

steam turbine of $1\frac{1}{2}$ -horse power. The light with a good reflector equals about 8,000 candle-power. The dynamo and turbine are attached to the top of the boiler between the headlight and the smokestack. Steam is introduced into the turbine from the main boiler at the will of the engineer, the mechanism of course being operated from the cab. A carbon can be used continuously for about eight hours, so that it is unnecessary to feed the lamp for that length of time. In connection with the burner an ordinary locomotive reflector is used, the combination producing the brilliant illumination shown in the illustrations.

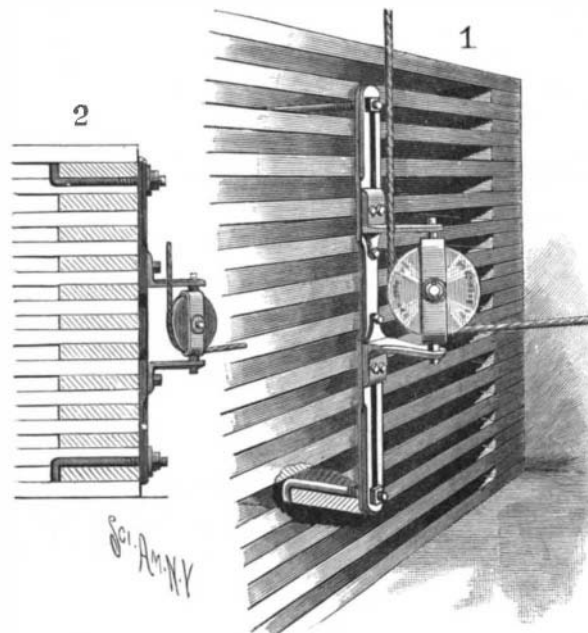
SOME UNIQUE ATTRACTIONS OF THE PARIS EXPOSITION.

The Paris Exposition is now practically completed, with the exception of a few minor details, and visitors are beginning to flock to it in large numbers. Its vast size is accentuated by being divided up into five or six different sections which require the visitor to make long journeys, but this has fortunately been obviated as far as possible by excellent means of intramural transportation. The great palaces devoted to the more important subjects may well take up all the time of the visitor for months, but there are many interesting exhibits in the smaller and less well-known buildings, and the amusement features, which are already attracting large numbers, are not to be neglected. We will glance briefly at a few of the less well-known buildings and some of the concessions.

The Palace of Navigation is constructed on the banks of the Seine at the left of the Pont d'Iéna, facing the Trocadéro, and forms a pendant to the Palace of Forestry, Fisheries, etc. Both buildings are the work of the same architects, MM. Tronchet and Rey. The lower story is composed of a series of horseshoe arches which form a colonnade, and above is a story composed of somewhat extraordinary architectural details. Parts of the decoration leave no doubt as to the purpose to which the building is to be put, one side ending in a prow of a galley, and above the building, in the center, may be seen a lighthouse, which, while it really belongs to the Pavillon of Navigation, is on an annex containing the German exhibit. The interior of the Palace of Navigation consists of a grand hall surrounded by galleries. The exhibits are models of vessels of all kinds, small boats, canoes, motors, anchors, chains—in fact everything which has to do with the navigating of either steam or sailing ships, including instruments of precision for making calculations, devices for saving life, etc.

The Celestial Globe is probably the most imposing of any of the concessions. It is on the banks of the Seine, near the Champ de Mars, and occupies a corner between two railroad stations. It is not in the grounds proper, but is connected with them by a bridge which crosses the Avenue de Suffren, and it was this bridge which collapsed a few weeks ago, resulting in several deaths. The sphere is 151 feet in diameter and rests on four stone pillars. It is surmounted by a terrace 197 feet from the ground. The exterior is decorated with large astronomical and mythological figures which are illuminated at night. In the interior electrical elevators and staircases convey visitors to a second sphere, the diameter of which is 115 feet, and in it is the center of this artificial planetary system. Here visitors will see the sun shining in the firmament, moving on the ecliptic, the stars, planets and even comets moving through space. The latter are represented by electric balls of different shape and size and changeable colors. In the center is the earth, 26 feet in diameter, revolving on its axis. There is seating room for a hundred spectators at a time, and they will be carried from west to east. The moon turns around the earth, accomplishing the phases of its monthly revolution. At certain times the phenomena of an eclipse will be visible. All the celestial movements are effected with scientific precision, and a grand organ is played mechanically, special music having been written for the occasion by M. Saint-Saëns. The staircase in the interior leads up from the terrace on which the Globe rests by a double track, forming an oblique circle and representing the zodiac. There are, of course, restaurants and minor attractions connected with the affair.

Another interesting amusement or concession is the "Tour de Monde," which is situated near the Eiffel Tower, and a little way back from the Seine. The interior is composed of bits of architecture of various peoples, and here we see specimens of pagodas, towers, minarets, etc., and yet the whole is blended with such skill that the effect is not displeasing. The bizarre



A LUMBER-HOISTING PULLEY.

and grandiose architecture of Indo-China is particularly noticeable. In the interior there is a small theater where scenes of various countries are represented by exotic actors, and there is also an immense panorama forming an ellipse, picturing scenes of various countries served by the Messageries Maritimes, including Greece, Turkey, Egypt, the Indies, China, Japan, South America, etc.

The section of the Exposition on the right bank of the Seine, between the Trocadéro and the river, is devoted to various colonies, including Algeria, Tunis, Senegal, the Soudan, French Guiana, Dahomey, Ivory Coast, the Congo, Indo-China, New Caledonia, Madagascar, etc. The French colonies occupy half of the

constructed on the grounds of the Trocadéro. It is a picturesque assemblage of pavilions, and it is filled with exhibits from the territory served by the Trans-Siberian Railway. It comprises pavilions of Central Asia, the Caucasus and the Siberia of the extreme north. There are also panoramas showing scenes on the Trans-Siberian Railway and a panorama of the coronation of the present Czar, by M. Gervex. The Compagnie Internationale des Wagons-Lits exhibits a series of sleeping cars, restaurants, and luxurious service on the Trans-Siberian Railway. The exhibits of Russian goods are most important.

AN ADJUSTABLE HOISTING PULLEY.

The subject of the illustration which we present herewith is an improved pulley arranged for convenient attachment to the side of a pile of lumber, to guide the hoisting-rope and to hold it in proper position. The pulley was devised by its inventor, Mr. John A. McGarry, of 1100 South Lincoln Street, Chicago, Ill., to be used in connection with a hoist of his invention.

The device comprises a bracket-plate having at each end elongated slots which receive bolts, the ends of which are hooked to engage the inner edges of the corresponding pieces of lumber, as shown in Fig. 2. From the front of the plate bracket-arms project. A grooved pulley has trunnions mounted to turn in the bracket-arms. The pulley, it is evident, has a swivel connection with the bracket, so that the hoisting-rope can readily turn the pulley, according to the sidewise pull exerted by the horse or other power employed to raise the lumber to the top of the pile.

The bracket can be easily attached to any part of the pile of lumber. The elongated slots and hooked bolts enable the device to be vertically adjusted to bring the lower or horizontal part of the rope in proper position relatively to the animal. The device, although primarily designed for hoisting lumber, is evidently capable of being otherwise employed.

Plague in San Francisco.

San Francisco has just been suffering from a panic on account of an alleged outbreak of bubonic plague. The local Board of Health, reinforced by United States quarantine officials, besides other experts of the disease, claimed that ten well authenticated cases occurred, and that all were fatal in their results. All of these were among the Chinese of the lowest class, just those among whom the disease, on account of their filthy habits and the squalid surroundings under which they lived, was certain to appear.

It is denied by many that the conclusions of the board were in any degree justified, or that any cases of the plague have really occurred at all.

In any event the belief that San Francisco is a plague-infested city has circulated through the country and is rapidly and seriously affecting business.

Chinatown, comprising twenty blocks, in which more than 20,000 of the Orientals live, for the most part, in crowded and filthy tenements, is now surrounded by guards, and none are allowed to enter or depart.

Ropes were stretched across the streets and the attempt was made to close all communication with the outside. The streets were deserted, and the Chinaman, unable to work at his usual avocations, spent his time at the opium pipe, or in gambling away the hours. At least 10,000 Chinamen were in danger of destitution. This contingency the city stood prepared to meet.

It is not believed that a serious epidemic is possible in a climate so cold as that of the San Francisco peninsula, where the temperature rarely ranges above 70°, and the surrounding water is so chilled that sea bathing is impossible to the average person.

Every precaution was taken to prevent the contagion from extending to the interior, where conditions are more favorable for its spread. Were it not for the ignorance and utter indifference of the Chinese in matters calling for the interference of the whites, the task of stamping out plague germs would be comparatively easy.

The disposition of these people to conceal suspicious cases of sickness constitutes the most serious difficulty to be overcome.



ONE OF THE ENTRANCES TO THE UNITED STATES EXHIBIT.

garden of the Trocadéro, while the other half is given up to buildings of other powers. The grounds of the Indo-Chinese section comprise four distinct pavilions—Tonkin with an Annamite theater, a Cambodian pagoda, a pavilion devoted to the products of the colony, and also a building for the display of forest products and the rare essences of this country. In the grounds is a heroic Chinese god with the banyan tree, as shown in our engraving.

The Siberian building is of imposing size, and is con-