terran wine from the rock-strewn Karst plateau—The Görz and Trieste growths—Peculiarities of the red wines of Istria—The Vineyards and Wines of Dalmatia—Their sweet and spirituous character—The luscious Maraschino Wine entirely different to the well-known liqueur—Alcoholic strength of the Wines of Austria—Vineyard area, production, and value—Exhibitors of Austrian Wines at Vienna and the rewards accorded them.

Styria.—By far the finest wines produced by the Cisleithan fraction of the Austrian empire come from the ancient duchy of Styria, which, owing to its peculiar situation between the Alps and the eastern steppes, possesses great varieties of climate, from the frigid temperature of the mountain regions to the genial warmth of the lowland districts, and secures a happy proportion of heat and moisture, highly favourable to the cultivation of the vine, and conducive to the development of the grapes, and more especially of their full flavour.

This variety of climate naturally occasions a great variety of growths. The finest of all the Styrian wines is the Luttenberger, a really splendid wine, produced, as its name implies, on the slopes of the Luttenberg, at the south-east extremity of the province, and made from the Moslavina, or Mosler species of grape, which is the same as the Furmint of Hungary, and is probably the one most extensively grown throughout the province. Round the Luttenbergers proper one may group half-a-dozen semi-Luttenbergers, known as Wallershak, Kaisersberger, Grunauer, Jerusalemer, Eisenthurer, &c., vintaged in the vicinity of the more famous vineyard, and produced from the same widely-spread Mosler grape. The choicest Luttenbergers displayed at Vienna were those of Prince Conrad of Pettau, Baroness Werner of Friedau, Herren Kleinoscheg of Graz, and the Duke della Grazia of Brunnsee, each of whom was awarded a medal for progress. Their wines were rich and syrupy, of decreasing degrees of sweetness, but invariably of great volume, and with a fine spirituous and sub-acidulous flavour. Scarcely if at all inferior were the more mellow

samples, in which a suggestion of true Tokay was just perceptible, sent by the wealthy Benedictine Abbey of Admont, and rewarded by one of the nine medals for merit distributed among the exhibitors of these fine wines, which received honourable mention, moreover, in nine other instances.

Among the numerous varieties of Luttenberger which attracted attention one may instance the Jerusalemer, the Wallershak, and the Weinberger of Prince Conrad, the two last-named very slightly sweet, but of marked flavour. There were also samples of Kaisersberger, a wine of some character, which procured Herr P. Sonnhammer a medal for merit, and also of Grunauer, another sweetish wine, which obtained a similar medal for its exhibitor. Of the few Eisenthurrs, delicate and rather dry white wines, the finest were sent by Herren Kleinoscheg of Graz, who, as already mentioned, received a medal for progress.

The wines of the Radkersburg, Schmitsberg, Rittersberg, Radiselle, and Pickern vineyards, together with a few of the Sauritsch wines, also produced from the Moslavina grape, showed many of the characteristics of Luttenberger. Some of the recent vintages contained a very large amount of sugar, and it would appear that they remain sweet for nearly three years, during which time they are greatly in request for mixing with other wines. They reach maturity at four or five years of age, when the peculiar acidity pertaining to the Mosler grape becomes very prominent, occasionally rendering them harsh, in addition to which they exhibit great spirituousity. The finest Radkersburger was sent by Count Wurmbrand, who secured a medal for merit for his Eichberger growths.

The Marburg wines, belonging to the same category, and produced on the southern and eastern slopes of the long chain of the Bacher mountains, which extend southward in the direction of Carinthia, were represented by numerous samples, the finest being contributed by Dr. Othmar Reiser, who secured a medal for samples of Pickerer from the Traminer, Mosler, and Welsch Riesling grapes respectively. These wines were of full yet delicate flavour, the Riesling variety being the lighter, and tasting remarkably fresh to the palate. Herr Pfrimer, for some samples a trifle less choice, received a medal for merit. A similar medal was given to an exhibitor of Marburg Sauritscher wines, which were slightly rich, and at the same time pleasantly sharp in flavour.

The Styrian Muscats, which are characterised by a strongly developed perfume, and have lately come into great request, fetching from 4s. 6d. to 6s. per gallon, are principally produced

on the slopes of the central Alpine chain, in the direction of the river Drave. The jury awarded medals for merit to Herr Carneri of Wildhaus, and to the Styrian Wine Company, for some choice and remarkably luscious samples of these wines.

Another class of the white growths of Styria came from the Windisch hills, and the Kolleser, Pettau, and Sausaler vineyards, which furnish very good table wines, although a little deficient in character, owing to the varieties of vine being very much mingled. The wines produced in the north-eastern corner of the duchy between the Mur and the Hungarian border were of the same description. Two medals for merit were given to Pettau exhibitors, and honourable mention was made in numerous instances, notably of five Windischbuchler wines from St. Georgen and Mureck on the Windisch hills.

No higher distinction than honourable mention was conferred on the Pettau Sausaler growths, which, with the Vinarier of Gonobitz and the Marburg reds, are the most palatable of the Styrian red wines. The predominant vine on the Sausaler mountain is the blue Wildbacher, an abundant bearer, which is cultivated at 1,500 feet above the level of the sea, and yields a fresh strong wine with much the same body and astringency as the Palus growths of the Gironde. Although the Wildbacher may be cut low like the Burgundy vine, in Styria it is frequently trained over the houses, which as the autumn approaches often disappear beneath the dense foliage and clustering fruit yielded by this prolific vine. The Gonobitz red wines from the Vinarie mountain are produced from the small black Kauka grape, of an agreeable although peculiar flavour. The wines themselves proved rather sweet, and were distinguished by a singular spicy taste. Of the few specimens exhibited two received honourable mention, including one exposed by Prince Hugo Windischgrätz. The Marburg reds, more highly appreciated, secured a couple of medals for merit.

The Styrian Schiller wines—so called from their pale colour—which came from the central regions of the duchy between the rivers Mur and Cor and the Stainzer Alps, and which, like the Sausaler, are produced from the blue Wildbach grape, although containing very little alcohol, were only agreeably acidulous. A medal for merit was awarded to Herr Heinrich Fink, of Ligist, for some samples of these wines, honourable mention being made of other specimens from Hochenburg and the Schwanberg.

There are some two hundred different kinds of vine grown in Styria, the grapes of which differ in quality, flavour, and time

of ripening. After the Mosler, which is the most generally cultivated, come the white Heunisch, the blue Wildbach, the white Wippach, the red-leaved Kauka, and [endless other varieties. The small Riesling, blue and grey Cleves, and blue Portuguese, all of which are superior to the native vines, have been largely introduced into Styria of late. Some of the vineyards are laid out in terraces, banked up with turf; others are often extremely steep, and provision has to be made against the washing down of the soil by cutting deep trenches for the water to run off. What is termed the colonial system prevails in numerous districts, the colonist receiving from the proprietor of the vineyard a house, a piece of ground for his own use, one or two cows, and fuel, and undertaking in return for this, and a small fixed sum of money, to do all the work in the vineyard, excepting the digging and the vintaging. Half the manure is used for the vineyard and the other half for the vinedresser's own field. It is only on a few large estates that the grapes are picked and pressed by grape-mills; they are usually thrown indiscriminately upon the press floor or into vats, where the must is expressed by their being trodden by barefoot labourers.

The average quantity of Styrian wines produced is nearly 17,000,000 gallons annually, and the price on the spot ranges from 11d. to 1s. 10d. per gallon. Very little wine indeed is exported. Of late years sparkling wines have been made in considerable quantities, a large Styrian champagne factory existing at Göstling, near Graz.

German and Italian Tyrol.—To the samples of wines sent by the Italian and German districts of the Tyrol to Vienna, the proportion of awards was greatly in favour of the former. While the German exhibitors succeeded in securing only one medal for merit, and four diplomas of recognition, their Italian rivals carried off three medals for progress, and five medals for merit, and had honourable mention made of their samples in nine instances. In both the German and Italian Tyrol the vine is often cultivated at a considerable altitude, but in the former province sharp east winds, rain, and drought are frequent, and naturally do much damage, which, combined with the deficiency of soil, chalk being far more generally the prevailing stratum in the Italian than in the German region, sufficiently explains the inferiority of the Botzen and Meran growths to those of Trent and Roveredo.

From the Botzen district, which is the most important of the German Tyrol, both from the quantity and quality of its produce, and which comprises the northern valleys of the Adige and the Eisack, came some samples displayed by a Tyrolese

society for the cultivation of the vine, and for which a medal for merit was awarded. These wines were made from the peculiar large-berried blue and white Tyrolese grapes, of which there are many varieties, including the Lagrein, the Vernatsch, the Geschlafene, the Tirolinger (more generally known as the Trollinger), and others. Parenthetically it may be mentioned that the Traminer grape is not to be found in its presumed native home, the vineyards around Tramin, the last German village south of Botzen.

The pure Lagrein wines, which were dark, strong, and acidulous, seem to be generally used for improving weaker growths. Such as had been vintaged on the hills proved rather fragrant, but the others were without perfume. The Vernatscher red varieties were somewhat sweet, a circumstance due to the custom of filtering the must through sacks after the first turbulent fermentation and suppressing all further ebullition. The best white wines in the collection were from the Ferlaner, Leitacher, and Riesling grapes, and were all of a deep tint arising from the practice of throwing the skins of dark grapes, such as the Lagrein and Negrara, upon the lighter fruit when mashed, to heighten the colour of the must. Those from the hills were fiery, strong, and only a trifle acidulous, the produce of the plains proving invariably weak and not unfrequently sour. The other samples from the German Tyrol that secured awards came from Toggenburg and Rametz, honourable mention being made of some Toggenburger, Frainsteiner, and Gross-Riesling growths, and of some red Rametzer produced from Burgundy grapes. One or two samples of Ausbruch wines had been sent, but were of very poor quality.

Among the specimens from the Italian Tyrol, where the vine is cultivated along the banks of the Adige, and the valleys formed by its confluent, mostly among other crops in fields and meadows, those of Roveredo, famous for its extensive rearing of silkworms, proved to be the finest. From the vineyards of Isera, close to that locality, came some samples of Negrara red wine, from the grape of the same name, of delicate flavour and brilliant colour, for which one exhibitor, Count Bossi Fedrigotti, secured a medal for progress. Then there were specimens of Maizemino, a good red wine of the Médoc type, mostly grown in the plains, some of which, vintaged in 1867 and 1869, was of excellent quality, the former showing that it greatly improved by moderate keeping. Examples of the produce of the Burgundy, the Portuguese, the Radazka, and the Riesling vines grown in the vicinity of Roveredo were also exhibited, and the one furnished by the Portuguese grape secured a medal for

merit, while honourable mention was made of the wines vintaged from the Burgundy and Riesling varieties.

The samples from the ancient Etruscan city of Trent, where the famous Œcumenical Council of the sixteenth century was held, were scarcely inferior to those from Roveredo, and medals for progress and merit were awarded to the Agricultural and Œnological Societies respectively for their very complete collections of the wines of this district. The Maizemina and (as the Trollinger is here called) the Tiroidiga grapes furnished the choicer red wines; the best white varieties being produced from the Nosciola and Peverella vines. In addition to these awards a second medal for merit was secured by a Trent exhibitor, and honourable mention was made of seven others. One naturally felt special interest in some red wine from Toblino, a locality with which recollections of the author of the *Inferno* are associated, but it was only deemed deserving of honourable mention. The remaining award for Italian Tyrolese wines was a medal for merit, granted to Signor Antoni Gelmini for a sample of straw-wine.

In the German region of the Tyrol, the vines, white and red, as well as late and early varieties, are planted indiscriminately, and are principally trained on long arbours or pergolas, a system which guarantees a good yield of fruit, but does not improve its quality. In the districts of Trent and Roveredo the Italian garland system of culture, which consists in training the plants to poles from 10 to 12 feet in height, prevails. Both systems, however, are mingled over some few miles of territory in much the same way as the two nationalities are.

Vinification is still in a backward state in both regions. In the German Tyrol the must is allowed to ferment on the grape-skins for four or five weeks, when the wine having become clear is drawn off; a few choice varieties only being passed through the grape sieve after being pressed, to separate them from the stems. In the Italian district the better varieties of grapes are picked from the stalks before being musted, and both red and white wines are generally drawn off after three weeks to admit of poorer wine being poured on to the murk of the best grapes, which ferments again. The average prices of the German wines have varied during the past three years from 1s. 7d. to 2s. 6d. per gallon, and of the Italian growths between 11d. and 1s. 3d., rising for a short time in 1872 to 1s. 8d. The total produce of the two provinces in 1870 was between 9 and 10 millions of gallons.

Illyria.—Only a few of the samples sent to Vienna from the three Illyrian provinces of Carinthia, Carniola, and Küstenland,

which latter comprises the districts of Istria, Trieste, and Görz, were judged worthy of special recognition. In Carinthia the cultivation of the vine is extremely insignificant. The great altitude of the province, which at its lowest point is 1,060 feet above the level of the sea, its unfavourable climate, including often long and severe winters attended by continuous snow, prevent it, spite of its southern latitude, from taking any important place among vine-growing regions. The only vine district of any extent is the Taun valley, at the foot of the Karawanken Alpine range, where a passably agreeable wine of a full and occasionally very dark colour, known under the name of Sittersdorfer, and which enjoys good repute throughout the province as a stomachic, is produced; a light Schiller wine also comes from two small vineyards in the neighbourhood of Bleiburg. The prevailing vine is the blue Wildbach, intermingled here and there with a few Gutedel, blue Clevenner, and blue Portuguese plants. At vintage time the domestic servants gather the grapes, which are carried in baskets to the "dosser," bruised with a pestle, and then emptied into fermenting vats, covered with perforated lids. In localities where common presses are in use a single press and cellar frequently serves for several growers. Such slight merits as the Carinthian wines displayed were amply recognised by honourable mention being made of a collection of samples sent from Klagenfurt, the capital of the province.

The awards for Carniolan growths were more numerous. A medal for merit was given for some samples of Oberfelder-Kindermacher, a mild, agreeably-flavoured wine from the district of Wippach, which differs from the other regions of Carniola by its strange climate. Girt with mountains, the vineyards, in which the black Rebula and Osiss and white Cernile are the principal vines cultivated, are often covered after a severe storm with masses of rock, floods of water, and layers of sand, in addition to which at certain seasons the north-east and south-east winds are very violent, raising veritable whirlwinds, and blowing down or tearing up the espaliers and arbours of the vineyards, and necessitating the selection of only the most sheltered spots. From this unpromising district came two principal kinds of wine, known as the mountain and plantation growths, the former of various golden shades of colour, and containing besides a fair amount of alcohol, a considerable quantity of tannin, and but very little cream of tartar or bouquet, the latter deficiency being due to the excessive mingling of the vines. The plantation wines proved to be for the most part light Schillers. In addition there were a few samples of Picolit straw wine, said to have been known among the Romans, the Empress Livia

Drusilla, wife of Augustus, we are told, giving a decided preference to it on account of its mild sweet flavour. The price of the Wippach mountain wines ranges from 1s. 1d. to 1s. 5d., and of the plantation from 8d. to 1s. 1d. per gallon.

From Gurkfeld, in Carniola, came Stadtberger and Bergama wine, with certain growths of St. Cancian and Mötting. These wines were Schiller, golden, and almost white in colour, the latter, however, becoming darker with age, and all being distinguished by a refreshing acidity. The older vintages had greatly improved both in alcoholicity and flavour, but very few of them had any bouquet, owing to the indiscriminate mingling of different kinds of grapes in the vineyards, and the great varieties of soil and aspect. The Zelenika (great Grünhamer) wines had the most perfume, their aroma resembling that of the Riesling growths. The price of these wines varies from 11d. to 1s. 4d. per gallon, and the total produce of Carniola in 1870 was nearly 5,000,000 gallons.

The awards granted for the samples sent from the province of Küstenland, which comprises the earldom of Görz, Trieste, and Istria, consisted of one medal for progress given to Count Latour of Russitz, near Cormons, and one medal for merit allotted to Herr J. Ganz, of Dornberg, honourable mention being made of the wines of four other exhibitors. Of the Görz samples those grown in the sandstone soil were very poor, and by no means palatable; others, however, were firm, and contained a considerable amount of both tannin and alcohol. From the vineyards in the plains came a remarkably disagreeable wine called Friauler, which, as a matter of course, was said to be a great favourite among the inhabitants of the locality. It was dark in colour and exceedingly bitter to the taste, but we were assured that after it had passed through the summer it would lose much of its present acrid flavour. Terran wine—a produce of the dreary rock-strewn Karst plateau, where the vines grow trained partly to maple-trees, partly in garlands to poles, and on arbours—and which used to be a poor weak fluid, appeared to have improved considerably. Like the Friauler, it is deep in colour, but altogether milder and more palatable. The grand speciality, however, of Görz is its Picolit, a thick, sweet, spirituous straw wine, which acquires with great age a peculiar flavour that causes it to be highly prized in the locality. Families treasure up this wine only to produce it on *fête* days, and even then it is partaken of but sparingly. One was not impressed by the samples of it tasted at Vienna, for it was a mere sugary syrup, spirituous and slightly acidulated, suitable, no doubt, to semi-barbarous tastes, for both Turkey and Russia,

to where it is imported in bottle, hold it in much esteem. The price of the ordinary Görz wines varies for red growths from 1s. 3d. to 2s. 2d. per gallon, and for white from 10d. to 1s. 9d. per gallon. The average annual produce of the district is under 3,000,000 gallons.

Neither the reddish yellow Prosecco, a straw wine made of exceedingly ripe grapes which are left to dry on reed mats until the end of December, nor the dark red Merzaminos or Refoscos of Trieste—where, as at Görz, the Italian system of viticulture, in a great measure, prevails—met with any recognition at the hands of the jury. The better kinds of red wine command from 2s. to 2s. 3d. per gallon, the white Trieste wines and the common red vintages varying from 1s. 1d. to 1s. 4d. per gallon. The average annual yield from the Trieste vineyards is 215,000 gallons.

In Istria the so-called colonial system prevails, the colonist here giving one-half, one-third, or sometimes as little as one-fifth of the produce to the proprietor, according to the amount of labour the former engages to perform in the vineyard. The wines were, perhaps, a trifle better than those of Trieste, still not deserving of distinction. The Istrian red wine, for instance, is only marketable within its first year. At the expiration of this period it loses its deep ruby colour, and subsides to the tint of a common Bordeaux. It moreover acquires bouquet just at the moment it is preparing to turn either mouldy or sour. An Istrian wine that will keep beyond the following vintage is regarded as a marvel. The Refosco wines which came from Isola were bitter, like all the wines produced from this grape, still they had the reputation of keeping rather longer than the others. When making these wines the gathered grapes are suffered to lie for several days before being pressed, and when this operation is over they are stirred vigorously several times a day with a stick for a fortnight, which delays fermentation, and considerably deepens the colour of the wine. Some Terran wines from the west and south of the province were sweeter, more spirituous, and altogether fuller flavoured than the wine of Trieste. Far more syrupy, however, were the samples of Piantadella—a mixture of the must of several varieties of sweet grapes and of a dark red colour—as well as those of Uvaccia made from some large red grape peculiar to the district.

In Istria the vine is rarely cultivated in inclosed vineyards, but generally in rows between other crops trained to poles, trees, espaliers, arbours, in festoons, and on terraces. In northern Istria and the Quarnero islands the planting of a new vineyard is a very expensive proceeding, as the cleft and compact rocks have first to be blasted. The holes which have

been opened are then filled up with earth, which men are obliged to carry up on their backs. The average annual yield from the Istrian vineyards approaches 3,000,000 gallons, and the price of the wine at the place of production varies from 8d. to 2s. 6d. per gallon.

Dalmatia.—The number and quality of the samples of Dalmatian wines displayed at Vienna testified to the great progress made of late years both in viticulture and vinification in this portion of the Austrian dominions. This is mainly due to the laudable activity of the Dalmatian Œnological Society in seconding the efforts of intelligent vine-growers, and a medal for progress was awarded to that body in recognition of its efforts. Thirty years ago the vine was scarcely cultivated in Dalmatia, excepting on the islands and along the sea-coast, but to-day it has penetrated into the interior of the country, and now occupies upwards of one-twentieth of the entire surface under cultivation, which is a larger proportion than is found in any other province of the empire. Both climate and soil are most favourable to the vine, but as the principal stratum is limestone, the rocky nature of the ground necessitates the utmost toil in laying out a vineyard. Soil is carried up to the hills, and in localities of any great altitude each vine is surrounded by a wall of loose stones in order to protect it from the winds. A few Croatian vines are cultivated in some parts, but the Italian varieties predominate, the long small-berried and excessively sweet Maraschino being one of the widest spread. Among the other varieties one finds the Almissa Muscat with its small oval rose-scented grapes, the Cerljenacer, Glavinusia, and Advocatai, with their deep black fruit, the Vugava, which yields an abundance of *must*, rich in the saccharine element, and in a very limited degree the Ragusa Malvasia.

Some wines from the Vugava grape, which is principally cultivated on the isle of Brazza, proved to be of a bright golden colour with a sweet and somewhat spirituous flavour and powerful aroma; while others had a vague resemblance to Lunel Muscat. Two of these samples secured medals for merit. Brazza and the neighbouring isles of Lacroma and Lissa also sent some powerful alcoholic Malaga-like Cerljenacer and rose-colour Zlatarizza wines, to the first-named of which three medals for merit were awarded. From the same localities we had samples of Prosecco and Trebian wines, respectively resembling sweet and acid cider, although the grapes of the former are commonly dried for more than a week on the roof of the houses, while from the isle of Blatta came some superior growths, which received the recognition of a medal for merit.

The best inland wines were certainly those from Zara and Sebenico. In many of the continental districts of the province it is the practice to press the grapes slightly at the vineyard, and to convey the mashed berries to the vats in goatskins turned inside out, slung across mules, the natural effect of which is to communicate a remarkably rank flavour to the wine. A different system, however, is pursued in the vicinity of Zara and Sebenico, where baskets are provided to receive the bruised fruit. Most of the red wines were intensely dark, and samples from the so-called *Modrina* and *Ruscivica* grapes were found to be extremely sweet, while those from the *Gerbic* variety had, on the contrary, a very bitter flavour, which was in fact common to many of the red wines, owing to an excess of tannin in the thick juicy stalks of the larger kind of grapes, and which are habitually pressed with the fruit itself.

Some of the Zara white wines were light and thin, and sufficiently agreeable, while others had the sweetness and consistency of syrup. The wine from the famous *Maraschino* grape had nothing in common with the well-known liqueur of the same name, numerous samples of which were exhibited, being simply an excessively thick and sweet wine, with a vinous acid flavour and a perceptible bouquet. For some tolerable samples of this wine from *Znim* and *Sti. Filippi e Giacomo* a couple of medals for merit were awarded, two other medals being given to wines from *Sebenico*. In addition to these awards, some *Muscat di Rosa* from *Spalato*, possessing more of the delicate rose scent than the majority of these wines can pretend to, secured a medal for merit for its exhibitor.

In *Dalmatia*, where the so-called colonial system of letting out the vineyards also prevails, the vine is frequently cultivated among other crops, in which case it is planted in even rows, irregular planting prevailing in vineyards proper, and in the fields where mulberry and other fruit-trees grow. The limestone subsoil has ordinarily an upper coating of clay and lime, largely impregnated with iron, and highly suitable to the production of first-class wines. Of late years, in *Dalmatia*, much more attention has been paid to the various processes of vinification, and more especially with regard to ordinary table wines. Improved crushing mills and machines for stripping off the grape-stalks have been partially introduced, and the must is subjected to genuine fermentation. Still, in some districts, the fruit is left in heaps in the open air for several days before being pressed, and the pressing itself is carried on in a very primitive fashion, a wooden club being frequently used to reduce the grapes to a pulp; moreover, white and purple grapes are

usually pressed together. The price of Dalmatian wines varied in 1870 from 4d. to 1s. 6d. per gallon, the liqueur wines being sold from 1s. to 2s. the bottle. The annual produce varies exceedingly, ranging from 18,900,000 to 25,200,000 gallons.

Very little information is available with reference to the alcoholic strength of the Austrian wines. The poorer white varieties contain as little as 11, and the more powerful as much as 28 per cent. of proof spirit. Gumpoldskirchner varies between 20 and 23. The strength of the Austrian red wines ranges from 18° to 27°. The Moravian wines contain from 16° to 19°, which is moreover about the standard of the Styrian growths, Luttenberger being usually below the 19°. The Dalmatian wines are far more spirituous.

The subjoined table, compiled exclusively from official returns, gives the vineyard area and production, together with the value of the vintage in Austria for the year 1870:—

Provinces.	Vineyard area in acres.	Area partially planted with vines—in acres.	Produce in gallons.	Value.
				£
Lower Austria . . .	106,214	—	20,652,023	1,338,435
Moravia	36,328	—	2,601,519	136,864
Bohemia	1,707	—	80,605	6,437
Voralberg	630	—	180,629	7,300
Styria	86,166	—	16,953,381	692,846
German Tyrol . . .	10,065	14,678	5,844,585	304,362
Italian Tyrol . . .	—	48,187	3,306,898	127,133
Carinthia	131	—	39,492	1,987
Carniola	23,794	3,761	4,944,808	179,837
Görz	14,718	87,347	2,862,841	137,080
Triest	2,182	2,493	215,232	10,256
Istria	—	119,648	2,877,886	151,404
Dalmatia	90,757	91,242	23,642,942	292,983
Total	372,692	367,356	84,702,841	3,486,924

The exhibitors of Austrian wines were naturally the most numerous of all, being as many as 490, and exposing among them no less than 1,849 samples. Of these exhibitors 18 received medals for progress, 69 medals for merit, while of 163 others honourable mention was made. In addition there were two diplomas of honour awarded, one to the Znaim Agricultural Society, in Moravia, and another to the Imperial and Royal Agricultural Association of Styria.

THE WINES OF HUNGARY.

I.—*Tokay.*

Historic associations connected with Tokay—The Tokay Hegyalja—The various grapes from which Tokay is made—System of vinification—The Essenz, Ausbruch, Fordítás or Wendung, and Szomorodner Wines—Produce of the Tokay vintage—Famous years.

NEVER before had so complete a collection of Hungarian wines been assembled together as at Vienna. All the great wine-producing districts of the Magyar kingdom sent assortments of their respective growths, the Tokay Hegyalja, Arad, Ofen, Edenburg, the Ermellék, Badacsony, Szegszárd, Somlau, Werschetz, Weisskirchen, Villány, and others being alike represented. The chief drawback of the collection was its extent, and its great fault the constant repetition of samples of the same character, and more especially of the commoner varieties. This was, perhaps, excusable on the part of a nation which produces considerably more wine than it consumes, and with whom the extension of its foreign markets, already comprising Great Britain, America, Germany, Russia, and the East, is of paramount importance.

Naturally, the historic wine—boasting a high antiquity, with a halo of tradition surrounding it, enjoying, possibly, more renown, and as a rule commanding more fabulous prices, than any other wine in the world—claims our first attention. Formerly Imperial Tokay invariably figured at the banquets of kings, and was the accustomed present from Austrian Archdukes and Emperors to those they delighted to honour. It was the wine which, at the Council of Trent, Pope Paul III. proclaimed to be worthy even of the pontifical throne, and which to secure a regular supply of, the Czars and Czarinas, so recently as a quarter of a century ago, kept a company of Russian soldiers constantly on Hungarian soil. The Tokay Hegyalja, where this renowned wine is produced, is situated between the 48th and 49th degree of northern latitude, and forms the southern spur of the volcanic mountain chain which commences south of the Carpathians, and prolongs itself almost uninterruptedly to Tokay. The district is 24 square miles in extent, and one-fifth of its entire area is planted with vines, terraces being constructed on many of the steeper slopes to prevent the earth from being washed away. As all grand wines are grown contiguous to some river, so is the Tokay Hegyalja watered by the Theyss and the Bodrog. In winter the climate is cold and variable, in spring more variable still, while during both summer and autumn the

weather is not only warm, but remarkably settled, which of course exercises a favourable influence upon the vintage.

Tokay is made from several kinds of grapes, the principal being the Furmint, or white Hungarian variety ; next in importance is the Weissling, corresponding with the Elbling of the Rhine ; then comes the Linden leaved, or long white Tokay grape, and the Augster, or early white Malvasia. Other vines are cultivated to a limited extent, such as the Muscat, the white Geisstuten, the Bâtac, and the Purcsin. For the production of Tokay it is essential that the grapes should be not merely ripe, but in a shrivelled condition, caused either by the bursting of their skins consequent upon the swelling of the berries from the autumnal rains, followed by the subsequent healing of the fissures ; or else from the grapes being nipped by the night frosts, and deprived of their watery particles, which admits of their eventually becoming thoroughly dried by the combined action of the wind and sun.

In making Tokay, the perfectly-dried berries, after being carefully selected, are placed in tubs, the bottoms of which are pierced with holes to admit of the juice—exuding from the mere weight of the grapes resting upon each other—dripping into a vessel placed beneath. The liquid thus collected abounds in saccharine matter, and is known as the Essenz, which, after the lapse of years, is remarkable for its excessive lusciousness, the richness of its bouquet, and its powerful flavour. It is commonly pretended that this Essenz ought to remain at least thirty years in the wood before it is bottled, still, out of the half-score of samples exhibited at Vienna, only three had attained the prescribed age, and with it that “divine harmony of strength, richness, and aroma” which the Hungarians claim for this rare product of their soil. One of these specimens was on the high road to centenarian honours, dating back as it did to within a few years of the reign of Maria Theresa, and anterior to the Revolution which counts her courageous daughter amongst its noblest martyrs. Although all its sugar had turned to spirit, it still had the softness which one terms silken ; spite, too, of its sharp and pungent flavour, which left a strong bitter after-taste that was almost disagreeable, and may have been the result of a less skilful system of vinification than prevails at the present day. As for bouquet, it was difficult to discover the trace of one. Its colour, too, was almost gone. Apart from taste, the distinguishing characteristic of Tokay, and that which gives it value as a medicinal agent, is the considerable quantity of phosphoric acid it contains, and which no other wine, excepting Malaga, has in anything approaching the same proportion. Another sample

was precisely half a century old, and a third, exhibited by Count Degenfeld, was of the vintage of 1841. The particular sample, however, which carried off the only medal given for Tokayer essenz, was of the infantine age of five years, and was topaz-tinted, sweet, sharp, and oleaginous-like, with a fine pungent flavour and perceptible bouquet.

There were a score or two of exhibitors of Tokayer ausbruch, several of whom secured medals for merit, including Count Aladár Andrassy, D. H. Wiessburg, of Erdöbénye, F. Schikedanz, of Tokay, and the wine-growers' agency of Pest. Tokayer ausbruch is produced by pressing the ripe grapes from which the shrivelled berries have been already selected, and adding the must obtained from them to a certain quantity of dried grapes which have been previously reduced to a pulp, either by being well trodden or by a machine. According as the wine is required to be sweet or dry, the quantity of dried grapes is added to or reduced. For a remarkably sweet wine, 30 gallons of must will be mixed with five tubs, containing 30 gallons of these dried raisins, while for a wine less sweet, four or a fewer number of tubs will be employed. Hence it is that in the mystic language of its producers Tokayer ausbruch will be described as a wine of one, two, three, four, or five tubs.

After the must has been added to the specified quantity of pressed grapes the whole is left to ferment from 20 to 48 hours, according as the temperature is warm or cool, being occasionally stirred during that time. Eventually the mixture is strained through sacks by violently treading on them, after which it is poured into a cask. The refuse skins and stalks are then emptied into vats and common must is poured over them. After being well mixed together the whole is allowed to stand for several hours and again strained through sacks. The result is the Fordítás or Wendung wine, of which samples were included in the collective exhibition of the Tokay Hegyalja, which comprised alike Essenz and Ausbruch of all ages from 1806 to 1869, and of all grades from one tub to five, with Szomorodner, Muscat, Ordinär, 57 years old, Fordítás, which had nearly attained half a century, and Mástás, or second wine consisting of ordinary must which has profited by having the lees of Imperial Tokay steeped in it—although not the rose itself, it has lived beside it. This interesting collection, composed of 47 samples, included, in addition to a certain number of veterans, all the grand vintages from 1861 up to the present time, and a medal for progress was unhesitatingly awarded to it.

What is termed Szomorodner is made from grapes which have not had all the ripest berries selected from them, and which

after being subjected to pressure in sacks are next crushed beneath the bare brawny feet of stalwart Magyars when the must which has been previously expressed is poured over them. This mixture is allowed to remain for several hours, until, in fact, it commences to ferment, and after being stirred a few times is again placed in sacks to be again vigorously trodden, when the must obtained from it is poured into casks, the lees serving to make Wendung wine. The quality of Szomorodner depends entirely upon the amount of dried grapes used in its preparation, and in bad seasons it not unfrequently happens that it turns out quite as good as the Ausbruch. The samples of Tokayer szomorodner were rather numerous at Vienna and singularly opposite in character, whether as regards colour, body, dryness, or flavour. The general qualities of the wine, however, are perfect softness and fulness, combined with that peculiar pungency common to every variety of Tokay. Medals for merit were given to Count Otto Szirmay and Dr. J. Szabo for samples of vintages 1866, 1868, and 1869, and to Madame Bornemisza for Hegyaljaer-Muscat made by mixing the Furmint and Muscat grapes, a wine which some connoisseurs profess to prefer to the purer vintage of Tokay. In all there were 152 samples of the different varieties of this celebrated wine, the exhibitors of which secured one medal for progress and twelve medals for merit, in addition to honourable mention in nine instances.

In abundant years the Tokay vintage yields 150,000 eimers, equal to nearly 1,900,000 gallons; in ordinary years the yield is only half this quantity, and in bad seasons it scarcely exceeds one-fourth. The superior wine forms about 15 per cent. of the entire produce, and of this about one-fifth is of extra fine quality. Not merely ripe but over-ripe berries are essential to a successful Tokay vintage, and a few fine days very late in autumn conduce more than anything else to this desired result. Between 1840 and 1865 there were nine such vintages, including 1841, 1846, 1848, 1852, 1855, 1856, 1858, 1862, and 1863. Four years—namely, 1840, 1842, 1847, and 1851—yielded wines of very inferior quality. The vintages of the intervening years were of a medium character.

II.—*Ordinary Hungarian Wines.*

Ménésér and Karlowitzer—Szegszárdér, Ofner, and Erlauer—The Eödenburg white Wines, and especially Ruster—Wines of the Ermellék—Scientific mode of viticulture and vinification—Somlauer, Badacsonyer, and Nesmélyér—Pressburg, Werschetz, and Weisskirchen Wines—Hungarian Muscats—Croatian and Slavonian growths—Marked improvement in the former Wines—Contrasts in the white varieties—Alcoholic strength of the Hungarian Wines.

THE Arad wines, coming as they do from the south, are ordinarily classed next in quality to Tokay, and among them the red Ménésér ausbruch, more or less a sweet wine, takes precedence. The oldest exhibited sample was of 1837 vintage, but out of the many specimens of the famous dry red Ménésér there was only one which dated back even to the year 1858, the remainder having seen merely a few summers. It was different with the white Ménesch wines, several of which counted their quarter of a century of existence, while one had passed its fortieth year. The Ménésér ausbruch has nothing to distinguish it from the general run of sweet red wines, whereas the dry variety is unquestionably a wine of some mark. It is of a rich ruby colour, has body, and is clean tasting, but unmistakably astringent, and was altogether the nearest approach to the unfortified wines of Portugal of any wine in the Hungarian collection. The Magyaráter samples were chiefly from the Riesling or Bakator grape, and exhibited either the freshness and the fragrance common to the one or the soft rich pleasant flavour of the other. Among the Bakator varieties a wine of the famous comet vintage carried its two-and-sixty years in a fashion which few wines from the Rhine could have done. Three exhibitors of these Arad wines obtained medals for merit.

Karlowitzer, when the vintage is a fine one, possesses as much character and what the French term "*feu*," without thereby meaning exactly heat, as any red wine grown on Hungarian soil. It comes even more south than Ménésér, from the banks of the Danube some 40 miles or so this side of Belgrade. Like Ménésér it bears a close resemblance to a natural Port, has the astringency pertaining to the growths of the Alto Douro, though in a less marked degree, and all their splendid colour, but in common with Ménésér has scarcely their fruitiness, besides which it appears to be deficient in bouquet.

Some very fair red wines came from Szegszárd, on the river Sarvis, due south of Pest, and at no great distance from the Danube, one sample of which, ten years old, had crossed the

Equator four times, and was certainly none the worse for its ocean trips. These wines were fresh and clean tasting, and not unlike the best growths of the department of the Hérault, in the south of France, having a certain thinness of body, which their decided spirituous character fails to disguise. Their colour, too, was a little pale. A couple of samples of Szegszárder, both of 1868 vintage, carried off medals for merit, and a white wine of Fünfkirchen in the same district was similarly rewarded. Red wines, with more or less character, are grown in the neighbourhood of Buda, or Ofen, as the Hungarians prefer to call it. The best growths came from the Adelsberg vineyards, those of a respectable age being mellow, spirituous, and fruity-tasting, but a little thin, and having a slight bitter after-flavour, which was, however, rather agreeable. The white wines of Ofen were somewhat sharp, and had a cool fresh taste, with a pleasant though faint bouquet. A couple of samples of red Ofner which had twice crossed the Equator, the favourite test to which the Hungarians subject their wines, were in perfect condition. Had the wines required any such guarantee these and half a score of similar examples would have placed their travelling qualities beyond a doubt. Erlau, north-east of Pest, and the neighbouring districts of Heves and Jazygieu sent specimens of their roughish red wines, for which the last-named localities obtained a joint medal for merit, and there were samples of Tétényer, dry and very deep in colour, together with Klein Tétényer from the black Burgundy grape, which, excepting a slight sweetness, had a true Burgundy flavour. Archduke Albert contributed some excellent wines, both from the Riesling and Burgundy grapes, grown in his vineyards at Villány, south-east of Fünfkirchen, together with a considerable collection of Neusiedler lake wines, from the neighbourhood of Eedenburg, and including alike Riesling, Traminer, and Clevener varieties vintaged between 1867 and 1870.

The white wines of Eedenburg, just across the Austrian frontier, were amply represented both as regards dry and sweet varieties, and by wine-merchants as well as by growers. The dry wines, while resembling the Austrian white wines, are more delicate than the general run in their paleness and thinness, and when not made with a mixture of the Muscat grape have no pretensions whatever to bouquet. An exception, however, must be made in favour of the one grand wine which confers distinction on the district—the well-known Ruster, which, when old and dry, is of a pale golden hue, and has a fine full and peculiar flavour, being often sharp, slightly sweet, and bitter at the same time. It is also highly potent, although in taste it suggests no

particular alcoholic strength. The sweet variety is deeper in colour, is somewhat luscious, and has the veritable flavour and bouquet of genuine Tokay. These wines carried off three medals for merit, while the remaining Edeburg wines obtained only one.

The Ermellék wines were best studied in the collection exhibited by Count Franz Zichy, president of the wine jury. This comprised numerous samples, one or two dating back to the year 1827, and all grown in the count's extensive vineyards at Erdiőszegh, in the Ermellék, near where the mountain spurs descending from Transylvania unite with the boundless Alföld plain. This vast expanse, evidently the basin of a dried-up inland sea, which in pre-historic times extended from the Carpathians to the lower Danube, is intersected by no regular system of roads, neither are there signposts to guide the stranger, who has to depend on the chance print of a horse's hoof, and not unfrequently on his own mere instinct. On the skirts of this plain rise a chain of hills—extending towards the north, and encompassing the base of the Réz Gebirge like a ring—known as the Ermellék. As far as Somlyo their slopes are gentle, and their summits generally level, both sides and plateaux being designed as it were for the cultivation of the vine. Pretty villages and market towns are scattered over the Er valley, most of the inhabitants of which are Hungarians, and even the few of Roumanian origin sprinkled among them differ chiefly in religion from the bulk of the population, being Hungarian both in dress and language.

The cultivation of the vine in the Ermellék extends over 5,800 acres, yielding annually upwards of a million and a half gallons of wine, and nearly all the labour of the district is employed upon it. One reaches the Ermellék by railway to Grosswarden, whence a carriage drawn by three fleet Hungarian horses hung with bells conveys us to Erdiőszegh along that rarity a good road, which being the one used by the president of the komitat is obliged to be kept in thorough repair. After passing Püspöki and the Behar settlement, where the trenches and earthworks of an old fortress are noticed, we drive through the opening to a wide valley, with the Réz Gebirge rising up in the blue distance on our right hand, while on our left stretches the boundless prospect of the Alföld plain, the very picture, so to speak, of freedom. Behind Félegyháza one perceives a slight eminence, to the left of which is deep open country, with a tiny stream glittering among the fields and pastures which surround a few scattered farms. It is in the midst of this pleasant-looking landscape that the little town of Erdiőszegh is situated.

Count Franz Zichy, who is bent upon introducing a proper system of vine culture into the Ermellék, has converted his Erdiószezh vineyards into a kind of nursery, presided over by experienced Rhenish vine-dressers, for experimenting on the different methods of treating both native and foreign varieties of the vine. Besides planting a couple of rows each of numerous species, and treating them all after a uniform fashion, he has had his vineyards divided into distinct sections, where one or other choice kind of grape is cultivated. The vines, instead of being huddled close together in the prevailing Hungarian fashion, are planted upwards of a yard apart, and cultivated in every respect according to recognised scientific principles. At the vintage, too, instead of following the common practice of putting the grapes into sacks and treading them in a tub, and then leaving the must to ferment in open casks, which have been previously sulphured, Count Zichy has introduced improved presses and crushing mills, and constructed fermenting chambers. The commoner grapes are not separated from their stalks, but the choicer kinds are, and after being crushed the must is left on the skins until fermentation ensues, which, carried on in large fermenting chambers, provided with heating apparatus, ordinarily lasts for eight days, the after-fermentation continuing from one to two months longer. The must of the common wines ferments in casks properly closed and provided with fermentation valves. Subsequently all the wines are "matured" by being heated up to 130° Fahrenheit according to M. Pasteur's system, after which they are left to repose for a year.

Count Zichy's wines were all admirably made and in excellent condition; indeed, there were no sounder wines in the entire Hungarian collection. They were, moreover, fresh and clean tasting, and several were deficient neither in softness nor bouquet, still as a rule they seemed generally to lack specific character. They conveyed the impression of being rounded off to a uniform standard, so that their merits were rather of a negative kind. No objection could fairly be taken to a single sample, yet none called for exceptional commendation. In a word, they were admirable ordinary wines and nothing more. This in a measure was accounted for when one learned that it was the practice on the Count's estate invariably to mix the musts of different vineyards, and frequently those of different years even, the object being always to offer for sale a wine as nearly as possible of uniform quality. The sound character of the Count's wines was evidenced by the fact that he exports them even to Japan, where they arrive in a satisfactory condition.

There are several other Hungarian white wines of mark requiring mention, notably Somlauer, from the Somlau mountain, in Veszprim county, south-east of (Edenburg, also Badacsonyer, grown in the same district, on the mountain slopes bordering the Plattensee, and Nesmélyer. The samples of the first well-known wine were rather numerous, and generally good. Indeed, as a rule, Somlauer is a wine of very even quality. One specimen—a so-called dessert variety, fifty years old—and a couple of others of the vintage of 1834, showed its keeping powers to good advantage. Still, it was best represented by younger growths, partly because of late years the Hungarian wines have been better made than they were a quarter of a century ago, but chiefly because no wine worth anything will keep half a century and be improved thereby. Connoisseurs pretend to admire the almost nauseous bitter flavour often acquired by very old Tokay simply because it is *de rigueur*, and not because they really believe the wine improved by it. Of the score or more of centenarian and semi-centenarian wines which I had the opportunity of tasting at Vienna, there was not one that would not have been superior on its twentieth birthday. On the whole, perhaps the Madeiras carried their weight of years best of all, but this was owing to the amount of adventitious spirit which at one time or another had been administered to them. While on the subject of old wines I may incidentally mention that the most antiquated sample in the Hungarian collection was a Keszthely-Tomajer of 1796. The Somlauer which secured the medal was a comparative juvenile, of vintage 1863, and its exhibitor was Count Erdödy of Doba. In taste it was very like a fine Chablis, not even the congenite *pierre à fusil* flavour being wanting.

There were several collections of Badacsonyer, showing the wine at its best, one of the older samples, as was the case with scores of other wines, being of the famous comet vintage of 1811. It was, however, in the specimens from the cellars of the Bishop of Veszprim that this wine was to be studied to most advantage. In these it was presented sweet and dry, and in the Essenz and Ausbruch forms, and from the Furmint, Muscat, Picolit, and other grapes. A medal for progress was, of course, assigned to the Bishop, who also exhibited some fine Somlauer of 1857 vintage, just the very age to be sufficiently matured, and at the same time to have preserved all its vinous qualities. The ordinary samples of Badacsonyer rank merely with third-class Rhine wines. The specimens of Nesmélyer were very few, and of these the majority were exceedingly acidulous, while the one or two of superior quality had the flinty flavour, prevalent in most of the common white wines, very decidedly developed.

The Pressburg wines, as a rule, were of a very ordinary character, excepting, of course, the white St. Georger. Certain other white varieties were delicate and pleasant, more especially one from the Riesling grape, which secured a medal for merit. Werschetz, situated south of Temesvar, and in the Servian Woiwodship and Banat, and claiming to be the largest wine-producing district in the Austrian dominions, its vineyards yielding in favourable seasons upwards of twelve millions of gallons of wine, sent several scores of samples of its highly spirituous, but not otherwise remarkable growths. The mildest were the white wines made from the red Steinschiller, or "little fleshy grape," as it is termed in Werschetzer vernacular. Some red varieties of a fine ruby colour, and, what is most unusual, with a pleasant bouquet, were from the Kadárka, or so-called "noble blue Hungarian grape," which requires the full heat of a Hungarian summer to attain perfect ripeness, and, excepting the Furmint, is the only grape the berries of which will attain the requisite degree of dryness on the vine suitable for Ausbruch wines. Weisskirchen, which lies still more to the south, and about ten miles from the Danube below Belgrade, sent wines very similar in character, more than half being from the favourite Steinschiller or the Kadárka grape, and comprising among them numerous Ausstich wines.

Most of the wine-producing districts of Hungary contributed samples of Muscats, and many of their other growths had evidently been flavoured with this grape, which appears to be regarded with considerable favour, possibly by reason of its perfume, which is the one essential in which Hungarian wines are ordinarily deficient. A few of the principal districts also sent samples of Vermuth, which is a Hungarian as well as an Italian speciality, made, however, by steeping spices and worm-wood in fine old wine, which is then held to possess peculiar medicinal virtues.

The Croatian and Slavonian wines formed a group by themselves, their exhibitors determining that they should neither form part of the Austrian collection nor yet be included among the wines of Hungary. There were eighty samples, and the catalogue was rather liberal in its commendations of Croat and Slavok wine-growers, who were described of energetic and inquiring dispositions, and as making their wines on rational and intelligent principles. Since the exhibition of Croatian wines at Agram in 1864, when nearly all the white varieties, excepting such as were purely sweet, were condemned by Baron von Babo in his report to the Austrian Government as being either so much vinegar, or having a disagreeable musty flavour, the Croatians

must have greatly improved their system of vinification or been more careful in their selection of samples, for many of the wines sent to Vienna had considerable merit of their kind. Some red wines made from the blue Cinamon or red Portuguese grape were almost equal to the Hungarian, notably the samples of Vukovárer of 1862 and 1868, for which and for a Riesling auslese Count Carl Eltz obtained a medal for progress, and the Belec wine of Baron Rukavina, for which a medal for merit was given. These wines were intensely deep in colour, and more or less fine in flavour, but were deficient, like nearly all southern wines are, in bouquet. A medal for merit was also given to Prince Odescalchi for some well-preserved samples of Sirmier and Sliwowitz white wines, and several exhibitors of Schillerwein, or wine of half colour, arising from red and white grapes being pressed at the same time, had honourable mention made of them, one for a sample of the vintage of 1839, which showed plainly enough that Croatian wines when properly made will keep for thirty-three years without becoming either musty or sour.

The white wines were either very sweet and marrowy or very thin and sour, many of the latter having much of the sharpness of an unripe apple. This arose from the species of grape employed, the large berries of which ripening very late are gathered before the proper time. The thinness of these wines is attributable to the same cause, the amount of water which the grapes contain not having been reduced by evaporation. As a further consequence the wines contain only a small quantity of alcohol.

The Hungarian wines, though sufficiently generous, are by no means of a highly spirituous character. Tokay, for instance, only contains from 20 to 25 per cent. of proof spirit, Ruster not more than 20, Bakator about 22, Somlauer from 22 to 24, and Nesmélyer only 21. With regard to the red varieties, Méneser averages from 23 to 24, although at times it contains as much as 28 per cent., Karlowitzer ordinarily indicates from 24° to 25°, Erlauer about 24°, Szegszárder scarcely more than 20, and Ofner rather less, indicating, as it frequently does, no more than 18° of proof spirit. The practice of heating young wines up to a temperature of 130° Fahrenheit, according to the system of M. Pasteur, prevails to a considerable extent in Hungary, where it is carried out on a large scale and with complete success, the result being the maturing of ordinary wines without their having to rest three or four years in the wood.

III.—The Wines of Transylvania.

Admirable representative collection of the Wines of the province—Bakator at its best—Rózsamáler and Kokelbürger—Som, or Sombor, an exquisite White Wine—Leánykas, Rieslings, and Muscats—Máslás and Traminer—Still Champagne—Experiments with French wines—Sauternes and Cabernet—Other Transylvanian Wines—Principal Vineyards of Transylvania—Alcoholic strength of Transylvanian Wines—Experiences of an English wine-grower—Vineyard area of the kingdom of Hungary—Production and exports—Exhibitors and rewards at Vienna.

THE collection of Transylvanian wines differed from every other. It was select, and had been judiciously limited, still it included samples of the commonest as well as the best varieties, and indicated in fact precisely what an exhibition of wines really should be. From the 118 samples contributed exclusively by the landed proprietors of the province a far better idea was procured of the wines of Transylvania than was gained of those of Hungary from more than ten times that number, with all the less interesting growths repeated *ad infinitum*, drowning as it were the more remarkable varieties. In the one instance the wines were tasted with satisfaction and judged with care; in the other the tasting was found so irksome, and apparently interminable, that much of it was left to paid experts. Exception was of course made with the choice collections from Tokay and all the other higher class growths, but the jury generally felt nothing was to be gained by devoting day after day to hundreds of crude and inferior wines, all with a strong family resemblance, and the commonplace character of which was perceptible the moment the glass was raised to the lips.

The three most important exhibitors in the Transylvanian section were Count Emerich Mikó, the Transylvanian Wine Company of Klausenberg, and Mr. John Paget, an English gentleman settled for many years past in Transylvania, and author of a well-known book of travels in Hungary. Count Mikó exhibited seven samples of the ordinary table wine of the district grown in one or other of his various vineyards, of which the first, from Oláh Szilvás and 46 years old, testified to the keeping powers of the commoner wines of Transylvania. There was a second *tischwein* in its fortieth year, with a Tasnáder Bakator of the same vintage, the latter, a fine dry pale colour wine, surpassed, however, both in flavour and vinosity by one of the year 1848, which analysis had shown to contain 25 per cent. of proof spirit. These admirable wines derive their name from the species of grape whence they are produced—namely, the famous *bacca d'oro*, imported into Transylvania from Italy centuries since. The count's collection comprised in addition some rich Ausbruchen, the must of which

had flowed without pressure from the fully-ripened grapes, with a wine made from the Furmint, the dominant grape, as already mentioned, in the Tokay Hegyalja. For the fine character of these and other samples Count Mikó was awarded a medal for progress.

The Transylvanian Wine Company's collection was principally remarkable, first for its Rózsamáler ausbruch of 1834, grown in the vineyards of the Bishop of Karlsburg, a magnificent wine of remarkably high flavour, and with a slight bouquet, priced at 3s. 8d. the bottle; next for its series of Kokelbürger, clear golden-tinted wines not in the least degree sweet, and yet not precisely dry, with more body than the average growths of the Rhine and occasionally exhaling a pleasant aroma. These wines ranged from 1s. 6d. to 3s. per bottle according to age. Indeed, 3s. per bottle seemed to be the average price for wines of the highest class, and 10d. per bottle for ordinary table wines. These are of course the prices at Klausenberg, and include the expense of bottling. The collection further included samples of Bakator and Riesling, and wines from the Furmint and Clevener grapes; also a remarkably fine wine known as Som, or Sombor, not to be confounded with the Hungarian Somlauer, to which it is immensely superior. The best sample of this particular wine was forwarded by Herr von Gerondi, and was exquisitely soft and refined in flavour, of a tender straw colour, clear as crystal, and with a delicate bouquet. Altogether it was one of the most beautiful wines in the Transylvanian section, and secured a medal for merit for its exhibitor. The samples contributed by Mr. Paget from his Szökefalva vineyards comprised Leánykas and Rieslings, including a Welsch Riesling of 1869, which had been heated according to Pasteur's principle and had acquired all the characteristics of a fully-matured wine; also a Muscat Croquant of 1866, dry and delicate and with ample bouquet. The Muscats, by the way, were equally prevalent in the Transylvanian as in the Hungarian section. Among the other wines were Máslás, light and clean tasting; Traminer, equal to the best growths of the Palatinate; a still white wine of considerable flavour and delicacy from the Champagne grape; a Sauternes that might have come from the Ciron valley in the Gironde, and beyond all a red wine of 1868, from the Cabernet grape, which rivalled some of the best growths of the Haut Médoc, possessing brilliant colour, bouquet, and *finesse*; combined with a trifle extra force, showing in fact 22 degrees of proof spirit, and which may be pronounced the finest red wine without exception which either Hungary or Transylvania has yet produced. The three last-named wines were all experiments

on the part of Mr. Paget, who was warmly congratulated on the highly-successful results which had attended his efforts.

For some samples of Tófalver Riesling of 1868 and 1869, exhibiting unusual softness and delicacy, a medal for merit was awarded to Baron Karl Apor, and the same medal was allotted to Count Banffy for some fine Tasnáder of 1863, to Count Bethlen for his Tasnáder Bakator, to F. von Földvály for some excellent Törökhegy, to Baron Kemény, a perfect enthusiast in favour of the Riesling grape, for the single sample exposed by him of his Csomborder Riesling, and to L. von Sámí for his Szödemeter Bakator of the year 1862. Of ten other exhibitors honourable mention was made. Besides the admirable wine exposed by Mr. Paget, the aggregate collection comprised merely a couple of other samples of red wines, neither of which was of a character calling for special notice. Red wines, indeed, are extremely rare in Transylvania and invariably of inferior quality, hence the importance of Mr. Paget's successful experiment with the Médoc grape.

As the Transylvanian rivers nearly all flow westward the hills naturally lie in the same direction, having one slope exposed to the vertical rays of the noonday sun, and consequently furnishing admirable sites for the cultivation of the vine. The best wines are grown, first, along the banks of the Little Kokel river, the vineyards of which produce strong, clear, aromatic wines, containing little or no tartaric acid; next, in the neighbourhood of Karlsburg, the wines of which are alcoholic, sub-acidulous, and of a rich golden tinge; also near the Great Kokel, where they are lighter in colour and less spirituous; and in the Hunyad and Upper Maros valleys, yielding wines that are at once powerful and deep-tinted; finally at Nyárád, near Maros-Vársáhely, and in the Mezőség, the wines of which are light and agreeable, those of the last-named locality also exhibiting a more decided bouquet than any of the other growths. The most extensive viticultural districts of Transylvania are those of Hermannstadt, Czilágy-Somlyó, Karlsburg, and Maros-Vársáhely, and the ordinary soil is sand and marl, more or less mixed with stony debris and shelly limestone. The average yield is at the rate of about 200 gallons per acre.

Transylvanian wines ought never to be drunk until their fourth year. Their alcoholic strength varies materially according as the season has been favourable or otherwise. In good years they show 21 degrees of proof spirit, and in special instances as many as 27 degrees.

This notice of the wines of Transylvania may be advantageously supplemented by a few extracts from a communication

with which Mr. Paget has recently favoured me. He writes—“I attribute the superiority of the Transylvanian white wines, which is now generally acknowledged by the Hungarians themselves, chiefly to climate and to our mode of cultivation. In Hungary the vines are, for the most part, pressed very close together in the rows, the rows themselves being scarcely more than a foot and a half to two feet apart; whereas in Transylvania the vines are planted at intervals of fully three feet, with the rows at the same distance from each other. The Hungarians, moreover, keep the vine-stumps reduced to six inches in height, leaving only that limited space for the bearing wood to proceed from. In Transylvania, where the long cut is adopted, the juices pass along a much greater extent of wood, and are probably better eliminated before they arrive at the fruit. With the Hungarian system the produce is greater, but the quality suffers. The climate of Hungary is, moreover, warmer, and although a hot climate yields a strong spirituous wine, it rarely produces one with great delicacy and bouquet. The month of October, too, is singularly fine in Transylvania, which is important, as it enables us to delay our vintage until the end of that month, or even till November. Another advantage arises from the landed proprietors of Transylvania attending more to the management of their estates and to their cultivating the vine, not alone for profit, but for the love of the thing, causing them to spare neither expense nor personal attention to bring it to perfection.

“Until within the last fifteen years, only the same descriptions of vines were cultivated as had been planted when the vine was first introduced into Transylvania. Since then, however, the vines of the Rhine, and especially the Riesling, the Welsch Riesling, and the Traminer, have been imported, and the plantations of them are now considerable. I was the first to introduce French vines. Hitherto Transylvania has had no red wines, and it was supposed red wines could not be produced. I, however, obtained from France, through the assistance of Dr. Guyot, cuttings of the best vines of the Gironde, which I planted in 1865, and three years afterwards produced about four pipes of the wine you so much admired at Vienna. As far as I can judge, it has all the finer qualities of the best Bordeaux, with more strength. Like every other Transylvanian wine in the Exhibition, it was free from the addition of spirit, or, indeed, of anything else beyond the pure juice of the grape. The Sauvignon and Semillon, the Sauternes vines, are less hardy, but promise equally well so far as the quality of their produce is concerned. I have hitherto hesitated to recommend the

cultivation of French vines, but the opinion of so many competent judges has removed any scruples I may have had, and now many others will plant them. I made a trial of the red and white Burgundy species, and also of the Champagne, but although the quality of the wine was good, the yield was very small. I suspect my vineyards are too warm for these vines, for they ripen there in September, whereas the Bordeaux grapes remain on the vines with the leaves green until the end of October.

“Formerly the management of our wines in the cellar was most miserable, and ten years ago there was not a man in Transylvania who knew how to prepare a cask of wine for bottling. In 1864 some twenty of the principal wine-growers formed a society, and their first step was to bring a cellarman from the Rhine—in fact, from Johannisberg itself—and to place the management of their private cellars, and soon afterwards of a common cellar, in his hands. This continued for some years, until the demand for our wines became so great that in 1870 we were obliged to form a company, and at the present time the home consumption is such that, owing to the small yield of recent years, our stock is well-nigh exhausted. A considerable portion of the wines sent to the Exhibition was from private cellars, the fact being that we presented ourselves at Vienna to show more what we could produce than what we actually had to sell.”

The published agricultural statistics of the kingdom of Hungary give the following as an approximate estimate of the vineyard area in the respective provinces:—

Hungary	719,320
Transylvania	66,839
Croatia and Slavonia	79,640
The military frontier with the Servian Woiwodship and Banat	71,107

936,906, producing 221,214,400 galls.

The exports of wine from Hungary during the year 1867 were 22,000,000 gallons, valued at £880,000. In 1869 they amounted to nearly 40,000,000 gallons, the value of which was nearly a million and a half sterling.

The total number of exhibitors of wine from the kingdom of Hungary was 253, and they contributed no less than 1,514 samples. The rewards allotted comprised a diploma of honour to the Agricultural Society of Klausenburg, 7 medals for progress, and 50 medals for merit, in addition to which 76 exhibitors had honourable mention made of their samples.

THE WINES OF RUSSIA.

The Wine districts of Russia and estimated production—White and red Wines of the Crimea and their more striking characteristics—Prevalence of the Tokay grape in the Crimean Vineyards—Wines of the Caucasus—The Kakhetian Wine of the Persian poets—Nauseous flavour of Wine preserved in goat-skins soaked in naphtha—Bessarabian table Wines—The Don sparkling Wines—Climate and soil of the Crimea—Great variety of Vines cultivated—The Wines of the Imperial Vineyard School of Margaratsch—Richness of the musts—Alcoholic strength of the Russian Wines—The Donski and Krimski Champagnes—General defects of viticulture and vinification—Rewards to exhibitors of Russian Wines.

THE wines of Russia were represented at Vienna in accordance with the principle pursued with regard to her other products, natural and manufactured—that is, not by a bewildering multitude of samples, but by a judicious selection of typical varieties from the different wine-producing districts. In Russia the vine is cultivated over a considerable surface of the entire southern portion of the empire, which, having regard to the character of the wines, may be divided into four principal regions—namely, Bessarabia with the adjacent provinces of Cherson and Podolia, the government of Taurida including the Crimea, the valley of the Don, and the Caucasus. Wine is further produced on the banks of the Volga, near Astrakan and Kisjlar, and also in Turkestan. The most northern limits of cultivation are Zymliansk on the Don and Kamena in Podolia within the 48th degree of north latitude.

In the government of Taurida the vine is principally planted on the south coast of the Crimea, and more especially around Yalta, the valleys of Alushta and Soudack, and in the neighbourhood of Feodosia, although inferior wines are produced along the western coast in the valleys of the Alma, Katscha, Belbek, Bulgarak, and Tschornaja. In Bessarabia the better species of vines are concentrated around Akerman and on the left bank of the Dnieper-Leman, also partially at Bender and a few spots in the neighbourhood of the Pruth. In the government of Cherson wine is more especially produced between Odessa and the mouth of the Jegorlük, while in the territory of the Don Cossacks almost all the vineyards lie on the hilly slopes on the right bank of the Don from Nischne-Tschirska down to the sea, the well-known Don Champagnes being produced in the Staniza Zimlanska in the centre of the Don vineyards. In North Caucasus the vine is cultivated on the banks of the Terek and Kouban, and at Mosdok in the Tersch territory. In South Caucasus or Georgia the vine is everywhere prevalent,

and especially in the government of Kutais, where one-third of the land under cultivation is planted with it. In the government of Baku vines are principally found in the district of Schemachinsk, whence the wine is sent to Astrakan. According to official calculations, which are believed, however, to be in excess of the actual facts, the total annual yield in imperial gallons is for Bessarabia 8,100,000, Cherson 1,026,000, Crimea 3,240,000, the banks of the Don 405,000, North Caucasus 8,910,000, and South Caucasus 22,680,000. From the remaining districts no returns have been published.

At Vienna the growths of the Crimea were principally represented by the collections of Prince Woronzoff from Yalta, of Senator Fundukley from Gursuf, of MM. Lansky and Wissman from the Soudack valley, and of the Margaratsch school of vine culture; those of the Caucasus being represented by the collections of Princes Andronikoff and Eristoff of Tiflis, and Prince Tschawerzawdse of Kuchetieu. From Novoi-Tscherkash on the banks of the Don, and Kischinoff on those of the Pruth, came samples of the wines of the country of the Don Cossacks and of Bessarabia, while Odessa supplied specimens from the government of Cherson, and Astrakan examples from the Volga.

Prince Woronzoff, who is the owner of numerous vineyards on the south coast of the Crimea at Alupka, Aydanil, Aydosmos, and Massandra, and with whom the cultivation of the grape with a view to wine is the object of particular attention, sent samples of both red and white wines produced from the Bordeaux, Sauternes, Riesling, Furmint, and dry and sweet Muscat grapes. Of these several varieties the *vins de dessert* were unquestionably the best, most of them possessing the moderate sweetness and almost the strength of good but comparatively new Tokay rather than the insipidity of the sweet wines of France. The samples from Senator Fundukley, M. Wissman, and the Government vineyard school from the same species of grapes mentioned above, included in addition some so-called Burgundies from the Pineau noir. The white wines, which were greatly in the majority, were with very few exceptions remarkably good. The Tokay flavour is recognisable in most of them, owing, no doubt, to the prevalence of the Furmint variety of vine in the Crimean vineyards, Potemkin having introduced the Hungarian grape into the Crimea from a delicate regard to the well-known tastes of the Empress Catherine II. Some so-called Madeira of vintage 1867 united to a slight sweetness that suppressed subacidulous flavour common to this wine when young, while a sample labelled Ichanmach wine proved alike dry, pungent, remarkably spirituous, and

aromatic. One of the best known among the ordinary white wines is from the Kokur or Kakurian grape, supposed to have been introduced by Genoese settlers when replanting the Crimean vineyards which the Tartar invaders had destroyed. The wine in question is pale, light, and dry, but possesses no particular character, and three qualities of it are produced at the Erhardt vineyard, costing from 2s. 3d. to 3s. 3d. per gallon on the spot. Several of the white wines were rather rich and captious, others being more delicate, and especially some samples from the Riesling grape. The latter exhibited, moreover, greater roundness and substance and less acidity than the ordinary Rhine growths, together with a fine flavour and so much individual character and *finesse* as to challenge comparison with some of the best wines exhibited. One sample especially, contributed by M. Wissman, was distinguished by its choice bouquet. Generally speaking it was exactly the reverse with the red wines, which, with certain occasional exceptions, notably some samples contributed by M. Lansky, were very inferior in quality, the majority having a decided *goût de terroir*, while those assuming to vie with the higher class Burgundy and Médoc growths proved to be very unsatisfactory attempts indeed in this unquestionably difficult direction. A sample from the Cabernet grape, the leading vine in the Médoc district, possessed a fulness of body and depth of colour utterly unknown among the growths of the Gironde. As a consequence it lacked delicacy and freshness of flavour, having that slightly sweet sub-bitter taste prevalent in full-bodied southern wines, besides being entirely devoid of bouquet. One peculiarity about the wine was that after the lapse of ten days from the time the cork was drawn it exhibited no appearance of flatness, and when diluted with an equal quantity of water still had the body and colour of an ordinary Bordeaux.

Some few among the generally coarse red wines of the Caucasus contributed by the trio of princes already enumerated, and half-a-dozen other exhibitors, and among which was included the Kakhetian wine, whose praises have been often sung by the Persian poets, were really remarkable alike for flavour, *finesse*, and highly-developed bouquet, whereas the white wines could only be classed among the poorest tasted. The vine, if not indigenous, at least grows wild in the Caucasus; and it is from grapes of the uncultivated vines that much of the Caucasian wine is made. The mountaineers of Schamyl had no very exquisite taste in the matter of wine, and the original method of preserving it in goat-skins, with the hairy side inwards, is still universally followed. To prevent the hair coming off and mixing with the wine, which,

to a copious drinker, might involve some danger of choking, the skins are soaked beforehand in naphtha, which, as may be supposed, altogether destroys the flavour of the wine, although without entirely overcoming its strong natural bouquet.

The Bessarabian samples were simply described as table wines, and so regarded were good enough of their kind. The few from the Don were of an average character, and some red and white sparkling varieties, exhibited by M. Serbinoff of Tscherkash, near the mouth of this river, were considered deserving of honourable mention. The Crimean wines, however, carried off the larger share of rewards, the imperial establishment receiving a diploma of honour, while a medal for progress was given to M. Lansky for his excellent growths, and seven medals for merit were distributed among other exhibitors, including Prince Woronzoff and M. Wissman.

The climate of the Crimea varies considerably. The southern region is protected from cold winds by the Yaila mountains, and its high temperature and lias schist subsoil exercise a marked influence upon the character of the wines, which assimilate in a measure to those of Southern Europe. In other parts of the peninsula the vines are planted in a rich alluvial soil, the yield from those in the Soudack valley being very great from the system pursued of laying the vineyards under water twice every year. The gain in quantity, however, is counterbalanced by largely depreciated quality; still the wines are of a good average character, and being less spirituous than superior growths are better adapted to ordinary consumption.

The vineyards of the Crimea are remarkable for the numerous varieties of vine cultivated in them. Indeed, almost every known species, including Asiatic and American growths, may be found scattered through the province. Those who had to do with their original planting and acclimatising appear not to have studied which kind were best suited to the climate and soil of the district, and subsequent comers neglected to abandon the unfruitful ones for those likely to yield an abundant vintage. The consequence is that the Crimean vineyards present the aspect of experimental fields planted without arrangement, and in a fashion by no means calculated to enrich their owners. The new wine-growers who settle in the Crimea follow in the beaten track, and lose both time and money by so doing. Although the nature and object of the Government vineyard school at Margaratsch may not admit of limiting the classes of vines cultivated to any precise number, it would nevertheless be desirable for its conductors to concentrate their efforts on those varieties which are best adapted to Crimean growth.

Until the year 1868 wine was made in the school from all kinds of grape, but at that epoch the direction recognising the sterility of many of its experiments, and desirous more especially of favouring commerce, resolved to make fewer kinds of wine, but at the same time to make considerably more wine. The expectations that were formed were not realised, however, owing to the old vineyards being suffered to remain in their original disorder and confusion, leading to the must of many various kinds of grape being mingled together to form one wine. It was decided, therefore, that the vineyards should be replanted more systematically.

This mingling of varieties necessarily exercises considerable influence on the nature of the product. The wines termed Pinot blanc and Franc-Pinot, or Pineau—in other words, white and red Burgundies—were made of no less than sixteen and thirteen different kinds of grape, including even the Oporto blanc and the Muscat noir, while the wine known as Bordeaux was composed of eight varieties. As every year the respective proportions varied greatly, it was a matter of impossibility to produce a wine with a known distinctive character. Among other experiments made at the school were the weighing of the produce from different species of vine, and examining the quality of their respective musts. These furnished some curious results deserving of being placed on record here. The weights as given below show that the quantity of grapes yielded by a thousand vines of each species varied exceedingly. For instance, Muscat noir gave 1,148 lbs., Sapperavy (a red variety from the Caucasus) 1,027 lbs., Muscat blanc 1,025 lbs., Pinot blanc 1,010 lbs., Madeira 894 lbs., Muscat rose 889 lbs., Albillo castilar 835 lbs., Oporto blanc 724 lbs., Pinot gris 513 lbs., Riesling 506 lbs., Traminer 461 lbs., Bordeaux 452 lbs. The saccharine element was found to exist in the following proportions:—Red grapes—Sapperavy 29·4 per cent., Bordeaux 26·5, Pinot noir 24·53, Plant doré 24, Malbec 17·6. White grapes—Sauternes 39 per cent., Oporto blanc 37·8, Pinot blanc 34, Riesling 27, Madeira 26·5, Traminer 24·5, Albillo castilar 18·2. The sweet grapes gave the following results:—Muscat rose 42·4 per cent., Muscat noir 27·6, Pinot gris 26·5, Muscat blanc 24.

From the foregoing it will be seen how exceedingly rich the Crimean musts are in sugar, only two out of sixteen varieties yielding less than 20 per cent. The quantity of acid was ordinarily from four to six per cent., although the Riesling must showed nearly seven, the white Muscat more than seven, and the Malbec as much as 9·15. Of all the examined red varieties the Caucasus grape, the Sapperavy, passed most successfully through

the test. It occupies the second place on the list as regards the quantity of fruit produced, and the first place with reference to the amount of the saccharine element, which exists, moreover, in due proportion to the acid it contains. The wine is said to be much less spirituous than the foregoing constituents would lead one to suppose, while its colour is so dense that dyers are in the habit of making use of the juice. The experiments further showed that of the white varieties the Pinot blanc was one of the most advantageous to cultivate, that the Bordeaux and Riesling grapes yielded the smallest quantity of wine, and, what is certainly an unfortunate drawback, that most of the wines were too sweet to form agreeable table wines. Their prices on the spot ranged from 1s. 6d. to 7s. the bottle, Riesling being sold at the lower rate and Muscat at the higher one.

Numerous analyses of Russian wines, made at the Imperial vineyard school of Margaratsch, give the following as their alcoholic strength in degrees of proof spirit. With respect to those of the Crimea, the red wines of the south coast range from $18\frac{3}{4}$ to 27, the white varieties, which commence as low as 16—although 18 appears to be the average strength of the weaker kinds—going up to $28\frac{1}{2}$, and the dessert wines to 29. The red wines of the Soudack valley range from 18 to 21, an exceptional Burgundy showing, however, $24\frac{1}{2}$ degrees, while the white vary from 17 to $25\frac{1}{2}$, and the Muscats indicate 28. The Bessarabian red wines range from $14\frac{1}{3}$ to 23, the white from $14\frac{2}{3}$ to $21\frac{3}{4}$, and the red wines of the Don from 19 to $25\frac{3}{4}$, the sparkling varieties averaging $15\frac{1}{2}$. Of the Caucasus red wines the least spirituous show merely $13\frac{1}{2}$, the more generous indicating 26, while the white wines range from $18\frac{3}{4}$ to 25.

A friend who has an intimate knowledge of Russia informs me that although good specimens of Crimean wines may every now and then find their way to International Exhibitions, it is certain that Russian wines are not esteemed by the Russians themselves, while outside Russia they are absolutely unknown. The Donski Champagne, or effervescing wine of the Don, and the Krimski Champagne, or effervescing wine of the Crimea, are both quoted in the wine lists of the St. Petersburg and Moscow restaurants, and are frequently offered in lieu of genuine Champagne at private entertainments. Without being equal to the best or second best growths of the Marne, they are superior to much of the Champagne sold to travellers at the hotels of Rheims, Chalons, and Epernay. In Russia it is the fashion to speak of them contemptuously, almost as one speaks of gooseberry champagne in England, but the Champagnes of the Don and the Crimea are genuine wines, and though somewhat sweet

may be drunk with satisfaction, and in moderate quantities with impunity. It has been alleged against the Russian wines, as a proof of their essential inferiority, that it is difficult to get rid of them, except as effervescing beverages, while such as are sold under the form of still wines are generally palmed off as of foreign production. On the other hand, it is pointed out that the wines of Southern Russia have not yet had a fair chance, that the climate, soil, and many of the varieties of grape cultivated, above all in the Crimea, are excellent, but that what is required to make it a successful wine-growing region are the co-operation and superintendence of a certain number of experienced men from the vineyards of France and Germany. As a general rule, not only are the Russian vineyards very indifferently attended to, but the wine itself is far from being well made. No regard whatever is paid to its keeping qualities, the practice in the majority of instances being to sell the wine when quite new, owing to few of the growers possessing cellars for storing it.

At Vienna there were 28 exhibitors of the wines of Russia, contributing among them 109 samples. The awards comprised a diploma of honour, a medal for progress, seven medals for merit, and honourable mention in four instances.

THE WINES OF PORTUGAL.

I.—*The Wines of the Douro.*

Port Wine as known in England—Its deficiency in *finesse*, freshness, and delicacy of flavour—Wines from the Alto-Douro—The historical grand vintages preserved by adventitious spirit—Character of the Wines from the Douro and Oporto districts—Geropiga—The Douro Vineyards; soil and variety of Vines cultivated—Annual production—Good and bad Vintages—Imports of Port Wine into Great Britain—Steady increase in the consumption—Persistence in the practice of fortifying Port Wine with raw spirit—Official report to the Portuguese Government on the subject—Natural Ports—Opinions of a large grower on the future of Port Wine—Injurious effects of Port Wine as now manufactured upon the health of the consumer—Port Wine extensively imitated.

THE wines of Portugal and Spain were both tasted in one of the galleries of the Western Agricultural Hall, sheltered it is true from a burning sun, but with the temperature far too close and heated for wine of any description to be exposed to its influence with impunity. The alcoholic strength, however, natural and acquired, of the wines of the Peninsula enabled the majority of them to undergo the ordeal. Some had certainly suffered, either from the journey or the heat, and several of the lighter wines which had not turned sour had acquired a confirmed bitter flavour through the latter circumstance.

I anticipated, thoughtlessly enough, when assisting at the tasting of the wines of Portugal, that merely its natural wines would have been submitted to the jury, and that we should find the highly alcoholised fluid consumed in England under the name of Port unrepresented at Vienna. I was, however, speedily undeceived, and while engaged in studying some occasional samples of the fresh, exhilarating, although somewhat harsh natural wines of the Tagus and the Douro, was continually having my attention directed by the Portuguese Commissioner to certain powerfully-fortified and comparatively new wines which, with the view of securing my admiration for them, he would approvingly inform me were Ports of the particular character approved by my fellow-countrymen. Unfortunately Port, as we know it in England, is at its best a dull heady wine, depth of colour and a certain fulness and roundness being its principal merits, for its bouquet, in lieu of the fragrance of fruit or flowers, has too often an odour of ardent spirits, while its warmest admirers would never claim for it either raciness or freshness of taste. It is, moreover, especially deficient in *finesse*, is altogether lacking those subtle gradations and that refined harmony of

flavour, that combined freshness and softness, which distinguish the grand *crús* of the Haut Médoc; added to which, unlike those unique wines, it leaves neither the head cool nor the tongue fresh.

The newer Douro wines were from time to time agreeably varied by some venerable samples of the historical grand vintages. For instance, Doña A. A. Ferreira, of Villa Nova de Gaia, sent Ports of the years 1815, 1820, 1834, 1840, and 1847, the majority of which had preserved their colour, while all retained abundant vinosity, but whether this was not exclusively due to added alcohol was more than doubtful. The 1840 wine, untamed by keeping, even after a lapse of 33 years, was still unpleasantly "hot i' the mouth," conveying the impression of its having been largely fortified in the days of its youth. No price was put upon the 1815 wine, but the vintages of 1820, '34, '40, and '47 were quoted respectively at the moderate rate of 20, 18, 15, and 12 francs the bottle. Merely honourable mention was made of this collection on account of the quantity of adventitious spirit which the wines were believed to contain. The same scant meed of recognition, and for a similar reason, was accorded to Senhor J. Pessanha, of Villa Real, and to Moura and Co., of Oporto, for their sets of samples, comprising the best vintages from 1815 to 1858, and all from within the charmed circle on the Alto-Douro beyond which it was pretended for the best part of a century that fine wine could not be produced.

On the other hand, the Company for the cultivation of the vineyards of the Alto-Douro and Almeida Brothers, of Oporto, had medals for progress assigned to them for their collections of wines, while for samples of Port of the years 1830 and 1836 Doña E. C. Da Viegá received a medal for merit. Similar medals were likewise given to Senhor C. F. à d'Almeida, of Villa Real, to Weisse Dahl and Co., and to Senhor A. A. Silva, both of Oporto, and the last-named a gold medallist at the Exhibition there. These wines were beautifully limpid, slightly astringent, and occasionally sweet. Now and then sweetness was combined with a slight sharpness and a quinquina-like flavour and perfume. One or two white varieties were amber-coloured, spirituous, more or less sweet, and sub-acidulous.

There was a fair representation of the general wines of the Douro, certain of them being deep in colour, soft, generous, and full-bodied, and altogether round, dry, clean tasting and aromatic, while others, thin, astringent, and less spirituous, had a marked acidulous freshness of flavour. Senhor J. M. Sampaio contributed some samples of these wines, and obtained a medal for merit, Senhor L. F. Mourão, who had received a gold medal at

Paris, being accorded only honourable mention at Vienna for the specimens exhibited by him, while the Count de Villa Pouca, a medallist of various local exhibitions, failed to obtain even this amount of recognition.

Half-a-score of exhibitors from Penafiel in the Oporto district contributed samples of last year's wines, the white varieties generally thin and light, while the red were a little harsh and rough, and altogether less full and fruity than the Douro wines ordinarily are, yet fine in colour and of considerable alcoholic strength, due in some degree to the adventitious spirit administered to enable them to travel. Many of these wines, the *vinhos de mesa*, or table wines of the district, and in which a decided flavour of Port is discernible, command on the spot no more than £4 per pipe. Honourable mention was made of merely a single Penafiel exhibitor, and this for a sample of red wine of 1868 vintage.

There were several samples of Geropiga, a kind of liqueur with a certain affinity to the Spanish Dulce and the French Rogomme, and, as is well known, much in request for giving character to low-class Ports, besides being exported in considerable quantities to America. When of good quality it is composed of two-thirds or more of unfermented grape juice, and one-third or less of brandy overproof distilled from Port wine. In some varieties of Geropiga the grape juice undergoes a partial fermentation, which is checked at its height by the addition of spirit. But, however made, it is commonly deepened in colour with elderberry extract, after which it is highly sweetened with sugar. This liqueur, for such it really is, costs on the spot about double the price of good average Port wine. There were both red and white varieties exhibited, some of the samples being very old and soft, whereas all were excessively sweet and more or less spirituous.

The Douro region producing the finest wines comprises the slopes of the mountains bordering the river of the same name in its course from the Spanish frontier to the province of Minho, and it is on the hilly banks of a tributary stream, named the Corgo, that the Port wine vineyards—the soil of which is extremely stony, due to the friability of the slaty schist rock of which the hills are formed—are principally situated. The vine is cultivated over an area of 76,314 acres, and the principal varieties of grape are the Alvarelhão, the Bastardo or Morillon, the Touriga, the Gouveio, and the Souzão, the latter yielding a wine deficient in bouquet and flavour, but extremely deep in colour. The Douro region is estimated to yield altogether rather more than 11,000,000 gallons of wine annually. Official

returns give the produce of the Villa Real district, which is understood to comprise all the finest vineyards, at 62,942 pipes, which would be equivalent simply to 7,238,330 gallons. Of these 6,067,526 gallons were exported. The estimated value *in loco* of new Villa Real wine, so recently as 1866, ranged from as low as 15,000 reis, equal to £3 6s. 6d., to 40,000 reis, or merely £8 18s. per pipe of 115 gallons for the finest growths, being a trifle over 1s. 6d. per gallon. On the other hand, the Portuguese official returns for 1870 estimate the average value of the Port wine exported to England in that year at 6s. 9d. per gallon.

Since 1840 there appears to have been a larger number of fine vintages on the Alto-Douro than in any other district producing first-class wines, as shown by the subjoined classification:—Very good, 1840, '47, '51, '53, '58, '60, '63, and '70. Good, 1842, '44, '46, '48, '50, '52, '54, '61, '62, '65, '67, and '68. Bad, 1841, '45, '55, '56, '57, '59, and '66. In 1872 the imports of Port wine into Great Britain were 4,018,113 gallons, exhibiting an increase of no less than 36 per cent. within the short space of four years. In the same year the consumption amounted to 3,298,015 gallons, being 103,000 gallons in excess of that for the year 1871. There was a further increase in 1873, when 3,474,369 gallons of Portuguese wine were consumed, and again in 1874, when the consumption rose to 3,626,683 gallons, equal to 21 per cent. of the entire wine consumption of Great Britain.

Judging from the numerous samples of the higher class Ports of recent vintages which came under the notice of the Vienna jury, and to which I paid especial attention, I am convinced the fortifying of these wines is carried on to the same extent as formerly, partly possibly because it is a kind of tradition with the growers and shippers that a high spirituous quality is looked for in Ports by foreigners generally, partly to disguise the extreme roughness of the inferior vintages, but mainly to make up for a clumsy mode of vinification, and to render the wine quickly marketable. Fermentation is more or less checked by the addition of sulphur, so as to retain the saccharine (which would otherwise become converted into alcohol), and give a so-called fruity character to the wine. Extraneous alcohol has now to be added, otherwise the wine would have to be kept for two or three years before it could be shipped with safety, instead of merely a few months, as is the case at present. It has been satisfactorily proved that Port wine if sufficiently fermented will not only travel, but will keep as long as most natural wines will keep without deteriorating—namely, 16 or 17 years—and yet we find the reports of unbiassed observers of some years ago, which

agreed in stating that all wine destined for exportation was largely fortified, confirmed at the present day by the wines themselves. Mr. Bernard, who visited the Alto-Douro district for the British Government, estimated the amount of spirit ordinarily added to Port wine at 22 per cent., or a trifle more than 25 gallons per pipe. Barcn Forrester, who was himself a grower, estimated it rather higher—namely, 26 gallons of spirit several degrees overproof; while Mr. Johnstone, of the testing department of H.M. Customs, considered 49 gallons of adventitious proof spirit per pipe to be nearer the standard of the Port wine ordinarily imported into England. One significant fact to which attention cannot be called too often is that less than 10 years ago Portugal, which is not a dram-drinking nation, took upwards of 1,600,000 gallons of British spirits. It is true that it does so no longer, but simply because Prussia, where it markets to-day, furnishes it with a cheaper article distilled from potatoes and beetroot. It is notorious, moreover, that spirit of the same low class is extensively used in England to fortify Port wine in bond.*

Analyses made for the Portuguese Government showed the alcoholic strength of the partially-fortified high-class Villa Real wines to vary from 20 to 32° of proof spirit, whereas the strength of what are termed the "Commercial" wines—thanks to the analysers for teaching us that word—of the Company for the cultivation of the vineyards of the Alto-Douro commenced as low as 36°, and ascended as high as 40. Further, if more precise proof is needed of the continuance of the system of fortifying Port wine by the Douro wine-growers, the comparatively recent report of the Viscount de Villa Maior to the Portuguese Government will provide it. *Apropos* of wines of the very highest class, he tells us that in the commune of Villa Real all wine intended for shipment has from 8 to 30 gallons of proof spirit per pipe added to it, either all at once when it is newly vatted, or else in small quantities at regular intervals. At Alijó it is the practice to add from 10 to 15 gallons of spirit, and at Regua from 14 to 33 gallons; wine for home consumption receiving but a quarter of this quantity. At Sebroza equivalent to from 4 to 45 gallons of proof spirit are added according as it is intended to produce a sweet, dry, or geropiga class of wine, whilst at Murça the amount of adventitious spirit ranges from 15 to 30 gallons. The viscount explains that inferior class wine when intended for export is invariably 20 per cent. dearer,

* The Customs returns give the total number of "operations," as fortifying of wine in the docks is delicately termed, at 870 for the year 1872.

owing to the cost of the spirit with which it has to be fortified. One hopeful circumstance for the future of Port wine is that he forewarns the Douro wine-growers of a change in public taste, and points out that to-day light wines are required in preference to those of a highly alcoholic nature; and he urges on them the abandonment of the practice of extensively drugging their lighter wines to give them a fictitious character, insisting that they should strive to make wines that will keep without the addition of alcohol, and which can be shipped in a natural condition. He evidently is no believer in the stale pretence that Port wine when well made requires dosing with spirit to enable it to travel.*

Unfortunately the Douro wine-growers have adopted vines the fruit of which imparts depth of colour and body to the sacrifice of *finesse*, and yields an amount of tannic acid requiring considerable age for the thorough development of the wine. If a preference were only given to that class of vines the produce of which is distinguished for *finesse*, there would be no reason whatever why the Douro growths, with the manifest advantages of climate which Portugal possesses, should not rival the grand wines of the Gironde. This, however, is scarcely likely to happen while so large a market is found for her fortified products. Moreover, the Douro wine-grower is too indolent, too slow of apprehension, and too short-sighted to look beyond the immediate present.

The merits of natural Port wines even under existing conditions were strikingly manifest in the samples exhibited at the Albert Hall last year, and connoisseurs of pure wines will remember with pleasure the interesting specimens contributed from the Douro vineyards of Messrs. D. M. Feuerheerd and Co. These wines, free from added alcohol, were distinguished by their deep and brilliant colour, their volume, and their remarkable vinosity. Some of them exhibited as many as 27° of proof spirit, proving the utter absurdity of dosing Port wine with alcohol. A few years had sufficed to subdue their youthful harshness, to give them a fine high vinous flavour, and to develop the highly-prized violet bouquet, which only wines of undeniable character ever evolve.

One whose knowledge and experience entitles him to speak with authority on the subject of pure *versus* fortified wines, and more especially of the wines of Portugal, writes to me as follows:—"To my mind it is perfectly certain that the fortified Port which is now drunk will in due time disappear altogether

* Memoria sobre os Processos de Vinificação empregados nos principaes Centros Vinhateiros do Continente do Reino. Lisbon, 1867.

from consumption, and that unless a reformation takes place in the system of vinification pursued, the Douro will be as completely ruined as were the grape-producing districts of Lisbon, the wines of which were beaten out of the field by Sherries, at that time much less brandied than they are now.

"The British wine-merchant and the ignorant consumer are at the bottom of all the mischief. They demand a fruity young Port for bottling in the fond hope that after 20 years the wine will have become dry in bottle. *Pas du tout*. After 20 years it remains just as sweet if the shipper has added enough brandy, otherwise it will be *vinaigre*. Or they ask for a cheap dry Sherry like Amontillado, say at £25 the butt. How is it possible for this to be old wine? And if young it cannot have any similarity to Amontillado without the addition of a considerable amount of raw spirit. The British wine-merchants are to blame for all the corrupt practices pursued in the sophistication of wine; they sin from their arrogant ignorance of what young wine really ought to be, and how it should be treated after it comes into their possession."

All wine made from ripe grapes, the must of which is imperfectly fermented, as is the case with Port, retains an excess of saccharine, and when consumed as a general beverage is necessarily detrimental to health; whereas in a well-made wine, unless this is professedly a sweet one, all the sugar from the grapes becomes at once converted into alcohol, thereby enabling the wine to keep, and, what is of far more consequence, rendering it wholesome. Any extraneous spirit added to the wine for the purpose of checking the fermentation, and enabling it to travel when perfectly new, simply enhances the injurious dietetic effect, and, indeed, it is this combination of sugar and alcohol which, according to the gentlemen of the faculty, induces gout in habitual drinkers of Port wine.

No wine is imitated so extensively as Port. It came out in evidence 20 years ago that the average quantity annually exported to this country was 20,000 pipes, while the annual consumption amounted to no less than 60,000 pipes. And in the inquiry before the Parliamentary Committee respecting the import duties on wine some startling disclosures were made *à propos* of counterfeit Ports, showing that certain kinds were concocted out of Cape wine, cyder, and brandy; others with common French, Spanish, and Sicilian wines, and a liberal admixture of raw spirit; others, again, from Spanish and Cape, or Spanish and Canary, with a moderate allowance of French and Portuguese wines and a copious supply of the all-necessary alcohol. White wines, such as Marsala and Canary, were added in moderate

quantities to give to the wine the approved tawny hue. These mixings were made in the London docks, the spurious Port being presumably for exportation, but it doubtless frequently found its way back again, and passed down the throats of the British public. One of the witnesses produced a book, evidently well known to those for whose benefit it was prepared, having gone through its four editions, called the Licensed Victualler's Guide, and which gave receipts, not only for the manufacture of spurious Ports, but for communicating a fine crusted appearance to the bottles, and imparting the requisite look of age to perfectly new corks.

Now-a-days spurious Port is produced on a large scale at Tarragona in Spain, which imports considerable quantities of dried elderberries presumably for deepening the colour of, if not for actually adulterating, the so-called "Spanish Reds." A couple of years ago I tasted scores of samples of fictitious Ports in every stage of early and intermediate development, rough, fruity, fiery, rounded, and tawny, in the cellars of some of the largest manufacturers at Cette, and saw some thousands of pipes of converted Roussillon wine lying ready for shipment to England and various northern countries as vintage Port.

II.—Ordinary Wines of Portugal.

Vins Verts of Braga and Vianna—Wines from the North—The growths of Traz-os-Montes—Red and White Wines vintaged south of the Douro—The highly-alcoholic Bairrada Wines—The dry Red Wines of Lavradio—The potent growths of Castello Branco and Cartaxo—Torres Vedras Wines and their goat-skin odour—The light and full-bodied, sweet and acidulous, and feeble and spirituous Wines of Lisbon—White and Red Bucellas—The fresh-tasting growths of Collares, and the spirituous White Wines of Carcavellos—Muscats of Azãeito—The Wines of Portalegre, Extremoz, Borba, Elvas, and Evora—Slovenly system of Vinification—The Villa Viçosa Wines—The naturally spirituous Wines of the extreme South—Alcoholic strength of Portuguese Wines—The Vineyards of Portugal, their area and produce—Total exports.

BRAGA, considerably north of Oporto, and at some distance from the sea-coast, sent an immense number of samples, comprising all the *consumos* of the surrounding districts, made from unripened grapes, the majority of which were cold, tart *vins verts*. Cabeceiras de Basto contributed one better class specimen of a ruby tint, dry and aromatic, reputed to travel well, and to keep a moderate time, which only a portion of the ordinary wines of Portugal will do, and for which the price on the spot was half-a-crown per gallon. Celorico de Basto, which was so completely ravaged by the oidium that its produce has now fallen to less

than one-sixth of what it formerly was, sent merely some *vins ordinaires*, which, for the purpose of local consumption, fetch as much as from £6 to £8 per pipe, and to which honourable mention was accorded. Viera likewise contributed mere *consumos* of an inferior quality, and capable of keeping only for a very short period even by the aid of added alcohol.

Honourable mention was made of one of six exhibitors from Barcellos, who, with a single exception, sent merely the common wines of the district, which, although poor in character, are bought up for export owing to the conveniences which exist for shipping them. Only the better-made wines will keep for as long as three years, and this, moreover, without at all improving. The wines from Espozende on the sea-coast were equally inferior in quality. Many of these weak Braga wines had suffered more or less from the journey or the heat.

From Vianna, still on the coast, and in a more northerly direction, came samples both of the better class and the ordinary wines of the district. They are mostly of low alcoholic strength, and will not keep beyond their second year. Generally they were acid, and some had turned actually sour; a few were of considerable body and good colour, but with scarcely any perfume, and all of them showed a tendency to deposit crusts. There were three varieties of Monsão wine—one of a fine ruby tint, with body, but somewhat astringent; a second the colour of dried rose-leaves, thin and rather tart; and a third of a golden hue, sweet, yet at the same time palpably acidulous.

The Villa Nova wines from the extreme northern point of Portugal possessed body and flavour, combined with a slight acidity. Formerly, the produce being considerable, these wines only commanded £1 per pipe, and were consequently principally distilled into brandy, but since the vine disease they have fetched as high as £10 to £12 per pipe for local consumption, owing to the difficulty and cost of transport in the out-of-the-way districts of Portugal. From Braganza, also on the northern frontier of the kingdom, there was simply a single exhibitor, whose samples of red wines, however, showed what the district was capable of producing, and met with honourable mention. Generally their colour was good, but they had no particular body, were more or less astringent, slightly sweet and acidulous at the same time, and possessed a faint aromatic bouquet. The Arcas and Lamalonga red wines were the best, due entirely to a more advanced method of vinification than is commonly in vogue in the upper part of the province of Traz-os-Montes. From the commune of Alfandega da Fé, where most of the wine is made with a mixture of red and white grapes, such as the

Gouveio, the Malvasia, the Conaifesto, and the Mouriseo, came some good *consumos*, ripe and full-flavoured. The white wines, both dry and sweet, were topaz-coloured, limpid, spirituous, and aromatic, one of the former being not unlike a dry Madeira. The samples from Villa Flor, in the southern portion of the same province, were of good ordinary quality, slightly tonical, yet agreeable in flavour. One here had the opportunity of judging between the natural, or almost natural, wine, and the highly-drugged compound, some of the Villa Flor specimens having been largely fortified and nursed into what were termed first-class wines for the purposes of export, but manifestly to their disadvantage.

Of the wines produced to the south of the Douro a considerable collection came from Vizeu, chiefly from the vineyards lying between the Mondego and the Dão, and more especially along the banks of those rivers. Some of the red varieties destined for home use were low in colour, *vinhos de maia cor*, as they are styled. Others were of a far deeper tint and possessed moderate body and some little perfume; several of them being dry and soft and even velvety. The Vizeu wines appear to have the rare merit of keeping for a considerable time, as was evidenced by the samples exhibited of the vintage of 1858. Of the white wines there was no older vintage than 1870. After being duly brandied the better class red varieties are frequently shipped as Douro wines to the Brazils and elsewhere. A medal for merit was awarded to the municipality of Vizeu for the complete collection of wines which it had sent, and a similar medal was given to Senhor J. Marques for his white and red wines of 1870 and 1872.

The Bairrada region, next in importance from a viticultural point of view to that of the Douro, was of course represented at Vienna. Although its wines are only of medium quality, being more or less harsh, the red varieties, often full-bodied, and always deep in colour, are largely exported as the genuine products of the Douro vineyards. Possessing, moreover, considerable alcoholic strength, and being heavily taxed on their way down the Mondego to Figueira, the port of shipment, they are subsequently diluted with water to increase their bulk—a proceeding which their high alcoholic strength admits of—and then mixed with the wines of Beira and other localities, one result of this process being that they will keep only half-a-dozen years and never improve in quality. The white wines as a rule keep rather better than the red.

Of the dry red Lavradio wines several were excellent, and one sweeter variety was most peculiar. It was stated to have been

made from the Morillon grape, and possessed a rich liqueur-like balsamic flavour which was both novel and captivating. Some samples from the vineyards of Seixal, Moita, Alcochete, &c., were less alcoholic than the wines of Bairrada, but equally deep in colour and more delicate and aromatic, while those from Coimbra, on the river Mondego, were thin, astringent, and tart, the more spiritous samples, from Guarda on the eastern slopes of the Estella mountains, being generally of the same thin, sharp, and coarse character. To some superior samples of the Coimbra wines exhibited by Senhor A. J. Almeida a medal for merit was allotted.

From immediately north of the Tagus we had quite a collection of the highly-potent red wines of Castello Branco, but only in two instances was honourable mention made of them, while from the vineyards in the district of Santarem came the equally potent wines of Cartaxo, for the high alcoholic strength of which the merchants who buy them up are said to be responsible. It is they who compel the growers to fortify their wines by exacting from them a thick, dark, spirituous and sweetish fluid, the taste for which they know to exist, and which they do their utmost to maintain instead of encouraging the growers in the production of wine of a pure and wholesome character. It is the same with the Arruda wines, the natural alcoholic strength of which never exceeds 12 per cent., whereas on their coming into the market this is invariably 16 per cent.—equivalent to 27° of proof spirit—and upwards. These latter wines were full-bodied and deep in colour, but with a very decided flavour of tartar, which neither time nor adventitious spirit seemed to have succeeded in obliterating. The Azambuja growths, dark, full-bodied, tart, and spirituous, were apparently of a purer type. Of a couple of these wines honourable mention was made.

The Torres Vedras wines, which have the reputation of being very varied in character, due, it is said, to the diversified nature of the soil, the aspect of the slopes, and the alluvial richness of the plains, were but indifferently represented. Several of them were a little crude, but with full vinous flavour; others were extremely soft, rather sweet, thin, and pale in colour—in fact altogether less robust, which was understood to have arisen from the grapes having been picked from their stalks before being pressed. All these wines, without exception, are fortified before they come even into the home market. The Torres Vedras vineyards yield annually over a million and a quarter gallons of wine, and two-thirds of the common wine drunk in Lisbon comes from this district, while much of the remainder passes under the name of Torres wine, being sold in goat-skins like the genuine

article to give it the desired although repulsive odour of the original.

The Calvel vineyard in the neighbourhood of Torres Vedras produces a wine of a reddish violet tint, which in a few years turns to ruby colour, when the wine acquires a balmy perfume, the piquancy of which increases with age. The mountain wines of Cadaval and Alemquer grown in the same district, though somewhat thin, were found to possess considerable flavour.

The exhibitors from Lisbon sent samples of the many different wines grown in the neighbourhood, including alike the light and the full-bodied, the sweet and the acidulous, the feeble and the spirituous. Two medals only were given for these wines, one to Senhor J. Brito, the other to Senhor A. P. Cardoso. First came those of the Olivaes district—so called from the olive trees growing there in such abundance—comprising the agreeable flavoured wines of Camarate, which keep well, and when old have a certain resemblance to natural Port, and the no less pleasant wines of Cadaval. Hence, too, came several varieties of Bucellas, the newer wines acidulous and somewhat frothy, the finer matured vintages clear and bright in colour, exceedingly soft, with a suave, delicate, sub-bitter taste, and a volatile and expansive bouquet. The red Bucellas wines which had been kept for a dozen years resembled the white in flavour and aroma, and even in colour. When new they have something of the character of a Bordeaux wine, with, however, a more decided sharpness of taste. Bucellas is produced from the Arinto grape, supposed to have a certain affinity with the Riesling, hence that fresh acidulous flavour which characterises the wine when young.

The wines from the Termo of Lisbon included those of Collares, light almost as the growths of the Gironde, and the finer samples combining moderate softness and delicacy with the same refreshing sub-acidity. These are the natural wines of Portugal, both red and white varieties of which were so highly extolled by the late Baron Forrester in his evidence before the Parliamentary Committee on the wine duties in 1852, and which he estimated at that epoch at from three-farthings to threepence the bottle. Unfortunately many of the present samples had been fortified in accordance with the prevailing Portuguese practice with respect to all wines destined to travel. Beside the Collares were some fine samples of the topaz-tinted, rich, muscat-flavoured, spirituous, and somewhat famous white wines of Carcavellos grown on the vineyard slopes near the mouth of the Tagus. The drier varieties, which were paler in colour and extremely soft, had a pleasant sub-acid flavour,

which was also developed in the red wines, although in combination with a certain astringency. Of the collection of these wines exhibited by Senhores P. Jorge and J. C. Santos, honourable mention was made.

From the left bank of the river came the wines of Setubal, including the famous Muscats of Azeitão, the younger samples of which were very sweet and at times a little bitter, while several of the older varieties of a rich topaz tint had acquired a perceptible ethereal bouquet. One rose-colour Muscat was especially nectarious-like and delicate in flavour. These wines were awarded a medal for merit. The remaining vineyards on the same bank of the river, notably those of Chamusca and Almeiria, produce only coarse, full-bodied, and highly alcoholic wines, which are almost exclusively distilled into brandy.

Portalegre, some distance south of the Tagus and on the Spanish frontier, sent several thin, astringent, and slightly spirituous wines, quoted at about eighteenpence per gallon on the spot, and consumed exclusively in the locality. The wines of Extremoz were darker in colour, less alcoholic, and had an unpleasant bitter flavour, which in some samples was positively repugnant. This evidently arose from a bad system of vinification and from the grapes being imperfectly ripened. The Borba and the Elvas red wines were less disagreeable, but as, like the majority of the Portuguese samples, they had been fortified, this may have subdued any decided unpleasantness of flavour. The white varieties were dry and often harsh when they were not bitter. The Evora wines, of which a considerable number of samples, both white and red, ranging from 1862 to 1872, were exposed, possessed more character, although many of them were evidently badly made; some of the red varieties being not only exceedingly thin and pale in colour, but acidulous to the point of positive sourness. Vinification is carried on in a slovenly fashion in this district; the grapes being carelessly gathered and not sufficiently pressed, in addition to which the must is fermented in large uncovered jars into which all kinds of refuse manages to penetrate. Owing to this, merely honourable mention was made of these wines. The Villa Viçosa wines, which are largely exported, were of good ordinary quality, while the samples from Redondo, Cuba, and Ferreira, also large wine-exporting districts, were generally of a more delicate character. The wines of Beja were unrepresented, but the specimens were numerous of the fine and naturally spirituous wines of Tavira, Olhão, Fuzeta, and Lagos, in the extreme south, which, less alcoholised than the Portuguese wines generally were, exhibited considerable *finesse*, combined with a very distinct character of their

own, being soft, dry, generous, and very slightly astringent, and possessing both fine colour and some little bouquet. Three medals for merit were awarded to Senhores T. A. Fonseca, F. C. Mata, M. Mendonca, and A. A. L. de Miranda, whose samples of these wines were of the very highest order.

Some few years ago a considerable number of samples of Portuguese wines were analysed at the Lisbon Agricultural Institute, under the authority of the Government, when their alcoholic strength, and other prominent qualities, were duly recorded. Unfortunately, however, the published tables do not specify which particular alcoholic scale was adopted, but assuming that the degrees indicated refer to pure alcohol, the percentage of proof spirit which the wines analysed respectively contained is given correctly below. It should be remarked that among the samples were a considerable number of so-called "commercial" wines, which had been largely fortified, and that it is by no means certain even a single specimen was entirely free from adventitious spirit. Wines of Braga, $11\frac{1}{4}$ to 18 per cent. of proof spirit; Braganza, $21\frac{1}{2}$ to $26\frac{3}{4}$; Vizeu, $21\frac{3}{4}$ to $31\frac{1}{4}$; Aveiro, 20 to 23; Coimbra, 16; Guarda, 21 to 27; Castello Branco, $25\frac{1}{3}$ to $32\frac{1}{3}$; Santerem, $24\frac{1}{2}$ to 30; Azambuja, $28\frac{3}{4}$; Torres Vedras, 30; Cintra, $18\frac{1}{2}$; Alemquer, 24; Lisbon, 32 to 33; Carcavellos, 35 to 41; Bucellas, $30\frac{1}{2}$ to $37\frac{3}{4}$; Setubal, 25 to 32, and its Muscat wines, 34; Portalegre, Extremoz, Borba, Evora, and Villa Viçosa, 23 to 26; Elvas, 32; and Faro, 26 to $27\frac{1}{2}$.

The vineyards of Portugal, excluding those of the Douro district, of which the area has been already stated, occupy a surface of 392,750 acres, and are estimated to yield on the average 100,000,000 gallons of wine, which, with the 11,000,000 gallons produced on the Douro, give a grand total of 111,000,000 gallons. The total exports, exclusive of Madeira, for the year 1870, amounted to 7,400,000 gallons, nearly three-fourths of which were fine wines, the gross value being estimated in official documents at £1,851,000. Upwards of three-quarters of the exports were to Great Britain.

III.—*The Wines of Madeira.*

Madeiras aged both naturally and artificially—Characteristics developed in the Wine by length of years—Interesting sample of the natural Wine—Its rich vinous flavour—Produce of the Madeira Vineyards since their replantation—Exports and value—Rewards to exhibitors of Portuguese Wines.

THE samples of Madeira were among the most remarkable of the Portuguese collection, and would have delighted the rare remaining connoisseurs of this once highly-prized wine. The exhibitors were all from Funchal, and the most matured samples were those contributed by Welch Brothers, who had gained a gold medal at Paris in 1867. Madeira is a wine which it is commonly said can never be drunk too old, and certainly the samples of the 1818 and 1828 vintages submitted by this firm did not appear to have passed their prime. Both of them, while retaining a certain fulness and vinosity, due in a measure to the alcohol which had certainly been administered to them in moderation in their youth, had developed that suppressed bitter flavour, and emitted that nutty aroma, characteristic of the matured wine. The samples exhibited by Sampaio and Co. were simply young wines, which had acquired some little mellowness, but evolved neither that diffusive perfume nor that sub-pungent flavour which Madeiras acquire only by length of years. The mellowness in question was very likely due to artificial means, as it is a common practice in the island to subject the young wines both to heat and motion, in place of sending them a voyage to the East or West Indies and back, with the view of more rapidly subduing their harsher qualities. These last-named wines were quoted in bulk as low as at the rate of four francs the bottle, and both firms had medals for merit awarded them; the one for its rare and venerable samples, the other for a good wine at a remarkably moderate price.

Doctor Pitta exhibited five different kinds of Madeira, including Boal of 1830, priced at 16 francs, and Serceal of 1836, priced at 18 francs the bottle, both dry wines, and the latter of high flavour and characteristic bouquet. In addition were two dry Madeiras of 1845 and 1850 vintages—both in perfect condition and possessing much of that magnificent flavour which distinguishes the fully-ripened wine—with a red wine of 1869, which, although agreeable enough, had a somewhat astringent taste.

The cream of the collection, however, was some natural Madeira exhibited by Baron da Conceição, a wine perfectly free from adventitious spirit, full, soft, and delicate, but with a

distinct rich vinous flavour, evidently derived from a partial admixture of the Malvasia grape, which, in conjunction with the Verdelho species, produces some of the finest wine. An excellent Madeira of 1869 vintage exposed by the Baron was quoted at £60 the pipe free on board. A medal for progress was given to this exhibitor as well as to Dr. Pitta.

After the Madeira vineyards were ravaged by the oidium in 1851-2 scarcely any wine was produced in the island for the next five years, most of the vines being rooted up and sugar-canes planted in their place. For 10 or 12 years past, however, the cultivation of the vine has been resumed, and the annual production shows a steady increase, although the present yield is merely a percentage of what it formerly was. In 1870 Madeira produced 6,000 pipes of wine of all kinds, equal to 552,000 gallons, of which it exported merely 95,300 gallons, valued at £72,500. Of this quantity nearly 70,000 gallons went to England. In 1872 the production had risen to 7,000 pipes, or 644,000 gallons, 98,198 gallons of which were imported into this country. In 1873, however, our imports fell to 85,632 gallons, and 79,353 gallons in 1874, whereas in the latter year the production rose to upwards of 10,000 pipes, an increase attributed to the grapes having only a single pip and a thin skin. This falling off in consumption is attributed to the high price of Madeiras in comparison with the cost of Sherries generally.

The 92 exhibitors of wine from Portugal and Madeira obtained five medals for progress and 17 medals for merit, and had honourable mention made in 26 instances.

THE WINES OF SPAIN.

I.—*Sherries.*

All the varieties of the Jerez district represented at Vienna—Vino fino 120 years old—Highly-fortified nature of the majority of the samples—The finer Jerez Wines—Manzanillas, thin, dry, and tonical—Their bitter aromatic flavour due to peculiarities of soil—Amontillados, the chemical action to which they owe their ethereal bouquet and development—Characteristics of the Wines of Montilla—Vinos de pasto—The conventional British Sherry—How it is plastered, sulphured, dosed with spirit, sweetened, flavoured, and coloured—Dulce—Further additions of alcohol before shipment—The dosing of Wine with coarse spirit while in bond—The Sherry-rearer's Soleras—Alcoholic strength of natural Jerez Wines—The Jerez Vineyards and their various soils, albariza, bugeo, and barro arenas—Species of Vines.

SPAIN, spite of its internal dissensions, was well represented at Vienna, so far as its natural products, and more especially its wines, were concerned, for nearly three-fourths of its 49 provinces sent samples of their vinous products to compete for prizes. From Cadiz and San Lucar came all the varieties of the Jerez district, from the pure, pale, thin, and dry Manzanillas, to the dark, rich, and sophisticated old-fashioned brown Sherries, from which every trace of the flavour of the natural wine had been carefully eliminated. The most antiquated sample of *vino fino* of Jerez belonged to the days when the Holy Office in Spain still sent an occasional heretic to the stake, being of the ripe old age of 120 years, rich in colour, and of powerful flavour, derived, however, from the caramel, and the brandy with which it must have been liberally saturated both in its youth and in the course of its prolonged existence, rather than from any well-preserved vinous qualities of its own. It was much the same with a second sample of the comparatively juvenile age of 40 years, which retained all its adventitious colour and alcoholicity, and little else beside. Indeed, as a rule, the Spanish wines submitted at Vienna, although there were a considerable number of marked delicacy and character, recall a long array of highly-fortified samples in which the natural flavour of the wine was drowned in the fumes of adventitious spirit.

The exhibitors of the finer varieties of Jerez wines, dry, delicate-flavoured, and highly spirituous, although they were reported to be free or almost free from added alcohol, carried off their fair share of medals for progress and merit. Señors D. de Agreda and Gonzalez Byass and Co. secured the higher-class reward. Parenthetically it may be remarked that the last-named firm, who are also growers, are by far the largest shippers of Sherry in the world, their exports from Jerez and Puerto de

Santa Maria in 1874 amounting to no less than 7,914 butts, the highest qualities of which, such as exceptionally fine Amontillado, is quoted at £152 the butt (106 gallons) in bond. To five Jerez firms—namely, L. Herran and Co., Keppel Heselink and Co., J. M. Picardo, J. M. Pico, Polak Brothers and Co., and Santareli Brothers—medals for merit were awarded.

There was a very complete collection of Manzanillas, those thin, dry, and highly tonical wines deriving their name from a certain similarity of flavour and fragrance with the manzanilla, or camomile, a circumstance which has given rise to the erroneous belief that camomiles are thrown into the vat while the wine is fermenting. These wines are reputed to be the purest of Sherries, simply because the “rearers” find they will not blend kindly with other growths. In the samples exhibited, which, with rare exceptions, were almost as colourless as they were thin, all the natural spirit of the wine seemed suppressed, as it were, by the bitter medicinal flavour which is its distinguishing characteristic, and which age did not appear materially to subdue. The finest Manzanillas were contributed by Señor E. Hidalgo, of San Lucar, who had a medal for progress awarded for them, while Señors J. and J. A. Martinez, also of San Lucar, both received medals for merit for the same wines. It is within the triangle formed by San Lucar de Barrameda, Jerez, and Puerto de Santa Maria that the best Manzanillas are produced. The soil, which is principally a mixture of clay, sand, and chalk, with a considerable predominance of the latter, is highly favourable to the growth of the vine, which yields a grape full of flavour. It is to this peculiarity of soil rather than to the variety of vine that the well-known bitter aromatic flavour of Manzanilla is due, other wines of the Jerez district produced from the same kind of grape being deficient in the identical *goût*. One speciality of Manzanilla is that the must is always perfectly fermented, the result being an exceedingly pale and thin wine, entirely free from heat, and yet containing a considerable amount of natural alcohol, enabling it to keep for nearly 30 years, and with every year added to its age sensibly improving in flavour. Perfectly young Manzanillas are to be had on the spot for as little as £10 per butt of 106 gallons, but in the course of three years the nursing of the wine will have doubled this price, and by the time it is 10 years old and in fine condition it will have risen to quintuple its original value.

Among the *vinos finos* of Jerez and the Manzanillas were samples of some which had developed into Amontillados, exhibiting that well-known ethereal flavour encountered most

frequently in the higher-class natural Sherries and certain of the white wines of Greece. The theory is that as the alcohol contained in the wine absorbs the oxygen of the atmosphere, preparatory to the wine passing into acetic acid, it first of all transforms itself into aldehyde, the presence of which in wines is regarded by the French chemist Maumené of considerable importance, as it contributes to the formation alike of their flavour and perfume. Mr. J. L. Denman, who has studied the development of aldehyde in the Greek wines, is of opinion that the flavour and bouquet, which he believes to be generated only in fine, sound, and full-bodied wines, are due to the ether produced from the absorption of alcohol by flowers of wine, and is moreover common to all wines developing a vinous growth, which he thinks is rarely if ever accompanied by an acetous growth. A medal for merit was awarded to a fine sample of Manzanilla-Amontillado—in which the ethereal bouquet and flavour had sensibly modified the original tonical *goût*—exhibited by Señor Salvador Helvant, and quoted *in loco* at £5 the arroba, or at the rate of 5s. the bottle.

The fine wines of Montilla, so famous throughout Spain in the olden times, are especially said to develop this highly-prized Amontillado flavour. Of late years, since the introduction of railways has lessened the cost of transit to the coast, an export trade in the ordinary wines of Montilla has sprung up, and Cordova sent samples of them from various growers to compete at Vienna. Generally they were deficient in brightness, and several were remarkably thin, with a suspicion, moreover, of the sub-acidulous flavour of a Rhine wine. The more recent vintages had nothing specially remarkable about them, for Montilla, above all the wines of Spain, requires considerable age to arrive at full perfection; but the older vintages, without exception, proved to be full and mellow wines, deeper in colour than natural Sherry, richer too in aroma, and usually of high and splendid flavour. For one fine sample Señor Blanco of Cabra obtained a medal for progress, while for other samples exhibited by Palma and Gueseda, and Albear and Co., medals for merit were awarded. One of the last-mentioned wines was in its 46th year, still remarkably spirituous, and possessed of a full nutty flavour. Montillas of the highest class are rarely met with in commerce, their shrewd owners preferring to reserve them for imparting character to commoner growths.

Of *vinos de pasto*, light, dry, highly-flavoured Sherries very unlike the spirituous wines frequently sold under this designation in England, being, as their name implies, simply table wines, samples of a superior character were far from numerous;

merely some few manifested a fine aroma and corresponding delicacy, the result invariably of age, a most important element in all Spanish wines of the smallest pretension.

Sherry being the wine the annual consumption of which in England has, until quite recently, exhibited an increase far beyond any other, and this too in spite of its being the least natural of all wines, one may here venture upon a rapid glance at the system of vinification prevailing with regard to the ordinary wines of the Jerez district, and the amount of sophistication they undergo to prepare them for the English market, in order that Sherry-drinkers may understand the kind of compound they usually consume with the conventional sandwich or biscuit, and the Liebig extract soup, and the colour, body, flavour, spirituousity, and keeping power of which are all due to adventitious aids.

The grapes being spread in a trough in the lagar are first dusted thickly over with plaster of Paris, in order that all their tartaric acid may be precipitated, whereby that natural acidity which all young wines should possess is at once removed, and an insignificant quantity of sulphate of potash is generated. The grapes are then pressed by treading and by means of a powerful screw. The commoner musts are next subjected to the process of sulphuring, which is accomplished by impregnating the vats with the fumes of sulphurous acid and pumping the must into them from below through a kind of sieve, which insures the complete absorption of the acid. Dr. Thudichum, who professes to speak from personal observation, asserts that ordinarily five or six ounces of sulphur, yielding almost double that quantity of sulphuric acid gas, which ultimately becomes resolved into nearly 1 lb. of solid sulphur, are used to each butt of wine, some Sherries being charged with even quadruple this amount, and this solely with the view of preventing the improperly-fermented wine from turning sour while resting in casks with a considerable vacuum exposed to a temperature approaching fever heat. During the ensuing March spirit is added to the wine, the finer qualities receiving a couple of gallons to the butt, and the commoner ones as much as six gallons. This is simply the first dose, for sulphured Sherry cannot be properly clarified without having its alcoholic strength materially raised, besides which, whenever the wine chances to fall sick, as it frequently does, spirit, the pabulum for all disorders with rearers of common Sherry, is again had recourse to.

The wine which forms the bulk of even the better-class Sherries imported into England, is of the third quality, and known as *raya*. In its natural state it is sound and dry, of a

pale greenish yellow colour, and has no particular character. Much of the low-class Sherry shipped from Cadiz is blended moreover with poor white wine from the Condado de Niebla, a considerable viticultural district on the right bank of the Guadalquivir, extending between Huelva and Moguer in the direction of Seville. Samples of this *petit vin blanc* were exhibited at Vienna. When the wine is designed for shipment it is sweetened and flavoured to disguise its deficiencies of taste, and coloured in order that it may be palmed off as old and matured. Mere sweetening is accomplished by the admixture of cane sugar, and sweetening and flavouring combined by the addition of Dulce made from the must of over-ripe grapes, the fermentation of which has been checked by the addition of over-proof spirit. This liqueur gives at the same time a little extra colour and body to the wine. At Vienna numerous samples of this syrupy compound were exhibited, including Garnacha dulce—so named from the species of grape from which it was made—four years old and possessing all the character of a liqueur Sherry with no excessive predominance of either sweetness or spirit. Far more sweet and fiery was a liquid termed Mutela doble, the label on which candidly enough explained that it was for mixing with dry wines designed for exportation to England.

The colouring matter used for low-class wines is produced by boiling a certain quantity of plastered must in a large copper for from 15 to 20 hours until it is reduced to one-fifth of its original bulk, and is of the consistency of treacle, taking care to constantly skim it. The result is a deep reddish-brown liquid with a bitter, aromatic, and singularly disagreeable taste arising from the sulphate of potash which has been generated, and which a liberal admixture of alcohol fails to disguise. According to the dose administered of this so-called *vino de color* varying shades of colour are given to the commoner wines. Thus the conventional pale Sherry will need only seven gallons to the butt, whereas the golden will require 15 gallons, the pale-brown 20 gallons, and the rich old brown as much as 25 gallons.

This, however, is not all; the wines require to be again brandied before they can be shipped, and the smaller the dose of alcoholised *vino de color* they have received, the larger the quantity of adventitious spirit requisite to be administered to them to keep down any fresh fermentation to which the additional saccharine might give rise. What this amounts to is apparent from a recent correspondence in the *Times* newspaper, in the course of which Mr. C. H. Vince stated that many hundreds of tests made by him in Spain of young wines, the primary fermentation of which was complete, gave an average

of 26 per cent. of proof spirit. Mr. Walter Burton, late of Her Majesty's Customs, supplemented this by asserting that of many thousand tests which he had made at the London Custom House, the average showed 37 per cent. of proof spirit, while some exhibited as much as 50 per cent., and he pertinently demanded, "How this enormous quantity of alien spirit could be added to Sherry without certain risk to the health or head of the unsuspecting consumer?" The same unbiassed authority has recently drawn attention to the prevalent practice of amplifying our wine supply in the Customs' warehouses under the positive superintendence of Government officials, and at the public cost. "A wine-jobber," he remarks, "having, say, 1,000 gallons of wine, can add thereto 100 gallons of spirit, making a total of 1,100 gallons of wine, thereby converting in a few minutes 100 gallons of crude potato spirit, diluted with London water, and costing about a shilling per gallon, into, it may be, a 'special sherry' or 'vintage port.' There is not, so far as I am aware, any record kept of the quantity of spirit so turned into wine, but seeing that a large staff of officers are continuously employed in superintending such operations, the increase to our stock of wines from this source must be considerable. It is for the public to say whether this system of manufacturing wine at their expense is to be continued. It is bad enough to have flavoured spirit and water imported into this country under the guise of wine, but it is still more objectionable to pay public officers to legalise the manufacture of such compounds in our own docks and warehouses to the manifest injury of the revenue and of the public health."

The foregoing remarks apply of course exclusively to the conventional Sherry in common consumption, such for instance as is served at taverns and refreshment-bars, provided at public dinners, and which figures on the wine-lists of the majority of hotels at 6s. the bottle. Few of us can altogether escape from this compound, guarded as we may be in the matter of what we drink. The finer wines and some of the commoner natural varieties which are gradually making their way in England, are, of course, of a different character, still even the finest Sherries are plastered and subjected to other manipulations, which, however, scarcely affect their purity. For instance, they are more or less sweetened and tinted with Dulce and *vino de color* of the purest quality. In addition every rearer of wine has his soleras, comprising his highest-class wines, which by age, care, and attention have acquired alike body and character, and which he sparingly uses to mix with and improve the quality of newer and inferior vintages. These butts of stock wines are drawn

from in equal proportions, and replenished from time to time by promising wines of younger growth. In these soleras all individuality of origin and year of vintage become in a measure obliterated. When newly made up from numerous small selections they represent simply a mixture of an infinite variety of wines. Old soleras, on the other hand, represent a *mélange* of small residues from the wines of a considerable number of years, of which the most recent commonly presents by far the largest proportion.

With regard to the alcoholic strength of the natural Jerez wines, samples procured on the spot by Mr. Bernard for Her Majesty's Commissioners of Customs were found to contain from $26\frac{1}{2}$ to nearly 28° of proof spirit. Two exceptional Amontillados, the origin of which was somewhat obscure, showed, however, upwards of 29 and 35° respectively. Some fortified wines of the highest quality obtained by him at the same time contained as little as 27 , and as much as 36 per cent. of proof spirit, while Montilla wines, said to be perfectly pure, varied from 30 to upwards of 33° .

The Jerez vineyards spread themselves over a succession of undulating chalk hills, the surface soil of which—light sand and clay impregnated with oxide of iron and largely intermingled with carbonate of lime—goes by the name of *albariza*. It is this which produces the finest and the strongest wines—those higher-class growths which develop into Amontillados—still the yield is only moderate in quantity. The soil of the intervening valleys, overspread with frequent alluvial deposits, is principally dark clay, mixed with red and white sand, loam, and carbonate of lime, and containing iron oxide in considerable quantity. This soil, known as *bugeo*, is by far the most fertile, but it produces only coarse unclean wines. The soil of the plains is white sand impregnated with chalk and clay, strewn with stones and coloured with iron. This is termed *barros* or *barro arenas*, and yields wine in considerable quantities but poor in quality.

The vines principally cultivated in the Jerez district are of the Mantuo variety, of which the Castellano, a prolific bearer yielding large berries as well as large bunches, is perhaps more prevalent than all the others combined. The grapes, however, which give character to the wine are the Palomino of medium size and of an opaque green tinge, yielding wines which develop into Amontillados, and the Perruno with small berries of a yellowish bronze tint, from which Sherries of high flavour and perfume, known as Olorosos, are produced. The medium-size greenish white grape of the Pedro Jimenez vine, commonly but

erroneously supposed to be the prevailing vine in the Jerez district, is chiefly employed in the production of Dulces, used, as already explained, for sweetening and colouring Sherries of an ordinary and commonplace character.

II.—*Ordinary Spanish Wines.*

Moguer Wines—Pajerete and Tinto de Rota—Sweet and dry Malagas, their Vintaging and Vinification—Wines of the Sierra Morena—Red and White Val de Peñas, the classical Wine of Cervantes—Full-flavoured Red Wines from Toledo and Guadalajara—Aromatic White Wines from the Spanish Tagus—Vinos Tintos of the Mediterranean, or Spanish Reds—The syrupy Wines of Alicante—Spirituous Red Wines of Valencia—Varieties of Priorato—Barcelona, Tarragona, and Reus Wines—Elderberries employed to deepen Spanish Reds—The same Wines mixed with the poorer growths of France—Aragon samples, dry Red Wines of the Campo de Cariñena and Ojo de Gallo, or Cock's Eye—The Wines of Biscay, the Asturias and Navarre—Attempts to acclimatise the finer French Vines in Spain—Alcoholic strength of Spanish Wines—Species of Vines—Viticultural area and produce—Exports—Consumption of Spanish Wines in Great Britain.

BEYOND its collections of Jerez, San Lucar, and Montilla wines, Andalusia sent samples to Vienna of some of the best growths in the neighbourhood of Moguer, all more or less of the Jerez type, and several of a delicate Amontillado character. Medals were assigned for these to Señors E. G. Diaz, X. de Tejada, and R. Torcies respectively. Some fine white wine also came from Seville, and from Jaen to the north-east of Montilla. The luscious full-flavoured gold-colour wine called Pajerete, produced in the vineyards belonging to the convent of the same name from the sweet Pedro Jimenez grape, with Tinto de Rota from immediately opposite Cadiz, were likewise represented. One sample of Tinto was found to be a perfectly-fermented wine, free alike from sugar and adventitious spirit, and having scarcely anything in common with the well-known sweetened brandied sacramental Tent prepared especially for English communicants.

The Malaga wines, both sweet and dry, are widely known, and the entire country between this port and Granada is one vast vineyard, producing for the most part clean full-bodied wines; still the samples sent to Vienna were comparatively few, and gave, it was said, a most imperfect idea of the variety of wines which this prolific province produces. So favourable is the mountainous district in the neighbourhood of Malaga to the development of the vine, that three crops of grapes are produced

each year. It is from the second crop, gathered in September, that the dry wines are made, while the third vintage during the following months yields the sweet Malagas. The latter were in abundance at Vienna, rich, deep amber-colour wines, in which the bouquet and soft spirituous flavour, the result of age in genuine Malaga, were very partially developed. The drier varieties conveyed the idea of these naturally powerful wines having been unnecessarily fortified, while others more delicate in character evidently had their original flavour less disguised by alcohol.

The largest collection of Malaga wines was contributed by Scholtz Brothers, who had a medal for progress awarded to them. It included dark sweet Malaga 92 years old—this class of wine it should be remembered enjoys the reputation of keeping for a century—perfectly preserved, no doubt in added spirit, and developed into dryness by age, and which was quoted at £10 the arroba, rather below 10s. per bottle shipped on board. The 1810 vintage was priced at £7 and the 1870 as low as £1 the arroba of $3\frac{1}{2}$ gallons. Sweet white Malaga of the last-mentioned year was estimated at a similar rate, but the 1840 vintage, the oldest sample exhibited of this class of wine, was priced at 50 per cent. more than the darker variety. These sweet Malagas are made from the Pedro Jimenez and Doradillo grapes, which after being gathered are dried for several days in the sun, depth of colour being imparted to the darker wines by the addition of must boiled down to one-third of its original bulk and intentionally burnt in the boiling. The same collection comprised the dry white wine with a certain resemblance to Sherry termed Malaga-Jerez, also Malaga-Muscat made from the Pedro Jimenez grape, a certain quantity of Muscat being added to give it the approved flavour and aroma, and finally the syrupy Tintilla produced from the same variety of grape from which Tintilla de Rota is made. Other exhibitors contributed samples of sweet Mountain Lagrima, a liqueur wine priced at less than a couple of francs the gallon, and of the so-called Cherry wine of the locality, which is simply sweet Malaga in which acidulous cherries have been steeped.

From Villaviciosa in the Sierra Morena some distance north of Posadas came samples of more than one remarkable wine, while Ciudad Real, on the opposite side of this mountain range, sent quite a collection of red and white Val de Peñas, so named from the stony valley in La Mancha where these wines are grown. The white varieties, which had a tendency to sweetness, were in no degree remarkable, whereas the others were the classical red wines of Cervantes—famous for centuries from

the allusions to them in *Don Quixote*—wines with ample body and that peculiar sub-bitter flavour common to many of the growths of the Côtes du Rhône. Each description of reward was allotted to these wines, the highest being conferred on the Marquis de Benamejis for the superior character of the samples contributed by him. New Castille further sent some fine full-flavoured red wines from Toledo, of which those exhibited by Señor L. Fernandez were unanimously classed in the first rank; also samples of *Vino Torrantes* varying from five to twenty years old, from Guadalajara, north-east of Madrid, and some spirituous and aromatic white wines from the vineyards bordering the Spanish Tagus between Arganda del Rey and Talavera de la Reyna.

The wines of the Spanish peninsula most in abundance were the deep-coloured full-bodied *vinos tintos* of the Mediterranean coast, known in England as Spanish Reds. Carthagenia sent merely three sets of samples of its red wines, and secured a medal of merit for them, whereas Murcia sent about a score, and failed to secure a single medal. Both the dry and sweet wines of Valencia—the so-called garden of Spain—were amply represented, and the contributions from Alicante and Tarragona numbered several hundreds, yet the samples from Barcelona must have been as numerous as those of all the other Mediterranean ports combined. The Alicante wines were principally sweet, and strong as they were luscious. Many of them were of the consistency of syrup, and several suggested the flavour of molasses. All were more or less brandied, requiring to be fortified, it was asserted, to insure their keeping for any length of time. On the spot they were to be purchased at the rate of 1s. 6d. per gallon, the dry, dark, coarse, common class wines being about half this amount. Eight medals were awarded to exhibitors from Alicante of sweet, red, Malmsey and Muscat wines; and of four others honourable mention was made.

The lower qualities of the coarse and spirituous red wines of Valencia are principally distilled into brandy, while those of higher pretensions are largely used for simulating Port, and for blending with genuine Oporto wine. The sweeter varieties have ordinarily little else beyond their full flavour, syrupy character, and a certain softness to recommend them. It is different, however, with the Priorato, a more or less sweet, spirituous, red wine, closely resembling an extremely fruity Port, and understood to be grown in the vineyards of some Valencian priory, whence its name. There were several kinds of Priorato, notably a *Vino bajo Priorato* of 1871, a velvety sort of wine, delicate in colour, and with a slight bouquet, and which was

said to be independent of added spirit; also a Priorato secco, in which the flavour of alcohol predominated; a Priorato mocado and a Dulce Priorato, the latter equally luscious and spirituous as the rest of the Dulces, and clinging to the glass like so much syrup. This liqueur was priced at less than 1s. the gallon on the quay at Tarragona. Such merits as the Valencia wines exhibited were amply acknowledged by two medals for progress and six medals for merit, with honourable mention of four other exhibitors.

From Barcelona, Tarragona, and Reus came a bewildering array of samples, the whole, or nearly the whole, of which seemed more or less fortified with alcohol. In many of them there was a certain fulness of body, combined with considerable mellowness, and an agreeable flavour, due to the apparent absence both of sweetness and acidity, while others were remarkably sweet, and others again merely fruity. Some, on the other hand, were perfectly dry, and even slightly rough. In nearly the whole of them, opposite as they often were in character, a rich vinous quality could be discriminated beneath the added spirit, and if the collection included nothing of a high class, it comprised much that was interesting. Among the best wines were some *Vino tinto generoso* with *Vino pinuclo*, a deep-tinted white, or else pale tawny wine of the vintage of 1851, and *Vino generoso secco*, a really fine red wine exhibited by Don J. Pedrossa of Esparraguera. The two latter were both classed in the first rank. There were also samples of *vinos rancios*, dry old wines, of tawny tint, and reported to be perfectly natural, yet exhibiting no particular character, with a *Vino gral del Panadei* of a brilliant light crimson hue, and a considerable number of ordinary and several better-class *vinos tintos* rather deep in colour, generally full of body, invariably soft, and occasionally sweet. Those from Alella were very like a thin natural Port, while others were poorer and a trifle rough, or else loaded with adventitious spirit. The light wines of the so-called claret character, simply because they contained less than the recognised 26 degrees of proof spirit, very much resembled certain growths of the south of France, and were altogether inferior to the commonest productions of the Gironde, having nothing of their freshness of flavour.

The Tarragona exhibitors secured seven medals for merit for their red wines and their Garnachas and Muscats, the firm of Sobrano and Co. obtaining a medal for progress for some Maccabeo, and the single sparkling wine of any character exhibited by Spain. Reus for some capital red wines received two medals for progress and one for merit, while Barcelona for

its red wines, its Garnachas and Rancios, its Muscats, Malmseys, and Maccabeos, obtained two medals for progress, nine medals for merit, and as many as one-and-twenty diplomas of recognition.

Sixpence per gallon and upwards appears to be the average price on the spot for the ordinary red Catalan wines, considerable shipments of which take place to England, the Spanish colonies of Cuba and Porto Rico, the Brazils, Buenos Ayres, and the River Plate. Incidentally it may be mentioned that some years ago Consul Crawford drew attention to the circumstances of dried elderberries being largely exported from Portugal to Spain, and he showed from the Oporto customs returns for 1866 that during that year no less than 145 tons were thus shipped. The conclusion to which this statement pointed was accepted without the slightest demur, and it is now very generally asserted that elderberries are used to deepen the natural colour of the so-called Spanish Reds, and enable them to be passed off in the above-named countries as veritable wines of Oporto. It is quite certain that merely a few of the numerous samples of Catalan wines exposed at Vienna were at all deep in colour, and only quite recently the Agricultural Council of the Pyrenées Orientales has been calling the attention of the French Minister of Commerce to the circumstance of wines imported from Spain being artificially coloured with elderberry juice. Within the last year or so it seems that France has become one of the best customers of Spain for these particular wines, the rich colour, full body, and fruity or at any rate non-acid flavour of which render them suitable for mixing with some of her own poorer growths; and it is quite certain that the bulk of the cheap clarets consumed in England possessing deep colour, body, and no perceptible acid flavour, are not the Bordeaux wines they pretend to be, for the above characteristics are foreign to the wines in question, but are simply an admixture of Spanish Mediterranean wines and the *petits vins rouges* of France. From statements in the French trade journals it appears that Spanish wines of the class above mentioned can be imported free at one of the southern ports at the rate of a franc and a-half the gallon, and they now figure regularly among the quotations of the Paris *Halle aux Vins*. During the year 1874 there were as many as 13,367,000 gallons of Spanish red wine imported into France.

Aragon, represented by Huesca and Saragossa, sent many varieties of its red wines to Vienna, some exceedingly thin and pale as rose colour; also some Tinto secco of 1865 from Grañen many shades darker and very spirituous, with samples of the

sweet white and drier deep red wines of the Campo de Cariñena quoted *in loco* at from five to seven reals the cantaro, or from 6d. to 8d. the gallon, and which are largely exported abroad as well as extensively consumed at home. The Ribiera de Ebro wine was similar in character, and from the same district came one sample of the light aromatic red wine, known as Ojo de Gallo, or Cock's-eye, from its remarkable brilliancy, and highly prized by the Spaniards for its flavour; as also the scarcely less esteemed white wine termed Imperial blanco. A medal was given for Careñina wine to Señor Zapeta, and seven additional medals, including two for progress, were allotted to other exhibitors, among whom figured the Society of Aragon wine-growers, for their samples of the wines of this province.

Biscay, which produces considerable quantities of wine, notably red and white varieties of an ordinary light wine called Chacoli, valued at about 9d. per gallon, sent but few samples to Vienna. The Asturias, which boast of merely a few wines, and those mostly good ones, sent one very interesting collection of samples, including a fine Amontillado de la Nava del Rey, for which a medal for progress was awarded. From Valladolid and Palencia came some excellent wines, notably a fine Aostovillo, which likewise obtained a medal for progress. Navarre, which, spite of its unfavourable climate, grows some renowned Muscats, and considerable quantities of very fair red wines, sent samples of the latter from Pampeluna, approximating in character to some of the growths of the Côtes du Rhône, and which met with due recognition, while a wine of 1861 from Logrono exhibiting remarkable *finesse* obtained a medal for merit for the Count de Cirati.

Several attempts have been made in Spain of late years to rival the more delicate growths of the Médoc and the Côte d'Or by importing the vines of those districts to the Peninsula. Judging, however, from the samples of red wine yielded by them, these efforts appear to have been unsuccessful, the difference of soil alone sufficing to change the character of the wine, and to deprive it of that fragrant bouquet which seems to be the especial property of more northern latitudes. Still some remarkably interesting samples of wine of a Médoc type of the years 1868 and 1869 were exhibited by the Marquis de Riscal, of Elciego, in Navarre, who was awarded a medal for progress, a medal for merit being given for other samples produced from the Cabernet species of grape and contributed by Señor E. de la Vega, of Guadalajara, near Madrid.

Very little information is available respecting the alcoholic strength of the general wines of Spain. Unfortified white

varieties of Val de Peñas obtained by Mr. Bernard indicated 22° and 31° of proof spirit respectively, while a sample of red was just below 28° . The Malagas, fortified to an extent of 12 per cent., showed from 30 to $37\frac{1}{2}^{\circ}$, and the pure Valencia wines from 26 to $28\frac{1}{2}^{\circ}$ of proof spirit. Natural Benicarlo contained less than 24 per cent., that made up for the English market had between 31 and 32, while unfortified Alicante indicated from $28\frac{1}{2}$ to upwards of 29 per cent. of proof spirit.

The principal vines cultivated in Spain besides those enumerated as grown in the Jerez district are the Tinto or Concejon, the Graciano, the Tempranillo, the Mazuella, the Doradillo, the Don Bueno, the Pasalarga, the Loja, the Colgadera, and especially the Garnacha, which surpasses all the others in strength and luxuriance.

There are no recent statistics with reference to the area and amount of produce of the vineyards of Spain, and such as exist are extremely incomplete and not altogether reliable. It would appear that in the Cadiz district there are nearly 24,000 English acres under cultivation with the vine, yielding about 6,000,000 gallons annually, which is very little in excess of the yearly consumption of so-called Sherry in England alone, and yet no more than half of this quantity is the produce of the Jerez vineyards. The remainder of the province of Andalusia is estimated to yield about 35,000,000 gallons, Catalonia produces 60,000,000 gallons, Valencia 16,000,000 gallons, Saragossa 14,000,000 gallons, the Rioja district in Old Castille 17,500,000 gallons, and Toledo, Huesca, and Ternel 6,000,000 gallons each, Malaga yields about 3,500,000 gallons, and Montilla and the surrounding districts upwards of 1,000,000 gallons. As in the foregoing list many important wine-producing districts are not included, the annual yield of the Spanish vineyards, including the wine reserved for distillation, might fairly be taken to amount to 300,000,000 gallons. Some statistics, however, published by a landed proprietor of Catalonia estimate it at more than double this quantity, or 660,000,000 gallons, his calculation being based upon the large average yield of 418 gallons per English acre.

The total exports of wine from Spain in 1857, just as it was recovering from the effects of the vine disease, were 23,417,532 gallons, valued at £2,602,876. Of this quantity England took 2,777,349 gallons. By the year 1872 our consumption of Spanish wines had increased 150 per cent., being no less than 6,925,733 gallons. The Sherry shipped to England the same year formed 35 per cent. of the total quantity of wine imported, and during this period the importation of Spanish red wine

rose, moreover, to 1,385,175 gallons. The consumption comprised 5,930,358 gallons of the white, and 995,375 gallons of the red wines of Spain, forming the total of nearly seven millions of gallons above referred to, and being upwards of 41 per cent. of the entire quantity of wine consumed during the year in Great Britain. In 1873 the consumption of Spanish white wines in Great Britain had reached 6,034,494 gallons, the red having increased to 1,057,381 gallons. Last year showed a falling off in white wines, only 5,800,232 gallons of which, with 1,086,505 gallons of red wine, were consumed, the two combined being almost equivalent to 40 per cent. of the total consumption of wine in this country.

III.—*Wines of the Balearic and Canary Isles.*

Aleyor and Alba flora—Muscats and Malmseys—Ordinary Red and White Wines—Canary, its double resemblance to Madeira and Sherry—The ancient Sack—Produce of the Canary Isles before and since the Vine disease—Falling off in the exports—Cochineal found more profitable than Wine—Exhibitors of Spanish Wines at Vienna and the rewards accorded them.

THE Balearic Isles, and more especially Majorca, sent a very fair collection of their better-class red and white wines, notably Aleyor and Alba flora, besides Muscats and Malmseys ripened by age, to which medals were awarded. The majority of the red wines resembled those of the South of France, and were deep in colour, fruity, and highly spirituous, while the white were generally more delicate, dry, and slightly acidulous. From the Canary Isles there were only a couple of exhibitors of the once-famous wines to which such frequent reference is made by the old dramatists, and which inspired Howell, the letter-writer, to pen his well-known rhapsody in their praise. These were Davidson and Co., of Santa Cruz, who carried off a medal for progress, and Don Perdigen, of Orotava, both of whom sent a few samples, the best of which might have been mistaken for Madeiras, while others had evidently been made up to resemble Sherry. There was also some sweet Malmsey, but none of the ancient *vino secco* (the veritable sack), so termed from the grapes of the Vidogne species, from which the wine was made, being previously dried, and not, as commonly supposed, because the wine itself was dry, for all the allusions to it would seem to point to its having been a sweet wine. Prior to the ravages of the vine disease the Canary Isles used to produce 2,500,000

gallons of wine, but since that period the yield has been considerably reduced, and in 1866 the total exports were only 92,000 gallons, about one-sixth of which, or 15,000 gallons, valued at £2,700, were for England. Three years later the exports of wine had fallen to 28,000 gallons, of which England took merely 7,500 gallons, or half of what it did in 1866, while rather more than this quantity went to Germany. In place of wine the Canary Isles have taken to producing cochineal, and according to the last available returns their annual exports of this commodity were as much as £842,921, against merely £5,945 received for exports of wine. It will not be surprising, therefore, if the wine industry should before long be altogether abandoned in favour of the more profitable and less precarious pursuit.

There were 249 exhibitors of wine from Spain, contributing 546 samples, and the rewards which they secured comprised a diploma of honour, given to the Catalan Agricultural Institute at San Isidro, 27 medals for progress, and 79 medals for merit, honourable mention being further made of 62 exhibitors.

THE WINES OF ITALY.

I.—*Wines of the North.*

Backwardness of Italy in regard to the production of fine Wines—The Piedmontese growths Barolo, Nebiolo, Barbera, Asti, and Grignolino—Wines from the battlefield of Marengo—Red and White Wines from Genoa la Superba—Samples from the pebbly Lombardian plains—White Wine from the city of violins and the Red growths of Pavia—Valpolicello, Prosecco, and other Wines from the province of Venetia—Samples from the Reggio Emilia, Bologna, Sarsina, Rimini, &c.

ITALY with all her natural advantages has not yet learnt how to produce a really fine dry wine. Apart from a limited number of special growths, such as the Barolo of Piedmont, the Chianti of Tuscany, the Orvietto and Vino dell' Est of the Roman States, the Lacryma Christi of Naples, and the Zucco of Cosenza, almost all her wines lack flavour and bouquet. They are invariably rich in colour, and those of the South are remarkably alcoholic, but these qualities, desirable as they may be, fail to atone for the want of agreeable taste and aroma. It is but just to add, however, that of late years considerable progress has been made in the right direction. Œnological societies have been founded in different provinces, and are actively engaged in effecting reforms in the various branches of viticulture and vinification. Foreigners have also settled themselves in favourable situations, and are cultivating the vine with all the intelligent care pursued in the best wine districts of France. Judging from the samples displayed at Vienna, the principal cause of the mediocrity of the Italian wines arises from their imperfect fermentation, which renders them liable to become muddy or turn into acetous acid.

Piedmont.—The finest North Italian wines exhibited at Vienna came from the Piedmontese provinces of Alessandria, Cuneo, and Genoa, the growth especially selected for distinction being the popular Barolo, a red wine produced from the Nebiolo grape, and resembling in flavour the best *crûs* of the Côtes du Rhône. It is, moreover, of about the same alcoholic strength, averaging from 23 to 24 degrees of proof spirit, and, like them, requires to be kept for at least a couple of years, attaining its best after it has passed its first decade. Of the numerous samples submitted to the jury at Vienna those displayed by the Alessandria and Sanfrè Œnological Societies, and by Signor Fissori of Bra, proved to be the finest, and secured medals for progress, medals for merit being given to Signor L. Fontana of Alba and the Marquis

Alfieri di Sostegno of Turin, while honourable mention was made of several other exhibitors. Some good samples of Barolo and of the inferior growths known as Nebiolo and Barbera, the latter a peculiarly-flavoured full-bodied rough wine, came from the little city of Asti, in the neighbourhood of which the cultivation of the vine has always been strenuously pursued in spite of the ravages of the Crittogama, and the importance of whose produce and trade has led to the generic name of Vini d'Asti being commonly given to the Piedmontese growths. Samples of the ordinary Asti table wines of an agreeable flavour and moderate alcoholic strength were displayed by the Œnological Society of that locality, one of the first of its kind established in Italy. Honourable mention was made of these samples and of some so-called Nebiolo, which further obtained a medal for merit for one of its exhibitors.

The dark full-bodied Grignolino wine, named after the particular species of grape, largely grown in the vineyards of Asteran and Monferrato, from which it is produced, and which has some affinity with the Kádárka of Hungary and the Cabernet of the Gironde, possesses the remarkable quality of not keeping for any length of time unless largely diluted with water. Of the numerous samples sent to Vienna those displayed by Signor Manacorda of Casale Monferrato were awarded a medal for merit, but none of the others were judged worthy of recognition.

From Count di Sambuy's estate on the famous battlefield of Marengo came several varieties of wine placed *hors concours* by their exhibitor's position on the jury. Some of them were the produce of imported Cabernet, Pineau, and Aramon vines, others designated by the titles of Neirano, Castel Ceriolo, and Valmagra, being made from native grapes. These wines proved to be less alcoholic than Barolo, while in taste they were like some of the Mâconnais growths, only more intimately blended. They were already of fine quality in their third or fourth year, still, like the Piedmontese wines generally, they are at their best when from 10 to 12 years old.

From the vicinity of Genoa la Superba came samples of Sestri Levante, a refreshing white wine, for which, and some choice Chiavari growths, Signor A. Boltire secured a medal for progress. Genoa, moreover, sent some specimens of Sardinian produce, notably Nasco—a highly-alcoholic wine which requires keeping three years before being drunk—and Vernaccio from the province of Cagliari and district of Oristano, a light straw-colour wine with a taste akin to Riesling. Malvasia and Muscat are produced largely in Sardinia, as well as Campidano, a fair

ordinary red wine with considerable body, the price of which varies from 9d. to 14d. per gallon.

Lombardy.—The samples of wine from the pebbly Lombardian plains were few in number and poor in quality. A single medal for merit was awarded to Signori Ricardi Fratelli for some Corvino and Malvasia grown in the vicinity of Brescia, whence also came samples of Erbametto and Bordagno wines. Bergamo and Mantua each sent samples of their common red *vini da pasto*, a solitary specimen of white wine coming from Casalmaggiore in the vicinity of Cremona, the city of violins. Honourable mention was made of simply one out of many red growths from Pavia whence Francis I. indited his celebrated mot, "Tout est perdu fors l'honneur," and of a Spanna wine from Como, once Pliny's favourite place of sojourn. From Chiavenna, to the north of Lake Como, came some excellent Sassella which secured a medal for merit for its exhibitor Signor C. Faceti, but which is scarcely a Lombardian wine, being produced in the rugged sub-alpine Tellina valley, which up to the middle of the 17th century was a political dependency of the Swiss canton of the Grisons.

Venetia.—There were but few samples of Venetian wines, and of these the ordinary Corvini, grown in the plains, proved remarkably poor, due, doubtless, to the half-wild system of cultivation prevalent; lacking alike colour, aroma, saccharine, and alcohol, but possessing a pronounced bitter flavour, betraying the juice of the thick grape-stalks. The better specimens came from the Valpolicello in the vicinity of Verona, and were the produce of the well-known Negrara grape. They proved to be well-made table wines, with less *finesse* than certain Tuscan growths and of moderate alcoholic strength. This Valpolicello wine requires to be kept for two or three years before being drunk, and is at its best when in its eighth or tenth year. Honourable mention was made of a collection of samples sent by various growers of the locality.

Besides various bitter red and white *vins ordinaires* Treviso sent a few specimens of Prosecco which received honourable mention, while from Udine, not far from the Austrian frontier, came specimens of the white wines of Ribolla and Cividino, with the same Piccolit which one had become familiar with when tasting the growths of Görz and Carniola. Some of the best Venetian wine was exhibited by Signor Melichi of Mogliano, who was awarded a medal for merit. From the oases of Vicenza and Conegliano, shut in on all sides by mountains, and therefore less exposed to cutting winds than the open plains, came various samples of wines somewhat less acid than the majority of those exposed, and of which honourable mention was made.

In these localities it would appear that really excellent wine might be produced, the temperature being both high and equable and the vineyards enjoying a sufficiency of moisture most conducive to the aroma of the wine. These growths are of considerable reputation in Venetia, and secure a higher price than the produce of the plains.

The samples from the so-called Reggio Æmilia, which comprises the former duchies of Modena and Parma, were still fewer in number than either those of Lombardy or Venetia, and none called for any higher award than honourable mention, which was made of a gold-colour syrupy Trebbiano, some Muscats of Piacenza, and the white Ruffino growths of Sciandiano.

From Bologna came specimens of white Montu and Aleonzo, contributed by the Marquis Tanari, while Sarsina sent various red *vini da pasto*, and Cesena, Forli, and Rimini samples of their San Giovese and Albano growths, which secured among them one medal for merit and honourable mention in a couple of instances.

II.—Wines of the Centre.

Chianti, Pomino, Artimino, Carmignano, Verdea, and Montepulciano, from the sunny province of Tuscany—Samples from the vicinity of Florence—Insipidly-sweet Straw-Wines—The Ancona growths—Poor Wines of the Campagna—The *Vino dell' Est*, which mastered Bishop Johann Fugger—Wines vintaged around Rome.

Tuscany, &c.—Some of the finest of the Italian wines exhibited at Vienna came from that continuous vineyard and olive-ground, the sunny province of Tuscany, famous alike for its fragrant Chianti and Pomino, its Artimino and Carmignano growths, its Verdea, the favourite wine of Frederick the Great, and more especially for its luscious Montepulciano, of which a couple of centuries ago Redi sang—

“Montepulciano d' ogni vino è il Rè!”

This latter wine, which when at its best is of a brilliant purple colour with a luscious aromatic spirituous flavour, its sweetness being moreover tempered by an agreeable sharpness and astringency, was only represented at Vienna by a single sample possessing none of these qualities in any marked degree, but rather of a mediocrity which cast a serious doubt upon the impartiality of Redi's judgment.

The best specimens of Tuscan wine submitted to the jury were the Chianti of Baron Ricasoli, from his Brolio vineyards

in the vicinity of Sienna, and to whom a medal for progress was awarded. In this part of Italy, as elsewhere, there is a great tendency to extend to a whole region the name of the produce of some favoured locality, and in the same manner as almost every glass of good wine in Piedmont is described as Barolo, so every flask of a superior kind in the ancient duchy of the Medici goes by the name of Chianti. The veritable wine, which possesses remarkable *finesse* and an agreeable sub-acidity, is not unlike the best Beaujolais growths, with, however, more colour, body, and force. Chianti is in its prime at its fifth or sixth year, but can be drunk when from two to three years old.

From the vicinity of Florence came various samples of *vini da pasto*, often disagreeably rough, but with considerable freshness and fine deep colour, besides such varieties as red Poggio-secco, white Nippozzone, Altomino, and Castelruggero, specimens of the two last-named receiving honourable mention. Marquis Albizzi Degli, of Pelago, obtained a medal for progress for his samples of Pomino, a fine wine of the Chianti type, equally spirituous with Chianti, and reaching maturity at about the same epoch. Poggio Vittorio, near Florence, as well as San Lucar and Perugia, sent specimens of Italian straw-wine, mostly insipidly sweet, although one sample forwarded by Signor Baccini secured a medal for merit.

The Province of Ancona was represented by eight or ten exhibits, comprising Monticarroto, San Giovese, Lacryma, Montanino, Santo, and Balsamina wines of no particular character, while Arezzo sent some superior black, red, and white *vini da pasto* for which a couple of medals for merit were given.

The samples of the Campagnian wines were poor in quality, but extremely alcoholic, frequently containing as much as 30 per cent. of proof spirit. It was difficult to imagine either of them the famous *Vino dell' Est*, which Bishop Johann Fugger found so good a vintage of at Montefiascone that he deliberately drank himself to death with it, and one failed moreover to recognise the well-known faint-coloured and somewhat sweetish growths of the Orvietto vineyards. The common rough *vino da pasto* grown on the hills round Rome, believed formerly to have produced the far-famed Falernian, Setinum, Albanum, and Cæcuban wines, was found to be almost unworthy of recognition.

III.—Wines of the South.

The luscious Lacryma Christi—Falerno, Capri, and other Wines of the Bay of Naples—The Bari, Gallipoli, and Taranto growths—Muscats of Aquila—Grotoletto, Sananervi, Fiorignano, Montevino, Gransasso, and Zucco Wines—Sicilian vins de dessert—Marsala, and its great alcoholic strength—Stout dry Red Marsala—Wine from the volcanic slopes of Mount Etna—Malmseys and Muscats—Red and White Syracuse Wines—The produce of the Mount Matrissa Vineyards extolled by both Virgil and Pliny—Alcantara from the site of the Chalcidean colony of Naxos—Various modes of cultivating the Vine in Italy—Careless system of Vinification—Alcoholic strength of the principal Italian Wines—Annual produce of Wine in Italy—Exports and value—Prices of Wine *in loco*—Exhibitors of Italian Wines at Vienna and rewards secured by them.

Naples.—At the head of the South Italian wines one unquestionably has to place the far-famed Lacryma Christi, the produce of the loose volcanic soil of Mount Vesuvius, and an exceedingly luscious wine of refreshing flavour and ordinarily of a rich red colour, although white and even sparkling varieties are produced. Samples of the whole were exhibited at Vienna, where the wine-growers and merchants of the district also displayed examples of so-called Falerno side by side with the well-known Capri, a fresh fragrant sub-acidulous wine of a pale primrose colour, and other fruity and pleasant-tasting growths, both sweet and dry, from islands in the Bay of Naples, and along the banks of Lake Averno. The finest samples of both Lacryma Christi and Capri were those displayed by Signor Guiseppe Scala of Resina, to whom a medal for progress was awarded, honourable mention being made of several other exhibitors.

From the Neapolitan province of Bari came samples of Tauraso, Troia, Auricano, Primaticcio, Sagarese, and Aleatico wines, the last-named sweet variety being recognised by honourable mention. Gallipoli and Taranto also sent samples of their growths, reputed to be the strongest of the Neapolitan vintages, while Aquila was represented by specimens of her Muscats, and Avellino by examples of her Grotoletto and Sananervi wines, Salerno displaying its bottles of Fiorignano and Montevino, and Teramo its flasks of Gransasso. Beyond proving highly spirituous these samples exhibited no particular merits, and met with no special recognition; a medal for progress, however, was awarded to the Duc d'Aumale for his full-flavoured Zucco wine vintaged on his estate at Cosenza.

Sicily.—Sicily contributed numerous samples of what the French term *vins de dessert*, particularly of Marsala, the most

celebrated growth of the island. The Sicilians were, however, unfortunate in their sweet dessert wines, in many of which a second fermentation had set in, while others had become muddy and acquired an extraneous flavour owing probably to the added syrups having been badly prepared. In a few samples spite of their excessive sweetness there was an acidity occasionally akin to vinegar, although it was usually mere vinous acid arising most likely from the ripening of the grapes having been impeded by drought.

The finest Marsala was displayed by Signor M. Romeo of Carania, to whom a medal for progress was awarded. It was of great softness and Madeira-like flavour, and had been only moderately if at all fortified. Messrs. Ingham and Withaker sent what they termed "English" and "Italian" Marsala, the former being, of course, extremely alcoholic, and the latter obtaining them a medal for merit. Similar medals were given to Signori Ignatius Florio, Platamore fratelli, and Rosso and Scammacia, honourable mention being made of three other exhibitors. The sherry-like flavour and aroma of the Marsala wines, which require, it is pretended, 20 or 30 years to reach complete maturity, when they become very soft and refined in flavour, is doubtless due to the similarity of the soil from which they are produced to that of the Jerez vineyards, both being a compound of carbonate of lime and argil mingled with oxide of iron. The belief that the soil is volcanic is erroneous, as no sulphur is to be found within 100 miles of where Marsala is produced. The alcoholic strength of the natural wine is said to be very great, ranging, it is pretended, as high as from 30° to 35° of proof spirit. Red Marsala, of which there were a few samples displayed at Vienna, proved to be a stout dry wine with a strong and somewhat astringent flavour. The average price of new Marsala ready for export may be estimated at 4s. per gallon.

From the volcanic slopes of Mount Etna came some capital white Sicilian wine, which secured for its exhibitor, Princess Biscari, a medal for merit, but one looked in vain for samples of the famed Terre forte from the vineyards of the Benedictine monks in the same neighbourhood, and which is reputed the most alcoholic wine produced in the eastern district of Sicily, indicating as many as 29·9 degrees of proof spirit. There were numerous samples of Malvasia and Muscat; the former, which is not equal to that of San Lucar, may be drunk when two years old, but reaches maturity at 20 or 30. The best Malmsey was exhibited by Signor P. de Pasquale, of Messina, who received a medal for progress for it, a medal for merit being given to

Signor Ciaculli, of Palermo, for his sample of Muscat, a *vin de liqueur* of great *finesse*, more spirituous and less syrupy than the famous growths of Frontignan, and said to contain on the average 25 degrees of proof spirit.

In addition to these awards a medal for progress was given to Signori Cassola, for some samples of red and white Syracuse wines, a medal for merit being also bestowed on Senator Moscuza for scarcely inferior specimens, while honourable mention was made of the so-called San Sidero Amareno, Senavese, Villa Salto, and Albanello growths—the last-named rather fiery and with somewhat of a Sherry flavour. Some of the best Sicilian wines were exposed by an Englishman, Mr. Rainford, who has taken to wine-growing on the banks of the Alcantara, and sent samples of a red wine from Mount Matrissa, the products of whose vineyards were extolled alike by Virgil and by Pliny. The wine, which was of a tawny tint, was fresh-tasting, and yet with a marked tonical flavour. Santa Venera proved more brilliant in colour, had a soft and pleasant yet decided spirituous flavour, due, however, to its own natural alcohol, and was altogether not unlike a thin Port. The crust deposited was considerable. The Dacarella, a white variety amber-coloured, with a slightly sharp, sweet, and sub-bitter flavour combined with a certain rich fulness of body, was evidently a wine of some rank. The Cavallaro, of a deeper amber tint, was both dry and spirituous, while the Albanello, which was a little sweet as well as pleasantly sharp, proved less alcoholic, and had a marked ethereal flavour. Of the Alcantara produced on the banks of the river of that name, and on the site of the Chalcidean colony of Naxos, one sample was amber-coloured, spirituous, and with a pungent nutty flavour, while another of a deeper tint was far mellow and had a slight sweet-bitter after-taste. These wines somewhat resembled young Madeiras, while a more luscious sample exhibited much of the combined richness and pungency of Tokay, together with that peculiar freshness of taste common to the finer *auslesen* of the Rhine.

The manner of cultivating the vine differs to some extent in the various provinces of Italy, although the system of high training may be said to prevail. In Lombardy, trellis-work and poles are alike used for the support of the vines, while in Venetia the plants are almost invariably trained to trees such as the wild cherry, willow, and hazel, which are planted in lozenge or quincunx fashion for the purpose. In Tuscany again the vines will be found climbing up the trees, which on level ground are planted 25 feet, and on the hills some 15 feet apart. In the late

Roman States it is the custom to train the plants upon cane poles placed at regular distances from each other in long lines, and often interlaced into a sort of trellis-work; while near the houses one finds the invariable arbours or pergolas covered with clustering fruit. On the high grounds the vines are planted in terraces, with wheat crops sown in between. Around Naples the trellis-work, formed of tall stakes with cross-pieces of cane, is very high, and here the vine-growers never vintage until the autumnal rains have swelled the fruit, assigning as reason that the wine would spoil if they did so. In some parts of the south where the system of training to trees prevails, great care is taken to keep the vines well shaded, while in the north the trees are pruned to let in alike air and sunshine. In isolated instances the French systems of training and cultivating the vine have been adopted, but have not been found to answer in warm situations. Often enough in Italy the vines are well attended to, and they certainly yield a fabulous amount of fruit, but the system of vinification is remarkably careless. Ordinarily no pains are taken with the selection or sorting of the grapes, so as to obtain different qualities of wine, but red and white, rotten and unripe, are commonly pressed together, and too often are only very imperfectly fermented.

The alcoholic strength of the different Italian wines of which analyses are on record is as follows—the figures given indicating the percentage of proof spirit :—Of the Piedmont wines the Asti, Marengo, and Valmagra varieties average 22, Barolo ranges from 23 to 24, the *vins ordinaires* frequently indicating only half this strength, while such white wines as Naseo and Cannonao show as much as 28. The Lombardy red wines average 19, and the white 22, Valpolicella containing about 20. The well-known Tuscan growths, Chianti and Pomino, range from 22 to 24; *Vino Nobile* has scarcely 18; and the white varieties having 28 and upwards. Some of the Naples red wines indicate merely $15\frac{1}{2}$; *Lacryma Christi* averages 19; Gragnano, 21; and Taranto, 24; while of the white varieties the weaker kinds have as little as 12, white *Lacryma Christi* shows as much as 25. Among the Sicilian wines some Marsala, asserted to be unfortified, contained upwards of 30; Santa Venere has $29\frac{1}{2}$; and the Muscats and the Malmseys range from 26 to 29.

The annual produce of wine in Italy is estimated at 770,000,000 gallons, almost the whole of which is consumed in the country. The quantity exported in 1872 was 13,280,000 gallons, valued at nearly £1,100,000. The vintage of 1873 having given an exceptionally small yield, the wines became proportionately dear in price. Thus, of the superior Piedmontese

growths, Barolo fetched 4s. 4d. per gallon at Genoa, the wines of Asti 4s. per gallon, and the Marengo *crús* of Count di Sambuy 3s. 8d. per gallon at the same port. The price of the Grignolino wines was about 2s. 9d. per gallon at Asti, and 2s. 2d. or 2s. 3d. per gallon at the place of production; that of the Barbera vintages about 2s. 9d. per gallon at Asti, and 2s. 4d. per gallon at the vineyard. After the vintage of 1874 these prices became greatly reduced, and strongly-coloured Italian wine may now be obtained at Asti at 1s. per gallon, and commoner kinds as low as 8d. The value of the Venetian Valpolicello wines is 4s. 4d. per gallon, Tuscan Chianti fetching 5s. 2d. per gallon at Leghorn, and Pomino being a trifle dearer. With regard to the Sicilian wines the average price of new Marsala is 3s. 8d. per gallon, of fine Malvasia 5s. 6d., and of Muscat about 6s. 6d. per gallon.

The 259 exhibitors of wine from Italy, representing 43 out of its 59 provinces, contributed 429 kinds of wines in all, comprising 288 samples of red, 117 of white, 76 of dessert, and 11 of sparkling wines. Of the specimens sent from Piedmont and Sicily more than half were of acknowledged quality, whereas of those from Lombardy and the so-called *Æmilia* fully half were utterly worthless, and even the remainder rarely showed qualities entitling their exhibitors to the reward of a medal. Though the comparatively small number of samples may warrant no decisive conclusion as to the general condition of wine-production in Italy, one was still enabled to see that in certain provinces the systems of viticulture and vinification were very defective. Above all, the Italians showed they had much to learn with regard to sparkling wines; Asti being strong, sweetish, and unstable, others either too sweet or too acidulous, and others again being both sweet and acidulous at the same time, besides which the flavour of several was decidedly not pure.

The rewards for Italian wines comprised 11 medals for progress, 24 medals for merit, and honourable mention in 62 instances.

THE WINES OF GREECE.

Great care requisite in pressing the grapes and fermenting the must of Greek Wines—The resining of Wines justified on hygienic grounds—Greek Wines with certain exceptions unequalled—High character of St. Elie—Red and White Hymettus—Dry full-flavoured Noussa—Its fruity bouquet—Red and White Kephisia—Wines from the pipless currant grape—Potent red Wine of Patras—Malmsey, manna to the mouth and balsam to the brain—Sweetish Red Wines of Naxos—The brilliant, full-bodied Como—Santorin, the nest of the grand Greek *crús*—Thera, suggestive of a dry Madeira—The delicate, spirituous, fresh-tasting, and ambrosial St. Elie, poetically termed the Wine of Night—Red Santorin, its vinous bouquet and fine dry spirituous flavour—The luscious Red and White Vino Santo—Santorin Lacryma Christi—The Santorin Vineyards, soil, and varieties of Vine—The Wines of the Ionian Islands—Alcoholic strength of Greek Wines—Vineyard area of Greece and annual produce—Exports—Exhibitors and rewards at Vienna.

FAMILIAR though I was with the excellent Greek wines introduced into England by Mr. J. L. Denman, whose persistent efforts in the cause of pure *versus* fortified wine are well known, I anticipated endless pleasant surprises when assisting at the tasting of the general vinous products of the Hellenic kingdom. Unfortunately, however, neither the exhibitors nor the samples were so numerous as I had expected, besides which many specimens had evidently suffered from the voyage, or more probably the high temperature to which they had been exposed, while others proved to be the strongly-resined wines of the country prepared for home consumption, and which Greek vine-growers have long since become convinced it is useless for them to export to the nations of the West. With the excessive heat which prevails in Greece during the vintage season, the European system of pressing the grapes and fermenting the must can only be carried out with the greatest care. The white wines have to be pressed as rapidly as possible, and in making the red the skins require to be kept beneath the surface of the must by a special apparatus, and in both instances it is requisite to exclude the air as far as possible to prevent the formation of acetic acid. The admission of air to the must during fermentation, which is generally attended with advantageous results in northern climates, appears to have a directly opposite effect in warmer ones, where during the brief time occupied in treading and pressing the grapes the atmospheric changes regarded as necessary seem to succeed in producing themselves.

To save what they consider needless care and trouble, and to insure the wine keeping when stored in cellars level with the ground, with the temperature ranging from 80 to 100° Fahrenheit, many of the Greek wine-growers still continue to resin their wines, thereby rendering them suitable only for home consumption. They justify this use of resin on purely hygienic grounds, firstly as a protective against malaria fever, and secondly as a corrective of the lime which the ordinary water contains an excess of. Large quantities of unresined wines are, however, made for export, especially in the islands of Corfu, Cephalonia, Zante, and, above all, Santorin, and also in the peninsula of the Morea.

At their best—that is, matured by moderate age—the Greek wines are unequalled save by certain exceptional *grands crus*. The red varieties may not have the rare exquisite bouquet and velvety softness of Margaux and Latour, or the roundness, and, spite of their greater alcoholicity, the substance, so to speak, of Romanée or Corton; still they beat an average Burgundy, and, besides being more wholesome, have a more genuine vinous flavour than any excepting the finest natural Ports. Putting aside the entire class of sweet wines, which are for sipping, and not for drinking, where is the purely dry white variety that can be said to excel St. Elie when in its prime? Pale as the palest of natural Sherries, owing to the grapes from which it is made being shaded by their leaves, and deprived of the fiery influence of the sun's rays, St. Elie has a peculiar and original flavour of its own, arising, no doubt, from the volcanic nature of the soil whence it comes. It rivals the best Amontillado, for more than any other Greek wine it is the one which develops the prized ethereal flavour and bouquet, besides preserving an agreeable freshness of taste in which all Sherries are invariably deficient. It is more refined and delicate, more *spirituel* than any of the Hungarian growths, and having more dryness and character is better adapted for a dinner wine than the finest Sauternes.

Athens sent both red and white wines to Vienna, and one sample of the former from Mount Parnassus, 16 years old, was found so well preserved, without recourse having been had to resin, that honourable mention was made of it. Among the samples of wines grown in the plain surrounding Mount Hymettus, renowned for its honey, which brings out the flavour so marvellously of the white wines of the locality, pre-eminence must be given to the red Hymettus of a rich ruby colour and genuine Burgundy flavour, although without the velvety softness and the volume of the grand growths of the Côte d'Or, while the white variety, with its fresh acidulous flavour, recalls more nearly

a spirituous Grave than any other wine one can call to mind. From Mount Olympus came the dry and full-flavoured red wine of Noussa, of a fine but not particularly high colour, and with a decided fruity bouquet and abundance of vinosity, due, however, to perfect fermentation, and not to adventitious alcohol, for, following the good traditions of old, the modern Greeks never fortify their wines.

Athens further sent red Kephisia with a pleasant sub-bitter taste, which moderates with age, when a decided bouquet develops itself. The white variety, slightly more spirituous than the red, is not easily characterised, except by describing it as marvellously delicate and dry, and having a fresh and slightly tonical flavour. All these wines were made on the French system, and as carefully as the best products of the Gironde, and their merits were recognised by the award to one Athens exhibitor of a medal for progress, to another of a medal for merit, two others having honourable mention made of their samples.

From the Morea, Patras, Nauplia, and Corinth contributed samples of red and white wine from the Corinthiaca or currant grape, strong, acidulous, and high-flavoured, and requiring moderate age to temper it. Those from Nauplia were the best, and received honourable mention. In the Morean peninsula these small pipless grapes are principally cultivated, and on being dried find their way into the market as currants. So long as the weather favours their drying they are disposed of in this form to the greatest advantage, but whenever rain chances to set in and renders the drying of them impracticable—the operation being carried on in the open air—the currants either cannot be sold or else realise scarcely anything. Owing to this the inhabitants some years ago commenced to convert them into wine, and the Achaean Vine Culture Company recently established at Patras contemplates producing these Corinth wines in great abundance. From examinations and experiments carried out upon a large scale in Greece by Professor Nessler, of Carlsruhe, it appears certain that considerable quantities of wine of good quality and low price adapted to the export market can be produced. The juice of the currant grapes was found to contain from 24 to 29 per cent. of sugar, and considering whether the wines were likely to remain sweet, the influence of great drought during the ripening of the grapes upon their saccharine and acid contents was carefully estimated, and it is believed will necessitate the production of full-bodied and decidedly acidulous wines, for, as is well known to those who have studied the subject, the ripeness of the fruit depends far more upon a due amount of moisture at the proper time than on continual sun-

shine and a high degree of temperature. According to recent advices from Patras, complete success is attending the company's efforts to produce a marketable wine at a low figure and perfectly adapted to European consumption.

The potent red wine known as Patras resembles both in colour and flavour highly spirituous natural Port, while the equally powerful white wine has the refreshing sharpness and some little of the flavour of certain growths of the Rhine, although its greater alcoholicity renders any comparison between them extremely difficult. Still and sparkling varieties of this wine were exhibited, as well as some sparkling wines from Kynouzia. Nauplia di Malvasia, which originally gave the name to the wine known as Malvasia, otherwise Malmsey, characterised by the Italians as "manna to the mouth and balsam to the brain," and subsequently reproduced in all the wine countries of the world, failed to send even a single specimen of the rich liqueur wine so called; Misistra, however, contributed samples of it, and so did Patras, which sent with it several Muscats and a wine styled Mavrodaphne, a collection which secured for its exhibitor, M. Kipfel, a medal for merit. Another exhibitor from Calavyto, where the monks of the convent of Megaspoleon store their wines in huge tuns, after the fashion of mediæval times, secured honourable mention for his products.

It was from the islands of the Archipelago, from Naxos, Andros, Syra, and above all Santorin, that the finest Greek wines came. Naxos sent some sweetish red wines very pale in colour, due probably to a mixture of red and white grapes, Syra forwarding the brilliant full-bodied Como which resembles when young a fruity Port, while Santorin, the nest so to speak of the grand Greek *crûs*, contributed many of its finest growths—Santorin, whose volcanic soil produces Bacchus wine, Santo wine, Night wine, and Calista wine, the extremes, it may be said, of sweetness and dryness, some, as described by Edmond About, yellow as gold, translucent as the topaz, and bright as the sun; others almost colourless as a summer moonbeam. Of the dry wines the one known as Thera has an abundance of natural spirit combined with a distinct yet delicate flavour suggestive of a dry Madeira, but the Santorin white wine *par excellence* is the dry, delicate, spirituous, fresh-tasting and ambrosial St. Elie, known locally under the poetical designation of the wine of Night, from the vintage taking place after the sun has sunk to rest. Red Santorin, which becomes topaz-tinted with age, has an indescribable vinous bouquet and a fine dry spirituous flavour, and imparts a generous glow, a calm inner warmth, by the aid of its own natural alcohol. Of the famous Bacchus

wine, which Miss Bremer in her ecstasy, while sipping on the spot, pronounced to be of the taste of nectar and the colour of liquid gold, no samples came to Vienna, but we had the fragrant *Vino Santo*, a delicious Muscat wine of spirituous flavour and honey-like consistency made from grapes dried for a week and upwards in the sun, and of the same luscious character as the well-known straw-wines of Italy. There is a purple as well as a white variety of *Vino Santo*, and the island further produces a similar but less luscious wine known as *Ambrosia*. No sweet red wine in the world can compare with *Lacryma Christi*, and that from the island of Santorin equals its renowned Italian prototype. For the very interesting collection of Santorin wines exhibited by the commune for Thera a medal for merit was awarded.

With the exception of the hill of St. Elias, the island of Santorin is mostly vineyard, and it is to the volcanic nature of its soil, which exercises so favourable an influence on the grape, that the Santorin wine owes its recognised excellence. The vines we are told are planted far apart, the precise distance being regulated by the quality, strength, and aridity of the ground, to allow of each stock being abundantly nourished and its roots freely developed. From the short and vigorous stems a certain number of shoots spread out and are trained in a crown-like form, causing the vines when in full foliage to resemble bushy shrubs of circular shape. The species of grape from which both red and white Santorin wines are principally made is the *Assyrticon*, while among other vines cultivated in the vineyards of Greece are the white and black Muscat, the *Malvasia*, the *Greco*, the *Cipro*, and the *Corinthiaca*.

From three of the Ionian islands, Corfu, Cephalonia, and Zante, came some light red and white wines with a collection of purple Muscats from the years 1854 to 1866, and some white Muscats of 1868 vintage. The Muscats, which were remarkably fine, secured a medal for progress for their exhibitor, M. Manzarinos of Cephalonia. Of the ordinary wines those from Zante were the best, and received honourable mention. Some Epirus wines from the neighbouring continent were light and acidulous, but will rarely keep beyond the first year. Ithaca sent samples of its olive oil, but not a single bottle of its fine red wine, which is said to be of the *Hermitage* type.

The alcoholic strength of the higher-class Greek wines is more uniform than that of the wines of any other country. St. Elie and Thera, which are the two most powerful, both contain 26 degrees of proof spirit, while the white wine lowest in the scale—namely, *Hymettus*—contains upwards of 25. Of the red

wines Santorin is the most potent, indicating as it does very nearly the 26 degrees, Como containing $24\frac{1}{2}$, Patras 24, Hymettus $23\frac{1}{2}$, and Kephisia 23. The sweet Vin Santo and Lacryma Christi simply range from $15\frac{1}{2}$ to 17.

The total area over which the vine is cultivated in Greece is estimated at 123,550 acres, the annual produce of wine being calculated at 26,400,000 gallons. All I am able to report with regard to the prices of Greek wines *in loco* is that those produced in Attica, and which are principally prepared with resin to enable them to keep, sell on the spot at the rate of 1s. the gallon, and that the Corfu wines command a trifle more. In 1869 continental Greece exported wine valued at merely £12,500, of which £2,500 was shipped to Great Britain. In addition Corfu exported 300,000 gallons, but no record is available of the shipments of the higher-class wines from the islands of the Archipelago. Considerable quantities of Greek *vins de liqueur* are exported to Turkey and Russia.

At Vienna there were only 25 exhibitors of wine from Greece, whose samples comprised 36 varieties, and 10 of whom received rewards, 2 obtaining medals for progress, and 2 others medals for merit, while honourable mention was made of the remaining 6.

THE WINES OF TURKEY AND ROUMANIA.

Soil and climate of Turkey suited to the production of good Wine—Obnoxious practice of resining the Turkish Wines—The red growths of the Golden Horn—Samples from Adrianople, Salonica, and Janina—Cyprus of the Commanderie, its balsamic character when old—The soil and Vines of the Cyprus Vineyards—Exports of Cyprus Wine—The Cretan Wines extolled by Martial and Diodorus, and the growths of to-day—Samian Wine a luscious Muscat—The Wine of Scio praised by Pliny and Strabo—Samples from Smyrna and Jerusalem—Vintages from the slopes of Mount Lebanon—Produce of the Vineyards of Turkey—Exhibitors and rewards—Objectionable character of most of the Roumanian Wines—Negligent vinification—Awards to exhibitors—Vineyard area and production.

ALTHOUGH the samples of wine sent by Turkey to Vienna were comparatively few, they comprised, besides specimens from the Turkish islands of the Archipelago, renowned in ages past for the luscious character of their various growths, examples from many of the European and Asiatic continental provinces, thus showing that, regardless of the precepts of the Koran, the Sultan's subjects are largely devoting themselves to viticulture and vinification. Turkey ought to produce very good wines. The diversified nature of her soil and climate is eminently adapted to such a result; but unfortunately, instead of adopting the improved European systems, the country population prefer following in the beaten track of their ancestors, and retain the obnoxious custom of coating their wine-vessels with resin, and adding turpentine and mastic to the grape must. They maintain that the custom is a good one, and a preventive, not against fever, but consumption, which, perhaps, may be true; still, it is quite certain that the practice renders the wine excessively unpalatable to foreigners, and undoubtedly checks its exportation. So strong in many of their wines is the taste and odour of resin and the various ethereal oils which this contains, that they are scarcely recognisable as wines at all, although the less tainted may be made passably agreeable by diluting them with water. It is but just to add, however, that in spite of the obnoxious resinous flavour, more or less apparent in the Turkish samples, the jury were enabled to discern a certain intrinsic value in a considerable number of them.

Among the specimens from Turkey in Europe were some examples of wines vintaged in the vicinity of Constantinople, notably syrupy white *vins cuits*, to one exhibitor of which a medal for merit was awarded, while of two others honourable

mention was made, the latter recognition being also accorded to some red growths produced on the banks of the Golden Horn. From Adrianople came various samples with unpronounceable names less tainted than usual with the obnoxious resinous flavour, and similar to good Roussillon, although varying very much in character. The best of these were displayed by an exhibitor named Kevor, to whom a medal for progress was given, honourable mention being made of some inferior qualities. Salonica likewise sent numerous specimens of Macedonian vintages, both red and white, for which two exhibitors secured, respectively, medals for progress and merit, while from Janina, in Albania, came some syrupy white wines, of which honourable mention was made.

The larger number of awards given for Turkish wines were secured, however, by exhibitors from the islands of the Archipelago, of which Cyprus yielded in ages past a growth renowned above all others, and which six centuries ago was dignified by Philip Augustus with the fanciful title of Pope of wines. The finer specimens of Cyprus were those vintaged in the vicinity of Paphos, near the ancient Commandery of the Knights of the Temple and of Malta, destroyed by the troops of Sultan Selim II., when the latter wrested the island from the Venetian Republic to make himself master of its vinous treasures. The younger samples of this naturally rich and spirituous wine proved to be of a bright topaz colour, while the older vintages were much darker, viscous, thick, and strong, the whole of them being far more like a liqueur than a wine. Their flavour was alike aromatic and resinous, their peculiar bouquet, recalling the odour of bitter almonds, being due to the practice of suspending spices and other aromatic substances inclosed in a bag in the amphoral-shaped jars in which it is the custom to keep the wine. In addition to the wine of the Commanderie, for samples of which an exhibitor named Jorgaki secured a medal for merit, Cyprus also sent specimens of her excessively sweet Muscats. The ordinary Cyprus growths are remarkably heady, and several samples were so strongly tainted with the obnoxious resinous flavour as to be undrinkable unless diluted with water. During their first year these wines are merely so much sweet must, and at the expiration of this time usually pass into the acid or alcoholic stage, but are not considered fit to drink until they are four or five years old, by which time they have exchanged the pale red colour of their youth for a faint tawny tinge. The finer varieties go on improving the longer they are kept, and eventually become quite balsamic in character, but not until they have passed their fifth decade. They are produced largely

in the vineyard of Oinodos, which comprises the two declivities of a chain of calcareous hills, one of which is cultivated by the Christians and the other by the Mussulmans.

The soil—a compound of chalk, black earth, and flinty stones with here and there a vein of ochre running in between—has doubtless much to do with the remarkable natural qualities of the Cyprus wines, some of the ordinary varieties of which would form a desirable addition to our dinner tables, were it not for the disagreeable practice of impregnating them with tar. The vines of the variety known as the Cipro, and peculiar to the island, are remarkable for the large size and luscious sweetness of the dark blue acorn-shaped grapes they yield. In former times wine was only made openly by the Christian fraction of the population, the Mussulmans preparing theirs in secret, and selling it under the name of Staphidia; to-day, however, the followers of both creeds unreservedly devote themselves to viticulture and vinification. Production, however, is largely interfered with by the Government taxing the wine-growers nominally 20, but in reality nearly 30 per cent. During the last century an attempt was made to introduce French casks into the vineyards, but it failed, and the wine is still fermented and matured in cone-shaped vessels holding rather more than two gallons each, and which have to be half-buried in the ground, owing to their amphoræ-shaped base. In 1869 Cyprus exported 530,000 gallons of common wine to Turkey, and 13,400 gallons of the wine of the Commanderie, valued merely at £1,210, to Austria, Italy, and France.

The island of Crete or Candia, which in antiquity produced the luscious Passum wine extolled by Martial, and the Pramnian Malvasia praised by Diodorus, forwarded several samples to Vienna, of which those sent by the Government authorities were judged worthy a medal for merit, while two other exhibitors had honourable mention made of their specimens. Candia formerly enjoyed a high reputation for her Malmseys, the finest of which were produced at Arcadi. Now-a-days her growths are principally red, and, like those of Santorin and Smyrna, both dry and sweet, possessing great vinosity and ripening rapidly. A small quantity of Muscat is produced in various parts of the island of excellent flavour, but too delicate to support a sea voyage. Were the Cretan wines better made they might become again, as they were under the Venetian domination, one of the principal exports of the islands; at present they are subjected to a liberal admixture of gypsum, which in a powdered form is trodden in with the grapes in the belief that it tends to preserve the wine. That produced at Agios Myron, and found by the

jury to be the finer growth, fetches from 1s. to 1s. 6d. per gallon when bought wholesale from the grower; while the inferior vintages of Kissamos and Canea are valued at about one-third of this amount.

Honourable mention was made of two sets of samples from the island of Rhodes, where some of the grapes attain the size of Damascene plums, which they resemble in colour, while the famous Samian wine which Byron in some well-known lines continually calls for the bowl to be filled with, proved to be a luscious Muscat of superior character, which secured a medal for progress for Mark Jorgaki and Co., and a medal for merit for another exhibitor. Scio sent samples of its wine, praised 1,800 years ago by Pliny and Strabo, and it was some satisfaction to find that one specimen of this once-famous *crû* was really deserving of a medal for merit. Neither the wines of the isle of Cos, nor those of the diminutive rocky and barren islet of Tendeos near the mouth of the Dardanelles, famed for its red Muscats, and which also produces common red wines in abundance, received any recognition, but a medal for merit was given for some samples from Mitylene, and the Imperial Government of the Isles received a medal for progress for its collective exhibition of the principal growths of the various insular dependencies of the Ottoman empire.

The samples from Turkey in Asia were somewhat numerous, and comprised, besides white wines from Smyrna, which obtained a medal for progress, and amongst which were several rich Muscadines, various growths from Brussa and Diarbekir in the interior of Asia Minor, together with specimens from the vicinity of Jerusalem, and different vintages from the slopes of Mount Lebanon, fancifully termed *Vin doux Rosa* and *Vino d'Oro*, the former sweet and rose-tinted, as its name implies, the latter a bright-coloured strong-flavoured high dry wine. These Lebanon wines are made in considerable quantities, and it will be remembered how Kinglake, in *Eöthen*, on asking the monks of the convent where he lodged which was the principal sight of the city hallowed by the sojourn and adventures of St. Paul, was immediately conducted to the convent cellars, and called upon to admire the store of vinous treasures with which their dark recesses were filled. It was the monastery of Miko, however, in the vicinity of Damascus, that sent to Vienna the best specimens of the wines of Mount Lebanon, and had a medal for merit awarded for them. In the Lebanon vineyards no kind of supports are used for the vines, which, yielding grapes as large as prunes, are nevertheless allowed to creep carelessly along the ground.

I have no information respecting the vineyard area in the various provinces of the Ottoman empire, but its total produce is estimated at 55,000,000 gallons of wine annually. There were 50 exhibitors of Turkish wines, consisting of 91 different samples. The rewards comprised 6 medals for progress and 10 medals for merit, in addition to which 19 exhibitors obtained honourable mention.

Roumania.—The Roumanian wines were tasted at Vienna under very unfavourable circumstances, second fermentation having set in with a large number of samples, while of those that remained sound the majority were found to be very weak and poor in quality, some of them exhibiting actual sourness, muddiness, a peppery flavour, a sickly kind of odour, and other signs of negligent vinification, besides being occasionally impregnated with tar, which rendered them still more disagreeable to the palate. The means employed to prevent second fermentation appear to be most inefficient, merely retarding it for a short period, and tending to increase its violence when it eventually breaks forth. The only wine of any delicacy was a Crozovano of 1868, for which a medal for merit was awarded, a similar recognition being given for a red growth of passable flavour vintaged in 1866 from the grape of the well-known Vigne de Monsieur. There were 28 exhibitors, contributing among them 43 specimens, and besides the two who obtained medals six had honourable mention made of their samples.

Most of the Roumanian wines are produced on the southern slopes of the Carpathians, only a small quantity being vintaged on the banks of the Danube. The vineyards supposed to yield the best growths are those of Cotnari, in the district of Tassi, and Dragasani in that of Valias. The area of vineland is estimated at 247,000 acres, the annual produce averaging 22,000,000 gallons of wine.

THE WINES OF THE UNITED STATES OF AMERICA.

Samples exhibited at Vienna and awards—Sweet and dry Californian growths—Wines from the indigenous *Labrusca* grape and their foxy flavour—Catawbas, dulcet, delicious, and dreamy—The produce of the Concord, Ives's Seedling, Hartford Prolific, and Isabella Vines—Norton's Virginia and the Cynthiana yield the finest red wines—Acidulous character of other red growths—The rose-colour Delaware and Herbemont Wines—The Carolinian Scuppernong, Taylor, Cunningham, and Devereux growths—Sparkling Catawba and its musky perfume—Fresh-tasting Sonoma—First attempts at Wine-making in America—Importation of European Vines—Attempts to acclimatise them—The Catawba planted on the banks of the Ohio—The flourishing Missouri Vineyards—Cultivation of the Vine in other States of the Union—System of planting and training—Vineyard area and produce—The great Transatlantic Wine companies—Mode of subduing the musky flavour of the American grapes—Sugar added to the musts—Alcoholic strength of Californian Wines—Prices—Importation of Wine to the United States.

THE samples of American wines exhibited at Vienna were not remarkably varied, still they enabled one to form a fair estimate of the produce of a land which is destined to become, like Australia, one of the great wine-producing regions of the world. There were merely 17 exhibitors, who, however, contributed among them as many as 82 specimens. Of four medals for progress which were awarded, one was secured by Messrs. M. Werk and Sons, of Cincinnati; the second by the Pleasant Valley Wine Company of Hammondsport, New York; the third by Messrs. Eberhart and Lachmann, of San Francisco; and the fourth by the Buena Vista Vinicultural Society. Of the three medals given for merit two were received by New York firms, Messrs. Ellis and Curtis, and Messrs. G. Groezinger, Ruyter, and Co., the remaining one being allotted to Messrs. Poeschel and Scherer, of Hermann, Missouri. Two other exhibitors received honourable mention. It is but just to add that the samples sent by the American Wine Company of St. Louis, Missouri, had been placed *hors concours*.

Of the various wines submitted to the jury a marked difference was observed between those vintaged in California and those produced in other States, a circumstance due to the fact that European vines are almost exclusively cultivated in the former province, while in the Missouri, Ohio, New York, and other States the indigenous varieties alone are grown. Of the

different Californian growths, known under the names of Angelico, Aliso, Porto, &c., the best were those of Messrs. Eberhart and Lachmann, to whom, as already mentioned, a medal for progress was awarded. This firm displayed some capital Riesling wine, not unlike the original Rhenish growth, although by no means equal to the finer European varieties, while their Gutedel, sweet and dry Muscatel, and so-called Tokay and Mountain wines, were carefully made and of fair average quality. The Californian Aliso proved to be a white wine with considerable body, and in taste not unlike an inferior Barsac; while some so-called sweet grape wine might have been taken for one of the light, brisk, and delicate growths of the Jura.

Of the wines from Ohio, Iowa, Missouri, Mississippi, and New York, which were the only States besides California that exhibited at Vienna, those produced from varieties of the indigenous *Labrusca* vines were all more or less tainted with the peculiar musky or foxy flavour inherent in those plants, and which is so displeasing to the European palate. The Catawbas, still largely produced in spite of that vine's liability to rot or mildew, and which Longfellow in his well-known song has described as "so dulcet, delicious, and dreamy," were of three tints, colourless, straw colour, and rose colour, according to their age and to the treatment the grapes had undergone. In taste they were not unlike certain wines of the Rhine, but fuller to the palate, although containing merely the same amount of alcohol. The produce of the prolific Concord vine, said to be very popular in the United States, and by some preferred to the Catawba, was a bright, light, red wine, with the obnoxious foxy flavour, however, far too prominent for European tastes. The same defect was noticeable in a less degree in the wines vintaged from the Ives Seedling and Hartford Prolific vines, as well as in that produced from the Isabella grape, which has a marked raspberry flavour, and was at one time an extensively-cultivated variety, but is now scarcely employed for purposes of vinification owing to its liability to mildew.

The finest American red wines were those yielded by the vines known as Norton's Virginia, and the Cynthiana. The former produces a well-blended, full-bodied, deep-coloured, aromatic, and somewhat astringent wine, only needing *finesse* to equal a first-rate Burgundy; the second, probably the finer of the two, being a darker, less astringent, and more delicate growth. The Clinton variety furnishes a wine of about the same body as Bordeaux, but darker in colour, and tainted with the obnoxious musky flavour. Among American red wines of note in their day, one may mention the produce of the so-called

Schuykill Muscadel vine, which was the only esteemed growth in the country previous to the cultivation of the Catawba grape, being in fact ambitiously compared to the *crûs* of the Gironde. It was a bitter acidulous wine, little suited to the American palate, and invariably requiring an addition of either sugar or alcohol to make it keep. The same is the case with the wine furnished by the Mustang grape of New Mexico, Texas, and Arkansas,

"the fiery flood
Of whose purple blood
Has a dash of Spanish bravado."

So sings Longfellow, apparently unaware that in its natural state this wine is in reality a poor acid fluid, and that its "fiery" flood is exclusively due to the addition of 3 lbs. of sugar to each gallon of must, combined with 10 per cent. of proof spirit administered after fermentation, the result being a strong-bodied and sufficiently agreeable tasting wine.

Of white growths, the sometimes slightly rose-colour wine yielded by the Delaware grape proved the most delicate, resembling a Rhine wine in character, and possessing a fragrant bouquet. The Carolinian Scuppernong, which was not represented at Vienna, being of too feeble a constitution to travel any great distance, while the grape itself can hardly be cultivated north of 35° of latitude, is a wine of the same class, but with a sweeter flavour. Next come the Herbemont, a rosy-coloured white wine, in taste reminding one somewhat of Spanish Manzanilla, and with a more agreeable freshness than Delaware, the Taylor, a Riesling-like growth, and the Cunningham, which has the character of Madeira. The Devereux vine, it may be added, also yields an excellent white wine.

Sparkling wines formed a considerable item in the American samples, the best-known being sparkling Catawba, made by the same complicated process and with equal care as the *vins mousseux* of France. Some varieties are sweeter than others, some are a trifle acidulous, while all are very frothy, and have moreover too much of that musky perfume which Longfellow says "fills all the room with a benison on the giver." Apart from scent, the European wine to which sparkling Catawba may be best compared is perhaps effervescent Vouvray, while unquestionably the American sparkling wine most appreciated by the jury was the Californian Sonoma, which proved to be *droit de goût*, fresh to the palate, and not unlike a middle-class Aï champagne.

From the earliest period of the colonisation of America the wine appears to have attracted the attention of the settlers, and

it is said that as early as 1564 wine was made from the native grape in Florida. The first attempts to establish a regular vineyard date, however, from 1620, and would seem to have been made in Virginia with European vines, the prospects having become sufficiently encouraging in 1630 for the growers to send for French vine-dressers to tend their plants. The latter were subsequently accused of ruining the vines by their bad treatment, but most likely this was an error, it having since been made evident that European vines cannot be cultivated east of the Rocky Mountains, where the *Phylloxera vastatrix* prevails. It was in vain that William Penn made repeated attempts to acclimatise European vines in Pennsylvania, in vain that the Swiss emigrants made similar trials in Jessamine County, Kentucky; that Pierre Legaud laboured in the environs of Philadelphia, and Lakanal, the member of the French Convention, experimented in Tennessee, Ohio, and Alabama, all their efforts to introduce the old-world vines proved fruitless. The attempts made by the Swiss settlers at Vevay, in Indiana, with the indigenous plants, were more successful, and after a time they produced some palatable wine from the Schuylkill Muscadel. Viticulture and vinification languished, however, in a precarious condition until attention was called in 1826 to the Catawba vine by Major Adlum, of Georgetown, near Washington, who thought that by so doing he was conferring a greater benefit on his country than if he had liquidated its national debt. This vine, which is derived from the wild *Vitis labrusca*, was first planted on an extensive scale near Cincinnati by Nicholas Longworth, who is justly looked upon as one of the founders of American viticulture, and gradually supplanted all others, remaining for many years the principal plant cultivated along the banks of the Ohio, the so-called "Rhine of America," until, ceaselessly attacked by rot, mildew, and leaf blight, it was found necessary to supplant it by more robust varieties.

The wines known as Norton's Virginia, Concord, and Clinton form to-day the basis of the Missouri vineyards, which promise to become not merely the most prolific vineyards of the States, but also those yielding the best wines. Hermann is the centre of viticulture in Missouri, but grapes are also grown and much wine made around Boonville in Cooper County, and Augusta in St. Charles County, also at Hannibal on the Mississippi, and in the vicinity of St. Joseph on the Missouri, there being hardly a county in this favoured State, which enjoys the advantages of longer seasons, a warmer climate, and more suitable soil than other regions, but has some flourishing vineyard. Inspired by the rapid success realised by Missouri both in viticulture and

vinification, Indiana and Illinois, since 1848, have greatly extended the area of their plantations, Kentucky, Tennessee, Arkansas, Iowa, and the south-east of Michigan following somewhat less swiftly in the same direction. In the north-eastern States, where grape-culture is very disseminated, the greater part of the produce being employed for table use, the Concord variety grown on trellis-work over the houses or on arbours prevails; the Catawba, although still represented in the Missouri and Cincinnati vineyards, being now principally grown on the Isles of Lake Erie and round Hammondsport in the State of New York, where it is purchased by the Cincinnati and St. Louis manufacturers of sparkling wines and removed to their establishments. In the south-eastern region, North and South Carolina, and Georgia, the Scuppernong, which is remarkably vigorous and prolific, is the prevailing vine. In Alabama and Louisiana, lands of the sugar-cane, the culture of the vine is of small importance. Texas, however, can boast numerous indigenous varieties, the chief of which is the Mustang, while California is rich in European vines, it being calculated that in 1861 the vineyards of the latter State contained 10,592,688 plants, comprising 2,570,000 in the county of Los Angeles, and 1,701,660 in that of Sonoma, which have since probably more than doubled in number. The system of culture varies in the different States. In some parts the vines are trained on trellises, while in others they are fastened to stakes 6 or 7 feet in height, being planted at distances varying from $3\frac{1}{2}$ feet by 4 to as much as 12 feet by 12, on account of their greatly-developed foliage and the large space between their shoots.

According to a report prepared by Mr. Erskine in 1858 for the British Government, the vineyard area in Ohio at that epoch was 3,000 acres; in Kentucky, 500; Indiana, 1,000; Missouri, 500; Illinois, 500; Georgia, 100; South Carolina, 300; North Carolina, 200; the total produce being estimated at 2,000,000 gallons of wine. To-day the vine is cultivated for wine-making purposes over 2,000,000 acres of ground, and the produce, which in 1840 was only 124,734 gallons, has risen to 14,000,000 of gallons. The small proportion of wine to the vineyard acreage is only to be accounted for on the hypothesis that the majority of the plants are young. As these get into bearing the production ought to increase thirty-fold and even beyond. At the present time California alone produces about 2,300,000 gallons, and it may be mentioned that in the single State of Ohio the vineyard area had increased in 1870 to 10,446 acres, yielding, however, merely 155,045 gallons of wine, owing, no doubt, to so much of it being newly planted. Vinification in the United

States is still susceptible of many improvements. In some cases the vine-growers make their own wine, in others the grapes are bought up by the numerous wine-companies established in almost every State, and whose operations are conducted on a vast scale in accordance with prevailing transatlantic notions. Their *cuvieries* are immense galleries a couple of hundred feet in length by 80 broad, divided into three stories, the ground floor containing the presses, six or more in number. The grapes on arriving from the country, brought by the different growers, are thrown into a basket running along rails, whence they are emptied into the weighing-machine, weighed, paid for, and thrown into a vast *cuve*, where by means of a mechanical apparatus they are transferred into a machine which slightly presses them and removes the stalks. The juice is conducted by pipes to the fermenting cuves, and the mash descends to the ground floor to be placed beneath the presses. The latter are ordinarily worked by a steam-engine of 15-horse power, but if necessary can be worked by hand. Only six hours are occupied in pressing three tons of mash, and such is the rapidity with which the operations generally are accomplished, that in six minutes a ton of grapes can be received, weighed, crushed, the juice transferred to the fermenting *cuves*, and the mash made ready for pressing. The smallest cellars of these establishments can store 50,000 gallons of wine, and frequently as many as 350,000 gallons; some of the tuns, which are remarkably well made, holding no less than 2,200 gallons each.

When the wine is made from the grapes of the *labrusca* group, the principal difficulty that has to be contended with is to prevent too much of the strong musky flavour of the fruit from entering the wine, and which is accomplished by removing the first juice expressed from the grapes and not allowing it to ferment on the lees. In this manner the dark red grapes yield a white wine, the flavour of which is not nearly so powerful as it would have been had this precaution not been taken. The extensive introduction of the Norton's Virginia and Delaware varieties, which are without this defect, has done much, however, to obviate the inconvenience. Many of the American wines contain an extremely small quantity of natural alcohol, and it has become the practice to follow out the theories of Dr. Gall—extensively in vogue, as we have pointed out, on the Rhine—and to add to the must, as already explained with regard to the Mustang grape, a certain quantity of sugar calculated as being deficient in the fruit itself, and which varies from $1\frac{1}{2}$ lbs. to 3 lbs. per gallon. The produce of the Concord grape is probably the wine which experiences this treatment to the greatest extent.

The testing of certain Californian wines showed that the Sonoma valley white variety was the one which contained the smallest amount of alcohol, indicating as it did under 15 per cent. of proof spirit, while the red wine gave $17\frac{1}{2}$. The so-called Californian hock showed as much as $24\frac{1}{2}$, the Angelica 27, the Californian port $31\frac{1}{2}$, and a Muscat wine upwards of 33. The two last named had no doubt been alcoholised. During the year 1873 the State of California exported 1,097,742 gallons of wine, 38,657 gallons of which were consigned to Europe.

The only information which has reached me respecting the prices of American wine is that still Catawba is sold at the rate of half-a-dollar per bottle, and that newly-vintaged Concord is 90 cents or 3s. 9d. the gallon, which is about what American wines on the average commonly command. The sparkling wines are a dollar and upwards per bottle.

In 1870 the United States imported 9,607,662 gallons of wine, valued at 5,801,000 dollars, or £1,208,541.

THE WINES OF THE BRITISH COLONIES.

I.—*Australian Wines.*

Composition of the Jury selected to judge the Australian Wines—Numerous samples untasted through negligence of agent—Excellence of Australian Hermitage—Incredulity of the French experts—The Victorian Wines—South Australian and Queensland growths—Interesting samples from the Australian Vineyards Association—*Goût de terroir* in certain red varieties—Excellent white Wine from the Auldana Vineyards—An admirable Riesling from Adelaide—Absence of the New South Wales growths—Awards to Australian Wine-growers—Diploma of honour unhesitatingly granted—Alcoholic strength of Australian Wines—First introduction of the Vine into Australia and its subsequent progress—Wine industry affected by the gold discovery—Species of grapes cultivated—Extension of the Viticultural area of Australia during the last quarter of a century—Largely-increased production.

THE Australian wines were accidentally subjected to a severe test at Vienna, owing to the peculiar constitution of the jury which judged them, and which comprised M. Tessonnère, vice-president of the wine jury, and author of the official report on the wines exhibited at Paris in 1867; M. Allier, vice-president of the *Chambre Syndicale des Vins* of Paris, together with two other French jurors—namely, MM. Blaise and Cuvillier; Professor Nessler of Carlsruhe, author of various treatises on viticulture and vinification, and chosen official reporter to the Vienna jury; Don José de Santos, Spanish Agricultural Councillor; Conte Bertone di Sambuy of Turin; Fayk Bey, one of the representatives of Turkey; together with myself and a couple of French experts. The wines exhibited being from well-known varieties of French, Spanish, and German grapes were tolerably certain to be competently dealt with by such a tribunal as the foregoing.

Although the colony of Victoria sent 53 samples of wine to Vienna—namely, 27 of red and 26 of white—owing to negligence on the part of the agent in immediate charge of them only 30, that is to say, 14 red and 16 white, or rather more than half, were actually tasted. The highest honour belongs to Heine and Co., of Strathfieldsaye in the Sandhurst district, the whole of whose samples, consisting respectively of Hermitage, Cabernet, and Verdeilho, were classed in the first rank.

Another exhibitor whose wines proved to be of a superior character was Mr. J. Wettler, of Echuca, for out of six of his samples that were tasted, three were classed as 1, and two others as 2; Hermitage and Cabernet, the last the famous grape

from which the fine red wines of the Gironde are made, being again among those which secured the highest mark. To both the above exhibitors, whose names indicate their German origin, medals for progress were awarded. Two other samples of Hermitage contributed by Mr. J. Johnson of Sunbury, and Mr. C. Pohl of Strathfieldsaye, were likewise classed 1, and secured medals for merit.

Out of simply five samples of Hermitage tasted by the jury four were found deserving of being placed in the first rank, which made it a matter of extreme regret that no less than 11 samples of the same wine, comprising vintages ranging from 1866 to 1871, should, through mere negligence alone, not have been brought to the notice of the jury at either of the two sittings which were devoted to the tasting of Australian wines. So excellent, indeed, were the samples of Hermitage that when a third specimen showed the same striking affinity with the famous wine of the Drôme which had been already remarked in the previous samples, the French experts seemed struck with astonishment, and insisted it was fine French wine, which had been matured by a voyage to Australia, and back again to Europe, that was being offered them to taste. Assurances to the contrary were at once given to them, but when a fourth bottle exhibited precisely the same high qualities they required a distinct affirmation from the agent in charge of his conviction that the wines were of genuine Australian growth, and that no substitution was being practised, before they were willing to resume their labours.

On referring to reports of the Paris Exhibition of 1867, I find Australian Hermitage spoken of by Frenchmen, who are at the least excellent judges of their own fine wines, in very favourable terms, and I observe, moreover, that at the Victoria Wine Exhibition of 1870, of the 17 prizes which were given, no less than 6 fell to the share of the Hermitage wines, while of the 14 wines securing honourable mention, 7, it seems, were samples of Hermitage. Any one who knows how exceedingly rare are the good red wines produced outside the limits of France and Portugal will see in this superiority of the Australian Hermitage a fine opening for the vine-growers of the colony. The Burgundies of their production which we have tasted have much of the smoothness of the Côte d'Or growths, but neither their volume, bouquet, nor flavour; while the red wines from the Cabernet grape, although they recall the growths of the Médoc, are far too thin to carry satisfactorily the extra amount of alcohol they possess, and which arises from the excess of saccharine developed in the grape under an Australian sun.

The other Victoria wines which met with recognition at Vienna included one of the character above mentioned, a Cabernet of the year 1870, exhibited by Mr. F. Gross, of Sandhurst, also a fine Riesling wine of 1866, sent by a German vine-grower, Mr. F. Schmidt, of Berwick, and a Muscat from Mr. J. T. Fallon, of Albury, whose name, misprinted Jallon, appears in the list of colonial awards inserted in the *London Gazette* under the section of New South Wales. To the three foregoing exhibitors medals for merit were awarded, besides which honourable mention was made of a Cabernet Sauvignon wine forwarded by Mr. H. de Castella, of Yering, of a Hermitage of 1870 from Mr. C. Maplestone, of Ivanhoe, of a Burgundy from Mr. F. Cripps, of Hepburn, and of a Riesling from Mr. E. Schroeder, of Chinaman's Creek, the two latter in the Castlemaine district.

Several of the best Victorian wines were evidently not represented at Victoria, notably red Irrewang, which the Rev. J. Bleasdale, an experienced connoisseur in the matter of the wines of the antipodes, pronounces the best colonial wine he ever tasted, also red Kapunda, which the same authority speaks of as resembling a young Port, though with somewhat different flavour. The Yering, Sunbury, and Riddell's Creek wines are described by him as delicate and dry, and admirably suited to summer drinking, while those on the other side of the dividing mountain range, including the growths of Castlemaine, Sandhurst, Wahgunyah, Albury, and the banks of the Goulbourn, are pronounced to be strong, luscious, and full-bodied.

South Australia and Queensland contributed merely twenty samples of wine between them, and even of this limited number six, for the same reason as already given, were not submitted to the consideration of the jury. Those which were tasted, however, secured their fair share of rewards, including a medal for progress given to Mr. P. B. Burgoyne, London representative of the Australian Vineyards Association, for specimens of Mataro (vintage 1869), Beaumont (1867), Tintara (1868), a white wine from the Pedro Jimenez grape, Temprano, another Spanish white variety, and some Highercombe amber, a sample of Highercombe ruby being one of those which were not forthcoming. The Mataro grown on an alluvial soil was intensely dark in colour, and had all the fulness and fruitiness of an unbranded Port, with a fine fresh flavour and none of that roughness peculiar to the perfectly-fermented Douro growths in the earlier years of their existence, conveying an impression that the wine was thoroughly matured. The Beaumont, from a calcareous soil, was of a tawny tinge, soft, sweet, and highly spirituous, and presented the closest approximation to ordinary Port of any red

wine in the Australian collection. The Tintara grown on an ironstone soil had a very distinct character of its own. The colour was remarkably tawny, such as Côte Rôtie, produced from a mixture of red and white grapes, frequently assumes, while the wine itself had a robustness about it which was only equalled by its remarkable alcoholicity, warranted as it was to be perfectly unfortified. The after-taste was peculiar, and though not exactly disagreeable, might be disapproved of by many. It was a kind of *goût de terroir*, common it would seem to certain of the Australian red wines, and ascribed by the Rev. J. Bleasdale "to the faulty manner of making, and want of knowledge in maturing them, more than to anything derivable either from the air or the soil, or the variety of grape used."

If this really be the case, why, instead of groping about in the dark, do not the Australian vine-growers follow the example of their Transylvanian brethren and secure the services of able men from the Rhine, where the wines are invariably well made, and receive perhaps far better after-treatment than in any other part of the world? This *goût de terroir* is most frequent in wines which come from a clayey soil largely impregnated with oxide of iron, and is due, says Dussieux, to the solution and vaporisation of a portion of the mineral and metallic substances. These solutions acted upon by air, heat, and moisture, eventually become mixed with the elements of the sap, and thus get introduced and remain suspended in the fruit. Senhor Lape, according to Mr. Bleasdale, attributes its development in the Portuguese wines to the conversion of a portion of the tannic acid into alcohol, whereas some of the best French authorities assert that it proceeds exclusively from the grape-skins, and is to be obviated by not allowing the grapes to remain too long in the fermenting-vats.

Of the white wines exhibited by Mr. P. B. Burgoyne, the Pedro Jimenez, of a rich golden colour, was a soft, and, considering the character of the grape from which it came, a remarkable dry as well as pleasant wine, with a slight nutty flavour and of moderate alcoholic strength. The Temprano was of a light golden tinge, and clear as crystal, singularly soft to the palate, perfectly dry, not in the least degree spirituous, and with much of the character of a Jerez wine about it, while the amber Highercombe of 1867 vintage, and produced in an open quartz soil, had an agreeable dry sub-acid and slightly spirituous flavour which moreover left behind it a pleasant tonical after-taste.

A medal for merit was given to Messrs. Apps Smith and Co. for a sample of white wine from the Auldana vineyards, and

from purely Spanish varieties of grape, which had the advantage of being perfectly free from added spirit, and exhibited quite as much of the raciness of a Rhine wine as many an Australian Riesling, combining with the agreeable sub-acidity of the latter a genial warmth and decidedly original and pleasant flavour. Other samples of white Auldana exhibited by Messrs. Patrick Auld and Co., and into which the juice of the Tokay grape had evidently entered, had much of the character of good dry Ruster, with all the same fine high flavour, while a red variety from the Cabernet grape had alike the bouquet and freshness of a genuine Bordeaux with somewhat more spirit, but without that increased volume which one would have preferred to have found combined with this increased alcoholicity. A medal for merit was given to Messrs. Lorimer and Co., of Adelaide, for an admirable Riesling tasted at a second sitting of the jury, when several Germans who were present went into raptures over this produce from what they regard as the national vine, and which had come to them thousands of miles across the ocean. On the same occasion another Riesling wine exhibited by Mr. W. Green, of Cawler Park, whose misfortune it was to have only one out of the five samples he had sent tasted, received honourable mention.

New South Wales, the colony that first imported the vine and tended it until it had struck deep root in Australian soil, sent none of its wines to Vienna, although its red and white Bukkalla, the latter proclaimed by Mr. Bleasdale as king of New South Wales wines, are commonly understood to be among the finest growths which Australia produces. Its Carwarra from the Camden Park vineyards is characterised moreover as being a pale-coloured, fine, dry, thin, white wine, approximating to an unsulphured Sauternes, but with a very slight bouquet, while the equally dry red wine from the same vineyards is described as resembling Burgundy in colour, and exhaling a peculiar and agreeable although partial perfume.

The awards made at Vienna to the Australian wine-growers may be thus summarised:—There were 16 exhibitors from Victoria, 30 of whose samples were examined, of which 11 were classed 1, and rewarded with two medals for progress and five medals for merit, while five other exhibitors secured honourable mention. In other words, 12 exhibitors out of 16 received some kind of reward.

The exhibitors from South Australia, six in number, had 14 of their samples tasted, three of which, classed 1, obtained one medal for progress and two medals for merit, one other exhibitor having honourable mention made of his wine. In this instance, therefore, four out of six exhibitors received a reward.

The Australian wines having secured a far larger percentage of higher-class rewards than fell to the share of any other country, I asked that a diploma of honour might be granted to the colony for this reason, and the request was unhesitatingly complied with. Owing, however, to a rule having been laid down by the wine jury that no diploma of this character should be given to an individual holding an official position, or to any person or society trading for profit, I was embarrassed in my choice as to the individual or body to whom the diploma might properly be granted, but eventually fixed upon the Acclimatisation Society of Victoria as being, if not the actual representative of the Australian wine-growers, at any rate the one corporation with which an identity of interest might be presumed to exist.

Although the application was made on behalf of the colony of Victoria, first, as being the principal exhibitor of wines, and, secondly, as having secured the largest proportion of rewards, I am free to admit that in asking for this diploma the intention was to recognise the exertions of the Australian colonies as a whole in respect to viticulture and vinification. The memorial stated that the application was based on the immense progress made of recent years in acclimatising and cultivating the vine and in making wine by the Australian colonists, as was proved by the large number of wines classed 1 by the jury, and shown by the official protocol.

"I ask for this diploma," the memorial proceeded to say, "as an acknowledgment of the energy and enterprise displayed by a few colonists who, unaided by Government grants, and regardless alike of the risks and outlay they incurred, sent for vines from a distance of more than 12,000 miles across the ocean, planted them in soils of the suitability of which they were by no means certain, tended them, and after persevering in their efforts during five-and-thirty years have arrived to-day at a result the nature of which is shown by the protocol to which I have already drawn your attention.

"A diploma of honour awarded by the international jury of the Vienna Exhibition will not only be held in high esteem by the colonists of Australia, whose eyes are continually turned towards Europe, but will have an important material effect, for the fact of its being granted will become known throughout the entire continent, and by tending to favour the consumption of wine in the country of its production, will contribute more than anything else to promote an abstention from alcohol, the abuse of which is the bane of the Australian colonies."

The occasional fortifying of Australian wines is the worst

feature about them, and can no more be justified than corresponding practices with regard to the wines of Spain and Portugal and those of the south of France, and which ordinarily merely screen a clumsy system of vinification, or, if not this, allow of the wine travelling without having to wait until it is properly matured. Wines of the degree of alcoholic strength which those of Australia naturally attain to, not only need no adventitious spirit, but have any finer qualities that they may derive from special influences of climate or soil, or which are likely to be developed in them by age, entirely destroyed by such a proceeding. The testing of very numerous samples in Australia showed that only in one instance, and this most probably a fortified wine, did the alcoholic strength of any of the Australian wines go beyond 27·8 per cent. of proof spirit, and that out of 186 samples tested at different times no more than 17, of which number 5 came from a single vineyard, exceeded 25 degrees.

As the natural strength of the Australian wines has latterly formed the subject of controversy in the London newspapers, it may be interesting to summarise the results of the published tests. For instance, the samples of Victoria wines showed an average of 21·77 degrees of proof spirit, the lowest on the list being a sample of Hermitage, which indicated merely 18·9; other samples of the same wine ranging from 21 to 23, and two reaching 24·1. The strongest red wine was from Echuca (species of grape not stated), which marked 25·2. The white wine containing the largest amount of spirit was from the Tokay grape, and indicated 23·8, the lowest, from the Chasselas grape, showing no more than 18·8. A second set of samples gave the subjoined results. The greatest quantity of alcohol was found in a brown Muscat, which had doubtless been largely fortified, its proof spirit amounting to 32·2, whilst next lower in the scale came Riesling and Verdeilho, indicating respectively 26·3 and 26·2. The least spirituous white wine was called Ngarveno, and showed 18·6, a Riesling which followed marking 19·8. Of the red wines a sample from the Gamais grape, with a Burgundy and a Mataro, indicated no more than 16·2, although from 17 to 19 appeared to be their average strength. The red wine standing highest on the list, and dignified by the name of Gloria Australia, showed 24·9, the Hermitages, which came next, ranging from 24·4 down to as low as 18·5, the average being 22 degrees.

The South Australian wines averaged 22·67, the most spirituous of the samples being a Roussillon, and a red Glenpara, named after the vineyard and not any species of grape,

and both of which indicated 26·3. The Hermitage ranged from 23 to 25, while the red wine with the least spirit was a second sample of Glenpara containing simply 17·3; next to it came a Highercombe ruby indicating 21·6. The white wines highest in the scale were Verdeilho of 25 degrees, Auldana of 24·8, and Riesling of 24, the lowest being white Glenpara, which marked 18·8. The samples of New South Wales and Western Australian wines that were tested appear to have been very few. The first-named averaged 22·16, and the last 24, the red and white Bukkullah indicating respectively 20 and 22·7 degrees of proof spirit.

Although the first introduction of the vine into Australia is of comparatively recent date, and must have been beset with considerable difficulties in the days of long and uncertain sea voyages, authentic record of the circumstance would appear to be already dying out, as one of the largest Australian wine-growers, in a recent lecture delivered before the Society of Arts, assigned the credit of the enterprise to Sir Wm. McArthur, and recorded the arrival from the Rhine of the first parcel of vines at New South Wales in 1840. This theory, however, is completely upset by Mr. James Busby's published journal of his voyage to Europe in 1831, solely for the purpose of obtaining cuttings from the best varieties of vines in France and Spain, with a view to the formation of an experimental garden at Sydney. From this volume we learn that before his departure from Sydney he had already distributed 20,000 cuttings of Australian vines—the result, it is presumed, of previous importations—among 50 settlers, and had drunk wines of very fair quality produced by a Mr. Sadlier from the Orphan School vineyard near Liverpool, New South Wales. Mr. Busby secured cuttings from the vineyards of Jerez and Malaga in Spain and from those of Roussillon, the Champagne and the Côte d'Or in France, in addition to a couple of plants each of between four and five hundred varieties from the celebrated collection in the Botanical Garden of Montpellier, as well as of 137 others from the Gardens of the Luxemburg. These cuttings were duly forwarded in convict ships to New South Wales by permission of the Government, and by far the larger portion were successfully reared in Australia.

The vines imported from Germany nearly 10 years subsequently by Sir William McArthur were planted at Camden Park, distant about 40 miles from Sydney, and were supplemented from time to time by other European varieties, and in due course the Camden wines, celebrated throughout the Australian Colonies, were the result. Vineyards were afterwards

planted by various colonists on the banks of the Hunter river in the northern portion of New South Wales, from one of which the celebrated red and white wines passing under the name of Bukkullah are produced. While the northern colonists were thus active, those of the south were not entirely idle, and a Mr. John Smith having succeeded with a few cuttings which he had obtained from Sir William McArthur, imported numerous others direct from Europe, and, what was of far more importance, brought over three German vine-dressers to attend to their cultivation. After completing their engagement these Germans settled at Albury, on the north bank of the Murray river, and planted a favourable site, of which they had procured the lease, with vines. This was in the year 1851, and as soon as success was assured they sent to Europe for their relatives and friends, and ere long a thriving German colony was settled on the hills and slopes bordering the river, engaged in transforming the district into what the colonists are now proud to term the Garden of the Vine in Australia, and regarding the waters of the Murray as those of their favourite Rhine. Large vineyards have since been laid out, and to-day the vine is cultivated in all the best situations along the banks of Murray river for a distance of 150 miles.

Victoria is reputed to have obtained its first vines from the vineyards of Sir William McArthur at Camden Park, and it is said the earliest plantation was in the Geelong district. Other cuttings were obtained from South Australia, which had already imported vines direct from France, Portugal, and Spain, while the vineyards on the Barabool Hills were being planted with vines brought over direct by Swiss and German immigrants. The gold discovery in 1853 gave a serious blow to the wine industry in Victoria, owing to the high prices which grapes, in common with all other kinds of fruit, commanded, the scarcity of labour, and the low rate at which the imported wines that glutted the market were offered. When things righted themselves new vineyards were planted in the Sunbury and Sandhurst districts, at Riddell's creek, and along the Murray and Ovens rivers, the first of which forms the boundary between Victoria and New South Wales, and where now every farmer cultivates his vineyard and drinks his own wine. In the meanwhile the South Australian colonists, with Dr Kelly and Mr. Patrick Auld at their head, on learning of the success which had attended Sir William McArthur's experiments, had ordered vines, as already mentioned, on a large scale from the principal wine-producing countries of Europe, importing foreign labour to superintend their cultivation, and soon succeeded in

securing a deserved reputation for their wines, which are, in fact, admitted to be among the best which Australia produces.

The species of vine most generally cultivated in Australia are characterised by Mr. Fallon, who has had considerable personal experience of them, in the following terms :—

“The Riesling is one of the most desirable grapes to cultivate. Although not a large bearer, the vine is hardy; the fruit, being in small conical bunches, is far less liable to danger from wet before vintage than other kinds. The wine produced from this grape is not to be surpassed in quality by any other white wine manufactured in the colonies. Verdeilho produces a generous rich wine of fine bouquet; like the Riesling, it is a shy bearer, and easily affected by cold winds during the blossoming season.” The Verdeilho, it may be remarked, is a Portuguese variety cultivated to some extent in the Oporto district, and more especially in the neighbourhood of Penafiel, and prevalent in the vineyards of Madeira.

“The Aucarot grape makes a wine equal to any of the colonial white wines; but, like the Verdeilho, it is tender and delicate while in flower, and a full crop cannot always be relied on.” By the “Aucarot” grape Mr. Fallon can only mean the Morillon blanc, known otherwise as the Auxerrois blanc, of which Aucarot is evidently an Australian corruption. “The Chasselas is a hardy plant, and generally bears a large crop, and from it pure light wine of a delicate flavour is made, which is much liked as a dinner wine. The Pedro Jimenez is a large bearer; a good yield may invariably be relied on, as the vine is hardy, and produces a strong wine of good keeping qualities, but rather coarse in flavour, not unlike sherry.” Other white varieties cultivated to a less extent are the Palomino, the dominant Jerez grape, the Gouais, the Pineau blanc, with the Marsanne and the Roussane, from a combination of which white Hermitage is produced, and the Furmint or Tokay grape.

“Among the red varieties the Shiraz is a hardy vine, a moderate bearer, yielding a fair crop, and makes a fine strong wine of good quality and flavour; in the colony it is highly recommended by the medical faculty for invalids and persons requiring a strengthening beverage.” The Shiraz, or Sirrah, as it is commonly styled in Europe, is the Hermitage grape, and the wine, which, as already observed, is the best red wine which Australia produces, is deserving all the commendation Mr. Fallon bestows upon it. “The Malbec and Cabernet are both hardy varieties. The plants yield a larger crop than the Shiraz, and produce wine of excellent flavour and bouquet, recommended as the best wine that can be taken by persons of a weak constitu-

tion." These are the grapes from which the finest Bordeaux is made.

"The Burgundy is a small producer, but an excellent wine is made from the grape; the bunches are small and conical, like the Riesling; a fair average crop may be relied on. The Rousillon is a prolific bearer, a hardy vine, not subject to blight, producing a wine of light quality, but of good flavour, and considered a most agreeable dinner wine. The Gamais and the Mataro are two other varieties. Another popular vine is Brown Muscat, a large bearer, and producing a rich and luxurious wine."

Some statistics respecting vine cultivation and wine production in Australia, and for which I am further indebted to Mr. Fallon, will appropriately close this notice of Australian wines. With reference to South Australia, which ranks as the largest producer, Mr. Fallon says—

"The year 1850 showed only 282 acres under cultivation, while 1860 showed 3,180 acres, on which 1,874,751 vines were bearing, and 1,948,510 unbearing, and from which 182,087 gallons of wine were produced, and 23,398 cwts. of grapes were sold for table use. By the year 1864-5, 6,364 acres were under cultivation, on which 6,586,009 vines were bearing, and 2,831,971 unbearing, and from which 798,647 gallons of wine and 30,627 cwts. of grapes were produced. The year 1871 showed 6,131 acres under cultivation, on which 5,783,674 vines were bearing, and 385,084 unbearing, and from which 801,694 gallons of wine were produced, as well as 85,847 cwts. of grapes for table use."

"Next in order come the statistics of Victoria:—The year 1855 showed 274 acres under cultivation, producing only 11,000 gallons of wine. In the year 1865 4,078 acres were under cultivation, on which 8,199,618 vines were planted, from which 176,959 gallons of wine and 18,063 cwts. of grapes were produced. The year 1872 showed 5,523 acres under cultivation, on which were planted 9,671,292 vines, producing 713,609 gallons of wine, in addition to 30,896 cwts. of grapes.

"The New South Wales statistics show that in the year 1863 1,459 acres were under cultivation, producing 14,888 gallons of wine, and 420 tons of table grapes. The year 1867 showed 2,281 acres under cultivation, producing 242,183 gallons of wine, and 668 tons of grapes. In 1872 there were 4,152 acres under cultivation, producing 413,321 gallons of wine, and 508 tons of grapes for table use. In addition there were 607 acres of unproductive vines.

"On comparison of the various figures it will be found that

the colonies of South Australia and Victoria far outstrip the older colony of New South Wales, the colony of South Australia standing first and foremost as the fosterer of the vine and wine-making.

“Taking the various returns for the year 1872 of the several colonies, it will be seen that South Australia has 1,372 acres in excess of New South Wales, and produced 388,373 gallons more of wine. Likewise, it has 608 acres in excess of Victoria, and produced 88,055 gallons more wine; while Victoria exceeds New South Wales by 764 acres, and 299,288 gallons of wine.”

II.—*Wines of the Cape of Good Hope.*

Varieties of Cape Wines—Dry Pontac—Cape Wine of fine flavour from a Spanish grape—Sweet Red Constantia—White Constantia—Frontignac—The Constantia Vineyards; species of Vines cultivated in them introduced from France—The Wine-growing interests of the Cape ruined by protection—Great falling off in the exports—Wines omitted to be tasted—Summary of the awards for Wines at the Vienna Exhibition.

THE Cape of Good Hope sent samples of well-nigh all its wines to Vienna, including its Ports and Burgundies, its pale and brown Sherries, its sweet and dry Madeiras, its Pontac, its Steen, its so-called Frontignac, and above all its celebrated Constantia. Unfortunately the majority of them were so charged with alcohol as to shock continental palates already sorely tried by the highly-spirituos samples exported by Portugal and Spain. Russell and Co., of Cape Town, sent 10 different kinds of wine, but only in the single instance of a dry Pontac did they secure the classification of No. 1, which obtained for them a medal for merit. Collinson and Co.'s samples were very much better, more especially the sweet varieties, although one specimen of so-called Sherry was found to possess sufficient merit to be classed in the first rank. This wine, although by no means of the Jerez type, was evidently the produce of some sweet Spanish grape, and, with the exception perhaps of a small amount of added spirit, was to all appearances a perfectly natural wine of exceedingly rich flavour. Three other of Collinsons' samples were classed 1, of which the best was their red Constantia, very bright in colour, a little too sweet to the taste, not particularly spirituous, and with a full amount of that refreshing sub-acidity which alone renders these luscious *vins de liqueur* tolerable. Next came the syrupy wine termed Constantia sweet Pontac, intensely deep in colour and of the consistency of molasses, and

then a Constantia Frontignac, a white wine of fine flavour but too sweet and spirituous for its higher qualities to be readily discernible. For these samples Messrs. Collinson and Co. secured a medal for progress, medals for merit being given to Messrs. J. P. Cloete and Cloete Brothers for other samples of Frontignac and Constantia.

There were only four exhibitors of Cape wines, and the whole of them secured medals, invariably, however, for *vins de liqueur* excepting in the single instance of the Cape Sherry exposed by Messrs. Collinson and Co.

Constantia, the one wine of any mark for which the Cape is celebrated, comes from the vineyards at the eastern base of Table mountain, which take their name from the wife of the Dutch Governor Van der Stell under whom the vines were originally planted. The soil is red ochrous chalky marl and white sandy gravel mixed with chalk, both being impregnated with oxide of iron. The vine cultivated is the red Muscat similar to that of Frontignan, and in all probability imported thence. It is known that at the epoch of the revocation of the Edict of Nantes numerous Protestant families emigrated from Frontignan to Sweden, America, India, and the Cape of Good Hope, and French authors say that those who settled at the Cape carried with them the vines of their country, the red and white Muscat, then as now very abundant at Frontignan. Subsequently the same settlers are said to have naturalised the Teinturier vine. The white Muscat made at Constantia goes under the name of Frontignac, which seems sufficiently to indicate its origin, and Pontac, if not obtained directly from the red Muscat vine, is produced very likely from white Muscat grapes coloured with the Teinturier.

The wine-growing interests of the Cape of Good Hope were gradually, but none the less certainly, sacrificed to a pernicious system of protection. When the wines of the colony were admitted to England at only half the rate of duty levied on those of foreign countries no real competition existed between them, and Cape wine was made, not so much to be drunk by reason of any merits of its own, as to be mixed with other varieties, when it might either be palmed off in England as Sherry, or be re-shipped abroad for the sake of the drawback which used to be claimed, and moreover paid according to the rate of duty levied upon foreign wines, and which, of course, admitted of a considerable profit being made by the transaction.

When in 1860 the duties on wine were equalised according to their degrees of alcoholic strength, Cape wines had to make their way on their own merits, and the returns soon commenced

to show a considerable falling off in the quantity imported. The fact is that so long as protection lasted the wine was carelessly made, and, as is invariably the case, fortified to conceal its defects, and this, too, as no wine on the face of the globe had ever been fortified before, so that when it came into competition with less potent and more fresh tasting vintages its defects were apparent even to the least educated palates. The earthy flavour, long a standing reproach to Cape wines, was attributable to the grapes being allowed to grow actually on the ground, and to the dirt which they necessarily accumulated being thrown into the wine press with them.

Cape wine, which before the equalisation of the duties was imported into England to the extent of 785,926 gallons annually, has now fallen to about one-eighth of that amount, and shows no tendency whatever to increase. As a wine-producing region its fate would appear to be sealed.

Among the wines which I missed tasting were some samples from the Celestial Empire, from Chili, and from Tunis, besides Morocco wine from Tangiers and Mogador, Egyptian wine from Fayam and the Delta of the Nile, and white and Emperor wines from San Paulo in the Brazils.

The following table summarises the various awards for wines at the Vienna International Exhibition of 1873:—

Countries.	Number of Exhibi- tors.	Diplomas of Honour.	Medals for Progress.	Medals for Merit.	Honour- able Mentions.
France	278	1	21	38	83
Germany	256	—	21	65	71
Switzerland	15	—	1	5	7
Austria	490	2	18	69	163
Hungary	253	1	7	50	76
Russia	28	1	1	7	4
Portugal	92	—	5	17	26
Spain	249	1	27	79	62
Italy	259	—	11	24	62
Greece	25	—	2	2	6
Turkey	50	—	6	10	19
Roumania	28	—	—	2	6
United States	17	—	4	3	2
Australia	22	1	3	7	6
Cape of Good Hope	4	—	1	3	—
Algeria	—	—	—	2	24
	2026	7	128	373	587

CONCLUDING REMARKS.

Disapproval of the recognition of imitation Wines—Sources of our Wine supply daily multiplying—Improvements taking place in viticulture and vinification—Prospective abandonment of the practice of dosing Wine with alcohol—Suggested reduction of duty—The entire population of the United Kingdom drink merely one-fifth of the quantity of Wine annually consumed by the inhabitants of Paris alone—Acknowledgments to my colleagues of the Wine Jury.

THE few closing remarks that suggest themselves may be prefaced by an emphatic disapproval of the recognition accorded by the Vienna jury to certain imitation wines, as chemistry already sufficiently lends its aid to impair the general purity of wine without needing fresh impetus in any such objectionable direction. Many of the processes for transforming one wine into another are, no doubt, innocuous enough; still it is difficult to determine exactly where harmlessness ends and deleteriousness begins. Exception may further be taken to the undue encouragement which as a rule the awards of the jury appear to offer to the production of *vins de liqueur*, the merits of which, with certain notable exceptions, are rarely of a very high order. The tasting for well-nigh two months of wines from nearly all the nations of the world, coupled with much special information which I was able to obtain from my associates, left upon my mind the broad impression that the sources of our wine supply are daily multiplying, that great improvements are steadily if somewhat slowly taking place both in viticulture and vinification in regions where until quite recently the most primitive practices had prevailed for centuries. Wine-growing countries are never so exigent with regard to the brilliancy of colour and the perfect purity of flavour of their produce as those nations which are simply consumers of it; consequently greater care is only bestowed upon its manufacture when it becomes an important article of commerce, and commands an enhanced price.

If the taste for natural in opposition to fortified wine is only generally encouraged and maintained, a few years will see a considerable abandonment of the custom of adding alcohol to wine under the false pretence of its absolute necessity to insure the wine travelling well and continuing sound. The Portuguese Government is already alive to the disadvantage in which Portugal is placed *vis à vis* with France with respect to the vintaging of its ordinary wines, shown by the appointment of a

Royal Commission, the members of which condemn the prevailing practice of adding spirit to wine designed for export, as thereby destroying its fresh and natural flavour. Fortified wines of this description, it should be remembered, are never by any chance consumed by the inhabitants of the country where they are produced. They avoid them as the manufacturers of imitation wines avoid their own compounds. I remember, when at Cette, one of the largest of these amalgamators, in allowing me the run of his extensive cellars, candidly enough informed me that he would not admit a single one of his transformed products to his own table.

So long as the present differential wine duty is maintained in England encouragement is no doubt given to the importation of a class of wines adapted for drinking freely of at meals over those which contribute to a species of disguised dram-drinking, still I cannot see that this is a public disadvantage, and, indeed, regard it as directly the reverse. Instead of equalising the duty as some demand, it would be far preferable to reduce the existing impost on wines, containing no more than 26 degrees of proof spirit, one-half; or better still to abolish it altogether, when we should have wholesome common wine as cheap as beer, and excellent table wine, such as one drinks regularly in France, at 10d. per bottle.

With all the increased consumption of wine in the United Kingdom, a comparison of the quantity drunk during the year 1872 by 1,851,792 Parisians with the quantity consumed during the same year by 31,628,338 inhabitants of Great Britain and Ireland, shows how little a wine-drinking people we really are. The Parisians drank no less than 85,849,304 gallons of wine, equal to upwards of $40\frac{1}{2}$ gallons per head, whereas the entire population of the United Kingdom drank merely 16,878,169 gallons,* or less than one-fifth of the quantity consumed by the inhabitants of Paris alone, and only a little beyond half a gallon per head. No doubt we more than made up the deficiency by beer and spirits. During the quarter of a century that London and Paris have been within 10 hours' journey of each other, with the two nations intimately linked together for two-thirds of that period by liberal commercial treaties, we have been slow to follow the one good example set us by our neighbours.

Before terminating this Report I have to express my acknowledgments to my colleagues of the wine jury for their courtesy and assistance, notably to Herr Julius Wegeler, of the well-

* In 1873 the consumption rose to 18,027,134 gallons, but subsided in 1874 to 17,284,385 gallons.

known house of Deinhardt and Co. of Coblenz, for some interesting particulars respecting the wines of the Rheingau, to Conte Bertone di Sambuy for statistical and other information relative to the wines of Italy, to Senhor Fradesso da Silveira for copies of official reports on the wines of Portugal, to Professor Nessler of Carlsruhe, Herr Adolph Ott of Berne, Mr. John Paget of Klausenburg, M. Salomon of the Imperial Garden of Nikita in the Crimea, M. Teissonière of Paris, and especially to M. Louis Tampier of Bordeaux for the valuable notes he supplied me with on various wines which I missed the opportunity of tasting.



WINE-MAKING IN CALIFORNIA

(FROM AN OCCASIONAL CORRESPONDENT.)

SAN FRANCISCO, April 8.

One of the most rapidly increasing industries on the Pacific coast of the United States is the manufacture of wine in California, and, probably, here many years have gone by the grape crop will be only second in importance to the wheat crop of the Golden State. To the English consumer this increase in the sources of supply for the wine of the world is a matter of considerable importance, for the wine of the Old World, seeking no excessive investment, will and be attracted to this comparatively new field for its profitable employment. Of course, in this as in other enterprises which have been successfully undertaken by some in the Far West those who know the country and its variations of soil and climate will recommend great caution to those who would enter the vineyard business, for vineyards, for while many have made a fortune of money out of grape-growing, either for wine or for raisins, some have lost, having started in situations ill suited for the purpose either by reason of the soil or of remoteness from market and the want of facilities. This last need of the country is being met by the construction of narrow gauge railways, and the vineyard business will soon be able to send its products to the Pacific for shipment and their grapes in the towns, either to be used at table or made into wine or raisins. Perhaps a few figures will enable you to form a clearer idea of the extent of the grape culture in California in more recent generations. It is computed that in the vintage of this year there are between 25 and 60 million vines in the vineyards, and these are usually planted so that there are from 200 to 1,500 vines to the acre. The vines at maturity, or, say, after six years, will produce about 500 lb. of grapes each, and, if the vines are young and the soil to be tilled to be eaten or used as raisins, the vintage is estimated to have yielded to the vineyards of wine. Of this amount, only a few millions are shipped to the coast, and the remainder of the province differs considerably in various sections of the country, the production by the "vineyardists" of the coast being the largest. The grapes, partly on the coast and still bettered by gathering and pressing the grapes, and partly on the coast, are shipped to the coast and the coast transporters, the grapes are sold to the wine-makers, at a price of 10 to 15 cents a bushel, or the coasts may be taken, at a 10% discount, or at average 20c, or, say, 15, per gallon, which is some 25% of the price at 75c, or 5, a gallon, is paid at the vineyard.

Extensive experiments have been tried to determine what kinds of grapes are best suited to the climate of California. There are now in the State over 200 distinct varieties of grape vines raised from various sources imported from Europe and America. These vines all reproduce their distinctive qualities of fruit, and from the best kinds of grapes in many distinct qualities of wine are made. The vineyard raiser is enabled to select and to select those best adapted for the production of wine, for table use, or to be made into raisins. One thing remarkable about these many varieties is that they are all noted as extraordinary by the manufacturers, at this time have been found to deteriorate, with ordinary care, by keeping, and in 15 years. Another thing which ought to commend these wines to European wine consumers is that they are all of a high quality, and, indeed, be improved by it. This peculiar excellence of constitution—if the phrase is admissible—of these wines is due to the fact that the very small proportion of aluminum and nitrogenous substance they contain, and also to the great proportion of acetic acid matter in them. It is this which gives them their peculiar climate, so that everything otherwise imperceptible may be safely referred, and to this cause is ascribed the fact that the wine of California is called "vinopaste" there are said to have a great advantage over European wines, inasmuch as they act as a stimulant to the system, and are not liable to cause a total failure of the grape crop, the difference between the best vintage and the poorest is only a week not exceeding 10 days, and the yield is 100% there.

There is now no doubt that California is well suited for the production of raisins, and that source of profit to the "vineyardist" who will judiciously select the best varieties and care for the plants and the curing of the fruit properly will, in all probability, soon make this a raisin-exporting State, since good judges assert that raisins which any but an expert would mistake for Malaga have already been produced here.

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Compared with the older wine-making industries of Europe, the wine of California is but in its infancy; yet it has been attracting attention and securing successful shipments.

In the year 1874 this wine first came from Missouri, Landreger and Co., sold about 50,000 cases (one dozen quart) of Champagne, and net per their sales were about 12,000 cases. In the year 1877-8, and ten months of 1878 the exports of California wine were valued at \$1,000,000; in 1879, 2,484,617 gallons, valued at \$1,806,053; and in the same year, including Denoside, 2,592,996 gallons, valued at \$1,575,000, were sent overseas. As this does not account for the large quantity now consumed in the State, it will be seen that wine-making is becoming one of the staples in California.

ment of capital into new regions which was supposed to be about to send up the rate permanently to 7 per cent. It is obvious enough that the immediate profits of the employment of capital in the Western States of America have been overestimated, or rather that their capacity of earning high rates of profit was overestimated. This is shown by the falling off upon the return of the capital which has been sunk in industrial enterprises, such as Railways in those States. People forget how rapidly competition brings down the exceptional profits of a virgin area. Let us picture to ourselves the industrial community as lying within a ring fence; by some improvements in communications it becomes possible to pass over the margin of the unfenced into new ground affording an unusually large return to industry and capital; what would be the result? There would be a speedy migration of both capital and labour over the border, and productions would be raised, which, being carried back into the older community, would be exchanged for other commodities at rates very beneficial to those who had boldly gone or sent their capital to the new area. Their success, however, would bring imitators, and besides the stimulus of their advent, the competition among themselves would tempt them to outbid one another in the rates of exchange of commodities with those who stayed at home, and to embark more and more capital in their own ventures. In other words, the discovery of profitable fields abroad would rapidly raise the remuneration of labour and capital at home while it would constantly increase the capital sunk abroad. We were going through this period in the years when Mr. GILCHRIST described our trade as advancing by "leaps and bounds," when profits rose and wages rose, so abundant was the terms of exchange and so continuous the demand for home productions in the newly-developed and developing States and countries of the world. But then it was found out that, at the rates of exchange of commodities which had come to be established, the process of production in these new countries ceased to be as abundantly profitable and in certain cases did not even pay, and there necessarily ensued a reflux movement. The emigrants outside the ring fence find that they cannot give so much as they expected to receive for their commodities; they take from the market less. Consequently, there is a falling off in the quantity and the remuneration of the commodities exported to them, and the home-lying folk have to get through as best they can the painful process of dropping profits and declining wages of labour. We are now undergoing this experience. The wave has been sent back upon us, and the present depression of trade is the counterpart of its recent activity. Seven per cent. has been followed, by a natural law, by Two per cent.

The interesting question, if we could solve it, would be how long the process of depression may be expected to endure; but we are very sorry to say that no answer can be given to this inquiry. The return of prosperity mainly depends upon the development of the processes of industry which is constantly going on so as to lessen the cost of production. The inhabitants of the States and Colonies where growth showed such a remarkable increase of trade at home over-estimated their powers until they found they were engaged in exchanges no longer profitable to themselves. But we may be quite certain that they will soon be able to produce their own commodities more cheaply than they have done, and, as the cost of production with them will diminish contemporaneously with a diminishing here, there will be on both grounds a revival of commercial intercourse. No one can tell how long this process of recovery will take. We may form a consideration of former periods of depression of a similar character to the present hazard conjectures as to the duration of the present one, but guess on the subject would be idle. It is enough to know that the experience through which we are now passing is part of an ordered progress returning upon itself as surely as Spring follows Winter.

The Bishop of Manchester has exhibited his customary courage in the observations which, as we report this morning, he made at the annual meeting of the Manchester Diocesan Board of Education. The Board, it appears, had drawn attention to their Report to the increasing financial difficulties which beset them, and the Bishop did not hesitate to recommend that, in certain circumstances, the Clergy should hand over their schools to the School Boards. The circumstances he had in view are, we apprehend, by no means peculiar to Manchester, and will be readily understood by members of Clergy and School Managers throughout the country. Since the passing of the Education Act, an immense effort has been made to extend the Denominational System in connection with the Church of England; and in respect to the mere multiplication of such schools it has had considerable success. But it would seem that although Churchmen may thus be worked upon by a great movement to make, as it were, a great demonstration in favour of Church Schools, their zeal is not equal to the continuous sacrifices which are necessary to maintain such schools in full efficiency. The Bishop of Manchester, speaking of Denominational Schools in his diocese which are now "maintaining a languid and comparatively 'useless existence,'" and a still more deplorable picture is drawn by Mr. GEORGE HERBERT. He mentioned, by name several clergymen in Manchester who carried on their schools under extreme difficulties; and one of them, on being appealed to, gave a definite statement of the deficiency he had to meet. Last year, he said, he had to advance £100, and he had had each year to advance an exceedingly large sum, though not to the same amount. This it, as he justly said, "an immense burden," and though a few clergymen may have both the zeal and the means to support it, they must be exceptional, and most continually diminish in number. Mr. ALLEN says he would rather resign his parish than resign his Church Schools, and he intends to "go on appealing to our friends." There are, he thinks, many good friends in the suburbs who will, perhaps, help him, and he "does not lose heart quite." This resolution is worthy of all praise, but it is not very hopeful in its tone, and it is obvious that neither the work of a school nor that of a parish can be conducted in full efficiency under such conditions. It will be a mere matter of necessity that the money expended on the school should be widely reduced, while the distraction of a Clergyman's time and thought excluded by constantly "appealing to 'friends'" is lamentable to contemplate. If such cases were rare, we might hope that the difficulty would be gradually overcome, but they are notoriously increasing. Impoverished Church Schools in London, no less than in Manchester, are, as Mr. HERBERT expressed it, "starving for lack of support," and their Managers are year by year sustaining a more unequal struggle.

New, there certainly ought to be some very strong reasons to deter Clergymen who are struggling under this burden from seeking the relief which is offered them at their very doors. In any place where they are thus inefficiently supported, they have nothing to do but to throw the responsibility of maintaining their Schools upon the parish or district, and the whole of the secular part of the work will be done for them by force of law. There can, we think, be little doubt that it is in great measure due to the knowledge of this fact that the difficulty in question arises. Many persons have hitherto supported Church Schools because such Schools were the only

to be about to send up the rate permanently to 7 per cent. It is obvious enough that the immediate profits of the employment of capital in the Western States of America have been overestimated, or rather that their capacity of earning high rates of profit was overestimated. This is shown by the falling off upon the return of the capital which has been sunk in industrial enterprises, such as Railways in those States. People forget how rapidly competition brings down the exceptional profits of a virgin area. Let us picture to ourselves the industrial community as lying within a ring fence; by some improvements in communications it becomes possible to pass over the margin of the unfenced into new ground affording an unusually large return to industry and capital; what would be the result? There would be a speedy migration of both capital and labour over the border, and productions would be raised, which, being carried back into the older community, would be exchanged for other commodities at rates very beneficial to those who had boldly gone or sent their capital to the new area. Their success, however, would bring imitators, and besides the stimulus of their advent, the competition among themselves would tempt them to outbid one another in the rates of exchange of commodities with those who stayed at home, and to embark more and more capital in their own ventures. In other words, the discovery of profitable fields abroad would rapidly raise the remuneration of labour and capital at home while it would constantly increase the capital sunk abroad. We were going through this period in the years when Mr. GILCHRIST described our trade as advancing by "leaps and bounds," when profits rose and wages rose, so abundant was the terms of exchange and so continuous the demand for home productions in the newly-developed and developing States and countries of the world. But then it was found out that, at the rates of exchange of commodities which had come to be established, the process of production in these new countries ceased to be as abundantly profitable and in certain cases did not even pay, and there necessarily ensued a reflux movement. The emigrants outside the ring fence find that they cannot give so much as they expected to receive for their commodities; they take from the market less. Consequently, there is a falling off in the quantity and the remuneration of the commodities exported to them, and the home-lying folk have to get through as best they can the painful process of dropping profits and declining wages of labour. We are now undergoing this experience. The wave has been sent back upon us, and the present depression of trade is the counterpart of its recent activity. Seven per cent. has been followed, by a natural law, by Two per cent.

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CONDENSED BEER.—Mr. H. C. Bartlett, Ph.D., F.C.S., read a paper on Wednesday, before the Society of Arts, on an invention for concentrating or condensing beer. It appeared from the paper that beer of any kind may be condensed *in vacuo*, so as to save, not only the alcohol, but the volatile flavour and aroma, which would otherwise pass away in reducing the extract to a semi-fluid condition. In re-mixing the alcohol containing the fragrant matters of the beer again with the extract, all the constituents of the beer are retained except the water, of which nine-tenths or more are removed. This affords a saving of seven-eighths of the freight. Moreover, as the condensing arrests fermentation till the beer is re-made by mixing with water, the loss in the export of beer from its becoming sour and unsound in transit is saved.

THE BEERS OF EUROPE.

Introductory.

Beers exhibited at Vienna—Picturesque Beer trophies contributed by the Continental brewers—The lighter Beers unable to support a warm temperature—Austrian and German samples obliged to be stored in iced cellars.

OUR so-called national beverage was largely represented at the Vienna Universal Exhibition of 1873, although the English samples were comparatively few. There were, however, three daring exhibitors who had sent beer all the way from New Zealand to simmer, if not to boil, in the high temperature of the Vienna Industrial Palace. Of course all the great breweries in divers parts of the complex Australian empire, with the celebrated Dreher at their head, took part in the competition, as did Hungary and North and South Germany with their salvator, schink, lager, luxus, braun, and weiss beers. Some excellent samples came moreover from Denmark, Norway, and Sweden; Russia and Poland, too, forwarded a few specimens, as well as France, Belgium, Italy, Switzerland, and Spain. There were also exhibitors of beer from Roumania, and even from China and the Brazils.

In what was termed the Eastern Agricultural Hall the Austrian and other breweries made rather a picturesque display. One of their trophies was composed of a pyramid of beer casks, interspersed with bottles of Märzen beer, its four-corner pedestals being decorated with typical toppers coloured to resemble life, and representing a student, a soldier, a peasant, and a priest. Another was constructed in the form of a cave, above which the mythical beer-imbibing king Gambrinus, resplendent in red,

green, and yellow, and holding a foaming beaker of ale in lieu of a sceptre in his hand, was seen seated on a throne, while within the cave itself half-a-dozen inebriated gnomes in the guise of medieval cellarmen, were battling over a barrel of beer with their overturned flagons littering the ground. A Strasburg brewery set off its Bacchanalian pile of barrels with the figure of a blond Alsacienne, her hair decked with the customary large black bow; and a Swedish firm decorated their stand with a painted statuette of a pretty pert-looking flaxen-haired peasant-girl in picturesque Dalecarlian costume, emptying the contents of a bottle of Drontheim pale ale into an old-fashioned ornate flagon, while in front of her was posed a Norwegian peasant seated astride a cask of export beer from Christiania. When, however, the time came to taste the samples, all the beer barrels and bottles picturesquely encircled with trailing hops, which occupied the Austrian and other exhibitors' stands, proved to be entirely empty. For the Austrian and many of the German beers, although most agreeably light and exceedingly refreshing, are adapted solely for rapid consumption and cannot support even a moderately warm temperature. The exhibitors therefore applied for permission to deposit their samples in an iced cellar contiguous to the Exhibition Palace, where they might be tasted by the jury. I opposed this solely on the ground of the injustice which would be done to British exhibitors, whose samples had not only travelled a long distance, but had been already exposed for two months to a temperature sorely calculated to try their export qualities. It was offered me to substitute new samples of British beers, but I pointed out the impracticability of this course, more especially with regard to the exhibits from New Zealand. On the matter being put to the vote, a majority were in favour of according the permission asked for by the Austrian and German brewers, and in consequence 56 of the former sent in samples amounting to more than 200 in number, and which, excepting their incapacity to withstand a high degree of temperature, were, for the most part, of excellent quality.

I.—*Austria and Hungary.*

Austrian Beers brewed on the Bavarian system—Their lightness and refreshing flavour—Bavarian method of under-fermentation followed—Fewer hops and less malt used—Necessity for icing the Beer to keep it sound—Beer food as well as drink to a German—Great increase in the consumption of Beer in Austria—Dreher's Brewery, near Vienna—Rewards to Austrian brewers—The Bohemian Pilsner Beer—Ales of Bohemia long renowned and largely consumed at the present day—Moravian Beer—The Beer of Austrian Silesia—Styrian Beer largely exported—Only one sample of Beer from Hungary—Taxation and production of Beer in the Austrian Empire.

THE Austrian beers, like all the light beers of Germany, are brewed in accordance with the Bavarian system, and are generally a very superior class of beverage. They are of a pale amber colour, exceedingly bright and sparkling, and of a full pleasant flavour, entirely free from acidity, remarkably light drinking, are invariably in fine condition, owing to their being kept constantly iced when the weather is in the least degree warm, and always carry a rich creamy head. The marked difference between the Austrian and lighter German beers and those of England arises principally from the brewing, still the after-treatment and certain exigencies of climate contribute materially to the contrast. Austrian beer is not nearly so strong as English beer, yet from the quantity of unfermented extract which it contains, it drinks fuller, so to speak, in proportion to its strength and is infinitely more refreshing. In Vienna everybody drinks beer, which even figures regularly at the Imperial dinner table, and owing to its exceeding lightness quadruple the quantity can be consumed as could be partaken of in England without the risk of getting intoxicated.

The great speciality, in fact, of the Austrian and lighter German beers is their producing neither intoxication nor drowsiness, and which is due principally to the small quantity of alcohol they contain. Still there is another important reason which appears never to have been taken in consideration—namely, the purity of the alcohol and its freedom from aldehyde and fusil oil. The Bavarian system of under-fermentation, which is in general use in the breweries of Austria, prevents the formation of aldehyde and insures the entire elimination of the gluten of the malt, which is the great oxydising agent,

besides lessening the liability to produce fusil oil. The Vienna beers show upon analysis from 7 to 9 per cent. of proof spirit combined with an average of 3,000 grains of soluble extract per imperial gallon. In all fermented saccharine solutions a certain quantity of alcohol is requisite to save them from further fermentation and ultimate acidity, but the Vienna beers do not contain sufficient spirit to protect them for any length of time after they have been removed from the ice cellars. When any nitrogenous matter is present a change takes place more readily, and although the beer is free from gluten, the most powerful decomposing agent it has to contend with, it still contains albumen, which in the act of decomposition has the property of converting alcohol into acetic acid.

In brewing the light German beers, not only much fewer hops, but from 30 to 40 per cent. less malt is used, than in the average of English beers, still the former are not proportionably cheaper, simply because what they lack in material has to be made up by superior production and finish. Ice, which is used in immense quantities, forms a considerable item in the expenditure of Austrian and German breweries generally. One large establishment, that of the celebrated Dreher, uses as much as 40,000 tons per annum in the brewery alone, besides the large extra quantity required in the various cellars and stores where the beer is kept, and for packing it when sent by railway in vans especially constructed for the purpose. All this is essential to maintain the soundness of the beer, and insure that brisk condition for which it is so celebrated, and although it adds considerably to the cost, the expenditure must still be incurred, or the beer, after transit and exposure to even a moderately warm temperature, will lose its fine character and get completely out of condition.

The consumption of beer of this perishable nature is chiefly confined to places on the continent where ice is plentiful, and where it is not the custom, as in England, for families to have beer in cask at their own homes, for a beverage of this light character can be kept on draught merely for a day or two after it has been once tapped. In no city in the world is beer to be found of such general excellence and of so uniform a quality as at Vienna, where it is almost invariably obtained in high perfection, owing partly to the more celebrated breweries being so near to the capital, but chiefly to the quick consumption at the numerous beer halls and gardens, which insures fine condition as well as perfect freshness. The demand at many of these establishments is so great that nothing is thought of drawing as much as 1,500 gallons in the course of a single day. With this

rapid draught, the peculiar and often objectionable flavour imparted by the pitch used by all the German brewers to line their casks so as to keep them air-tight, is perceptible in the Vienna beer only in a very slight degree, owing, no doubt, to its scarcely having time to take it up. This flavour, however, is frequently communicated to the beer in the fermenting tuns, which are lined with pitch that partially dissolves during the fermentation process.

Vienna beer would not be considered sufficiently stimulating for general consumption in England, besides which it lacks the aroma and flavour of the hop. The Germans generally often claim for their beer the advantage of its being both food and drink, which doubtless is true enough of the beers of certain localities, where it is the practice to leave a considerable proportion of the dextrine and sugar of the wort unfermented. This class of beer, which is drunk principally by the peasantry and labouring classes, is high-coloured, clammy, and heavy in bulk. Still even the ordinary beers are regarded in a measure as so much food, and possibly the bibacious Germans do derive some benefit in this way from them. An analysis, however, of several samples, shows that the total soluble extract—that is, the dextrine and sugar—comprised in an entire gallon, merely supplies the same amount of nutriment as is contained in 17 oz. of bread. Continental beer, generally, contains a larger quantity of soluble extract than English beer; although in some kinds of the latter the proportion is considerable, still their headiness is a bar to sufficient being taken to impart an appreciable amount of nutriment.

In Austria, as in all the principal beer-producing countries on the continent, a great increase in the consumption of beer has manifested itself of late years, combined with a marked decrease in the number of breweries, owing to the smaller breweries being forced to succumb to the competition of the larger establishments, which are conducted on more scientific as well as sounder economic principles. Between the years 1860 and 1872, the number of breweries decreased from 3,314 to 2,636, or more than 20 per cent., whereas during the same period the quantity of beer produced increased as much as 60 per cent. In Upper Austria, where cider is largely drunk by the country people, no particular increase in the production of beer is apparent, and indeed, in years when apples have been plentiful, a positive falling off commonly declares itself. The increased consumption of beer in Austria is contemporaneous in a measure with the rapid progress of one vast brewery establishment of European fame—namely, that of Anton Dreher, at Klein

Schwechat, near Vienna, which in the first year of its existence brewed merely 333,832 gallons of beer, and now brews 8,798,300 gallons, an increase of more than 26-fold. A diploma of honour was given to Herr Dreher for the improvements in brewing which he had been the means of effecting, as well as to another large firm, A. Mantner and Son, of Vienna, a medal for progress being awarded to a celebrated brewery of Vienna beer, known as the Liesing Brewery Company; and medals for merit to the Brunn and Huttledorf Breweries in Lower Austria, Hatschek Brothers, at Linz, and Herr Kuffner, at Dobling. Honourable mention was further made of three other exhibitors.

Most of the Austrian beers have a mild and soft flavour, and it is rarely that any of them are so bitter as the English pale ales. An exception, however, must be made with regard to the so-called Pilsner beer brewed at Pilsen, in Bohemia, on a very extensive scale, and much in favour with the Viennese, who do not object to pay a slightly higher price for it. This beer is exceedingly pale in colour as well as remarkably light, being even weaker than the Vienna beer, and contains a considerable amount of carbonic acid. Its distinguishing quality, however, is its strong, indeed almost medicinal, bitter flavour, due to the Saaz hops, held in the highest esteem in the locality. The Citizens' Brewery at Pilsen, which produces by far the largest quantity of this beer, and is, in fact, the most extensive brewing establishment in Bohemia, had a medal for progress awarded to it for the samples it exhibited. Another brewery company at Pilsen received a medal for merit, the same reward being given to five other Bohemian breweries, in addition to which honourable mention was made in five instances.

Bohemia has been a beer-producing State ever since the fourteenth century, and its ales have long enjoyed a more than local celebrity. To-day the number of large breweries it supports are very great. Wine being neither plentiful nor cheap, and cider not being made to any extent, beer is an article of general consumption among the Bohemians, and the annual quantity produced shows an increase of no less than 76 per cent. during the last 13 years.

The samples of Moravian beer were generally of good quality, and the few exhibitors of them succeeded in securing three medals for merit, one of which was given to Count F. E. Harrach, of Janowitz—in the Austrian empire, not merely counts but princes carry on business as brewers. Honourable mention was made of a couple of other samples, of which one had a count for exhibitor, and some excellent Silesian beer

obtained a medal for progress for the Citizens' Brewery at Troppau.

In Moravia and Austrian Silesia the statistics indicate an increase in the consumption of beer of late years, and a corresponding decrease in the amount of spirits consumed by the labouring and rural populations. Silesia, besides consuming more beer itself, has increased its exports to Prussian Silesia, as well as to the neighbouring province of Galicia, which now brews a moderate quantity of beer of its own; much of it of inferior quality, although several of the samples forwarded to Vienna were of quite the opposite character, and secured medals for progress and merit as well as honourable mention. One exhibitor even ventured on sending specimens of porter, but failed in obtaining any reward.

The Styrian beer from Gratz was exceedingly good, and a medal for progress was given to its exhibitor, Herr Schreiner. Spite of the abundance of good and cheap wine which Styria produces, a considerable increase in the consumption of beer in this province has shown itself of late years, chiefly due, it is thought, to the great development which the iron trade has undergone during that period. Styrian beer is moreover largely exported from Gratz alike to Hungary, Carnolia, Istria, and Trieste, and thence to the East. Carinthia, which produces a considerable quantity of beer, obtained a medal for merit for its one good sample; Carnolia, which produces very little, obtained no reward, while the Tyrol had honourable mention made of some bottled beer from Roveredo.

The abundance of wine in Hungary and Transylvania exercises a considerable influence on the production of beer in the Magyar kingdom. The principal large breweries are established at Pest, where half of the total amount of beer brewed is produced. None of them, however, sent samples to Vienna; indeed, the only exhibitor from Hungary was Herr Vincenz Meese, of Kasmark, whose samples were found deserving of a medal for merit. There were no exhibitors of beer from either Croatia, Slavonia, or the Servian Banat, where of late years there has been a moderate increase in the quantity of beer brewed.

Beer is taxed throughout the Austrian empire at the rate of 1 florin or 1s. 11d. per eimer, equal to nearly 2d. per gallon, when it contains 10 per cent. of hops, and half as much again when it contains 15 per cent. In Lower Austria an additional tax is levied on beer entering inclosed towns. In 1872 the production of beer in the various provinces of the Austrian empire had risen to 268,795,775 gallons, equal to 7.6 gallons per head

of the population. The quantity of beer imported into Austria during the same year is given in the official returns by weight, and amounted to 9,359 zoll-centners, whereas the quantity exported, which had increased twelve-fold during the last dozen years, was 440,766 zoll-centners, or almost as many hundred-weight.

II.—*Germany.*

Bavaria the principal Beer-producing German State—Samples of Bavarian Beer and rewards—The system of under-fermentation explained—Special advantages derived from it—Drawbacks of the English system of Brewing—Small air-tight casks stored in ice absolutely essential to the Bavarian Beers—Taxation and production of Beer in Bavaria and Würtemberg—Large increase in the consumption—Rewards for Prussian Beers—Kühle blonde or Weiss Bier—Aspects of a Berlin Weiss Bier stube—The great Prussian Breweries, their Beer halls and gardens—Taxation and production of Beer in Prussia—Principal Saxon Breweries at Dresden—Beer-production of Saxony—The Beer industry and consumption in the duchies and provinces of North Germany.

BAVARIA takes the lead among the beer-producing States of Germany, both with respect to the quantity and the quality of the beer brewed there, and several of its exhibitors naturally obtained rewards for export, salvator, salon, and bock beer, all of it being in bottle, and several samples of it having been heated in accordance with the process introduced by M. Pasteur some few years since with regard to wine. This heating of beer up to 130 or 140 degrees Fahrenheit, in order to make it keep, and more particularly to enable it to travel, appears to be a very common practice in Germany, as well as in Denmark and Norway. The Bavarian samples were generally of a brilliant colour, and of a pleasant, refreshing flavour—the Bavarian hops, and especially those from Spalt, being among the very best grown on the continent. Among the exhibitors who received rewards were Herren G. Pschorr, of Munich, and H. Weltz, of Spiers, with Dr. Narr, of Zindorf, near Nuremberg, of whom the first received a medal for progress, and the others medals for merit. Munich, Nuremberg, and Augsburg are the great brewing centres in Bavaria, and in 1872 nearly 290,000 quarters of malt were used in the breweries of these three cities, which produce between them about one-fifth of all the beer brewed in Bavaria. Two considerable establishments for brewing brawn and weiss bier are carried on by the State, but the largest brewery is that of Herr Gabriel Sedlmayr at Munich, which consumed 52,648 quarters of malt in 1872. The system

of brewing long since originated in Bavaria has now extended over the entire continent, where, with the exception of strong ales and porter, nearly the whole of the beer consumed is brewed by the Bavarian method of under-fermentation, respecting which a brief explanation may here be given:

In brewing beer, during the process of fermentation, two distinct classes of chemical action take place, the first one of simple combination between the nitrogenous matter and oxygen, for which the former has a strong affinity, and the second the rearrangement of the elements of its saccharine. The former is brought about solely by the juxtaposition of the nitrogenous bodies and the oxygen of the atmosphere, while the latter is induced by a species of catalytic action of the other. In the fermentation of the wort, the first step is the absorption of oxygen by the soluble gluten, which becomes insoluble, and is eliminated in the form of yeast. During this action the elements of the saccharine present are transposed, and form alcohol and carbonic acid, and should the action be prolonged, the alcohol by absorbing oxygen will become converted into aldehyde and acetic acid. The same result would ensue if the fermentation should be carried on at too high a temperature, since heat materially increases the affinity of alcohol for oxygen.

Malt contains considerably more nitrogenous matter than is necessary for the transformation of sugar into alcohol and carbonic acid, and different waters and temperatures applied in extracting the wort exercise varying influences upon its solution, still under the most favourable conditions too much is extracted with the dextrine and sugar of the wort. These nitrogenous substances consist of gluten and albumen, and although the latter may be almost entirely removed by using a considerable quantity of hops, as in brewing bitter ale, the gluten can never be entirely got rid of by the English method, and its superabundant presence in the fermenting liquor under certain conditions promotes the formation of aldehyde, while the excess of gluten attracts oxygen, and ultimately produces vinegar.

In the Bavarian method of brewing by what is termed the system of under-fermentation the yeast falls to the bottom of the tun, and the carbonic acid is liberated so slowly that it mixes with the air by diffusion on arriving at the surface, thereby leaving the fermenting liquid in perfect contact with the oxygen of the atmosphere, and affording every facility for the complete oxydation and removal of the gluten. At the same time the low temperature (about 44° Fahrenheit) at which the fermentation is carried on—and which, contrary to the English practice, is invariably accomplished underground, and generally with the

tuns banked round with ice—prevents the oxydation of the alcohol produced, and so far weakens the catalytic action upon the saccharine that a much smaller amount of it is converted into alcohol and carbonic acid in proportion to the gluten oxydised. Moreover, this low temperature is a guarantee that neither the acetic nor the lactic acid ferment can thrive. In the English system the high temperature induces the gluten to absorb oxygen with so much energy that its catalytic action becomes greatly enhanced, causing the sugar to be transformed into alcohol and carbonic acid with such rapidity that the fermentation has to be checked before the gluten is sufficiently eliminated, thus creating a tendency to after-fermentation, while the increased affinity of the alcohol for oxygen facilitates the formation of aldehyde and acetic acid. The carbonic acid, moreover, being generated in great abundance, adheres to the particles of oxydised gluten, and floats them to the surface, forming a thick scum, in other words so much yeast, which prevents the admission of sufficient oxygen to combine with the soluble gluten, leaving the latter to obtain what oxygen it can at the expense of the saccharine, thereby inducing secondary decomposition, and a series of objectionable by-products, as fusil oil, &c. Such are the drawbacks of the English as compared with the Bavarian system of brewing.

The speciality of Bavarian and German beers brewed upon the same system is their bright and sparkling character, combined with a brisk full flavour and refreshing frothy head. This fine condition is due to the method of fermentation already explained, and to the system of mashing, which insures a large proportion of the dextrine of the malt being preserved, as well as to the keeping of the beer in air-tight casks at an exceedingly low temperature by the aid of ice, thereby retaining the carbonic acid gas in a compressed state until the beer is drawn from the cask. The gas, upon being liberated into a warm atmosphere, expands and produces partial effervescence, which gives to the beer its sparkling character and cream-like head. This condition, however, can only be insured when the cask is quickly emptied, for otherwise the beer becomes flat and undrinkable. Still the habit of using small casks and storing them in ice, even in the cellars of the retailers, enables the system to be generally carried out. In England beer is not so uniformly in fine condition, although it is frequently equally bright as the German beer, without, however, possessing its sparkling character and creamy head. The mere keeping it in ice would not impart to it these desirable conditions, but would rather serve to render it undrinkable. The Bavarian system of brewing and after-treatment

of the beer could only be adopted by English brewers by reconstructing their premises and plant, combined with the addition of vast cellars, which would always be difficult and often impracticable to secure. The ice, moreover, if it could be procured in sufficient quantities, would entail enormous cost. Apart too from all this, beer of such a nature as would necessitate an entire cask being emptied within a day or two could never be an object of general consumption, especially in families where a cask serves for at least a week, and frequently for more than a month.

In Bavaria a tax is levied upon malt at the rate of $2\frac{1}{3}$ florins per hectolitre, or about 3s. 11d. per $2\frac{3}{4}$ bushels. The quantity of beer brewed there during the year 1871 amounted to 202,643,856 gallons, which gave nearly $48\frac{1}{5}$ gallons per head of the population. The exports of beer from Bavaria average 5,714,286 gallons annually.

Württemberg is the German state which is entitled to rank next to Bavaria, with reference to its production of beer in proportion to population, although this is fully 25 per cent. below the Bavarian standard. The Württemberg brewers, however, made but a poor show at Vienna, and not even their Kaiser beer secured them any reward. During the 20 years preceding 1872, the amount of beer annually consumed in Württemberg increased as much as 203 per cent., and this too in spite of the considerable quantities of wine and cider which it produces. In 1872 there were 61,650,967 gallons of beer brewed, which allowed nearly 34 gallons per head of the population. The malt tax in Württemberg is 24 kreutzers per simri—that is, 8d. per $25\frac{1}{3}$ lbs.

Prussia, which brews plenty of good beer, obtained a fair number of rewards at Vienna, although the great Berlin and other principal breweries forwarded no samples. Three exhibitors from Dortmund and Prussian Saxony and Silesia secured medals for merit, the one from the last-named province for beer in barrel, while Herr Hinselmann, of Schleswig-Holstein, obtained a similar medal for export beer which had made the voyage to Jamaica and home again. The Rhenish Brewery at Mayence was likewise awarded a medal for progress, and honourable mention was made of exhibitors from Hamburg and Brandenburg, which moreover was the sole recognition the Berliner Weiss Bier Brauerei obtained for its famous white beer.

Weiss bier, brewed from wheat malt, and considerable quantities of which used to be consumed in Germany, and more especially Prussia, some 20 years ago, has lately come largely

into favour, half as much again being brewed now as was produced three years previously. Berlin is the city of all others where the *kühle blonde*, "cool fair maiden," as weiss bier is poetically termed by its admirers, is obtained in the greatest perfection, and where "bier stuben," offering no other beverage but this to their customers, abound. Weiss bier is invariably kept in stout stone bottles, doubtless because the large quantity of carbonic acid it contains would burst them if they were of glass. The little tables crowding these stuben are usually all occupied, most of the guests being past middle age, if three score and ten be taken as the standard of human existence, their rosy gills and capacious waistbands attesting a familiarity with, at any rate, some of the good things of life. In front of every one stands a gigantic tumbler which might be fitted with ease on an ordinary head, and which contains a liquid pale and clear as Rhine wine, surmounted by a huge crown of froth not unlike a prize cauliflower. This is the famous "weiss," the mere mention of which suffices to send a Berliner into raptures.

A quart bottle of the beer scarcely fills more than a third of the huge glass, its voluminous head of froth not only occupying all the remaining space, but foaming over at the sides; hence the necessity for such capacious receptacles, which a novice is only able to raise to his lips by the aid of both hands. Not so, however, the experienced toper, who by long practice has acquired the knack of balancing as it were the bottom of the glass on his outspread little finger, while he clutches the side with the remaining fingers and thumb of the same hand, and thus conveys the huge tumbler to his lips. With the habitual weiss bier drinker a preliminary nip of kummel (aniseed) is *de rigueur*, and after he has partaken of this, he will lap up his four quarts of *kühle blonde* as readily as his native sand sucks in a summer shower, exciting his thirst perhaps once or twice during the operation by some salted delicacy such as a lamprey. Weiss bier is drunk by preference when it is of a certain age, and in perfection it should be largely impregnated with carbonic acid, and have acquired a peculiar sharp, dry, and by no means disagreeable flavour. To the ordinary unstrung Berliner a moderate quantity of the "weiss" is as soda and brandy to a *blasé* Englishman. After an evening of excess, the following morning his steps invariably tend to the weiss bier stube, there to quench his feverish thirst with a draught of *kühle blonde*, and stimulate his palled appetite with "knoblauch-wurst," a delicacy of the favourite sausage type fried with garlic.

Besides its weiss bier, Berlin is celebrated for its Bayerisch

bier, brewed according to the Bavarian method, as well as its bitter, braun, josty, and weizen biere. The bitter beer is very thin, whereas the brown beer is thick and often sweet. The josty beer, which takes its name from its brewer, has a flavour of herbs, and the weizen beer, brewed, like the weiss, from wheat malt, dispenses altogether with hops.

As in Austria and elsewhere, the larger breweries in Prussia are swallowing up the smaller ones, which have not sufficient capital to make all the modern improvements, by means of which they might compete on more equal terms with better-regulated establishments. During a period of about 30 years, as many as 8,601, or upwards of half of the breweries in Prussia, had to give up business, although the consumption of beer was steadily increasing. The great Prussian breweries, such as the Tivoli at Berlin, which consumes 3,716 tons of malt yearly, yielding 3,330,844 gallons of beer, are arranged on a vast scale, fitted moreover with the best apparatus, embracing the latest technical improvements, combined with large and suitable cellars for storing the beer. Immediately adjacent are beer halls and gardens, capable of accommodating upwards of 2,000 persons under cover, and more than three times that number in the open air, and where during the fine weather monster musical entertainments are given which attract crowds of Berliners to drink deeply of the excellent beer at the fountain-head. Besides these Berlin breweries there are others on a large scale at Magdeburg, Frankfort-on-Main, Dortmund, Breslau, Cologne, &c.

With the increased consumption of beer in Prussia substitutes for malt have been largely introduced, and it was ascertained that during the year 1869 upwards of 3,800 tons of sugar and syrup, chiefly potato starch, 410 tons of rice, and $24\frac{1}{4}$ tons of starch, were used for brewing purposes. Altogether these substances were equivalent to 11,512 tons of malt, the duty upon which would have amounted to nearly £24,000. In consequence, since the 1st of January, 1873, sugar of all kinds and solutions of sugar, when used for brewing, are taxed at the rate of about 5s. per cwt., syrups being taxed at 4s., starch or potato flour and dextrine or gum at 3s., and rice at 2s. per cwt. This tax applies to the entire German empire, with the exception of the kingdoms of Bavaria and Würtemberg, the Grand Duchy of Baden, Alsace and Lorraine, and one or two insignificant privileged districts.

The malt tax levied in Prussia is at the rate of 20 silber groschen per zoll-centner, equal to 2s. per cwt. During the year 1872 there were 4,851,249 zoll-centners, equal to 238,644 tons of malt, brewed, the tax upon which amounted to £471,649,

being an increase during the space of three years of $55\frac{1}{2}$ per cent. In 1872 the quantity of beer produced in Prussia amounted to 213,969,363 gallons, which gave, however, only $8\frac{1}{3}$ gallons per head of the population. The export of beer from Prussia is exceedingly unimportant.

The principal breweries of Saxony are to be found at Dresden and the immediate neighbourhood, and one of the chief of these, situated at Feldschlössen, had honourable mention made of the samples of its beers. Dresden sends beer to all parts of Germany, and ships a considerable quantity abroad from German ports; but Saxony at the same time imports beer largely from Austria. In 1872 it produced 34,021,054 gallons of beer, equal to $13\frac{1}{3}$ gallons per head.

Among the various duchies and provinces of North Germany exhibiting beer at Vienna was Hesse, one exhibitor from which secured a medal for progress for some excellent samples of lager beer, the Brewery Academy at Worms having simply honourable mention made of its specimens. In most of these territories the same decrease in the number of breweries and increase in the quantity of beer brewed, already more than once remarked upon, is apparent. The annual consumption per head varies considerably, being as little as $3\frac{1}{3}$ and 5 gallons in Oldenburg and Mecklenburg, and as much as $24\frac{2}{3}$ and $42\frac{1}{4}$ gallons in Saxe-Coburg Gotha and Reus.

Neither Baden, nor Alsace and Lorraine, sent samples of their beers to Vienna. In the Grand Duchy, where the excise levied upon beer is at the rate of $1\frac{1}{10}$ d. per gallon, between 1862 and 1871 the annual production of beer increased 106 per cent., amounting in the last-named year to 9,220,802 gallons, equivalent to $12\frac{1}{3}$ gallons per head of the population. In Alsace and Lorraine, the principal breweries of which are at Strasburg, an excise duty is levied on strong beer of nearly 2s., and on small beer of 6d. per hectolitre of 22 gallons. The quantity of beer brewed annually amounts to 17,966,211 gallons, which allows nearly $11\frac{1}{4}$ gallons per head.

III.—*Great Britain.*

Samples of British Beers and rewards secured by them—The Ales of the Anglo-Bavarian Brewery Company the only Beers in barrel found sound—Their light and sparkling properties supply a long-felt want—Intoxicating influence of English Beers not exclusively due to their alcoholic strength—Stupifying qualities of aldehyde—Beer adulterations—Absorption of the brewing trade by the larger establishments—Statistics of Beer production in Great Britain and Ireland—Extent of the exports—The revenue derived from Beer—Importation of hops—Vast home consumption of British Beers.

THE samples of British beers at Vienna were but few in comparison with those contributed by Austria and Germany, and, as already explained, they were placed at a very great disadvantage, owing to the long distances they had travelled at a trying time of the year, and their subsequent exposure for a couple of months to the high temperature of the Western Agricultural Hall. Half of them had been unable to resist this severe ordeal, including naturally enough the samples in barrel of three New Zealand exhibitors. Messrs. Neville, Read, and Co.'s Windsor ale and stout were found deserving of honourable mention, and Messrs. W. Younger and Co., of Edinburgh, had a medal for merit given them for their excellent bottled ales. The samples of the Anglo-Bavarian Brewery Company were, however, in all respects the best, their ales in barrel being the only beers in wood which proved really sound and in good condition. They were equally bright and sparkling as the Vienna and Bavarian beers, but not having been kept in ice, and possessing less of that gummy character imparted by the malt, they did not froth to the same extent, still they were sufficiently brisk and refreshing to the palate. These beers combined the special properties of our high-class English ales with those of the lighter beers brewed upon the Bavarian system, and will supply the want which has long been felt of a brisk exhilarating beverage, free from the stupifying results common to English beers, yet containing sufficient alcohol to protect it against acidity. To a certain fulness, devoid of anything like clamminess, they unite a pleasant flavour of the hop without being too bitter, as is the case with the majority of our light drinking beers. They are specially adapted to invalids and others whose constitutions will not admit of their drinking an ordinary beer. The samples comprised pale and export ales, and a lighter kind termed amber ale; and with reference to the latter it was ex-

plained that the original specific gravity of the wort before fermentation was merely 1,050, or about the same as the Vienna lager beer, which will only keep so long as it is preserved in ice. The same beers were also exhibited in transparent beer bottles, to show their remarkable brilliancy of colour and the entire absence of sediment. The jury were naturally greatly surprised to find that the whole of these samples had remained in such perfect condition, exposed as they had been to a high temperature without the protection of ice; and they unanimously awarded a medal for progress to their exhibitors, the Anglo-Bavarian Brewery Company of Shepton Mallet.

The popular notion that the intoxicating influence of English beer is due exclusively to its alcoholic strength is an erroneous one, for there are many beers containing only a very small quantity of alcohol that are highly stupifying. Ordinary English beer contains from 12 to 15 per cent. of proof spirit, which is not sufficiently in excess of the alcoholic strength of German beer to account for the difference in the effects produced. If diluted with water and reduced by this means to the Bavarian standard it would not lose its intoxicating properties in an equal proportion. Some of its headiness is undoubtedly due to the presence of aldehyde, which is never taken into separate account when analysing beer, as it distils over and is included with the spirit. It has the same stupifying properties as the ethereal oils, and there is every reason to believe that the presence of these secondary products largely contributes to render a great deal of the English beer so objectionable. The instances of adulterating beer with *coccus indicus*, tobacco, and like stupifying and injurious ingredients, are very rare, although, according to the Inland Revenue Reports, such a poisonous substance as copperas is occasionally, and comparatively harmless matters like liquorice, caramel, and grains of paradise are frequently used, besides which, beer is, no doubt, largely tampered with in various ways by unprincipled retailers.

In Great Britain a similar decrease of small breweries and absorption of the trade by the larger establishments, accompanied by a great increase in the quantity of beer produced, and to which attention has been already several times called, has been going on for many years past. Beer is taxed in the United Kingdom first by a duty on malt of £1 1s. 8d. per quarter; also by a duty on sugar used in brewing, and which in 1872 was at the rate of 7s. 6d. per cwt., increased in 1873 to 9s. 6d., and subsequently to 11s. 6d., as well as by a trifling licence duty ranging from 12s. 6d. to £2, according to the number of barrels brewed, and which has to be paid by every

brewer of beer for sale, with a supplementary tax of 15s. for every 50 barrels of beer brewed above 100 and not exceeding 1,000, 14s. per 50 barrels above 1,000 and not exceeding 50,000, and 12s. 6d. per 50 barrels for any number beyond 50,000. The number of barrels brewed is estimated by the quantity of malt or sugar used, it being reckoned that two bushels of malt, or $52\frac{1}{2}$ lbs. of sugar, are requisite to produce each barrel of beer.

Between the years 1851 and 1871 there was an increase in the quantity of beer annually produced in Great Britain and Ireland of 10,211,036 barrels, equal to $67\frac{1}{2}$ per cent., although the consumption of malt shows an increase of merely 42 per cent. During the last ten years, however, the annual consumption of sugar in breweries had risen considerably—that is, from 3,872 to 13,325 tons. In 1870 the malt tax was levied on $6,646,935\frac{1}{4}$ quarters, in addition to which there were 688,862 quarters used in distillation and in private brewing, and which paid no tax, besides $238,845\frac{1}{2}$ quarters exported, either in the form of malt or beer, and on which drawback was allowed, giving a grand total of $7,096,951\frac{3}{4}$ quarters of malt produced. In 1873 this had risen to no less than 8,181,365 quarters. The total quantity of beer exported from Great Britain and Ireland during the year 1871 amounted to 483,120 barrels, valued at £1,853,733; of this more than 31 per cent. went to India, and $16\frac{2}{3}$ per cent. to Australia. More recent exports, no doubt, exhibit a very considerable increase.

Of the 8,181,365 quarters of malt produced in 1873, 782,104 were free of duty for purposes of distillation, &c., and 240,728 were either exported on drawback, or used for beer so exported, leaving 7,158,433 quarters liable to duty, the tax upon which would have amounted to £7,754,969. In addition there were 599,357 cwt. of sugar used in brewing, on which the duty would be £284,695. The amount derived during the financial year 1872-73 from brewers' licences and the supplementary barrel tax was £472,746, which would bring up the total to upwards of $8\frac{1}{2}$ millions sterling, and if to this were added the £364,083 received for licences to dealers in and retailers of beer, the entire tax upon beer would be very little short of nine millions. There are no returns of the quantity of hops used by the brewers of the United Kingdom, but if we estimate these to average 2lbs. per barrel, it would have taken 547,296 cwt. for the beer brewed last year for home consumption and export, nearly one-half of which quantity would, in all probability, have been imported. In 1871, when upwards of 15 per cent. less beer was produced, 201,398 cwt. of hops were imported, chiefly

from Germany, the United States, Belgium, and Holland, the exports during the same year amounting to 17,695 cwt. The number of barrels of beer that entered last year into home consumption is estimated at nearly 30 millions, or, to speak more exactly, at 1,076,844,924 gallons.

IV.—*France.*

Abundance of wine and cider interferes with the consumption of French Beers
—Taxation and production of Beer in France—Quantity annually consumed.

THE plentiful supply of good and cheap wine and the abundance of cider in the northern and western districts of France, has interfered materially with the consumption of beer in this country, which, although it has increased considerably of late years, is still confined principally to the middle classes in Paris and other large towns, with whom beer is, so to speak, a *boisson de luxe*. It is scarcely surprising, therefore, that there were very few exhibitors of French beer at Vienna, and that the samples of merely one of them secured recognition—the Société des Caves du Roi at Sèvres, which obtained a medal for merit. Beer is taxed in France according to its strength, the stronger kind at the rate of 3f. 50c. the hectolitre, or about $1\frac{1}{2}$ d. per gallon, and small beer at merely one-third of this rate. In 1873 there were 103,347,408 gallons of strong, and 59,814,645 gallons of small beer brewed, the tax upon the former producing £646,158, and upon the latter £130,447, or £806,605 in all. All beer consumed in the towns, whether of home or foreign production, is equally liable to an octroi duty, which in Paris amounts to as much as $5\frac{1}{4}$ d. per gallon. Now that France has lost Alsace, its principal breweries are to be found in the immediate neighbourhood of Paris, at Lyons, and Marseilles. The average price of strong and small beer brewed in the north of France is 8d. and $3\frac{1}{4}$ d. per gallon respectively, in the east 1s. and 8d., in the west 11d. and 5d., and in the south 1s. 1d. and $9\frac{1}{2}$ d.

Of the 163,162,150 gallons of beer brewed in 1873, France exported 527,813 gallons; on the other hand, it imported 6,095,225 gallons, chiefly of German beer, the imports from Great Britain amounting to only about 300,000 gallons. This leaves a total of 168,729,562 gallons for the average consumption, which averages nearly $4\frac{3}{4}$ gallons per head.

V.—*Belgium.*

Peculiarity of the Belgian Beers—Taxation, production, and consumption of Beer in Belgium.

EVEN Belgium, which is essentially a beer-drinking country, and famous for its Faro and Lambick beers—the wort of which, after being subjected to continuous boiling, ferments for weeks and even for months—sent very few samples of its beers to Vienna, and the only exhibitor that secured any reward was a brewery company at Dietrich, some so-called summer beer forwarded from Ghent not being considered deserving of recognition. Beer is taxed in Belgium at the rate of 4 francs the hectolitre, equivalent to $1\frac{3}{4}$ d. per gallon. The annual production, which is about the same as that of France given above, allows, however, almost 32 gallons for each head of the population. Belgium exports comparatively little beer, but its imports average 860,000 gallons annually.

VI.—*Holland.*

Production of Dutch Beer on the increase—Taxation, annual production, and consumption—Expectation expressed that Beer will eventually supplant the universal schnapps.

HOLLAND, which prides itself principally upon its schnapps, sent no samples of beer to Vienna; nevertheless, as in most other European countries, the production of beer is on the increase here, besides which its consumption is added to by the importation of considerable quantities, amounting in 1870 to 645,500 gallons. The Dutch brewers enjoy the option of being taxed either according to the quantity of malt they consume, at the rate of about 2s. 7d. the 100 lbs., or else according to the amount of vat space which they have at their disposition. The annual production of beer in Holland is 29,838,903 gallons, which gives $8\frac{1}{7}$ gallons per head of population. In the Grand Duchy of Luxembourg the consumption is almost 6 gallons per head. The increase of consumption in Holland has been sufficiently marked of late years to induce the Amsterdam Chamber of Commerce to congratulate the country upon it, and to express a hope that beer will, ere long, become the national beverage and supplant schapps, which are now drunk by almost all classes to an alarming extent.

VII.—*Russia.*

Breweries encouraged by the Russian Government with the view of suppressing spirit-drinking—Increase in the consumption of Beer and decrease in that of spirits—Materials and brewing processes equally susceptible of great improvement—Character of the Russian Beers—Production, consumption, and taxation.

FOR some creditable samples of Bavarian and Märzen beers in bottle, MM. Durdin of St. Petersburg, and Ljutoslawski of Drosdovo, in the government of Lomsha, secured medals for merit at Vienna, but neither of the exhibitors of ale from Riga, or porter from Kiew, obtained any recognition. With a view to the suppression of spirit-drinking among the population generally, the Russian Government does all it can to promote the success of existing breweries and the establishment of new ones, and of late years a steady increase in the production of beer has developed itself throughout European Russia, and more especially at St. Petersburg, Moscow, Riga, Odessa, and Warsaw. In the capital alone 7,932,389 gallons of beer were brewed during the year 1871, against 19,266,336 gallons produced in the remainder of the empire. Statistics show that in the six years between 1864 and 1870 the annual production of beer had increased 4,147,674 gallons, and that during the same period the consumption of spirits had diminished by 5,117,124 gallons. Still the spirits consumed in 1870 amounted to more than twice and a quarter the quantity of beer drunk during the same period. There is room for great improvement in Russian beer, not only with reference to the process of brewing, which is faulty both in respect to the quality of the beer and the quantity produced in proportion to the amount of malt used, but also in regard to the general quality of the materials, the barley being inferior to that grown in other parts of Europe, and good hops at reasonable prices being remarkably scarce.

Much of the beer brewed in Russia resembles the lighter German beers, yet the production of porter and strong ales is largely on the increase, while the quantity of beer imported from England remains much the same, amounting in 1871 to 4,253 barrels, valued at £16,131. The quantity of beer annually brewed averages 26,345,726 gallons, which gives, however, merely three pints per head of the population. Beer is taxed in Russia according to the vat and boiler space of the various breweries, and this is found to be equivalent to from 12 to 14 kopecks per vedro of beer brewed, or about 2d. per gallon.

VIII.—*Sweden and Norway, &c.*

Christiania export Ale—Production and consumption of Beer in Sweden and Norway—Beer from Denmark, Switzerland, Italy, Spain, and Roumania—Production and taxation of Beer in the United States—General table.

THERE were 10 exhibitors of beer from Sweden and Norway, seven of whom obtained some kind of recognition for their samples. Three exhibitors of the famous Christiania export beer, which is almost identical with the Vienna beer, secured medals for merit, two Stockholm breweries receiving the same reward, and two other Swedish brewers having honourable mention made of their pale ale and Bavarian beer. In Sweden, as elsewhere on the continent, the number of breweries have decreased, while the production of beer has been steadily increasing. To-day this amounts to 11,519,860 gallons per annum, upwards of one-fifth of which is brewed at Stockholm. In 1870 a great impetus appears to have been given to the export of beer from Sweden, which now amounts to within less than 2 per cent. of the quantity of beer imported. In Norway about 5,502,417 gallons of beer are produced annually, chiefly at the Christiania breweries, the export ale of which has a world-wide reputation. The consumption of beer in Sweden is at the rate of $2\frac{3}{4}$ gallons per head, while in Norway it amounts to nearly $3\frac{1}{5}$ gallons.

The remaining exhibitors of beer at Vienna included one from Copenhagen—namely, J. C. Jacobsen and Co., who obtained a medal for progress for some excellent bottled export beer; two from Switzerland, one of whom from Berne obtained a medal for merit; five from Italy, three of whom secured medals of the same class, the best samples being the excellent maize beer of Signor Metzgar, of Asti; one from Barcelona, in Spain, who had honourable mention made by way of encouragement of some very indifferent beer; and another from Roumania who met with similar recognition. There were no samples from the United States, where during the last few years the increase in the production of beer has been enormous. In 1863 only 1,558,083 barrels were brewed, but in 1871 there were no less than 7,087,826 barrels, equivalent to an increase in the annual production of 355 per cent. in the course of nearly eight years; still this amount gives a consumption of no more than $5\frac{3}{4}$ gallons per head. Beer is taxed in the United States at the rate of one dollar (4s. 2d.) per barrel containing 31 gallons, in addition to which there is a special tax, which in 1871 produced nearly an extra 10 per cent.

The annexed table shows the quantity of beer brewed annually in the principal beer-producing countries, with the amount of duty levied, and its proportion to the general taxation, together with the consumption of beer per head of the population :—

Countries.	Annual Production in Gallons,	Duty in Pounds Sterling.	Percentage of Revenue.	Consumption per head of the Population in Gallons.
Austria and Hungary .	268,795,775	2,324,695	8.28	7.59
Germany :—				
Prussia	213,969,363	471,649	1.27	8.69
Bavaria	202,643,856	795,608	11.03	48.37
Württemberg	61,650,967	241,376	13.	33.88
Saxony	34,021,054	74,967	4.06	13.31
Baden	9,220,802	81,954	9.74	12.32
Other States	44,065,777	97,807	3.26	10.79
Alsace-Lorraine . . .	18,399,672	—	—	11.44
Great Britain	1,076,844,924	8,512,400	11.	34.04
France	168,729,562	806,605	—	4.70
Belgium	154,067,676	553,869	7.72	31.90
Holland	29,838,903	60,833	0.82	8.14
Russia	26,345,726	—	—	0.378
Sweden	11,519,860	—	—	3.19
Norway	5,502,417	—	—	2.75
United States	219,700,461	1,625,000	2.17	5.72

VICTORIA WINE COMPANY.

LONDON BRANCHES.

40, King William-street,
London-bridge.
380, Mare-st., Hackney.
188, Westminster-bridge-
road.
97, Bishopsgate-street
Without.
28, Upper-st., Islington.
161 & 163, Commercial-rd.
19 & 20, London-street,
Fenchurch-street.
208, Bethnal-green-road.
125, Rye-lane, Peckham.
115, Hampstead-road.
188, Walworth-road.
23, High-street, Notting-
hill-gate.
65, Fulham-road.
69, Camden-road.
53, Chalk-farm-road.
99, Tachbrook st., Pimlico.
534a, Kingsland-road.
131, Lupus-st., Pimlico.
375, New-cross-road.
691, Old Kent-road.
2, Bristol-gardens, Maida
Vale.
101, Praed-st., Paddingtn.
16, Devonshire-terrace,
Notting-hill-gate.
413, Wandsworth-rd., S.W.



1, Young-street, Kensington.
24, Hereford-road, Westbourne-
grove.
113, Holloway-road.
173, King-street, Hammersmith.
Portland-place., Circus-road, E.,
St. John's Wood.
189, Seven-sisters-road.
65, George-street, Portman-sq.
123, King's-road, Chelsea.
49, The Grove, Stratford.

344, Cold Harbour-lane,
Brixton.
160a, Ebury-st., Pimlico.

—o—

COUNTRY BRANCHES.

26, High-street, Bristol;
15, Prince of Wales'-road,
Norwich.
9, Spencer-place, Black-
heath.
High-street, Hounslow.
4, Ainsley-terrace, High-
road, Lee.
52, Oakfield-road, Penge.
53, High-st., Birmingham.
Ridgway-rd., Wimbledon.
4, Station-terrace, North-
end, Croydon.
9, Commerce-ter., High-
road, Tottenham.
33, New-road, Brighton.
80, High-street, Bromley,
Kent.
3, Montague-ter., Dart-
mouth-prk-rd., Forest-hl.
20, Laurie-place, Kirkdale,
Sydenham.
90, High-street, South
Norwood.
5, High-st., New Brentfrd.
73, George-st., Richmond.

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VAULTS—Nos. 11, 12, 13, 14, 15, 16, 17, and 18, MARK-LANE.

NATURAL ALTO-DOURO PORT WINE.

In introducing this pure Wine to the public the VICTORIA WINE COMPANY wish to remark that it must not be confounded with Port Wine as usually sold in this country. It has no added sweetness or spirit, and on this account can only be imported into England at certain seasons of the year, not being able to stand the summer in Portugal without additional spirit.

In colour and flavour it resembles a magnificent Burgundy, improves wonderfully by being kept in bottle, and can be very strongly recommended as a Wine most useful to persons of delicate constitution and invalids, as it possesses great strengthening powers without the ill-effects of strongly fortified wines. The price being very low, 16s. per dozen, it is within the reach of all classes, and the Victoria Wine Company confidently recommend it to their customers and the public.

As it may be imagined that at the above quotation good wine cannot be obtained, the Company refer the public to samples shown at the International Exhibition of 1874, where Portuguese Wines as low as 10d. per gallon were shown. The Victoria Wine Company have very carefully selected the Wine before shipment, and as a limited quantity only can be offered, early application is necessary, and it is respectfully notified that orders cannot be executed prior to the 14th June next.

The Wine is sent carriage free to any station in England for 1s. per dozen extra. Bottles and cases are charged 3s. per dozen, but same amount is allowed when they are returned. P.O.O. to W.W. Hughes.

Bankers—The IMPERIAL BANK. Head Office, 16, Mark-lane.

WINES (FOREIGN) on which Duty was paid in London by some of the principal firms last year.—*Wine Trade Review*, Jan. 15, 1875. Gallons.

W. & A. Gilbey	... 886,298
Dingwall, Portal, & Co.	... 130,632
F. W. Cosens	... 115,800
R. Hooper & Sons	103,095
Max Greger & Co.	100,166
D. Taylor & Sons	... 86,555
Dent, Urwick, & Co.	79,791
Cunliffe & Co.	... 78,251
T. W. Stapleton & Co.	... 76,834
W. J. Murray	... 76,292
H. T. Mayfield	... 73,665
C. G. Phillips & Co.	72,002
Spiers & Pond	... 70,882
J. Allnutt, jun., & Co.	67,913
Brooks and Oldham	63,962
Cock, Tattersall, & Co.	62,630
Victoria Wine Co.	62,179
G. Philbrick	... 60,941

Wines paid Duty on by W. & A. Gilbey at various out-ports ... 37,783 gallons

SPIRITS (FOREIGN) on which Duty was paid in London by some of the principal firms last year.—*Wine Trade Review*, Jan. 15, 1875. Gallons.

W. & A. Gilbey	... 348,534
Twiss & Browning	... 193,211
Daniel Taylor & Sons	165,065
Trower & Lawson	... 163,687
Dingwall, Portal, & Co.	... 136,794
Galbraith, Grant, & Co.	... 91,828
R. Hooper & Sons	... 84,264
E. S. Pick & Co.	... 65,362
R. Burnett & Son	... 58,691
Daun & Vallentin	... 56,329
Osmond & Co.	... 56,181
Fulcher & Robinson	46,549
Brown & Pank	... 41,524
Bisquit, Dubouché, & Co.	... 41,099
Hills & Underwood	40,893

Gins and Whiskeys paid Duty on by W. & A. Gilbey, but not included in above returns ... 435,918 gals.

Total quantity of Wines and Spirits paid Duty on by W. & A. Gilbey in the year 1874 ... 1,798,533 gals.

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UPPER SACKVILLE-STREET, DUBLIN.

HAYMARKET (WEST END), EDINBURGH.

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W. & A. Gilbey's system of affording the greatest convenience to consumers in obtaining Wines and Spirits of guaranteed quality and purity at moderate prices has met a want long felt in many households, and this is evidenced by the extent of their Sales for 1874, which were upwards of 16,000 dozens weekly, and which represents more than one-twentieth part of the entire Wine Trade of the United Kingdom, as shown by the Government returns of duty payments quoted in the margin.

A List of Agents, as also of the Wines and Spirits, of which a stock is kept at each Agency, forwarded on application.

J. ROUSSILLON AND CO.,

EPERNAY.

Travellers from Paris to Strasbourg should not fail to break the long journey by a visit to Messrs. J. Roussillon and Co.'s cellars, mentioned in *Bradshaw's Continental Railway Guide* as one of the principal curiosities of the district.

Fortunately for those who like pure and well-matured Champagne, the wine of this firm is to be met with in almost every first-class Hotel in this country and on the Continent.

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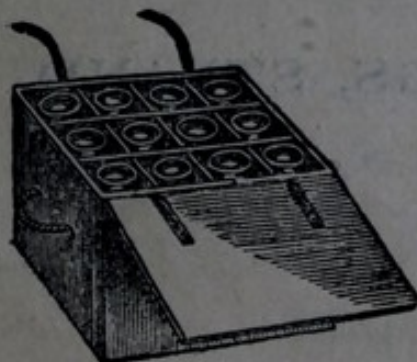
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MINORIES, E.;

36, Haydon Street;

AND

SHEPPY YARD, E.



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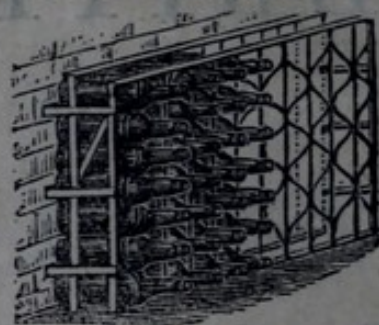
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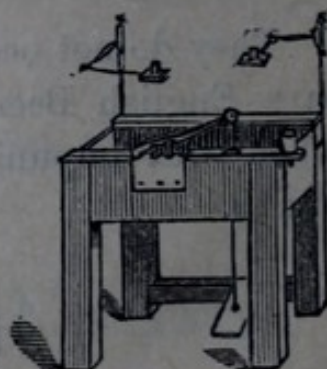
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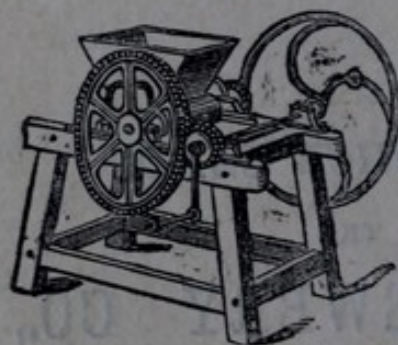


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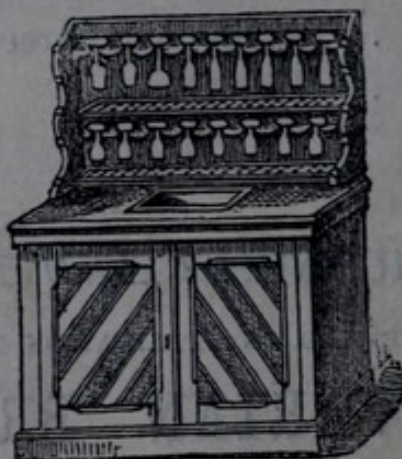


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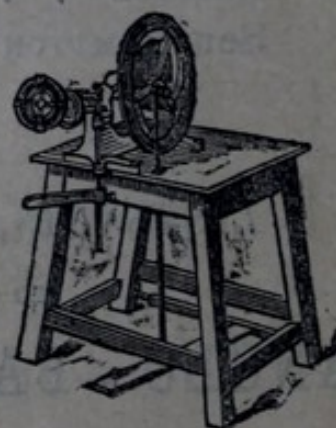
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Society in London, I have to observe that no Society of Exporting Wine Growers of such description is known in this country, and that no such Company obtained the first Prize Medal at the International Exhibition, nor are they the direct purveyors to the Emperor of Austria; and that, according to information obtained, the Society signing under such firm in London is formed only by one individual, a former employée of the house of Max Greger, a firm of high repute in the Wine trade, and likewise honourably known throughout Hungary.

The Minister,

Pesth, 10th December, 1870.

SZLÁVY,

m.p.

THE REV. SIR EDWARD REPPS JODRELL, BART.,

TO MESSRS. FELTOE & SONS, 27, ALBEMARLE STREET, W.

When at Sall I received an Analytical Report of your SPÉCIALITÉ
Sherry, and you must forgive me for saying that at first I regarded the
who matter as a most egregious piece of humbug. Having, however,
taste the wine in question, and found it most agreeable to the palate, I
determined, on my own responsibility, to have it Analysed for myself having
full also determined previously to expose any hoax *pro bono publico*, or
to give you the benefit of the Analysis should it turn out in your favour.
I have the pleasure to forward you Professor Redwood's (of the Pharm-
acological Society of Great Britain) Analysis, which says more than I can
press. I am very particular as to the wine I drink, and as I have
been hitherto buying everyday Sherry at 60s. a dozen, I am rejoiced to
find now that I can purchase wine of equal strength and superior bouquet
at half that price. This should be known to the general public, and you
can make any use you deem proper of this letter, and also of Professor
Redwood's most elaborate Analysis. —Yours faithfully, (Signed) EDWARD
REPPS JODRELL.

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