

expect to place themselves on an entirely independent basis.

Here at Tien-Tsin is the best place to make a study of the Chinese navy. Li Hung Chang, the famous viceroy, is its head and Lo Feng Lub, his naval secretary, has his headquarters here. Mr. Lo Feng Lub is one of the most accomplished men in China. He speaks English and German as well as he does Chinese, and he is as well posted on the doctrines of Huxley and Darwin as he is in the philosophy of Confucius and Mencius. He knows all about the great navies of the world and he adopts everything new in naval warfare as soon as it is invented. I am under many obligations to him for favors during my stay at Tien-Tsin, and some of the best of my information comes from his headquarters. The chief fleet in the navy is the north coast squadron, which is directly under him and which is, perhaps, as fine a squadron as you will find outside of the greatest English forces. It consists of four barbette seagoing armorclads, one of which is 9,200 tons in size, and two others of which are more than 7,000 tons each. It has a number of deck-protected cruisers, a torpedo flotilla and eleven gunboats. The Foo Chow squadron has a number of fine boats, and in addition to these are the Shanghai flotilla and the Canton flotilla. These are under the viceroy at Canton, and the Foo Chow squadron is, I think, under the viceroy of Nanking. Two of Li Hung Chang's armorclads have a speed of fifteen knots an hour and they are armed with four twelve-inch Krupp guns. These guns are Hotchkiss cannon and tubes for Whitehead torpedoes, and they are of the best workmanship the Germans can turn out. I can't describe the excellence of the guns which the Chinese are making themselves. The guns and ships which they are importing are of the best. They have, in short, everything that is known to modern warfare, and I see everywhere their ships manned with rapid-firing guns, Hotchkiss guns, Gatling guns and the giant monsters known as six, eight, ten and twelve-inch guns. The Japanese have almost equally good fighting material, and a war between the two nations will result in an enormous destruction of life and property.

One thing which strikes me in the great gun works of China, which I visited, is the fact that they make everything without regard to patent rights or patent law. There is nothing of this kind in China, and they seem to have no scruples against adopting any invention they can put their hands on. They can copy anything from a collar button to a 50-ton gun. An American inventor who looks to China as a future field will be disappointed. I know of an American who has been trying to introduce Gray's telautograph here. The ordinary Chinese alphabet contains about 5,000 characters, and as it is now, telegrams have to be sent in the shape of numbers and translated back into Chinese. By this invention the characters themselves could be sent and it would be of immense value to China. The viceroy, to whom the man applied, said he would probably introduce the invention, but he would first like to have one of the machines sent on trial. The American refused to sell less than \$250,000 worth of the machines, and the

venture dropped through. Had he sent a single instrument it would probably have been copied by the mechanics of the viceroy, and China would have made her own telautographs. I heard of similar instances at Nanking, and the Chinaman who told me laughed as he described how easily an American gunmaker had been taken in. The man represented the Maxim rapid-firing gun, and he wanted to get an order from the viceroy. He came to Nanking and was received right royally. He had several of his guns with him, and as he exhibited them the bottom-hole eyelids of the Chinese officials widened and their black pupils grew big at its destructive properties. They began to figure with him on prices, and led him to believe that they were going to buy the guns. They treated him well, and when he was invited out to dinner night after night he thought his contract was assured and his visions were those of Monte Cristo. All at once the civilities ceased and he was told that the viceroy had concluded after all that he did not want the gun. Before he left it leaked out that during the nights he had been out eating bird's nest soup and shark fins and listening to the dulcet screeches of the singsong girls the agents of the viceroy had picked the locks of his gun cases and had taken accurate measurements and models of the machinery of the guns. The only reason why they are not making these guns today is because they have other guns they consider better. They have the drawings and they can reproduce them at any time. In the gun works at Kiangnan I saw all kinds of modern rifles, from the Winchester to the Enfield, and I was told that the best of the lot had been chosen, and that they were now making them for the troops. I handled some which had just been finished, and to my inexperienced eyes they looked as well as any I have seen elsewhere. Speaking of the wonderful power of the Chinese to copy any piece of machinery which is placed before them a curious incident occurred in connection with the electric light plant in the palace of the emperor. The foreign manager of this plant became sick and went off for his health for a few weeks. When he returned he found a second plant running. The Chinese had copied the original machinery, and for fear that they might make a mistake they had reproduced it even to the color and amount of the paint put on the different parts.

During my stay at the Kiangnan arsenal I visited one of the Chinese gunboats, which was made at Foo Chow. My photographer was with me, and he took pictures of the boat and some of the officials. The sailors did not relish being photographed, but the commands of the captain made them pose as we wished. Mr. Cornish, the foreign adviser of the arsenal, was with me, and our Chinese cards were sent into the captain. A moment later a round-faced Chinaman, standing at least six feet two, and weighing two hundred pounds, appeared on deck. He bent over and shook his own hands at me in Chinese fashion, and then asked Mr. Cornish and myself to step down into his cabin. This was a large room, built much like the salons of one of our big boats. It was furnished with a number of two-foot tables, which stood against the walls of the room between heavy armed teak

wood chairs, so that as we sat down each of us had a table beside him, upon which later on tea and champagne were served. She tea was given us in Chinese cups, with saucers on their tops, so tilted into them as to keep the tea leaves out of our mouths. The champagne was served in little glasses the size of an egg cup, and the captain smacked his lips as the amber fluid audibly gurgled down his throat. In the center of the room as we entered one of the officers of the ship was sitting on a stool, with a copper basin in front of him and a barber behind him. The barber was shaving his head and braiding his queue, and the officer did not seem to regard our presence in the least. He rose and shook his own hands at us, then bowed half a dozen times, and then had his man go on with the shaving. There was, in fact, an unconventionality about the whole ship that was refreshing. A big mandarin was expected, and the marines were dressing themselves on board. One man pulled on his trousers as we came out of the captain's cabin on to the deck, and another hurriedly got himself into his coat.

The marines wore dark blue shirts or sacks and blue pantaloons of wadded cotton, which were tucked into thick black cloth boots. The shirts were bordered with wide bands of red and were embroidered on the breast with Chinese characters. I had one of the marines on deck photographed, and I noted that his gun was a muzzle loader, though he was standing beside a big Armstrong cannon at the time. I afterwards got a picture of a whole crew with their turned-up straw hats and their light blue clothes, as the posed for their photograph on one of the biggest ships of the Chinese navy, and I was struck with the nerve shown in their faces and the agility with which they moved about at their work.

I chatted with the captain sometime about his boat, and I found that he understood its organization and equipment. He was anxious to have a new six-inch gun, and he told Mr. Cornish so. He spoke pigeon English, and when Mr. Cornish asked him if he did not want to try the gun before he took it out to sea, he replied emphatically:

"Yes, must havey tly! S'pose my go way—s'pose gun no good must havey tly—my take gun out—we go shoote. S'pose alle lightee we takee, but must have a tly."

This Chinese captain, however, I am told, knows more about his ship than many of the other officials do. The mandarines, as a rule, are politicians rather than business men, and some of those who are in charge of the arsenals know nothing whatever of mechanics. A few days ago a twelve-inch gun was tested and the leading officials of Shanghai went out to see it. These high mandarines discretely retired to a pavilion when the gun was ready to fire, and the undertrappers did the business.

If there should be a war between China and Japan it will in all probability be a blood-thirsty one. The Chinese would have no scruples about the use of dynamite, and all the devilish contrivances of modern invention will be adopted. It may be that the "fo yok po," or hand grenades, which were used by