

Recent Archaeological News.

Paul Dubois' equestrian statue of Joan of Arc has been set up provisionally in the quadrangle of the Louvre, to see what the effect will be.

Prof. Jakob Burkhardt, the historian and art critic, best known by his famous art guide to Italy, "Der Cicerone," died recently at Basel, his native town, at the age of 79 years.

In the Architectural Record for quarter ending September 30, there is an interesting article by Prof. W. H. Goodyear entitled, "A Discovery of the Entasis in Medieval Italian Architecture." It is accompanied by eighteen illustrations and plans, and, like the rest of the series, is of great interest.

Though the acoustic properties of the Roman theater at Orange have been highly praised, the recent performance by the Comédie Française, before President Faure, of "The Erinnyes" could hardly be heard, as the wind howled through the building. Two great persons, M. Francisque Sarcey and the Duchesse d'Uzès, complained that they had been treated rudely by the officials.

A tapestry map of Warwickshire, Shakespeare's county, 24 feet by 18, and made in 1598, is now on exhibition in London, where it has been sent to be repaired. It is one of five made by Flemish weavers imported into England, and is the largest and most minute topographical record of the time. It once belonged to Horace Walpole, but is now the property of the York Museum.

Dr. W. Flinders Petrie, the Egyptologist, has sent, according to the daily papers, to Dr. Breasod, of the University of Chicago, a valuable collection of relics excavated along the Nile. Among these are statues of Nen Khefa, a wealthy nobleman, and his wife, which are said to be nearly 5,000 years old. They are of limestone and are remarkably well preserved. They will go to the Haskell Oriental Museum of the university.

Prof. Nehring, in describing the domestic animals of the ancient Peruvians, states that the subject is scientifically important, because all the other peoples of ancient America were very poor in this kind of property as compared with the Peruvians and some of the Central American peoples. Nehring examined eighteen dog mummies from old Peruvian graves and ascertained that they belonged to three different races—a shepherd's dog, a dachshund and a bulldog. This discovery is interesting, as it shows the influence of domestication on the formation of races.

Public opinion in Holland is much moved by the sale of three important pictures from the famous Six Collection, the last survivors of those which were formed during the lifetime of the great painters of the seventeenth century. Every art-loving visitor to Amsterdam knows the house where hang Rembrandt's magnificent "Burgomaster Six," and perhaps a hundred other pictures of the highest class. Innumerable attempts have been made at various times to induce the family to sell, but till now without success. At last they have yielded so far as to cede, fortunately not the Rembrandts, but three others—Cuypp's "View on the Maas," the Terburg, and the Gerard Douw. These have lately been sold, after long negotiations, for a prodigious price. It is believed that they have gone to England.

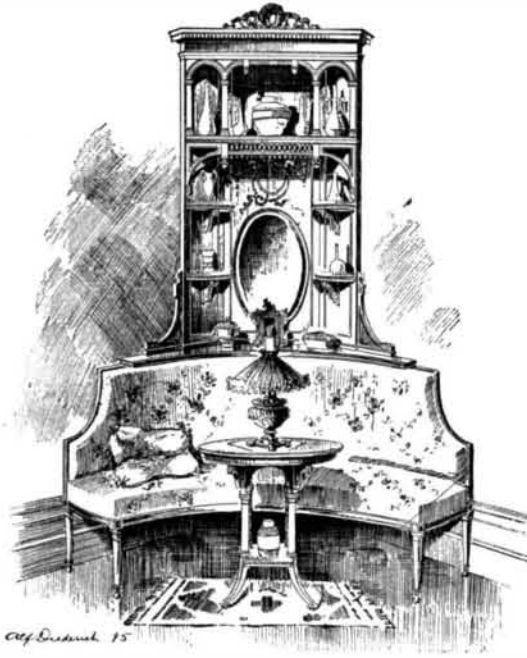
In the will of the late Lady Wallace, her pictures, porcelain, bronzes, artistic furniture, armor, miniatures, snuff boxes and works of art, on the ground and first floors and in the galleries of Hertford House, as well as the Louis XIV balustrade, are bequeathed to the British nation. The bequest does not include personal and modern jewelry, trinkets and effects, nor ordinary modern furniture and chattels, says The Builder. The government in return are to give a site in a central part of London, and build a special museum for the collection. It is also stipulated that Mr. John Murray Scott is to be one of the trustees of the collection. The other trustees appointed by the Treasury are the Earl of Rosebery, Sir Edward B. Malet, Sir John Stirling-Maxwell, Major-General Sir Arthur E. A. Ellis, Mr. A. B. Freeman Mitford and Mr. Alfred C. De Rothschild. Mr. Claude Phillips has been appointed keeper of the collection. The committee appointed to consider how the collection should be housed having recommended the purchase of the interests in Hertford House and its adaptation to a museum, a sum of £80,000 will be obtained for that purpose. No arrangement could be more satisfactory. The character of the Wallace collection would suffer if placed in a new building of a severe character like the National Portrait Gallery. The pictures were specially selected to adorn a private mansion, and it would be difficult to erect one better adapted for their display than the house in Manchester Square. Mr. Waterhouse acknowledged that at first he was not in favor of keeping the collection there, but, on considering the decoration of the rooms and their matchless chimney-pieces, he came to the conclusion that, if the bequest were taken away from its present surroundings, it could never be shown to such advantage. The value of the collection is set down officially, according to the New York Tribune, at the enormous sum of \$22,000,000.

Excavations at Treves.

The excavations that have been going on for months past on a plot of ground belonging to Herr Schabb, a manufacturer at Treves, have resulted in the discovery of a Roman private house, which will excite the interest of antiquaries almost as much as the famous public buildings at Augusta Trevirorum. The front of the house lies parallel with the principal street of the old Roman city. A number of blocks which served as pedestals for the wooden or stone pillars of a portico still remain. The entrance is distinctly recognizable between two buttresses and an immense heap of stones. A long entrance hall running right through the house, from front to back, is intersected by another corridor, so that the gigantic building is divided into four parts. Side corridors lead into the rooms. Of these the marble tessellated bath rooms for hot and cold water and warm air lie side by side, and deserve special mention. The two latter were supplied with warm air through subterranean passages. The escape of the smoke was effected by means of hollow tiles laid on one another. The southwestern rooms have cellars under them. In a light court in the same part of the house there is a well-preserved window, the first ever found in a Roman building. The most interesting thing, however, is the magnificent and richly colored mosaic floor, a rarity of the first order. Experts assign the building to the first half of the fourth century, when Augusta Trevirorum attained the zenith of its splendor under Constantine and his sons.—Public Opinion.

COMBINATION CORNER PIECE.

The accompanying engraving was loaned by the American Carpet and Upholstery Trade, and represents a very neat corner piece. For small drawing rooms,



COMBINATION CORNER PIECE FOR LADY'S APARTMENT.

such as are found in many apartment houses, it is a piece of furniture that might be found very desirable, as it is dainty in design, and occupies but very little space.

Andree's Balloon Expedition.

A telegram from Stockholm, July 27, to the London Times, says that in a letter to the Aftonblad, Dr. Nils Ekholm, who accompanied Herr Andree to Spitzbergen last year with the intention of taking part in his aerial voyage, offers some remarks on the prospects of the expedition based on the full details now received of Herr Andree's ascent. Herr Ekholm declined to go this year because he considered that the impermeability of the balloon was unsatisfactory. In his letter he points out that from the day the balloon was fully inflated it lost 51 cubic meters of gas every 24 hours, representing a diminution in carrying capacity of 56 kilogrammes per day. This, he says, shows that the imperviousness of the balloon had not been essentially increased since last year. Besides this daily escape, various circumstances led to a certain loss of gas in the ascent itself, necessitating a corresponding sacrifice of ballast. After making allowance for these losses of gas, and taking into consideration the fact that in the ascent part of the dragropes were lost and that the balloon at once rose to a height of 15,000 feet to 25,000 feet—which was more than had been reckoned upon—Dr. Ekholm comes to the following conclusions: The longest time for which the balloon would remain in the air would be from 22 to 24 days, and less if mountains exceeding the height attained at the start had to be crossed. As the duration of the projected voyage may be estimated in ordinary conditions as regards wind at 24 days, remarkable good fortune would be necessary for success. Dr. Ekholm declares himself skeptical with regard to the supposed loss of the balloon in the White Sea, but he proposes, nevertheless, that a search expedition should be sent to the White Sea from Vardoe.

Science Notes.

The Brooklyn Institute of Arts and Sciences announces that Dr. Nansen will lecture before that body during the coming season.

A sanitary Bible for the use of courtrooms has just been put on the market, says the Medical Record. It is bound with white celluloid instead of leather, and it can therefore be washed and disinfected from time to time.

The statue of Charles Darwin erected in his native town of Shrewsbury has been placed in front of the school which he attended for nine years. It was recently unveiled and was the gift of the Shropshire Horticultural Society and cost 1,000 guineas.

Andorra, the little republic on the border of France and Spain, is going to give up its picturesque isolation. It now has a telegraph line connecting it with the French system, and a carriage road is being constructed to take the place of the mule track over the Pyrenees, which for ages has been the only means of access to the town.

It is reported, says Science, that the Secretary of Agriculture will ask Congress, at its next session, to authorize the establishment of an agricultural experiment station in Alaska. Suitable scientific experiments would be of great value in showing what agricultural products and domestic animals could be introduced to advantage.

Holborn and Wien have invented a thermo-element composed of iron and "constantan" wire, says the Pharmaceutical Era. This latter is an alloy composed of copper containing 40 per cent of nickel and possesses the peculiarity that its electrical resistance is not influenced by temperature; also, next to the bismuth-antimony element, it is the most sensitive.

The London correspondent of the New York Evening Post cables that Mr. George Murray, keeper of botany in the British Museum, has proceeded to Panama at the instance of the government grant committee of the Royal Society for researches on little known pelagic algae. During the voyage these organisms will be obtained by pumping sea water through fine silk tow nets.

A committee of the Paris Academy of Sciences, appointed to report on the precautions to be observed in the installation of electric conductors in the neighborhood of powder magazines, concludes that no distinction can be drawn between telephone or telegraph wires and electric lighting mains; that a distance of 10 meters appears sufficient to avoid all risk in the case of underground wires; but for overhead lines a greater distance is advisable—20 meters at least.

Lieut. Keising has lately been lecturing before his comrades in Berlin upon the subject of the value of photography in field operations, says the Army and Navy Journal. He recalls how the Germans employed it in the war before Strasburg and Paris. He is of the opinion that every officer's patrol should have a small hand camera, which should hang at the belt or the saddle, the plates being developed when the patrol rejoins the troops. He advocates also the use of captive balloons for photography.

A Roentgen society has been formed, with Prof. S. P. Thompson as the president, says The Engineer. The intention of the founders is that the society shall occupy a position between those devoted purely to medicine, to physics, or to photography. Some of the members will study the sources of the Roentgen rays, others the applications; some the induction coils, others the tubes and the various forms and adaptations of the apparatus used in the production of the rays. Roentgen photography has been found serviceable in so many branches of scientific investigation that the society appeals to a large constituency for support. It should be the means of increasing the efficiency and applications of the rays, and should also be of assistance to surgeons and others who have entered the new field of work without previous training in physics.

The number of matriculated students attending German universities during the summer semester of 1897 is indicated by the first figures, the whole number of hearers by the second figures, and the number of women among the hearers by the third figures in the following list: Berlin, 4705, 344, 114; Bonn, 1889, 103, 13; Breslau, 1541, 83, 22; Erlangen, 1140, 13; Freiburg, 1449, 95; Giessen, 663, 29; Göttingen, 1123, 72, 34; Greifswald, 834, 19; Halle, 1534, 101, 6; Heidelberg, 1230, 92; Jena, 704, 50; Kiel, 727, 37; Königsberg, 695, 31, 11; Leipsic, 3064, 157; Marburg, 1042, 48, 7; Munich, 3871, 160, 2; Academy of Münster, 487, 10; Rostock, 499, 10; Strassburg, 1016, 31; Tübingen, 1289, 12; Würzburg, 1430, 13. The whole number of matriculated students was 30,982, and hearers 1519, of whom 207 were women; students of theology 4326, of law 8368, medicine 8232, and philosophy 10,006. There was a marked decrease of students of theology and medicine, and an increase of students in the philosophical department, especially in philology and natural science. There seem to have been no women hearing lectures at Leipsic, although there were several in attendance last winter.

The Alaskan Reindeer—the Camel of the North.
BY GEORGE ETHELBERT WALSH.

Since the discovery of large quantities of gold in Alaska and the Klondike excited public attention in this country and Canada, some mention has been made of the reindeer farm established at Port Clarence, on the lower Yukon, and the suggestion comes from Washington that these "camels of the North" could be utilized in carrying freight and the United States mails to the new mining regions. Dr. Sheldon Jackson, whose long residence in Alaska gave him an opportunity to study the needs and condition of the country, first recommended the introduction of the reindeer in the newly acquired territory of the United States, and it was through his representations and urgent appeals that Congress finally, in 1893, appropriated \$15,000 for the new experiment. It was estimated then that it would cost \$500 to import an old reindeer into Alaska from Siberia; but even this apparently large price did not seem too great for the good which the promoters of the scheme expected in return. When Alaska was first purchased from Russia there were many people who claimed that the price was exorbitant, and that the country was a useless piece of waste territory; but in 1893 scientists and practical men of business had begun to think and know differently. The climate was against the development of the territory; but the resources had been found to be tremendous.

The reindeer experiment farm consequently received little opposition from either politicians or private individuals. In fact, it was indorsed by nearly every man of science who had given the question any consideration. The interminable snow fields and stretches of ice could not be traversed by any other animals in the depth of winter, and the reindeer seemed as essential to the development of the country as they have been for ages past to Lapland. The first importation of the animals was small, in order to see if they would thrive in their new quarters. At first everything seemed to go against the experiment; but matters took a turn for the better in the second year. A number of Laplanders were brought over to reside in the new country, to act as keepers and breeders of the animals.

Since then life on the reindeer farm at Port Clarence has been both interesting and profitable. In 1894, when the original herd was reported to be in a thriving condition in their adopted country, the government imported nearly fifty more. The original herd had by this time increased to over one hundred, so that the farm contained about one hundred and fifty reindeer when the revenue cutter Bear left Port Clarence in the summer of 1894.

Hardly any information has been published since then concerning the reindeer. So far as the reading public was concerned, one might never know that reindeer were being raised anywhere within the territory of the United States. Moreover, the Alaskan authorities and people knew little about the experiment, and no accounts were given in the annual reports to Congress about their usefulness. But the animals were thriving in their new quarters, and new importations were being made by the government as the case seemed to demand.

It is therefore with considerable gratification that the news comes from Port Clarence announcing the excellent condition of the reindeer herd. Altogether about five hundred of the animals have been imported from Siberia by the government, and these have increased in the natural manner to over one thousand. The animals take naturally to the country, and find ample food in the reindeer moss which thrives throughout the great Alaskan snow fields. This moss is so abundant that it is estimated that millions of reindeer could exist on it, while almost any other animal would starve or freeze to death. The reindeer on the farm have not only been bred for future usefulness, but they have been trained to carry loads, and every full grown animal has been broken to harness by their Lapland keepers.

In a short time the full herd will probably be needed to accommodate the gold seekers who are now flocking to the Klondike. It is announced semi-officially that the government will establish next summer a reindeer express service from Bering Strait to Kauliak Island, where the steamers which sail for Sitka touch. A new station or farm for the reindeer will also probably be established somewhere on the upper Yukon, within easy reaching distance of the new gold fields. It is believed that these animals will prove more serviceable than either dogs or a railroad in carrying small loads and the mails from the placer mines of the Klondike to civilization. Mongrel dogs in Alaska cost from \$100 to \$200 apiece; but a trained reindeer is worth a whole pack of such animals for carrying loads.

The reindeer require little or no care if properly handled. In Siberia and Norwegian Lapland the work of rearing them is a profitable industry. There is a disease similar to the rinderpest in cattle which occasionally attacks and carries off whole herds; but, when free from this pest, the herd is almost sure to double itself in numbers year by year. So long as the reindeer moss flourishes, the deer will have ample

nourishment, and the owners have only to supply them with shelter.

In return for this simple care the animals transport the burdens of the keepers across the country at a most remarkable speed and in the face of every discouragement. In the palace at Drotninghold, Sweden, there is preserved the portrait of a reindeer who is said to have accomplished six hundred miles in forty-eight hours, drawing a bearer of dispatches. This remarkable feat may not be susceptible of proof, but it furnishes us with an approximate idea of the speed and endurance of the animals.

Besides serving as good horses, the reindeer are extremely valuable to inhabitants of Arctic climates in other ways. The does yield nearly a pint of milk a day, which is so rich that it is almost wholly cream, and it will stand a good deal of water before it becomes inferior to our best cow's milk. This milk is of great nourishing and refreshing value in the winter season, and is eagerly sought after by those forced to live in such cold regions. A herd of several hundred reindeer can furnish milk for a good size town or mining camp. The Lapps, of Norwegian Lapland, make a cheese or skier out of the milk, which is also a very desirable article of diet in winter.

When dead, the reindeer's services to man do not cease. The blood is drunk warm, and every part of the body utilized in some way. The flesh is dried or smoked, in which condition it can be kept indefinitely in such a climate. The surplus blood is preserved by freezing, and is then used for puddings, and the stomach and contents are frozen for special delicacies. The Lapps make bow strings and a rough thread out of the sinews and intestines, and glue from the hoofs, and various articles of use and ornament out of the antlers. But more important than any of these are the blankets and clothing which the skins of the reindeer yield. There is no skin of any wild animal that surpasses that of the reindeer for keeping out the severities of an Arctic winter. A single skin wrapped around the body of a man enables him to withstand the rigors of a climate as intense as any that prevails in the Klondike. On the coldest Arctic night the Lapp and Samojede find comfort and pleasure under the protecting covers of their reindeer clothing and blankets. The same skins are utilized for mufflers and gloves. In Russia the skins of new-born fawns are in special demand for glove making.

The ease with which the reindeer traverse marshy tundras, swim ice-cold streams of water, and pass across fields of soft snow, has made them special objects of wonder to all travelers in the cold northern countries of Europe. The singular foot conformation of the animal is probably the most interesting part of the reindeer, for it is owing to this that it is enabled to perform feats that defy all other animals. Besides crossing crusted snows, icy lakes, and marshy tundras with the greatest facility, the reindeer can scale icy precipices that would baffle almost any other creature, and all of this is done with perfect safety both to the animal and the load that it drags behind.

The foot of the reindeer is cloven in the middle, and each half is turned up in front. These two sections of the foot are greatly elongated, and capable of great lateral expansion. When the foot is placed on the ground the two sections expand three or four inches, and when it is raised again a muscular contraction brings the two digits together with a loud clattering noise. It is this peculiar sound which one hears half a mile away when the reindeer are approaching. Secondary hoofs that are not developed in other deer are greatly prolonged in the reindeer, and having a slight backward inclination, they add valuable support to the animal. Thus, with such a peculiar foot conformation, the reindeer secures a good foothold on any solid substance, and performs wonders of strength and agility within the Arctic circle where all other animals are placed at a disadvantage.

What Constitutes Negligence.

Is it negligence to step off the pavement in a street without looking to the right to see if the way is clear on the near side? The London Law Journal makes the above query and then adds: Formerly a pedestrian might with tolerable safety have trusted to his ears to find out if there was any vehicle close to him, but now that the bicyclist is ubiquitous, common prudence suggests that for his own security a foot passenger should look in both directions before he crosses the road. The safety of the bicyclist does not count with the majority of non-riders. He is not altogether unreasonably regarded as a nuisance where there is much traffic; yet he is entitled to pursue his way along a thoroughfare, and in regard to him the foot passenger has duties as well as rights. In a case which was before the court of appeal recently the facts were that a butcher's boy with a knife in his hand stepped suddenly off the narrow pavement of a street without even a glance to the right, and came at once into collision with a bicyclist, who, as the jury found, was riding along carefully and at a reasonable speed. The result was that one of the unfortunate rider's hands was struck by the knife and seriously

hurt, and he brought an action to recover damages for his injuries. The jury found that the occurrence was a "pure accident," and the court were unanimous in saying that they would have come to the same conclusion. It seems to us, however, that the jury would have been justified in finding that the butcher's boy, who admitted that if he had looked he would have seen the bicyclist, and waited for him to pass, was guilty of negligence. On the other hand, it may be that a street is so narrow or so crowded that a bicyclist is not justified in riding through it, or that he ought, at any rate, to ring his bell continuously, irritating though the tinkling may be to himself or to the people within earshot. These points, however, are wisely left for the determination of a jury.

The Sleep of Plants.

Like animals, all plants require intervals of repose, during which the vital functions are slowed down and the organic structures undergo repair. Some plants repose during the rainy season, others during periods of drought, but while some plants sleep during the cold or the comparatively cold season of the year, others again take their rest when the average temperature is high. It occurred to a Norwegian observer to investigate the sleep of plants, more particularly with the object of shortening the period of repose, and this he claims to have attained by subjecting the bulbs or buds to the action of chloroform vapor. He asserts, indeed, that plants thus treated subsequently develop more rapidly than those whose repose has not been intensified by the narcotic action of this drug, and the observation is not without considerable interest.

If his observations are trustworthy, it follows that sleep in plants is not strictly comparable to that of animal life, for we do not suppose that the period allotted to sleep by animals could advantageously be shortened by the administration of an anæsthetic. Sleep, on the other hand, is a relative rather than an absolute condition. Its value as a restorative depends in a very marked degree on its intensity, and certain individuals derive more benefit and recuperate their jaded energies more effectually in five or six hours than others do after twice as long. This recuperative energy is asserted to be an indication of a high standard of vitality, and common observation certainly lends color to the view that diminished recuperative power is indicative of physiological deterioration.—London Medical Press.

Pasteurizing Milk at Home.

Milk has been pasteurized successfully, according to the American Agriculturist, by taking any ordinary bottles, filling with milk to the neck or a little below, placing a stopper of cotton batting in the neck, then setting on a thin strip of wood, or inverted pie plate, which has been perforated, in a thin basin or pail of water. The whole is then heated until the milk shows a temperature of nearly 150°. The bottle is then stoppered and the pail and contents are removed to the back of the stove, where the temperature will remain fairly constant for twenty minutes, especially if covered with some non-conducting material, as a cloth or dry towel or the pail cover. At the end of the twenty minutes the bottles are removed and set in warm water, which is gradually cooled and then iced. The bottle may finally be put in the refrigerator after being partially chilled in water.

Pasteurizing may also be accomplished with equally good, if not better, results in tin vessels, either a double boiler oatmeal cooker or two dishes of suitable capacity, one with a diameter two inches shorter than the other. The water is poured into the outer dish at boiling point, the milk dish and contents being set in at once and the milk constantly stirred until its temperature is 150°. It is then removed for a moment, while the water in the outer dish is tempered to the same or a degree or two higher. The milk is then set back into the boiler, put to one side and closely covered and wrapped, in order to retain the heat for fifteen or twenty minutes. The advantage of tin vessels is that they may be plunged from hot water to ice water without danger of breakage, and with possible advantage to the milk.

If the object of pasteurizing be to destroy the bacillus of tuberculosis, a minimum temperature of 149° should be maintained for fifteen minutes, or 140° for half an hour.

If milk can be got from a herd known to be free from tuberculosis, or the person has no fear of this trouble, a pasteurizing temperature of from 133° to 140° maintained for fifteen or twenty minutes is sufficient to give good keeping qualities and to effectually get rid of 95 per cent of all bacteria, including the forms which produce stomach disturbances, vomiting, and cholera infantum in children.

In all pasteurizing work the sudden chilling of 50° or thereabout is imperative. The milk should be kept covered and at as low a temperature as can be obtained. Treated in this manner, pasteurized milk will be found to have a delightfully sweet, pure taste long after common milk has lost its freshness. On the average it keeps from six to thirty-six hours longer than unpasteurized milk in the same temperature.