

MACHINERY vs. MOSLEM.

The prelude to the last act of the bloody drama which Britain and the Mahdi are now playing in the African Soudan is nearly ready for the boards, and it is reserved for American mechanics to play it.

As a necessary step to the subjugation of the fierce Arab tribes who are ranged under the banner of the Moslem pretender, the British Government has determined to lay a pipe line, for the purpose of conveying water for its troops, across the 280 miles of desert between Suakim and Berber, after the manner of the oil pipe lines in successful use in this country.

Manifestly delays and experiments could not be risked in an enterprise upon the speedy success of which so many lives and such important political consequences depend. For the mechanical appliances needed to carry out the proposed plan, the British Government was therefore forced to apply to the American mechanics who were familiar with the problem. The contract for a number of pumping engines adapted to the work has been awarded to an American firm, Henry R. Worthington of New York, and the Brooklyn works of this firm are working night and day toward its fulfillment. Four engines have been already shipped, and the firm have also offered to furnish the four-inch wrought-iron pipe required, at the rate of fifteen miles per day, while confident of their ability to furnish twenty miles per day. It is believed the necessities of the case will require the pipe contract also to be awarded in this country, notwithstanding the efforts of British competitors to secure it.

The pumping engines used are of the Worthington duplex type, non-condensing, and calculated to work under a pressure of 1,000 to 1,500 lbs. per square inch, and have a delivery capacity of 150 to 200 gallons of water per minute—a much less capacity than that of the American oil-pipe lines being required.

Whatever difficulties the British soldiers may encounter in maintaining their foothold in the Soudan, pending the construction and completion of the pipe line, and the narrow-gauge railroad, which is made possible by it, and is presumably likely to follow it, there can be no doubt of John Bull's ultimate ability to whip the Mahdi, now that he has called in the aid of American machinery and American mechanics.

Of the possible ulterior consequences, political and commercial, which may in time follow this move, it is needless now to say much. If the pipe line and railroad accomplish the desired military result, and are preserved, as is probable, for the purposes of peace, important commercial consequences may ensue, the accounts of travelers seeming to agree that in the Soudan region, the desert once passed, lies an immense country, fertile, well-watered, and especially adapted for the cultivation of cotton.—*Ex.*

ANCIENT CHINESE TELEPHONES.

At a recent meeting of the Royal Asiatic Society in Shanghai, a paper by Dr. Macgowan was read on the subject of the early use of telephones in China. This paper, being very brief, we give it in its entirety:

It detracts nothing from the merits of the ingenious physicists who have conferred on mankind the boon of the telephone, that its principles are familiar to uncivilized peoples, several of whom are in possession of rudimentary telephones. It was, I opine, when the Chinese were in their youth that they constructed the rudimentary instrument a specimen of which I herewith transmit for the Society's museum. It consists of two bamboo cylinders, one and a half to two inches in diameter, and four in length; one end of each is closed by a tyuanum of pig bladder, which is perforated for the transmitting string, the string kept in place by being knotted. This rude instrument is styled the "listening tubes," and is employed for amusement as a toy, conveying whispers forty or fifty feet. It is unknown in many parts of the empire, Chih-kiang and Kiangsu being the only provinces (so far as I can ascertain) where the listening tube is employed.

Besides this toy, Chinese ingenuity produced, about a century and a half ago, the "thousand mile speaker." The implement is described as "a roll of copper, likened to a fife, containing an artful device; whispered into and immediately closed, the confined message, however long, may be conveyed to any distance; and thus in a battle secret instructions may be conveniently communicated. It is a contrivance of extraordinary merit." The inventor of the "thousand mile speaker," Chiang Shun-hsin, of Huichou, flourished during the

reign of Kang-hsi, A.D. 1662-1772. He wrote on occult science, astronomy, etc. The above account of his invention was taken from his works by the author of a Fuhkien Miscellany. At that time—reign of Kien Lung—there was no longer an instrument of this description in that province. It seems to have perished with the ingenious scientist who contrived it.

Here is a fine opportunity for the organization of a new telephone company, with a legal department to hunt up the lost evidence, and take a whack at the Bell telephone monopoly. Doubtless many heathen Chinese might be found glad to testify they had often used the old telephone in talking from the Great Wall to Peking, and further if necessary.—*Ex.*

A SUNKEN CONTINENT.

This was the title of a very interesting lecture recently delivered by Captain William Churchill, in which he sought to show by the records of deep-sea soundings and from archeological remains that the Pacific islands are only the remnants of a submerged continent, whose mountain peaks and lofty heights are all that remain above the surface of the ocean. He dwelt at length on the subject of a Polynesian antecedent civilization as revealed through ancient implements, statues, and sculptured stone slabs found on a few of the groups, more notably the Feejees. The studies of zoophytes and coral formations taken from a depth of 2,000 fathoms and more also confirmed this belief of the subsidence of the pre-historic continent. On Pitcairn's Island, and also on Tahiti and Tonga-Tabu had been found remains which showed the existence of a long-forgotten tribe. At Tonga-Tabu a monster trilithon is to be seen. It is composed of gray, volcanic stone, with neatly-dressed edges. It is 10 x 12 feet square, and stands twenty feet out of the ground. It is surmounted by a huge kava bowl. Captain Churchill considers this relic to be of great archeological value. He described the implements and metals in use by the natives of several of the groups before the advent of the white voyagers, and said that iron and steel were unknown to them before their discovery by civilized persons. Captain Churchill gave a minute description of monolithic statues of stone and sculptured wood found on Easter Island. The monoliths were found standing in rows of five or six, only a few feet apart. They were hewn from volcanic rock and were either very crude in workmanship or else they had suffered from the ravages of time. One row of these statues was quite well preserved. Each of them was ten feet high and they represented human heads and bodies, with a cap or other head covering on the top. These were the same statues seen and described by Capt. Cook in his works on travel and discovery. A finely sculptured hand of a dancing girl and some polished wooden slabs, on which were numerous hieroglyphical figures in long rows, had been discovered in an ancient and half-ruined stone house on Easter Island. This was the only relic of a native written language ever found in the Pacific Islands.

A POWERFUL NEW EXPLOSIVE.

A story comes from Huntingdon, Pa., that a man from an Eastern city has been experimenting there with a new explosive compound, which he calls nitro-petrolene. In one experiment a solid rock, of which 1,600 cubic feet, estimated to weigh 85 tons, were exposed, and drilled to a depth of six feet, and a glass-tube seven-eighths of an inch in diameter and ten inches long, filled with the explosive, was introduced. The remainder of the operation was precisely the same as in blasting with dynamite. Nearly half of the exposed part was broken into fragments that a man can handle, some of them being thrown to a great distance, and it was shattered and loosened for many feet under the mountain side. A sound white oak tree, three feet in diameter, was perforated to the heart at a distance of eight feet from its roots, and a small glass ball, containing the compound, was inserted and exploded. The body of the tree was split into kindling wood, the roots were torn from the earth, and not two of the limbs within thirty feet of the ground remained together. A rifle, when charged with the new compound, embedded a bullet in a tree twice as deep as when charged with powder. The substance is in liquid form when made, but may be solidified by mixing it with another substance which is, itself, combustible and is entirely consumed in the explosion. As to its chemical composition no information can be obtained, except that suggested by its name.