Scientific American.

ther importations. Two years ago the American tretter went abroad to enter the races in various parts of Europe, and after winning in dozens of important contests their virtues become fully recognized. The Russian government imported several thousand for breeding purposes and established an American trainer and breeder in the Imperial stud. In Austria wealthy lovers of horse flesh paid from five to ten thousand dollars apiece for American trotters, and in London similar high prices were offered for exceptionally fine American trotters.

In the international races held at Nice the American horses won nearly all the medals and money. Someof them were classed as American-bred horses, but owned by Europeans. This condition of affairs was painfully similar in other races held on the Continent, and while admiration was felt for the American trotters in some quarters, their unfailing success caused envy. The local trainers felt they had no chance of winning in the race. In Russia, the American-bred trotter is now handicapped in all races, the American breeder has been dismissed from the Imperial stud, and the importations of further American horses stopped. In nearly all of the Continental races the American trotters have to enter under such odds that there is no possibility of their winning.

But while local-breeders can manage the racing associations so that the American trotters cannot win when pitted against their horses, they cannot besmirch the enviable records and reputation that our trotters have established. Their virtues are so well known that the demand for these animals by prominent European racing men is extensive, and to-day this country is supplying more trotting horses for the European market than any other. Our export trade in horses reached its minimum in 1894, when the bicycle and trolley threatened the doom of the horse, but five years later, in 1899, the pendulum had swung to the other extreme, and our export trade reached its maximum. Last year we exported nearly 100,000 head of horses, and a fair precentage of these were trotters to be used either for racing, coaching, or for the parks. A large number of cavalry horses were also shipped, and these are still going abroad in a continuous stream.

The American trotter, as bred to-day, is the most useful and serviceable horse in the world, and he has outclassed all others at the shows at home and abroad. He is the ideal type of horse, with just sufficient mobility about him to permit the breeders to rear him for a variety of uses. He is bred from fifteen to seventeen hands in height, and from 900 to 1,400 pounds in weight, suitable alike for racing, trotting on the speedway, or for road handling. He is bred to trot from 2:20 to 2:03, and he sells for \$600 to \$10,000 on the average, not taking into account the extraordinary prices paid for a Maud S. or Sunol. There is a demand to-day in Europe for American trotters that can meet the market requirements at prices ranging from \$600 to \$10,000. Trotting-bred road horses of extra speed and beauty sell to-day in the London market for \$10,000 a pair, and in nearly all instances of such sales the horses are either bred in America or are from American-bred

This condition of our trotting stock abroad has given a new impetus to horse breeding in this country, and there is a revival in the business that promises well for the future. The present scarcity of good salable horses is forcibly contrasted with the condition of the market five years ago. Then the horses in the far Northwest were so plentiful and in such little demand that they were left by the farmers to starve on the range. On the great ranges of Texas, California. Oregon, and Dakota the stallions were shot to stop the increase, and premiums were even offered for removing the herds. Only recently the Union Pacific Railroad closed a contract to carry from the Oregon ranges some 9,000 head of wild horses to the graingrowing States. The organizers of this movement anticipate making money out of these wild horses when they have been fed and prepared for the market. Instead of the wild horses being a nuisance on the plains to-day, they are in great demand both for export and for home use. This change of condition is partly due to our war in the Philippines. The Pacific coast has been shipping horses to the far East for our soldiers and army transports at the rate of nearly a thousand a month. These half wild horses when broken to the saddle make the best sort of army and cavalry horses. So well is this recognized that both Germany and Russia are now buying American horses for this wing of their armies. The South African war has demonstrated the value of a large cavalry army, and nearly all the European nations are increasing their mounted troopers, with the result that the American horses are in greater demand than ever. Not only are the American trotters and range horses of the West great winners, but we practically have a corner in the horse markets

the world. We have the breeding stock, and above all the cheapest ranges and feed in the world. The American breeder can put the products of his stock farms on the European markets at less cost than the local breeders, and his animals will be superior in speed, power, and endurance.

THE JAPANESE GRASSES.

Japan continues to supply us with wonderful products of their gardens, which, through centuries of culture, they have brought to the present high state of perfection. Japanese plums, morning glories, and lawn grasses are now quite common in every orchard or garden, and they are not excelled by anything that the Western nations have been able to produce. The Japanese grasses, or Eulalias, have only been introduced in this country a few years, but wherever planted they receive more than common notice. For ornamental grouping on the lawn there is no palm or plant that quite equals them, not even excepting the celebrated pampas plumes. When once planted these grasses flourish so abundantly that it is a question whether they may not have a commercial value as well as an ornamental one. In Japan they are dried and woven into mats, and if one cares to imitate the Orientals in this respect, durable home mats can easily be manufactured. After the cold weather has killed the graceful stems or the variety of Eulalia known as gracillima, the stems should be cut down close to the ground. This will give stems from five to seven feet in length. After cutting, dry a few days in a cool, shady place, and then weave the mats cross-wise, fastening the ends by tying them under or sewing with a bagging needle and twine. A mat at least six by five feet can be made in this way, and it will be found durable enough to last for a long time. The mats can be made in a short time, and the stalks can be had in abund-

The Japanese make many ornamental wicker-work articles with the stems of the Eulalias, and if they are properly dried in season, they will prove very stiff and strong. For this work they should be cut in the late fall and dried in the shade where moisture cannot reach them. Ornamental baskets, paper racks and scrap-baskets can be made with the dried stems.

The best Eulalia for this purpose is the variety mentioned above. This variety sends up beautiful stems to the height of six or seven feet in the fall, with stems not much larger around than thick straw. The leaves branch out from these solid stems and widen to about a quarter of an inch. These long graceful blades are of a light green with a light midrib running from top to bottom. In late autumn they produce a light pink plume, which is the flower of the plant; and as the frosts come, the stems and leaves turn to a pretty brown, which they maintain until spring. If the stems are cut off in the late fall, new ones shoot up early the next spring, and another crop as large as the first will follow.

The most commonly known Eulalia is the zebrina. This is a short grass compared to the first, but raised in beds and masses, it gives a pretty effect to the lawn or garden. The pure zebrina has yellow bars across a green blade, but most of the specimens seen in gardens are nearly green. This is due to the fact that the variety has a tendency to revert back to its original type. In order to preserve the variegated nature of the plant the roots that show a plain green foliage must be taken up, and the roots divided which emphasize the yellow bars. In this way the plants can be prevented from degenerating.

The Eulalia japonica variegata is a variety that greatly resembles the old-fashioned ribbon grass, but it is prettier and taller. The green leaves are brightly variegated with white and yellow, which colors do not disappear as the season advances, but remain on the foliage until frost kills the plants. Although fragile in appearance this grass is quite hardy, and does not suffer from our severe winters. A pretty method of planting them is to surround a group of the tallergrowing gracillima with a border of the variegata. The former lends support and contrast to the latter, and the two together always make an effective ornament. The variegata is a foot or two shorter in its full growth than the gracillima. The two varieties grow with the greatest freedom, and require next to no care after being planted. They can be made to flourish in clumps or in a scattering row, where each individual stem stands out tall and straight as a reed arrow.

There are infinite uses to which these tall slender grasses may be put. They are not as tough as the Japanese bamboo, but for light work they answer almost the same purpose. We cannot raise the bamboo in this country, but the Eulalias will flourish, and we might endeavor to employ them about the house in useful and ornamental ways.

DEATH OF JONAS GILMAN CLARK.

Jonas Gilman Clark, the founder of Clark University, died at his home at Worcester, Mass., at the age of eighty-five. He was born in 1815. After obtaining a public school education he apprenticed himself to the carriage-makers' business in Boston, and in 1853 he went to California during the gold fever and laid the foundation of his fortune. When he returned East he located in New York, where he amassed a large fortune in the banking business. In 1889 he founded Clark University, in Worcester, Mass., giving it an endowment of \$2,000,000. By his death the institution re-

ceives his magnificent library of rare and costly books. Clark University is perhaps unique among the educational institutions of the United States. It is devoted entirely to post-graduate studies, and the university has recently celebrated its tenth anniversary.

PARIS EXPOSITION NOTES.

The number of passengers to the Paris Exposition on the opening day was 118,630. In 1889 111,295 were admitted.

The Post Office in the American pavilion will be a valuable object lesson to Europeans as regards the prompt handling of postal matters. It is located on the main floor together with the Bureau of Information, reading and writing rooms. The second floor will be devoted to various State headquarters. The commissions reception room will occupy the third floor, and the fourth floor is given up to the headquarters of juries, delegates, etc.

A large number of fine jewelry exhibits, have been placed at the Exposition, and from now on special arrangements have been made to prevent losses by robbery or fire, and a special service has been organized, which is in charge of M. de Balnegre, a former Commissioner of Police. A service of day and night watchmen has been arranged for, and should any of the cases be broken into, or jewelry be stolen from any of the vistors, measures have been taken to have a bell rung as soon as the theft is detected, and the gates of the different buildings are closed at once.

The Exposition authorities are making a special effort to finish the work of installing the exhibits, and the Minister of Commerce has issued a decree limiting the time allowed for this work. According to the decree, no installation work is permitted after May 12. and exhibits which are too late to be put in place will be refused admission to the grounds after that date, and the Administration will take possession of the empty spaces. No exception will be made to this rule except for special reasons admitted by the Commission. The same limit is made for the erection and installing of exhibits, and all building material, etc., must be removed from the grounds before May 13. The exhibits which are not finished on that date will be stopped by the authorities, who will take measures for removing the unfinished work.

A partial illumination of the grounds took place on Sunday evening, the 6th of May. The various buildings of the Champ de Mars had a line of incandescent lamps along the top, and the Eiffel Tower had a series of lamps from the base to the summit, outlining the general form. Some of the attractions were also brilliantly lighted up, but the Electrical Palace and Fountain could not be illuminated for the occasion, to the disappointment of the large crowd that had gathered in anticipation of this event. In the Champs Elysées section the grounds were brilliantly lighted up with a pleasing effect by a series of translucent orange colored globes containing incandescent lamps, these being hung in the trees all over the grounds, especially along the Seine, including a portion of the space occupied by the national pavilions. Some of these were also lighted up by rows of lamps outlining the main architectural features. The space between the Grand and Petit Palais was well lighted by arc lamps upon poles, and the Alexander III. Bridge by the bronze candelabra which are placed along the balustrade. These candelbra are very handsome, being in massive bronze of artistic design; each supports four large globes containing several incandescent lamps. On either end of the bridge is a large bronze group upholding a candelabrum of an elegant design; this is finished in antique bronze.

The Spanish pavilion was one of the first to be inaugurated, and the ceremony took place on the 8th of May. The pavilion is situated on the bank of the Seine, in the group of national buildings, between those of Germany and Monaco. Among those present at the ceremony were M. Picard, Commissioner General of the Exposition, Prince Roland Bonaparte and many other celebrities. One of the interesting features of the occasion was the presence of Mr. F. W. Peck, the United States Commissioner, with a number of the Exposition staff, thus showing the friendly relations which now prevail between the two countries. The American representatives were cordially welcomed by the Duke de Sesto, the Spanish Commissioner General and his staff. The building takes the form of a palace built in the style of the Spanish Renaissance. Its details are taken from different historic buildings. The façade is designed after that of the University of Alcala, constructed in 1553; another part of the building is copied from the Alcazar of Toledo, erected during the reign of Charles V. The University of Salamanca and various other palaces are represented. In the interior of the building is a large hall surrounded by arcades; a wide staircase leads up to the second floor, where the reception took place. The building is almost entirely occupied by a retrospective exhibition of the national art, and the Queen Regent has sent a number of interesting and valuable collections of ancient tapestry taken from the Royal Palace at Madrid.