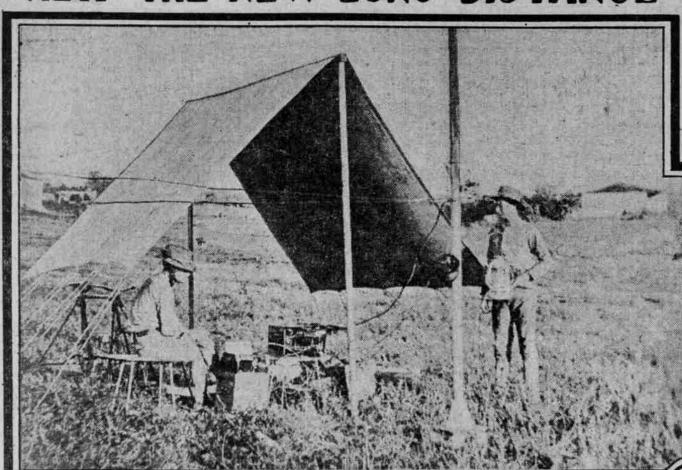
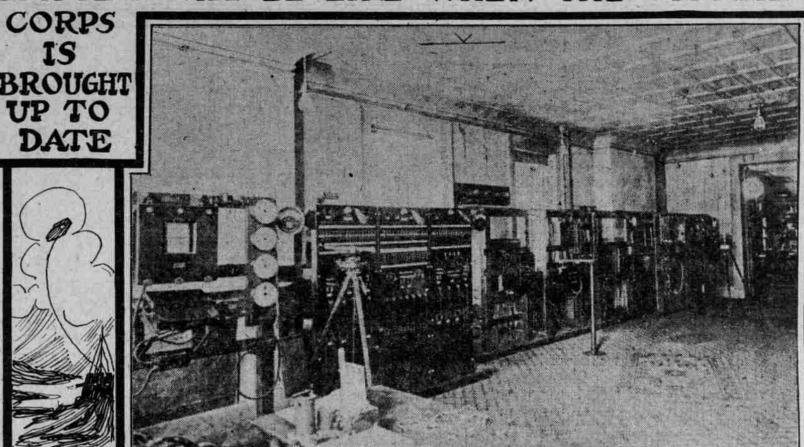
NOW FOR OUR WIREDESS WAR

WHAT THE NEW LONG DISTANCE BATTLE WILL BE LIKE WHEN THE SIGNAL

CORPS





A WIRELESS SET IN THE FIELD IN CUBA

BY C. H. CLAUDY.

HERE is a lot of difference between the battle of a few years ago and the battle of today. All our old ceptions of a battle picture are out of Even the scene at the general's tent, where the grizzled veteran sends out his commands by orderlies as he watches the progress of the conflict with his field glasses is hopelessly unreal.

And now the United States proposes to go a step further than any other nation has gone and to reconstruct its signal service on a basis of modern scientific development that will make its next war still more unreal, from the old point of view. Two bills are now before Congress to this end. The old-fashioned, out-of-date sort of

a battle has been made familiar by cycloramas and paintings. The commanding general stands on an eminence overlookng the entire field. Below him and to one side are his own troops and beyond he can plainly see the line of the enemy. He sends out his orders by word of mouth or scraps of paper and sees them de-Before his eyes the orders are obeyed. This troop retreats, that advances to the attack. This one is wiped out in a hand-to-hand conflict that drives forward victoriously. A battery is marched a mile or two in the face of the enemy to take a new position, or a regiment trots gravely and unconcernedly from one end of the field to the other, content to lose a few men that it may

All that is no longer possible, Today it would be army suicide. A general can no longer see even his own lines from a natural elevation and the chances of his sending orders by word of mouth would be slim indeed.

Nowadays we shoot so hard, so far and so fast and have such accurate artillery that for a body of men in the field to disclose its position means that it must vacate that position unless the disclosure is in the form of an overwhelming at-If the general of today had to depend on written or spoken words of com mand, delivered in person, he would find practically all his messages as dead as their bearers would be before they were even in sight of the commands they were sent to

Organization the Pivot.

The pivot on which the modern battle turns is no longer personal bravery, or equipment or numbers of hardly even skill. It is organization, and the very essence of that organization is communication-the work of the Signal Corps. Yesterday the modern general worked with telegraph wires, strung along fences or laid along the ground and some very wonderful things were accomplished in this way, belped by the courage and resourcefulness of the Signal Corps, as witness the Japanese-Russian War.

But today we use the wireless and across miles of rearing battlefield come instant instructions as to range and direction for firing, minute orders that must be obeyed though they tell the hidden battery hardly a word of 'the fight. It is a big game played in the dark to all except the general and his staff, over a great expanse of miles with fearful engines of death commanded absolutely, certainly and instantly by the spark of the wireless. As some one recently put it: "We do not fight today man to man, company to company brigade to brigade or division to divi The modern battle is a fight be tween two men-two generals armed wit

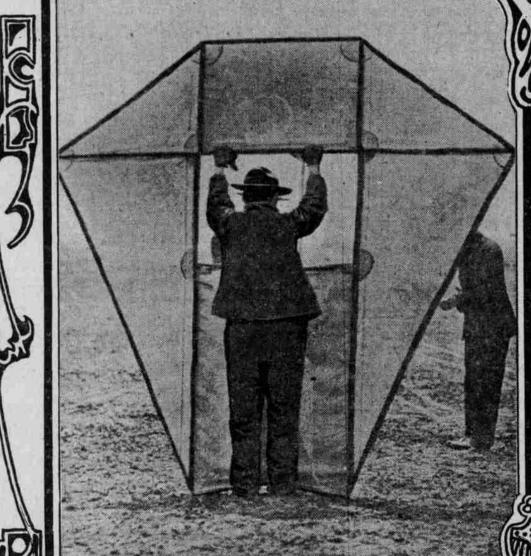
Quickest Hitter Wins.

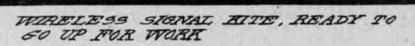
And the general who best controls his army, who best and quickest knows where all parts of it is and what all parts of it are doing, and who can best and quickest tell all and several of its parts what to do next, wins the day, In a fist fight between two pugilists, it is not always the hardest hitter, but necessarily the strongest wrestler who throws his man, but the wrestler with the quickest nervous reaction. It is the gray which can act as a whole, not as a collection of little wholes—the army which can fight as one body, not as a lot of the number of over 50 species or kinds. All of them are highly dangerous, while some of the species swim the seas in schools of countless thousands.

The actual sea serpents are never seen in any but tropical waters. None strongs the season of the species are never seen in any but tropical waters. which can fight as one body, not as a lot of little bodies—that is the army of

its ability to respond quickly to com- ica and Northern South America. quickly and ability to deliver the com-mands quickly. Per contra, the nerv-yous action" of the army is the ability to send the commands quickly, and the laterally commands quickly and with little effort.

With a fear that this fine fellow greed to that this fine fellow greed to that the post of the trap can di to send the commands quickly, and to green and black, all with a laterally com





SENDING A RANGE TO THE GUNNER

FROM HEADQUARTERS, BY MEANS OF THE TELAUTOGRAPH

corps as far as it goes. The only trouble is that it does not go far enough. It is general concensus of opinion, not only among our own military authorities, but among the best of those abroad, that a minimum of 2½ per cent of the strength of the Army should be provided for Sig-nal Corps work. Moreover, this mini-mum should be outside of the legal strength of the Army and not drawn from it.

stick and hammer to pick up gun and pistol. But while National Guard and military schools train the average man so that he can be made into a first-class fighting machine in a few weeks, when necessity arises, making him into a competent Signal Corps man is another. a competent Signal Corps man is another thing entirely. You can train the average man to obey orders and shoot a gun in a short time. It takes a life-time to train an officer of the Signal Corps as he should be trained, and many, many months to perfect the rank and file. The service, including The old argument of those to whom a such things as wireless telegraphy, field

frequently means, in the public ears, investigation, furnigation, castigation? But vestigation, furnigation, castigation? But until war—then expand." And applied to the Signal Corps, according to the bill introduced in the Senate by Senator Burkett and in the House by Repiston, development. There is no question of the efficiency of the present corps as far as it goes. The only trouble and the fear of the present corps as far as it goes. The only trouble and the fear of the present corps as far as it goes. The only trouble and the fear of the present corps as far as it goes. The only trouble to the fear of the present corps as far as it goes. The only trouble to the fear of the present corps as far as it goes. The only trouble to the fear of the present corps as far as it goes. The only trouble to the fear of the present corps as far as it goes. The only trouble to the fear of the present corps as far as it goes. The only trouble to the fear of the present corps as far as it goes. The only trouble to the fear of the present corps as far as it goes. The only trouble to the fear of the present corps as far as it goes. The only trouble to the fear of the present corps as far as it goes. The only trouble to the fear of the present corps as far as it goes. The only trouble to the fear of the present corps as far as it goes. The only trouble to the fear of the present corps as far as it goes. The only trouble to the fear of the present corps as far as it goes. The only trouble to the fear of the present corps are the fear of the present corps are the fear of the present corps as the fear of the present corps are the fear of the present corps as the fear of the present corps are the fear of the present corps as the fear of the present corps are the fear of the present corps as the fear of the present corps are the fear of the present corps as the fear of the present corps are the fear of the present corps as the fear of the present corps are the fear of the present corps as the fear of the present corps are the fear of able, requires more than the average in-telligence expected of the solder and much careful training. The Signal Corps at present has the apparatus— highly technical, thoroughly ingenious and most compact, but it lacks the men.

Reports of Actual Service.

General McArthur has said of the Signal Corps in the Philippines: "The splendid service of this corps in these islands makes it a matter of regret that

We need wires, instruments and operators everywhere, the more the better. It simplifies everything, makes unity of action possible, insures concenthat it is impossible to say too much

tration of troops on threatened points, and altogether is of so much importance behalf of its indefinite extension to the limit of possible usefulness."

These are words literally from the

from intelligence which came to him from and by his perfectly organized and entirely efficient Signal Corps. Reliable Information Needed.

in a glant web, controlled the entire force by wire, sitting 12 miles in the

rear, and keeping the positions of the various forces before him upon the man,

These are words literally from the front, from the man who writes not of the theory, but the practice. But apart troops are to succeed in war, they dition.

action as to inspire and insure the complete confidence of the mobile army which has to depend upon them. The equipment must also be so mobile as to provide instant communication by the side of the commander, wherever

must have field lines of information

which are so reliable and certain in

LABORATORY OF U.S. CORPS

APPARATUS FOR GUN

AT WASHING TON

FIRE CONTROL

the side of the commander, wherever he may be required to go in the exercise of his duties.
"It is now fully recognized, by the leaders of military thought that the strength of an army is not alone measured by the number of men it contains, but the number of rifles, guns and sabers it can be put into comparatively effective action at any one time."

The bills now before both houses of Congress, and referred to the committee on military affairs, provides for the

tee on military affairs, provides for the Signal Corps to meet the modern con-ditions. It is of little avail for us to have a highly-trained and efficient army if the pivot on which the whole turns is too small to support the weight. And the number which can be so mobilized depends not only on the resources at command, but on the means of telling what to do where to do it and when it is to be done. The bills provide that the Signal Corps shall consist of one Chief Signal Officer with the rank of brigadier-general, four with the rank of original electricians, four colonels, four lieutenant colonels, 12 majors, 36 captains, 30 signal electricians, 200 first-class sergeants, 300 corporals, 1200 first-class privates, 200 privates, 60 cooks 48 farriers and blacksmiths, 24 saddlers, 24 wagoners, 48 trumpeters and one bandeach grade to receive the rank, pay and allowances now provided by law.
It should not be argued that while such

a force is necessary in time of war, its maintenance at full strength will be a burden in time of peace. It has been stated that such a corps, highly trained as they need be, to be efficient must be maintained in time of peace in order to be ready in time of war. But the Signal Corps in time of peace does a great deal more than merely train itself and devise new and effective apparatus and specialize in its use. The Signal Corps is charged with the construction and maintenance of extensive land and sea telegraph lines in time of peace—some of the Alaskan cable work of the present corps might be mentioned as examples. The Signal Corps is almost entirely constructive—only indi-rectly destructive. Yet, as its field work rectly destructive. Yet, as its field work in time of war is of the most dangerous character, requiring the utmost courage and coolness, it is anything but a non-combatant arm of the service. It can fight, and has fought, and fought well. when required, although its main end and aim is not to fight, but to arrange mat-ters so the other follows can fight to utmost advantage.

General McArthur says: "The most recent experience has demonstrated that efficient service of military lines of information is indispensable to successful strategic and tatical operations. The organization charged with this service has become so intimately associated with strategic and tactical operations. The or-on the batticfield, that it must in the future be regarded as an integral part of the combatant force—a fourth arm, so to speak—and as such its organization becomes a matter of quite as much conern as that of infantry, cavalry or field

The proposed law is to realize this con-

THE DEADLY SNAKES OF THE OCEAN Sea Serpents Not a Myth, but a Reality in Malayan Waters.

nce of the sea serpent. At the same time culmer seas, affording the skippers of incoming sailing vessels occasiona periods for convivality, will lead to tales nvolving marine serpents of terrific pro-

portions.

The sea serpent myth, to which all these stories relate, has been much overworked. But it is interesting to note that real sea serpents exist, and to the number of over

to a length of over eight feet. One species only occurs in the waters of the New World, and this is found off the western The "nervous reaction" of an army is coast of Southern Mexico, Central Amer-

region of the tropical Pacific that the waters are infested with bright hued snakes, some striped, others ringed with

remarkable tail. If placed on land a sea erpent is awkward and unable to make lefinite progress. Regarding the habits of sea serpents Charles O'Mara, a reptile specialist who

recently returned from the Philippines, said to the writer: "The larger snakes seem to lead a soli-

tary life. Some of the smaller species swim in schools. "Catching these serpents is a weird sport and is best effected at night when a ship is at anchor and the sea is perfectly

calm. My most successful experience was off the coast of Luzon.
"Being on good terms with the captain, I induced him to lower the port gangway so that I had a flight of steps leading to within a foot of the water and a small platform on which to operate. I had rigged up a trough-like arrangement of stiff wire mesh about six feet iong and four feet wide, and having sides a foot high. By tying light ropes to the corners, thence running a rope overhead to a davit and bringing this down to me again, I could raise and lower my trap quickly

WITH the coming of Spring enterprising managers of seaside places will be be mevitable appearwill be mevitable appearthe display of the flattened body and the darts and accompanied each motion by swallowing one of the translucent crustaceans.

Some other fish soon arrived, varying in form from the beautiful to the grotesque, and apparently after those gleaming shrimps which kept coming in unabated numbers. It was then I got my first indication that snakes

ere about. Barely within range of the glow of my cluster of lights the black, oily water appeared cut for an instant by an indistinct, grayish streak. To one not familiar with this kind of sport the apparition might have appeared merely as an optical delusion, such as our eyes often give us when peering into intense darkness. I knew those symptoms, however, and grasped with both hands the rope that controlled the raising of my apparatus.

"Twice that gray object sped by, but th moderating speed, each time arer. Then the reptile approached with the tray with those wonderfully graceful undulations characteristic of th sea snakes. He was shy and darted away, evidently disturbed by the slight

I lifted him with the tongs he turned and bit at the metal viciously. To hear the brute's fungs rasp on the tongs was a caution to me. "I had dropped him into the copper

tank and had lowered my trap for another snake before the several fishes also hauled out of the water had ceased flapping from side to side to escape, and they all came to their senses and commenced to swim wildly about the trange score as it was under senses and commenced to swim wildly about the trap as soon as it was under the surface—all but the one that was bitten by the snake and dropped by the reptile as I hauled up the trap.

"His iridescent white belly disclosed him at the bottom of the receptacle and I got him out with the tongs. He was dead and quite limp, and although I examined his five odd inches of smooth scaled body, I could find no marks of the fangs that had so speedliy done.

their work. "Other dim streaks were now passing in the semi-darkness and an occasional popping sound followed by a muffled splash informed me that snakes were not only prowling near by but coming up for air from almost immediately be neath the ship. It was half an hour though, before I caught my second

the fangs that had so speedly done

"He was a big fellow and darted into the trap while I was off my guard. He started out again with a fish in his jaws, the silvery sides of the prey flashing in the light as it struggled to

get loose.
"With a fear that this fine fellow myself at the

of sight, slowly rotating, as if either paralyzed or dead. "My endeavor to land this snake was no slight task. He was a formidable looking chap, fully six feet long, of a pale yellowish hue, ringed with vivid green. The body was as thick as a man's wrist, but tapered into an ex-

tremely siender neck and rather small head, while at the other end was a paddlelike appendage as big as a flipper of a small seal. or of a small seal.

"The reptile was crafty and made a dash to get over the side of the trap into the open water, so that I had to knock him back with the tongs. When I tried to hold him with these instruments he proved far too strong for them, begins he made such a lunge at

them; besides he made such a lunge at

me that I thought of those two dead help. "They had been watching me from the rail and came to my assistance with some stout twine. We managed to noose him and lower him into the tank. "As the thrashing, strangely patterned

strong fascination about this capturing of poisonous snakes from the sea, and the sport can only be had in Malay waters. I believe my catch that night amounted to about a dozen specimens.

"Among the snakes two distinct kinds were represented. One was the Enhydris, of rather chunky build, with thick neck and quite large head. The scales do not overlap, as with land appears."

Hence the two tips only of this organ are shown, making the tonguo appear quite different in its functions from the divering member seen in the terrestrial

enakes.
"I brought several living sea snakes with me to Europe and presented them to zoological parks having capacious tanks in which to keep them. Strange to say, each and every specimen starved to death and the authorities told me afterward that all of the few examples that have

been exhibited have met a similar fate.

"They seek the darkest corners of their tanks and never leave them, unless coming to the top for air. Fish of all kinds may swim near them without harm." Collecting sea snakes for the scientific institutions is a difficult process. If the collector is to obtain anything like fair proportion of the 50-odd species cruise through Malayan seas in a small boat and be ever on the watch.

The only way to obtain a series of the species is to shoot them. Sea snakes come regularly to the surface for air, but the collector is lucky if he gets one out