THE SEAFORTHIA ELEGANS.

Few of the larger growing palms, says a correspondent of the London *Garden*, to which we are indebted for the accompanying engraving, equal this species in beauty; and it has, what is many cases a great advantage, the property of being a rapid grower. Its proper place is planted out in a conservatory that is cool in summer, and kept regularly a few degrees above freezing in winter. Planted out in such a position in a bed of rich loam, and abundantly supplied with moisture, it soon makes a noble plant. Although a native of tropical Australia, it is sufficiently robust in constitution to succeed out of doors as a sub-tropical plant during our summer season, when it should be plunged on a well drained bottom.

Our illustration, showing the way in which it is used in French gardens, exhibits the graceful port of this species at a glance, and also the singularly effective character of the plant when associated with yuccas and other fine foliaged subjects in the open air. Scarcely any other palm is better adapted than this for a center plant in any well arranged group of foliage or flowering plants; and small specimens are useful for this purpose, as well as for the decoration of apartments and reception rooms. It is readily propagated from seeds sown in light soil in pots plunged in a gentle moist bottom heat, and the plants are ornamental from the time they attain 9 or 10 inches in hight until they outgrow the quarters allotted to them. Frequent syringings overhead are beneficial to them, especially during hot weather, in order to keep down red spider; and as soon as the pot or tub becomes filled with roots, a little manure water is advantageous to them.

We have noted several small plants doing well in apartments, but they require a plentiful and regular supply of water at the root, and the hard foliage should be washed at least once a week with a soft sponge and clean tepid water. If soap is used, be particularly careful to remove every particle of it from the plant afterwards, by either syringing or sponging with clean water. If only one palm is required, for either pot culture or for planting out in the conservatory, we should recommend this before all others, on account of its graceful habit and easy culture.

THE SEAFORTHIA ELEGANS.

An Oyster Patent.

One of the great troubles which oystermen have to contend with is the starfish. This rapacious enemy destroys thousands of bushels of oysters every year, and no device has heretofore proved effective as a protection. But the ingenuity of a Connecticut Yankee has at last triumphed. Mr. Oliver Cook, of Darien, Conn., has lately obtained a patent on the subject. His invention consists in spreading a net, under water, on the ground composing the oyster bed. Mr. Starfish puckers his fingers together, squeezes himself up through the meshes of the net, and then extends his digits again. Being now upon the upper side of the net, he will be infallibly captured whenever the oysterman raises the net to the surface. This is to be frequently done until the enemy is cleared from the coast, when the oysters at once begin to laugh and grow fat.

A Metallic Larynx.

The total extirpation of the larynx was performed not long ago, for the first time, by Professor Billroth, in Vienna, in consequence of epithelial disease, so extensive as to be amenable to no less severe procedure. The correspondent of the Boston *Medical and Surgical Journal* reports that tracheotomy was performed in order to accustom the patient to the use of the canula; when this was accomplished, the extirpation of the larynx was undertaken, by carefully dissecting it away from the surrounding tissues, leaving the hyoid bone and sound portion of the epiglottis. That night, brisk hæmorrhage occurred from some of the smaller arteries, and the patient seemed, for a time, in imminent danger of suffocation; it was also necessary, during the first fortnight, to administer liquid food through an œsophageal tube; but the extensive wound has entirely healed, and the operation must be conceded to be a success, and to reflect no little credit on its originator.

After the operation the man still possessed the power of communicating his wants in an indistinct but intelligible whisper. Subsequently a metallic larynx, provided with vibratory reeds, was fitted to the upper convex surface of the tracheotomy tube, and the man "can congratulate himself that, if his voice is a trifle monotonous in pitch, it is by no means unmusical in tone."

Preservation of Telegraph Poles, Posts and Railway Sleepers.

In the course of a recent discussion before the Society of Telegraph Engineers, London, concerning the best methods of preventing decay in wooden telegraph poles, it was stated that an experience of several years with hop poles had shown that, when their lower ends were simply boiled in an open vessel of creosote, the wood was greatly preserved from decay. The more perfect method of creosoting wood is to boil in creosote under a pressure of 120 lbs. to 150 lbs. per square inch. This involves expensive apparatus, but the wood thus treated will last indefinitely.

It was alleged that simply painting the bottoms of green poles with tar hastened decay, as the sap was sealed up at that point. When the poles were well dried, the application of tar was believed to be useful.

Attention was called to the process of Sigismund Beer, of New York city, which was considered to be an important one. It is certainly very simple, economical, and easily practiced. The wood is merely steeped in solution of borax. This salt is supposed to neutralize the decomposition of the vegetable matters in the wood, which are afterwards washed out.

Mr. Von Truenfeld said that he had not been concerned with wooden posts in England, but he knew of tropical trees which would last, he should say, at least 200 years without showing the slightest signs of decay. He had had occasion to take up poles which had been used in building, and which had been in the ground for over 100 years without showing the least sign of decay or corrosion on the ground line. They were poles made of trees growing in the interior of South America, and which were called in the native language the *urunday* and the *curupay* trees. They were generally called by English people iron wood. The wood was so hard that it was impossible to drive a nail into it. It would, perhaps, be an advantage if it could be brought to this country, and used for telegraph poles. He should think that it would last for hundreds of years. It might be worth while for some of our investigators to experiment with the iron wood with a view to its acclimation here.

Galvanic Electricity without Chemical Action.

At a recent meeting of the Physical Society, Mr. Fleming showed his new battery, in which the metallic contact of dissimilar metals is entirely avoided. The arrangement consists of thirty-six test tubes of dilute nitric acid, and the same number of tubes of sodium pentasulphide, all well insulated, alternating with one another. But strips of alternate lead and copper connect the neighboring tubes; by which means the terminals are of similar metal, and a current of sufficient intensity to violently affect a quantity galvanometer obtained. The potential increases, as in the ordinary galvanic arrangement, with the number of cells employed, until sixty cells showed an electro-motive force exceeding that of the same number of Daniell's elements. In this new battery the acid lead is positive to copper, while in the sulphide it is negative. Mr. Fleming further showed how, by using the single fluid nitric acid, and the single metal iron, a similar battery could be constructed, provided one half of each iron strip was rendered passive. This is an important discovery; for it seems to revive the theory that chemical action is not necessary in a galvanic apparatus to produce electricity. At all events it is of sufficient interest to merit the sound inquiry into its principles which physicists seem likely to make.

New Protecting Compound for Iron Ships.

Dissolve thirty-four ounces of shellac in eighty ounces of wood alcohol, which is allowed to stand about twenty-four hours. Then add thirty ounces of Venetian red, and thirty-five ounces of sulphate of lime, and thoroughly mix by passing it through a paint mill.

The paint is now ready for use, and is applied with a brush in the same way as ordinary paint, and will dry instantly, so that the vessel may be lowered into the water within an hour after the paint has been applied to the bottom.

For vessels navigating fresh water, or both salt and fresh water, the proportions of the Venetian red and the sulphate of lime used may be diminished. This paint may also be used upon the inside of the iron work of the vessel. It is the invention of Samuel Williams, of New York city, recently patented.

Condensed Milk Manufacture in Switzerland.

A factory for the production of condensed milk has recently been established at Cham, canton Zug, on the borders of the lake of the same name, in Switzerland. We find the following description of the process in the *Bulletin de la Société d'Encouragement*: The milk is furnished by peasants; and as soon as each person delivers his supply, a sample is taken from the pails, numbered, and allowed to remain quiet over night. The object of this is to judge of the quality of the milk for the rising of cream. Cases of fraud, however, are rare, as the peasantry are generally honest and the penalties imposed by law are extremely severe.

The first operation is to weigh the milk, which to this end is conducted into a copper basin supported by a balance. Its weight being obtained, the milk is allowed to escape into huge wooden reservoirs lined with zinc, and located in the cellar. Here a careful examination is made with the lactometer, and the fluid is drawn off into large cylindrical copper boilers which are placed in a vat furnished with a false bottom under which steam enters. The milk is thus slowly heated, but not boiled. For the latter purpose, it is ladled out into a separate boiler whence it is carried to another tank containing a a quantity of white sugar. In order to facilitate the solution of the latter, the liquid is repeatedly passed along a metal trough from one vase to another. When the operation is completed, it is drawn off into evaporating chambers. These receptacles resemble the similar apparatus used in sugar manufacture, and have double bottoms heated by steam. They are united to a column of condensation which communicates with air pumps. Under these conditions the milk boils at 140° Fah. Every little while the workman takes out a sample from which he judges according to its viscosity whether the condensation is sufficient.

When the latter point is reached, the liquid is led down into the cellar and into a tin receptacle which is surrounded by cold water. The milk is thoroughly agitated by hand for some time until completely cool, when it is carried to other reservoirs and thence drawn off into boxes and sealed. The daily product is about 8,000 boxes, each weighing about 13·5 ounces. The milk may be diluted with five times its weight of water.

The Fastest Steamer in the World.

Such is the title claimed by Messrs. Thornycroft for a boat they have just built to the order of the Government of India, for service in the Orissa canals. The dimensions of this vessel are: Length, 87 feet; beam, 12 feet; draft of water, 3 feet 9 inches. The speed contracted for was 20 statute miles per hour. The hull, the working parts of the engines, and the propeller—Thornycroft's patent—are of Bessemer steel, and the woodwork is of teak. The official trial of the boat was made on the 14th ultimo under the inspection of Colonel Haig, R. E., chief engineer of the Bengal Irrigation Works, and the results were: With tide, 25·08 miles per hour; against tide, 24·15 miles per hour; giving a mean speed of 24·61 miles per hour. In another official trial it was shown that the boat could keep up a speed of 22 miles per hour without losing steam. These speeds are extraordinary enough in themselves, but when it is considered that they are attained by a boat only 87 feet long they become absolutely wonderful. The value of swift steam launches as torpedo boats is acknowledged, and already various foreign governments have ordered boats from Messrs. Thornycroft's yard, near London. If torpedo launches can be built to steam at the rate of 16 or 18 miles an hour in a moderately calm sea, the whole face of naval warfare may find itself changed in a very unexpected way.

Novelty in Ship Building.

At East Boston, Mass., there has been built by N. Gibson, as an experiment, a three masted schooner without frame. The vessel is 138 feet long, 32½ feet beam, and 12 feet 2 inches depth of hold. Long, sharp, large capacity and buoyancy The vessel is composed of square logs of spruce, one foot square, placed one upon the other, and secured together by iron bolts, three feet long and placed twelve inches apart. The owner expects that this vessel will prove to be stronger, more capacious, and faster than vessels of the ordinary construction. In timber there is a saving of forty per cent. Twenty-six tuns of iron were used. The construction of vessels on this plan was illustrated by engravings in the SCIENTIFIC AMERICAN several years ago. In view of the marked revival of shipbuilding now going on in this country, there is an excellent opportunity for inventors to study out new and useful improvements in maritime devices of every kind. Less attention has been given to this branch of industry by inventive minds, than almost any other.