

THE CLIFF DWELLERS AT THE ST. LOUIS EXPOSITION.

BY THE ST. LOUIS CORRESPONDENT OF THE SCIENTIFIC AMERICAN.

Among the most interesting of the aboriginal tribes of North America are those strange people the Mokis and Zunis, who, as far back as human records go, are known to have occupied the so-called Painted Desert in Arizona. By the enterprise of one of the concessionaires at the World's Fair at St. Louis, there are now being exhibited several hundred of the cliff dwellers, as they are popularly known, in an exhibit which makes a praiseworthy and very successful attempt to reproduce the conditions under which these people live. Like every other tribal exhibit at St. Louis, this one is thoroughly genuine, the tribes represented having come direct from their strange cliff dwellings, high up beyond the mesa, to take up their abode, during the continuance of the fair, in the extensive reproduction of their homes in the far Southwest. The large company of Zuni and Moki Indians gathered in this exhibit forms an ethnological exhibit of rare interest. As will be seen from our illustration, the reproduction of the native dwellings has been carried out with no little fidelity, and in the various rooms

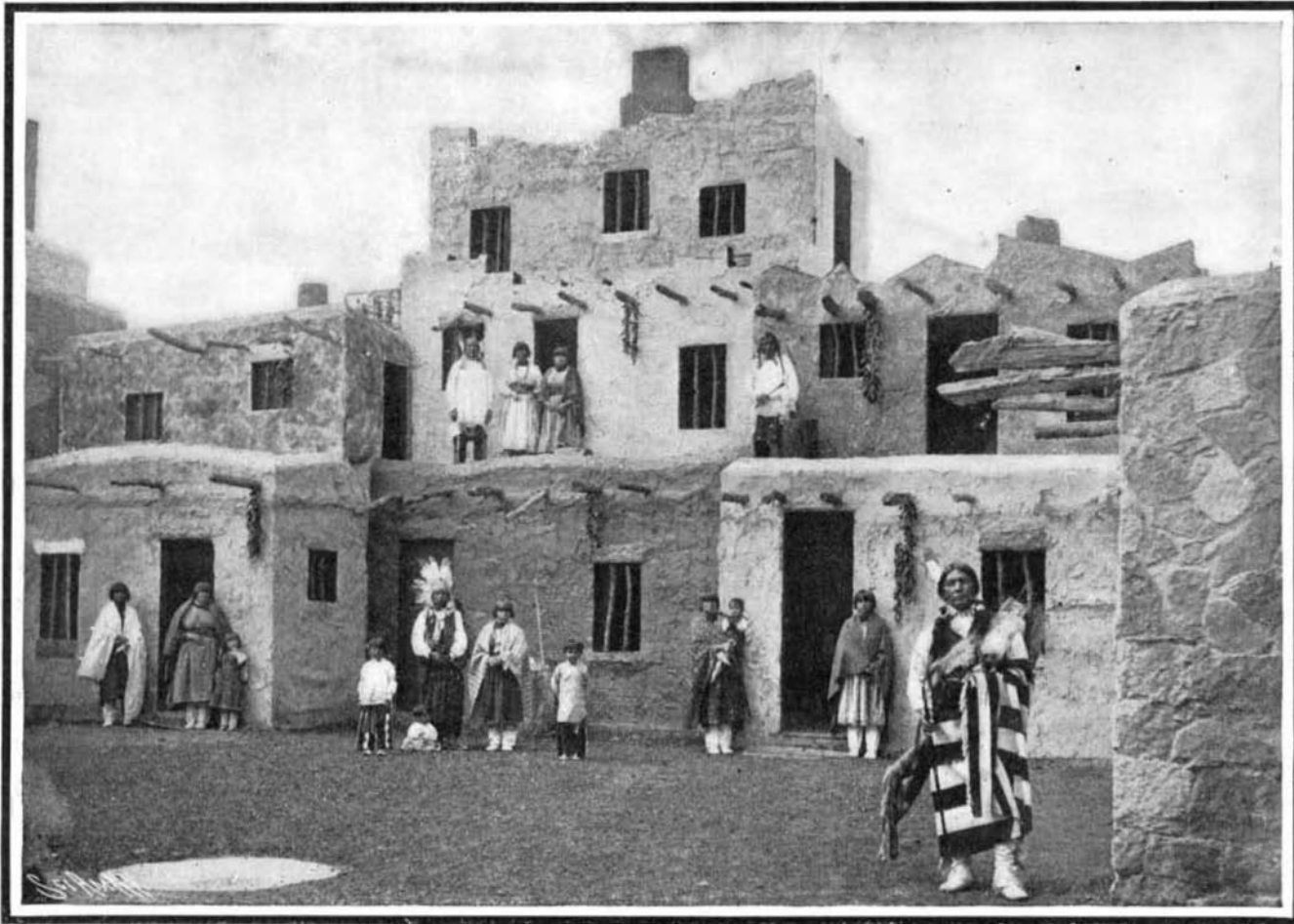
the two tribes are to be seen daily engaged in the arts of peace. They weave rugs that vie with those of the Navajo Indians in beauty and durability; they exhibit their skill in the making of a peculiarly beautiful beadwork; others are engaged in the weaving of hammocks, the sewing of moccasins and clothing, and the manufacture of silver jewelry, in which the Mokis are particularly expert. A curious characteristic of these people is that they are singularly skillful in mimicry, many of them being natural actors of no small ability, and they give exhibitions in a theater within the village. Among their daily performances, one that naturally attracts the most attention is the snake dance,

which has been aptly described by a well-known ethnological student as an "unparalleled dramatic pagan ceremony." It takes place but once every other year, and during its performance they implore their deity, Gitche Manitou, for much-needed rain. Previous to the giving of these performances at St. Louis this tribe has never before performed its snake dance elsewhere than at Wolpi, in the Painted Desert of Arizona; and it is only within the past few years that even the existence of this extraordinary ceremony has come to the knowledge of the white man. As late as 1897 a few hunters and trappers, with some government at-

and chanting wild themes to the rhythm of their drums, they go through their uncanny dance apparently charming into quiescence or stupor dozens of the deadliest snakes in which their region abounds, until they place the reptiles in their mouths and carry the dance to its climax. The sight is one of the strangest and most weird to be seen at the St. Louis Exposition.

A Balloon Equipment for the Russian Army.

The departure of Col. Kowanyko, the chief of the military aerostatic establishment of Russia, with a balloon outfit for Manchuria, is announced. He takes with him eight balloons, which are to reinforce the Russian aerostatic equipment on the scene of operations at present. The detachment under his command is charged with transporting the hydrogen generators for the balloons. These generators have been constructed on a special plan in view of making them easy to transport over a long distance. The gas is obtained by using a bath of caustic soda, and into it is plunged an iron cage containing scrap aluminium. The apparatus employs 2 pounds of aluminium, 2 pounds of caustic soda, and 1.3 gallons of water to obtain 35 cubic feet of gas. While the system is ad-



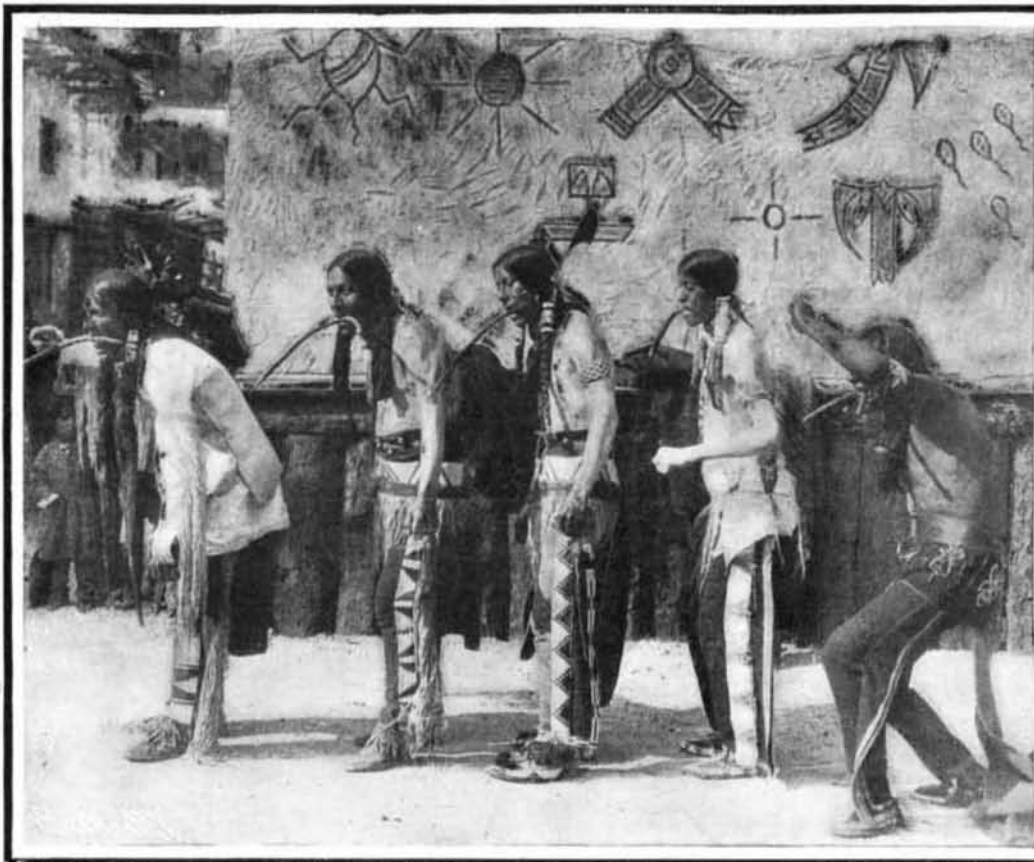
Reproduction of Cliff Dwellers' Village

vantageous on account of the small space it occupies and the rapid production of hydrogen in large quantities, the process is a very expensive one, as 1 cubic meter (35 cubic feet) costs about \$1.50. Owing to the lightness of the apparatus, the cooling of the gas is somewhat neglected. However, under the special conditions in which it is to be used, it will no doubt render considerable service.

tachés, were reluctantly given permission by the performers to witness the ceremony. Since that date the snake dance has grown in notoriety; and it is now seen biennially by several hundred Americans who make the long journey over a rough and inhospitable country for the purpose.

It took a great deal of tact and a free use of money to induce the cliff dwellers to leave their homes for St. Louis, there being a suspicion among them that for the Zuni to leave the region of Wolpi means that he will never return to it again. They dance the snake dance on the stage of their small theater, dressed in their full savage regalia. Armed with strange implements

The question of cutting a canal from Vienna to Trieste is being seriously considered. The assistance to commerce by enabling goods to be carried by water with its cheap freightage will be enormous.



Moki Indians Dancing with Live Snakes in their Mouths.



Group of Cliff Dwellers; the Indian to the Right is 98 Years Old.