

THE PAINTED ROCKS OF ARIZONA.

In "Picturesque Arizona," a new book by E. Conklin, may be found an engraving showing the Painted Rocks (*Pedras Pintadas*), curious relics for earlier life in Arizona. The engraving which we reproduce on this page, is from a photograph by the Continent Stereoscopic Co., of New York, and is, we are told, the first delineation ever made of these historic "remains." Mr. Conklin and the Stereoscopic company have also done many other valuable services in making known to outsiders the rare, curious and beautiful phases of Pacific coast scenery and objects of nature, art and artifice.

Mr. Conklin's account of his observations on the painted rocks is as follows: One of the leading features of interest to the traveler in the mesa land of Arizona is the system of pre-historic landmarks he is constantly coming in contact with on all sides. Man has, as yet, however, derived very little positive knowledge of them from any research or investigation, and they remain to this day a source of speculative interest to the traveler, from the time he leaves the Colorado, at Yuma or Ehrenberg, until he completes his journey. It is in these features that Arizona presents herself as the land for the archaeologist, the psychologist, and all curious minds. Among the foremost of these are the "Painted Rocks" (*Pedras Pintadas*).

About six miles from Oatman's Flat, on an extensive plain, encircled by the famous Arizona mountains, is to be seen the largest and most perfect specimens of these Painted Rocks (*Pedras Pintadas*). They are in the Gila valley, 120 miles from Tucson, latitude, 33°, longitude, 113°. To stop and examine these wonders of the pre-historic age, is only to enhance the great enchantment that waylays the traveler in Arizona on every hand. They are a mass of rocks, evidently piled by some physical power, ages ago. They are massed together in a heap about 50 feet high, with a proportionate base; and while some are of a size that may be lifted by a man, others might be ranked with boulders. On these rocks or stones, are various figures and images. Figures, geometrical, comic, and anatomical. There are squares, circles, triangles, crosses, snakes, toads and vermin, men without heads, and dogs without tails.

In comparing them with some sketches I made of the Aztec Calendar Stone in Mexico, they show some variations, though a similarity. The figures are slightly indented in the rock; and whether it is the result of force at the time of application, or whether the chemical effect of the substance used, eating into the rock, are questions with me. I found it to be a common tradition with the Indians that they were put there in the time of Montezuma, to record treaties with the different tribes. This would make them 400 years old. Some geologists claim the inscriptions to be only 100 years old. Comparing them again with my photographs of the Aztec Calendar Stone, the similarity would seem to support the theory that they might have been the chronicling of that age, and the variations suggest, by perhaps different tribes or sects of that age. This would seem to have some weight, as the stones are of an indiscriminate collection and the paintings are as indiscriminately distributed as regards the size of rock, in proportion to the amount of chronicling to be done, I should imagine. Opinions, however, are as varied as in other cases concerning the archaeology of this most wonderful country. In regard to the rocks, it has been suggested that they were monuments of boundary lines between the different tribes' lands. It is the reader's turn to go forward and add his investigations to the yet meager knowledge of the stone.

THE London Chamber of Commerce has adopted a resolution in favor of an international agreement for the remonetization of silver.

IMMIGRANT SLEEPING CARS.

At their shops at Sacramento the railroad company is at present engaged in fitting up 25 cars, which are to be used for the transportation of immigrants and emigrants to and from the East, and which are a great improvement on those at present in use. The new cars are being fitted with upper and lower berths, somewhat after the manner of caboose cars. The upper berths swing freely on iron rods, and when not in use can be hung up on the roof of the car, where it is not in the way. The lower berths are formed from the seats, which are made up after the manner of the present sleepers, by turning down the backs, etc. Slats are then placed crosswise, and when laid out the berths are exceedingly neat and comfortable. This will be a great convenience to persons traveling third-class, as heretofore they have been compelled to sit up or make shift the best they could. The only difference between these remodeled cars and the present sleeper will be that the former will not be upholstered. Another benefit which the Company will derive from this improvement is that they will be enabled to carry more passengers in a car, from

TO PREVENT EXPLOSION.

Mr. John Napier of Edinburg, Scotland, proposes the following mechanical device for the prevention of boiler explosions: The device consists in the attachment to the boiler of a plate of copper or other metal of similar qualities and ductility, which plate is firmly secured between two perforated plates of iron or other metal, and is covered by them on its upper and lower sides, except at the places of perforation, these places corresponding to each other in the upper and lower plates. The perforations are greater or less in diameter, according to the size of the boiler. Direct communication is established between the apparatus and the interior of the boiler, and according as the thickness of the intermediate plate is varied with reference to the strength of the boiler, it resists a greater or less pressure. When this pressure is exceeded, the steam causes the intermediate plate to give way at one or more points between the corresponding perforations of the upper and under plates, and by the steam thus escaping from the boiler an explosion is prevented. The apparatus, which is intended to be accessory to the ordinary safety valve, may be either at-



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the fact that heretofore only one passenger could be placed in a seat, so that he could have an opportunity to lie down, but now the upper berths will make sleeping room for an extra number and more can be accommodated. It is a merciful act on the part of the Company, as heretofore the immigrants and emigrants have been very uncomfortable while traveling. Several of the altered cars are already completed. —*Sacramento Bee*.

MAGNETISM OF LOADSTONE AND OF STEEL.—

Dr. A. L. Holz, a French scientist, has investigated the comparative influences of equal amounts of magnetism upon the loadstone and upon glass-hardened steel. He has reached some novel conclusions, among which are the following: 1. The maximum of permanent magnetism in the loadstone, for equal volumes, is about the same as that in the hard steel. 2. The specific magnetism of the loadstone is the greatest of all magnetic bodies yet investigated. 3. The permanent magnetism of the loadstone is sooner reached than that of steel. 4. The quantity of temporary magnetism which disappears, after the magnetizing force is removed, is less in the loadstone than in steel.

SINCE the United States Supreme Court decision in the Reynolds case, it is estimated that 200 polygamous marriages have taken place in Salt Lake and St. George.

tached to the boiler or fitted to a tube or neck secured to the boiler. In order to give additional security, the apparatus may be fitted in two or more places on the boiler subjected to pressure. The plates are so attached to the boiler and to each other that the intermediate plate may be readily removed and replaced by a fresh one.

THE MINERAL CRITE. — Although it was known for some time that cerium aniline black was a valuable color, it was not used in calico printing because it was thought that the cerium salts were too expensive, and no attempts to produce them cheaply were made. Recently, however, the manufacture of cerium aniline black has been introduced by Jacob Lytche, of St. Petersburg, Russia, with much success. It was found that cerium salts sufficiently free from any injurious substances could be manufactured from the mineral cerite by a simple and cheap process which every calico-printer could easily carry out. At St. Petersburg the mineral which is derived from deposits in gneiss, near Riddarhytta, Westmannland, Sweden, is finely powdered, then treated repeatedly with sulphuric acid, and finally extracted with cold water. The cerium aniline black thus made is said to be cheaper and more effective than the vanadium aniline black.

THE Rhode Island Legislature has refused suffrage to women.