country even at the loss of some of his independence. But the ruler *de facto* of Turkestan could not command entrance through the Chinese gates, nor free transit through the Western and Centra Provinces. The monopoly of trade in Central Asia, and a more direct caravan route than the Siberian approaches by Kiachta and Urga for the exchange of Russian and Chinese products, would fulfil the two great objects of Russian policy in these regions. No doubt this, and not designs of invasion or any direct menace to our Indian possessions, has been Russia's aim from the beginning of its advances towards Kashgar. If it be true that Yakoob Beg has either defeated the first Chinese force, or is in strength to march with 40,000 men to Hami, on the border of the desert, and the nearest station to the Kiayu Pass on the Chinese territory, he must have felt strong enough to defy Russia and China together to pluck the eight Mahommedan cities and the fertile valleys of Kashgar from his grasp. We wait with some interest for later intelligence. His success may or may not mean future trade between India and Central Asia, but his defeat and the triumph of the Russian and Chinese alliance would certainly mean our exclusion and an immense trade monopoly for Russia. The opening of the first railway in China, though but a very small beginning, is an event of scarcely less importance; an importance only to be understood by those who are conversant with the persistent obstacles interposed by the Chinese authorities hitherto both at Peking and in the provinces. That these should have been overcome at one point is a sure presage that they must at no distant date yield at others. It means railway communication in the interior, and with it, as a necessary and logical consequence, the break down of all the obstructions to inland foreign trade and residence. This would be a gain that might well be accepted as a set-off to the Russian advance from the side of Mongolia and Central Asia, and would go far to neutralise all the efforts of that country to secure the monopoly of Asiatic trade north of the Himalayas. This commercial rivalry, in which Russia seeks, by all the means imperial power can wield—by arms and diplomacy, by political support, by new railway and telegraphic lines—to secure a monopoly, being content with nothing less, places Great Britain in irreconcilable antagonism to her, and brings the two nations face to face across the whole breadth of Asia, from the Bosphorus to the Gulf of Pecheli. And the same great commercial interests—important alike to both countries—form the links by which the "Eastern Question" of Constantinople is connected with the movements of Russia and China in Central Asia, and give the true measure of the Eastern question of the present day.'

THE above article from the *Pall Mall Gazette* is not calculated to inspire any fears for our future in India, or that Russian aggression will seriously imperil the hold of Great Britain on its Eastern possessions; because it is evident the real checkmate to Russian domination in the East will be found in the opening up the Celestial Empire in front and Persia on the flank by Railways.

The Euphrates Valley Railway will now become a necessity, and with it the acquisition of Syria. Towards this end our Eastern policy has been bent ever since Mr GLADSTONE and his philanthrophic friends were so unceremoniously shelved by the English people.

A MOST valuable lecture was delivered at the "Royal United Service Institution," 12th Feb, 1875, by Lieut. Colonel ARTHUR LEAHY, R.E, on "Military Bridge Construction," the opening paragraphs are as follows:—

"When a nation has decided to be prepared for war, the indispensible conditions are: 1—To enrol and train men to fight.

'2—To provide material for their equipment.

"3—And supplies for maintenance. These conditions being fulfilled and war being decided on, one of the first military points which will necessarily come under the consideration of the General appointed to direct the war is, the *communications* of his army.

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"By communications one usually understood Roads, Railways, Canals and Telegraph lines," and we may add *navigable Rivers*, especially on this continent.

The want of proper *Brigade equipment* in the British service is then commented on, and it is pointed out that as an insular power its chief means of communication has been hitherto its Fleet.

The Crimean campaign, with its very exceptional circumstances, is adduced as an instance of the total want of the most common appliances for the use of the Engineer corps; but as it is well known that the siege of Sebastopole would not have been brought to a successful conclusion without the aid of the *Civil* Engineers of Great Britain, we must assume that the *Military* corps were wanting in practical experience alone in the art of road and bridge building and embankment; nor does it appear from the lecture that want has yet been thoroughly remedied, nor can it be as long as the Royal Engineer corps are kept only at such experiments as Woolwich affords, or as Ashantee Expeditions can give.

The next announcement is worth careful attention. "In Railways a new element of immense military importance has arisen, and I need scarcely say that for Railways bridges are more indispensable than they were for any pre-existing communications."

A practical lesson on this subject has been taught the world by the events of the late civil war in the United States in 1861 65—in no country at any time has there been such varied or extensive practical experience acquired in Railway bridging or in crossing troops and material of war over rivers and streams to which the *Prah* would be a mere rivulet by comparison. It must also be remembered that all this wonderful concentration of talent, practical experience and organisation was not derived from the training of a Military College, but acquired in the pursuit of civil life and carried out by men who had no military training.

The lesson has borne only half fruits inasmuch as practical teaching on such subjects is neglected as much now as when the great need arose. Military Engineers are kept at Experiments on a *small* scale and not allowed the scope in dealing with natural or physical objects which the civil branch of the profession enjoys.

The lecturer devides his classification as follows:—

"Military Bridges are of two classes: 1—Those formed on floating supports or piers. 2—Those of which the supports are fixed." And we think a *third* might be added in the very useful and by no means contemptible class of what we know on this continent as *flying or rope bridges.*

The lecturer gives us a very interesting bit of *ancient* military history respecting the celebrated floating bridge, built by order of "XERXES more than 2,355 years ago," across the Hellespont—CEASAR'S bridge across the Rhine, and in modern days the operations of the French Republican and Imperial armies.

Instances are given of the construction of Bridges in 1854-6 during the *Russian* war in 1857 9, during the *Indian* mutiny, the *Italian* war in 1859, the *American* civil war in 1861-63, the *Danish* war in 1864, the *Austrian* war in 1866, the *German* war in 1870-1, and the *Ashantee* war in 1874.

In the latter the Bridge across the *Prah* was the most distinguished feature of Military Engineering the operations afforded. The River was only 189 feet wide, and *three* to *ten* feet deep; it appears to have had a swift currer and to be subject to sudden rise.

The Bridge, of which a plan and elevation is given, appears to have been a combination of cribs and trestle with spans or bays of about 20 feet, to have a roadway *six* feet wide—its height above stream is not given, but an elaborate description of the mode of building and landing the crib in the stream are given.

To us who are familiar with bridging rivers over *three* times the greatest depth of the *Prah*, the elaborations of the details in launching a crib of 8×6 on bottom and 4×3 on top appears to be very complicated, but it was probably the best and most effective method within reach at the time, and deserves all the attention bestowed on its illustration; but the great value of the lecture is the concise rules laid down for military bridge construction.

The following table is extremely valuable:

LOADS ON MILITARY BRIDGES.

"The following are the principal loads that can be brought on a bridge by the passage of troops of various kinds guns, &c.

"Infantry in marching order, average weight 200lbs. per man, cause when crowded a load of 1¼ cwt. per lineal foot of roadway.

"Infantry in marching order in *file* crowded cause a load of about 2½ cwt. per lineal foot of roadway.

"Infantry in marching order of *fours* crowded cause a load of 5 cwt. per lineal foot of roadway.

"Infantry in marching order when crowded in a disorganised mass, may cause a load