

THE SCOURGE OF THE BATTLESHIP--- THE HOLLAND SUBMARINE BOAT.

WITHIN the past six months several additions which have been made to the fighting strength of Uncle Sam's sea forces have brought it up to a high place among the navies of the world. Among these are some of the largest and most powerful vessels in the world and the submarine torpedo boat Holland, which, according to the naval experts, is one of the most formidable weapons yet added to the naval list, and which is said by them to be the beginning of the end of the construction of heavily armored vessels for coast and harbor defense and the means of revolutionizing the methods now employed in blockading harbors and other close to shore work.

While the H^o is new so far as her number of the naval list is concerned, she is old enough to have proved beyond any doubt her ability to keep out of the way of the rays of the searchlights and the heavy gun fire of

the large ships, which in time of war have made a reputation for Uncle Sam's navy which will be remembered for years to come by the nations of the world. Besides being capable of keeping away from these dangers, the Holland has shown her ability to crawl up to the larger ships, deliver her missile of destruction, and then move away to a place of safety to watch the result of her work.

During the maneuvers of the fleets off Newport recently many attacks of different sorts were tried for the purpose of developing the usefulness of the several classes of vessels employed. Night attacks on the forts and running the blockade were the favored maneuvers. Then came a night attack by the torpedo boat fleet upon the blockading squadron. Most of these little vessels were "picked up" by the powerful rays from the searchlights of the battleships and quickly put out of action. One after another these frail craft fell victims to the guns of the larger vessels. With the Holland it was a different story. With less than half the speed and equipment of the surface torpedo boats, this submarine wonder moved from her position in the inner harbor and, while running on the surface, passed near enough to three of the hostile fleet to have ended their careers, and returned to her station without having been seen.

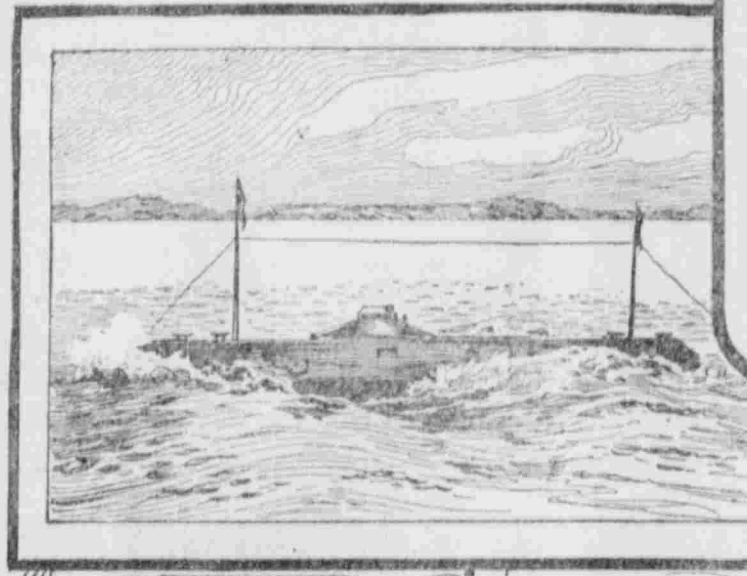
The methods employed in operating the Holland are entirely different from those used in any other fighting vessel. She lies so low in the water while running on the surface that little is exposed to the searchlights, and when the vessel is completely submerged there is not even a ripple on the surface to in-

dicate her whereabouts. She is less than half the length and displacement of the surface torpedo boats, and, while her equipment is less, she is better able to send her torpedoes to their destination without fear of being destroyed, as there is no way for the attacked vessel to locate her.

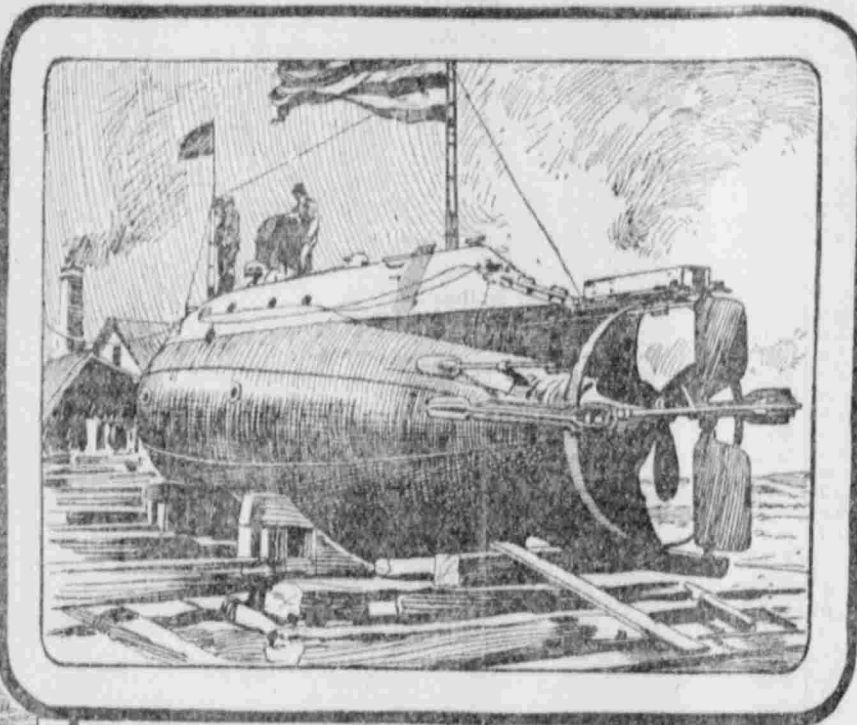
While on the surface the motive power

rudders are in position to carry the craft below the surface. She is kept on "even keel" through a system of "trimming tanks," and also by use of the rudders. While submerged the vessel is kept on the desired course by means of a compass which is fitted in the conning tower, from which place the movements are controlled by the captain. A

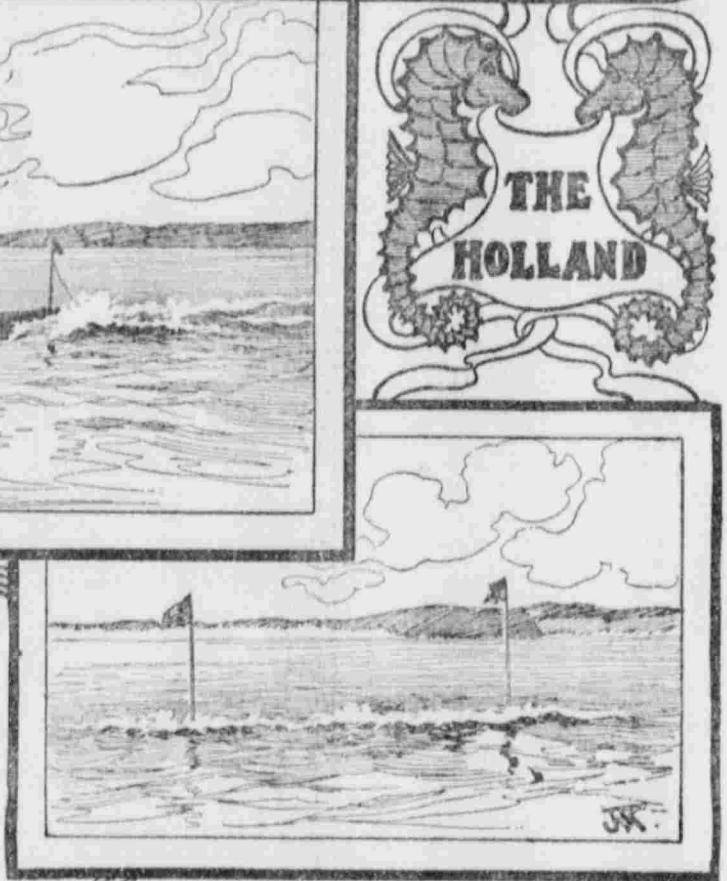
opened. The torpedo is then placed in the tube, and the breech is closed. The gauge is then set, and at the word of command the missile is sent on its mission of destruction. The weight of the discharged torpedo is then taken up through the "compensating tanks." To bring the vessel to the surface, the water is forced out of the tanks by air,



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used to operate the Holland is generated by a gas engine, and when in the submerged position, motors, driven by a series of powerful batteries in which electricity is stored, are used. Fresh air is supplied to the crew from flasks stored to a pressure of 2,000 pounds to the square inch. This is let into the boat at a reduced pressure, obtained through a system of valves. Air is used in operating the diving and steering engines, by which the vessel is guided in both the horizontal and vertical planes, and also to discharge the torpedoes from the tube in the bow.

When the Holland moves to an attack, after getting the range of the vessel to be destroyed, she is placed in the "dash" position. This is done by allowing a sufficient volume of water to enter the system of tanks in the bottom of the boat. The valves are opened and the water allowed to rush in until the dial indicates that sufficient has been taken. The vessel is then ready to dive. At a command from the captain the man operating the diving engine turns the wheels until the horizontal

system of telephones and telegraphs to the several sections is also installed in the conning tower. In all, five men operate the vessel, being stationed, respectively, at the engine, at the diving apparatus, at the tanks, at the torpedo tube and in the conning tower.

When "in service," the vessels of the Holland type carry five of the smaller type of Whitehead torpedoes. When ready for action, word is passed from the captain to the men forward to place the torpedo. The cap over the forward end of the tube is closed and the breech

is changed.

During the last session of congress an appropriation to construct six boats of the improved Holland type was made. Those vessels are now under construction, and all will be completed in about a year. The new plans have many improvements over the devices in use in the present vessel. The new plungers will be 43 feet over all, with a diameter (beam) of 11 feet 9 inches. The cost of each will be about \$100,000.

F. A. VERDU.

TWO STATESMEN CONTRASTED.



No two statesmen could apparently present greater points of contrast than those whose portraits are presented herewith, for Lord Salisbury and Li Hung Chang are representatives, respectively, of the occident and the orient, stand for almost antipodal types.

The one is bluff, outspoken and direct—at least on the surface—the other is reserved, wily and reserved. While Li Hung Chang may stand for the oriental diplomacy, as, for instance, pursued or adopted by Russia and China, with its shifty and evasive methods, his cunning and scheming, yet it cannot be shown that this policy has brought him either great success or credit, a notable instance of failure being the treaty with Japan, which was the most disastrous for China that could have been negotiated.

The time has passed for evasion and equivocation to succeed in diplomacy, and the truth is more effective than a lie, because the astute diplomats are looking out for the latter, while the former takes them unawares, the up to date statesmen affect to believe.

MEN OF AFFAIRS.

The Arionides Haynes, pastor of the Plymouth Congregational church of Chicago, will take a two years' rest from church work and has resigned. He has been hotel bellboy and clerk, a "lumberjack" in the Maine woods, a fisherman in Newfoundland, a reporter, advertising agent and minister. He studied at Harvard university.

General Claffee is very studious and has always worked hard in order to train for the army, as he did not have the advantage of an education at West Point. He has taken a full course of law and military tactics in order to educate himself for his duties.

Dr. H. H. Kane, a well known horseman and a member of the Brooklyn branch of the Society For the Prevention of Cruelty to Animals, is advocat-

BLIND ENTHUSIASTS OF THE WHEEL.



Cycling is the favorite recreation of the blind students of a certain famous normal academy of music. The cycles they use vary in size and style, but the best liked machines are those that accommodate several riders at once. The illustration shows a machine that holds 12 pedalists. It is 23 feet in length, and all the riders with the exception of the second man, who does the steering, are blind. All p-dai, but the pedal attachments are not all alike, and there is variety in the styles of handle bar. The bars are really only used as supports for the hands.

A PROPITIATORY PAGODA.

Standing on the right bank of the Grand canal just below the populous city of Yang Chou, China, is an ancient pagoda with a most interesting history. It was built several hundred years ago, but not, as was generally the custom, for the purpose of perpetuating the fame of some great man or powerful dynasty. It was intended to propitiate the evil spirits of the air and water and was founded after consulting the famed geomancers of the period. Ever since, the city near which it stands has been preserved from the malice influences of the winds and waters, most of the 500,000 people in Yang Chou firmly believe, and look forward with apprehension to the time, apparently not far distant, when it shall yield to the aerial and aqueous elements and crumble to decay. Indeed, it is expected to fall this year.

For the establishment of a home for old horses which have given faithful service all their useful days, and which there should be a cemetery for such horses and for all other animals which have been faithful companions of men.

J. E. Curtis, just appointed supervisor of city schools for the blind in Chicago, is himself blind. He graduated from the University of Chicago in 1885, and in the following year was giv-

BOYS OF THE PAO-TING-FU MISSION.



At the American mission of Pao-Ting-Fu a boy's boarding school was established some years ago and was in a flourishing condition at the time of the Boxer uprising. There were many students, sons of converted natives, in the school, and there were nearly a score of native servants attached to the establishment, these also being converts. All of the inmates of the school and those connected with it who could be reached by the Boxers were butchered by the fellow devils.

On the degree of A. M. During the last three years he has occupied the chair of mathematics and civics in the Illinois Institution For the Blind at Jacksonville. David Irwin of Byron Center, Mich., claims to be the oldest Democrat in the country. He is 102, a veteran of the Mexican war and has voted the Democratic ticket ever since he came of age. A crow hatchery, the only one in the

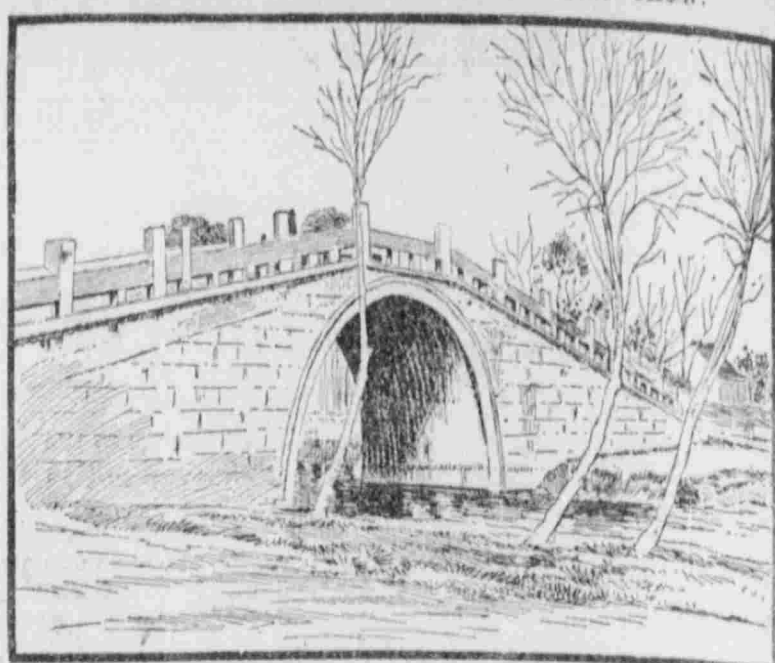
A PRETTY CANTONESE MAIDEN.

According to European and American notions the prettiest Chinese women are those of Canton and the southern provinces, where the truly Celestial type prevails. They have the deformed



feet, to be sure, but their cheeks are more oval and their countenances a trifle more intelligent than those elsewhere. That beauty is only a relative term, depending greatly upon the point of view, is amply shown by the Chinese standards. The most beautiful woman is the one with the smallest deformed feet and the broadest "moon face" so often sung about by the Chinese poets. There is, however, a vast difference between the Chinese proper and the Manchoo ruling class at Peking and mainly in the north, where the women have feet of the natural shape, are tall and erect, some of them of really regal bearing. To this class, or, rather, race, belongs the remarkable empress dowager, who, together with the representatives of her family, presents a striking contrast to the dainty little maid pictured here, whose portrait was secured unawares.

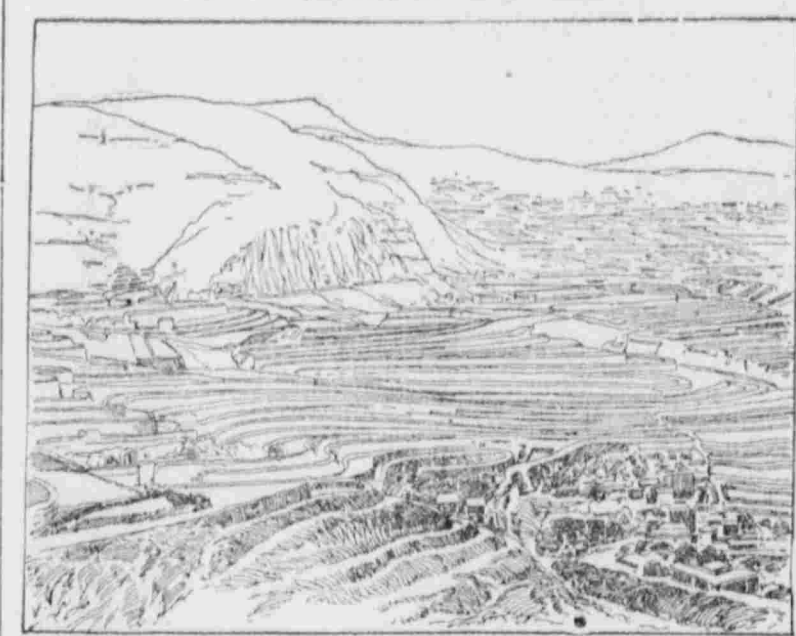
A "CAMEL BACK" BRIDGE NEAR YANG CHOW.



One of the most curious specimens of bridge architecture is that so frequently found in various parts of China known as the "camel back." It is usually ancient, perhaps boasting an antiquity of several hundred years, and it always spans a stream which may be almost dry in the summer time, but full to overflowing after the rains have set in.

It is owing to the fact that an ordinary bridge would invariably sink away on the flood when the river was high that this camel back has become the accepted pattern in China, and as many of this type have withstood the freshets of centuries it has proved well adapted to the needs of the country. This particular bridge spans a stream just north of the gates of Yang Chow, a city lying to the east of Nankin.

NATURAL TERRACES OF SHANSI.



The province of Shansi in China has become famous in recent history as that from which the empress dowager sent an imperative command to Li Hung Chang to capture Peking. This is assuming that a place might become famous rather than infamous from having been chosen as the last refuge of such a craven crowd as accompanied the foreign hating Prince Tuan into seclusion. This province is also famous, at least throughout China, as that in which are situated vast beds of anthracite coal and mines that have been worked in a primitive manner for centuries. In agriculture, also, it leads with many products, and the surface of the country is cut up into thousands of natural and artificial terraces, on the levels of which the soil is extremely fertile. The province is bounded on the north by Mongolia, east by Pe-chi-li, and west and south by the Hoang-Ho river.

A TAOTAL OF THE YANG-TSE.

To be technically correct, according to one who has traveled extensively in China, a "taotal" is an intendant of circuit and rules over a department, but the term has been rather loosely used to signify an urban as well as suburban official. The portrait herewith pre-



sented is that of the taotal of An-ching, on the Yang-tse river, in the center of a region at present of great interest to all the powers with aspirations in China. To control the Yang-tse means paramount influence over many millions of people occupying nine out of the 13 provinces of China. The river itself is second only to the mighty Amazon and drains the most fertile portion of China.

THE STAMP SPEAKS FOR ITSELF.

Among the stamps which the enthusiastic philatelist will consider as well worth an effort to obtain is one the very existence of which was at one time denied. This is the stamp printed in Mafeking when the regular supply gave out, during the last days of the historic siege. All the others were exhausted, and so the commander ordered some printed with his portrait on them. Instead of the regulation effigy of Queen Victoria. So few stamps of this imprint were used that collectors in general denied its existence, but this photograph, taken from an original direct from Mafeking, establishes its identity. The portrait of the redoubtable Baden-Powell, whom his friends and intimates call "B. P." for short, appears here to refute the statement that the hero of Mafeking would not be guilty of usurping the functions of the postmaster general.



BUDDHIST NUN OF HANGCHOW.

It is generally stated that Buddhism, that oriental cult or religion introduced into China 1,800 years ago, is in the last stages of decay, but there are still many temples and monasteries scattered throughout the country.

The portrait presented here of a young Buddhist nun is of a type familiar to



residents of China, where almost every city supports an establishment occupied by these devotees of a religion whose founder died 543 years B. C., and whose followers carried it to China in the first century of the Christian era. These nuns, like the monks, are pledged to a life of poverty, obedience and abstinence. They are brought up to regard purity of morals as necessary to the most exalted and peaceful life and are sworn to abstain from all animal food and the shedding of blood and to live upon charity.

FRIGHTENING THE FOREIGN DEVIL.



This picture shows a Chinese military band engaged in the serious occupation of frightening the foreign devils by beating a big kettle drum and blowing terrific blasts on their trumpets. It may have been thrashed out of them by this time, but Chinese tactics of a few months ago included such performances as this, without which no well drilled Chinese battalions would be considered up to date. According to the ancient Manchoo code of tactics, when the enemy is sighted the proper thing to do is to send out the "musicians" and acrobats in advance, to attempt to scare off the foe by creating a hideous din on their tom-toms, trumpets and horns and to frighten them into fits by exhibitions of uncouth posturing. If the foreign foe was not sufficiently impressed by these ceremonies and still persisted in advancing, contrary to the rule of military ethics in vogue with the Chinese, the Celestials generally took to their heels with promptness and dispatch, after firing a few scattering volleys from their antiquated jingalls and a flight or two of arrows from their lancewood bows.

boy to commemorate his act of citizenship. The vote was cast at a special city election ten days after the amendment was passed. Adna T. Treat of Denver says that he is the oldest Mason in the United States. He was born in Hartford on April 8, 1797, and became a Mason at Troy, N. Y., in 1822. He was one of a committee of Masons appointed to receive General Lafayette when he visited Troy in 1825. Mr. Treat is remarkably well preserved. He smokes in moderation, but does not drink alcoholic beverages of any kind. The Duke of Devonshire is one of the richest of living Englishmen and owns no less than 126,000 acres at the famous seats known as Chatsworth House, Hardwicke Hall, Holker Hall, Bolton Abbey, Compton Place, Oldcotes and Linsmore Place, while his London mansion, 78 Piccadilly, is one of great magnificence interiorly.