Eatables on Ocean Steamers.

Few persons are aware of the extensive nature of the victualing on board the great ocean steamers. Such a vessel is provisioned as follows for the passengers and crew: 3,500 lb. of butter, 3,000 hams, 1,600 lb. of biscuits, exclusive of those supplied for the crew, 8,000 lb. of grapes, almonds, figs, and other dessert fruits; 1,500 lb. of jams and jellies; tinned meats, 6,000 lb.; dried beans, 3,000 lb.; rice, 3,000 lb.; onions, 5,000 lb.; potatoes, 40 tons; flour, 300 barrels; and eggs, 1,200 dozen. Fresh vegetables, dead meat and live bullocks, sheep, pigs, geese, turkeys, ducks, fowls, fish, and casual game, are generally supplied at each port, so that it is difficult to estimate them. Probably two dozen bullocks and 60 sheep would be a fair average for the whole voyage, and the rest may be inferred in proportion. During the summer months, when traveling is heavy, 25 fowls are often used in soup for a single dinner.

GREENHOUSES AND CONSERVATORIES.

The time of year is now approaching when many who have been experimenting with the cultivation of plants or flowers during the past season bethink themselves of the possibilities of continuing, and perhaps enlarging, their work during the winter months, provided their means go hand in hand with the tastes which this pleasurable occupation usually begets, while others who have before done something in this line should not longer delay the making of contemplated enlargements and improvements. To all such the design herewith presented, of an English country house and conservatory, will afford suggestions for a roomy, highly ornamental, and yet not very expensive structure, which may be used both to raise and display plants. The chimney, built into the side of the house, suggests where the furnace should be placed, and in the most convenient place for so dividing the interior, either by permanent fixtures or sliding partitions, as to get the different temperatures required for various plants. A cool greenhouse is one intended simply to protect tender plants during the winter season, and the temperature may be as low as 35° to 40° F., but plants are not expected to grow in such a house; for flowers the day temperature must be at least 60°, with a minimum of 40° at night. It is evident that an abundance of light and ventilation are afforded by a conservatory of the design herewith shown. For heating such houses, the plan now most generally adopted is by hot water flues, though formerly, and at present in some of the smaller houses, the furnace flues alone are used, conducted around the house before entering the chimney. In the hot water system a pipe runs from near the upper part of the furnace hot water reservoir all around the house, under the different benches holding the plants, and returns to the boiler near its lower part, the fire in the furnace causing a constant circulation. A house constructed as the one shown gives great opportunities for display as well as for the cultivation of plants requiring different temperatures.

AN ORNAMENTAL CONSERVATORY.

The Nutmeg Plant—Myristica (*Var. Sp.*).

BY F. L. S.

ANALYSES OF NUTMEG.—(*M. fragrans.*)

	Ordinary kind. Bonastre, 1823.*	Ceylon nutmegs. 1880.
Volatile oil	6·0 per cent.	8·21 per cent.
Liquid fixed oil	7·6 "	35·76 "
Solid fat	24·0 "	
Acid	0·8 (?) "	....
Starch	2·4 "	1·85 "
Gum, etc	1·2 "	
Nitrogenous matter	..	6·70 "
Mineral matter	..	6·23 "
Cellulose and loss	54·0 "	33·73 "
Water	.. (?)	7·52 "
Loss	4·0 "	..
	100·00	100·00

The volatile oil of most species of *Myristica* seems to vary but slightly as to composition and physical characters, although it differs widely as to quantity. Some (Bentley and Trimen) assert the yield at "2 to 3 per cent," but the true nutmeg normally contains a great deal more than that, the wonderfully aromatic "nut" of Ceylon containing nearly 8¼ in 100 parts. The specific gravity of this variety is stated to be 0·927 by the author of the 1880 analysis, but from 0·920 to 0·948 has been named as the extreme limits, or range. *Myristicene*—a hydrocarbon—stated by Cloetz to constitute about three-quarters of the ordinary oil, but Dr. Gladstone has detected the presence of a small quantity of an oxygenated product, isomeric with menthole; for this the name of *Myristicole* is suggested. It appears to have the same properties as menthole when locally applied for the relief of neuralgia, etc.

The expressed oil of nutmegs—*Oleum Myristicæ Expressum*, or nutmeg butter—consists, of course, of a mixture of the volatile and of the fixed oils, and the yield is given, by Fluckiger and Hanbury, at 28 per cent of the nuts. It is chiefly imported from Singapore in square or oblong tablets or cakes, and some, recently measured, were found to be about 9½ inches long by 2¼ inches wide, of an orange-brown tint, fragrant and aromatic. The fixed oil, or non-volatile basis, of this "butter" contains several saponifiable fatty acids, *Myristicene* being the most prominent of these.

The method of preparing this "expressed oil" is to bruise the nutmegs and subject them first to the action of steam, and then to place in bags between the tested surfaces of large plates of iron previously heated, and subject them to great pressure, collecting the escaping oil in the usual manner. An important ingredient in the warm plaster and the *Emplastrum Picis* of the British Pharmacopœia, the "expressed" oil, either with or without mixture with *Lin. saponis*, is exceedingly useful as an external application for the reduction of sprains and the amelioration of paralysis, gout, and chronic rheumatism, etc.

The quantity of nutmegs annually imported into England amounts at present to from 640,000 to 660,000 pounds. France is content with something like half as much, and America imports about 470,000 pounds per annum.

The *Myristica sebifera* appears to be indigenous to the Brazils and British Guiana, and it is also found abundantly in Cayenne. It grows to about twice the height of *M. fragrans*, that is to say, 50 or 60 feet in height. The latter is said to contain no starch whatever; but this statement the present writer is able to deny, although the quantity of starch present in this nut is less than in most of the other varieties.

By drying the fruit in the sun, passing through rollers to break the shell, which is subsequently separated, crushing the kernel and throwing it into boiling water, some 29 per cent of fat is obtained, valuable for soap and candle making purposes.

The *M. laurifolia*, of Martinique, is very little known at present. A small specimen was placed in the hands of a well known analyst, who found 34·5 per cent of fat or oil.

M. punctata is chiefly remarkable for being without smell or taste. This variety is used in Brazil—its native habitation.

From the same country as the preceding comes the "ucu-uba," the fruit of *M. officinalis*. The flavor is amygdalaceous, but it has little or no taste; 18 or 20 per cent of fat is yielded upon macerating in hot water, and pressing, and this is much in demand for the purpose of soap and candle making, and as an ointment for the cure of asthma, tumors, and rheumatic affections. It begins to melt at 106° F., and forms a yellow fluid at about 170° F. This fatty matter dissolves in 3·1 parts of ether, 28·1 parts of hot absolute alcohol, but in the cold 105 parts are required to dissolve it.—*Br. C. and Druggist.*

* *Jour. de Pharm.*, 1823, pt. ix., p. 281.

Focal Distance of Spectacle Glasses.

Place the ends of a measure of 30 or 40 inches in length against a smooth wall or other suitable ground, in plain view of some well defined object a few rods distant, as, for instance, a building or window on the opposite side of the street. Then place the edge of your lens on the measure, and move it backward or forward until a spectrum is formed, or in other words, until a clear and distinct outline of the distant object is produced on the ground against which your measure rests. This point will represent sufficiently near for all practical purposes the exact focal distance of the lens, and will correspond in inches with the number on all properly marked convex spectacles.

Boring for Natural Gas at Cleveland, Ohio.

The Cleveland Rolling Mill Company of that city has been drilling for gas on its property in the Eighteenth Ward since October 10, 1884. At the depth of 715 feet a small vein of gas was found, but it was soon exhausted. After passing through the shale the drill entered a vein of limestone, 260 feet in thickness. Below this, hard gray sandstone was encountered. While the drill was pounding in the sandstone at a depth of 1,700 feet, the well suddenly filled with water, which, being pumped out, was found to be strongly impregnated with salt. The drilling was continued until a depth of 1,985 feet had been reached, when pure rock salt was found. This vein was 169 feet in thickness, and it required 36 hours to drill through it. The drillers were not in search of salt, but gas, and they continued with the work. The big salt vein was encountered about a month ago. Two weeks later, after drilling through a considerable amount of rock, another but smaller vein was encountered. The drill was still driven downward until it had reached a depth of 2,680 feet, and the drillers were treated to another surprise. This time they found petroleum. Evidences of oil were found in the shape of a peculiar odor about the borings. The drill was passing through very hard rock, and it therefore proceeded very slowly. Every time the sand pump was put down into the well it was filled with oil and water, and several barrels of petroleum were taken out in that manner. The oil is said to be of very fine quality. What has already been found seems to have trickled through the rock from a pocket near the well. No gas has been found since the drill passed below 1,000 feet. It is now producing about one barrel of oil daily. The hole has reached a depth of 2,700 feet, and according to the *American Gas Light Journal*, there are slight indications of gas, but it has not yet been discovered in paying quantities.

How Bees Predict the Weather.

No. 17 of *Die Natur* contains an article by Herr Emmerig, of Lauingen, on German bees as storm warners. From numerous observations, the writer advances tentatively the theory that, on the approach of thunder storms, bees, otherwise gentle and harmless, become excited and exceedingly irritable, and will at once attack any one, even their usual attendant, approaching their hives. A succession of instances are given in which the barometer and hygrometer foretold a storm, the bees remaining quiet, and no storm occurred; or the instruments gave no intimation of a storm, but the bees for hours before were irritable, and the storm came. He concludes, therefore, that the conduct of bees is a trustworthy indication whether a storm is impending over a certain district or not, and that, whatever the appearances, if bees are still, one need not fear a storm.