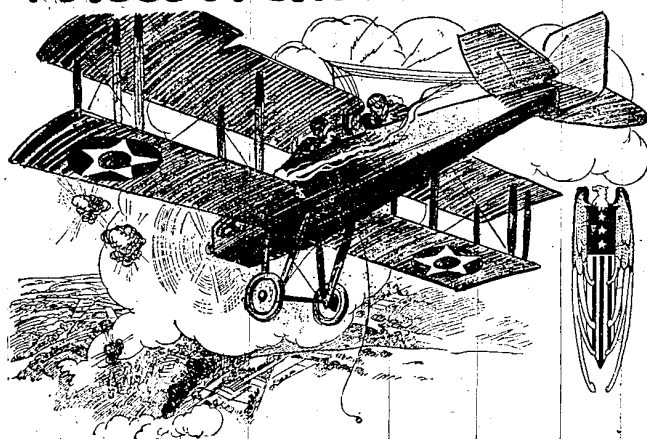


Voices from the Clouds



Unknown Ten Years Ago, Wireless Telephone Is Now Widely Used on the Battle Fronts

How would you like to take up the telephone in the seclusion of your library and talk to your son on the battlefields of France something on this order?

Scene: An American home somewhere in the United States.

Family reading the latest war news from the front. Mother, dad and sister Sue thinking about the big part Brother Bill is playing in the great game over there.

B-b-b-bling! The telephone rings! Dad takes up the phone. Control asks if you are there and then hooks up the connection. After an instant comes a familiar voice:

"Hello, hello! Is that you, Dad? This is Bill."

"Well, well, boy, where are you?" "Just got in from running another hole through the Hindenburg line. Got the Hun on the run. Feeling great. Good luck; goodbye!"

If Kaiser Bill and his deluded millions down the roof of the house of the world a few years longer it is quite likely such scenes would have been possible, says a writer in the Philadelphia Public Ledger. Fathers and mothers would have been able to talk to their sons in the faraway military camps here at home. They could have conversed with them thousands of miles out at sea while the great gray ships were conveying the boys over the blue. They could have heard the voice of the boy from the battle-scarred fields of France and Flanders.

Radio-telephony at the beginning of the world war had just about reached the practical stage where it was to take its place with radiotelegraphy as one of the marvels of the age. One year after Mars unloosed his guns the human voice was projected across the Atlantic ocean—from Arlington, Va., to the Eiffel tower in Paris. Intelligible speech was transmitted also from New York city to Pearl Harbor in faraway Hawaii, close to 5,000 miles, or further than from New York to Paris, Rome or Vienna, or from New York to the North Pole.

Scientifically demonstrated as a feasible proposition, the wireless telephone was about to be commercialized when the war intervened. Fathers and mothers of American could talk to their sons in France today as outlined above were the facilities available. But man has had to devote all his endeavors to the overthrow of militarism, and as a consequence the peaceful developments of the scientific world have been held in abeyance until the time when the beast of change shall have been caged and the human family take up again the wonders of the new era.

War Hastens Development. The war, if anything, however, has but hastened the universal commercialization of radio-telephony. While the world is engrossed in the titanic struggle from Belgium to Switzerland, it has not had time to note all the remarkable progress that has been accomplished in the conversion of the "theoretical" to the "practical" game from turned reality.

Aviation was a hazy dream in America before the war—stuffed at

the sport of daredevil fanatics; yet at this moment the wireless messenger of our air cavalry has become, with the same simplicity, that the average motorist takes up for a trip to the seashore or mountains. Robbed of its battle dangers aviation stands out as an accomplished fact, to be negotiated with ease, comfort and safety. Our boys after the war will turn their garages into hangars. The aerial postman breaking records today between New York and Washington is a harbinger of the new era of air transportation.

No after the war the wireless telephone will be developed as a casual, unobtrusive asset and men will talk with their business partners in London, Paris and Rome, say the scientists, just as today they use the telephone to communicate with Atlanta or Chicago.

In the army and navy of the United States this fall, radio-telephony is playing a potent part in the business of winning the war. Thousands of young men who go up to the radio rooms of the service are linking together the fighting forces of the nation so that each and every separate unit is closely united under a single guidance, working cohesively for the one supreme attainment and at a moment's notice, in the most intimate contact with their military directors.

The great problem in radio-telephony at first was the question of sufficient energy control. It was necessary to develop transmitting stations capable of generating high-frequency currents and radiating them so that the currents induced in the receiving apparatus when rectified would cause no disturbing noise in the telephone receiver. It was necessary also to find the means by which the amplitude of the high frequency currents could be controlled and modulated by the voice so that the amplitude of radiated waves followed closely every variation in the voice.

Brought Under Control. All of these difficulties have been overcome in the last few years by the world's renowned scientists. "A system of controlling the high frequency currents by means of the regular telephone lines so that conversation may be carried out between two people by the telephone circuit." It has now been possible to connect up the radio telephone with the regular telephone lines so that conversation may be carried out between two people by the telephone circuit. It has now been possible to connect up the radio telephone with the regular telephone lines so that conversation may be carried out between two people by the telephone circuit.

Two fields of activity for radio-telephony opened up with the development of the first wireless telephone. The first was for long distances where wire telephony was impossible over submarine cables and expensive on land. The other was for short distances between ships at sea, and between land stations.

Transoceanic Communication. Transoceanic communication is likely to be developed faster than inland radio-telephony. It was pointed out some time ago by J. J. Carey, the electric engineer who has been making the most possible the first wireless telephone messages from New York to Pearl Harbor, Hawaii, that transatlantic service over the ocean was earlier than across land because there were fewer atmospheric disturbances.

Overcoming these disturbances is the greatest problem we have at hand," he said. "We do not know exactly what causes them, but our experiments have shown that they are greater in summer than in winter, so are probably caused by electrical disturbances in the atmosphere. Theoretically any number of messages can be kept separate by tuning the ap-

paratus to their own wave length. They wear the Italian army green uniform in their colors the striped red and white, of their national Bohemian colors. They are to be used only when Italy strikes her next blow, and can advance instead of retreating, judging by the way they are going for Austria, the molting, singing Bohemians ought soon to be fluting their hands full.

Thoroughly dry brass will quickly cleanse the finer velvet and woolen fabrics.

paratus and other devices. Practically when it comes to the rapid vibrations necessary to carry the human voice, the number is very limited. There is no way of preventing anyone within the zone of communication from taking any message his instrument is tuned to. And if there were many messages at once they would interfere with each other."

It would appear now that these difficulties were being overcome for, according to reports from the battlefields of France, the wireless telephone is proving a mighty valuable asset in the maneuvers of modern warfare, despite all the gunfire and the disturbed atmospheric conditions. Going over the top in French warfare, the reliable telephone was a handy asset in communicating to the rear the results of the advance. But lately the troops have been going forward so fast that as soon as one telephone line would be set up another extension would be necessary to keep pace with the flying Yankees.

"Hello" From the Clouds. It is in the air service that the wireless telephone now is being employed to the greatest advantage. Voices out of the air, messages filtering down through the clouds, report the observations made during a reconnaissance flight and convey to headquarters the vital information as to the movements of the enemy troops.

It is said the airplanes now in flight unfold a long strand of wire which acts as the antenna for transmission of the messages. An observer in a large plane, noting the descent of a village by the retreating Hun, has but to take up the telephone and "hello" his chief with the important message. Instantly the Yankees are alerted in pursuit.

The incandescent lamp plays an important part in the great game of wireless telephony from air fleet to land battalions. A tiny lamp that can generate one horsepower of energy is used to receive the faint currents, and a larger one boosts the currents so that the ordinary telephone apparatus can receive them.

According to report, it is a common occurrence for a young American or French aviator now to be talking to base headquarters while flying high in the heavens 50 to 100 miles away. With the receiving apparatus on the earth allowed to take the contact of wave lengths from his sounding apparatus aloft he is able to report instantly on the developments below.

The wireless telephone has been in the more than ten years on the way in the matter of aerial demonstration of theories long held tenable. It began with simple experiments in the New York laboratories of Professor Lee Forest, who was engaged in transmitting a distance of a few feet across a table without wires.

Message of Peace. It was first employed at sea on ships in July, 1907, in reporting yacht races from the yacht Tholma in Put-In-Bay, a distance of four miles. Next experiments were made on the battleship Connecticut off Cape Cod. Without wires messages were relayed to the battleships Kentucky and Illinois, a distance of eight miles. From this beginning radio-telephony was developed until transoceanic communication became possible. All that has been done in a military way cannot be revealed until the war is over, but it is certain that to unveil some startling disclosures. It seems certain, for one thing, that the use of wireless telephony in the overthrow of German militarism and the triumph of democracy, will be relayed completely around the world by the wireless telephone—a voice out of the clouds pre-announcing the dawn of the great day.

Manless Bombing Plane Invented. Jacob Weismann of Cincinnati, Ohio, has invented what he calls the "Weismann manless bombing plane." He claims the machine, without the aid of human hands after it leaves the ground, can be propelled through the air at terrific speed toward an objective upon which it will automatically release death-dealing bombs.

Japanese claim to have invented matches that will light perfectly even when wet.

TAKEN PRISONER; HIS LIFE IS SAVED

American Bombing Base.—Dr. Albert M. Stevens of New York, medical officer at this base, owes his life to the fact that he was taken prisoner by the Germans, while Dr. Harry J. Dooley of Chicago, successor to Doctor Stevens, assistant surgeon, owes his liberty to the fact that Doctor Stevens is a prisoner.

It is one of those weird romances of the sea and war.

Word was flashed to the bombing base one afternoon that a seaplane was down on the surface of the water about thirty miles off the coast. A fast motor boat, ready for such emergencies, was sent out. A surgeon always accompanies such expeditions. Doctor Dooley in ordinary circumstances would have gone. But Doctor Stevens was just retiring from the post, and he thought the trip might do him good.

"I think I'll go," he said to Doctor Dooley. "It will be my last trip and the journey will be something of a relief."

He jumped into the boat and was off. There were six others aboard. They reached the stranded seaplane in a little under two hours. The flyers, men had, got her into condition again and were just ready to start off. They left the motor boat and landed back at the base in good time.

Shelled by Germans. It was dark. The surgeon, seeing what he thought were lights of a town near the base, headed the motor boat in what he supposed the correct direction. They slipped through the light seas for an hour or more. They approached close to the supposed home lights, when suddenly the scream of a shell was heard coming straight at them. It exploded directly in the back of the boat! A second shell dropped about two hundred yards in front.

"The Germans are shelling us," called one of the men. "Where are we?" asked the skipper. They were under German guns. The lights they thought their base lights had been for. They had been steering straight toward German-held ground.

"Jump into the water!" commanded the surgeon. The men went overboard. Half a minute later a shell struck in the center of the boat. It blew a great hole in her and sank her.

A strong current was running on the shore. Doctor Stevens and one other man, being strong swimmers, headed for the nearest point of land. They reached the beach. They were drenched, but they were safe. They had just reached the shallow water when a squad of German soldiers marched down the sands with drawn bayonets and commanded:

"Surrender! You are on German territory!"

Doctor Stevens and his companion surrendered. Meanwhile the other five men were trying to make land. Two of them went down with the current, looking for any chance to make land. One of this trio was drowned. The

other two got to land and were captured by the Germans. The two men who were left swamping in the current were in a wretched condition when two British officers ashore made them out. The Britons jumped into the surf, swam out and dragged the men ashore.

They ran to a telephone and called the bombing base.

"We have two of your men suffering from exposure and exhaustion. Their boat was sunk by Germans and two of the men taken prisoner," said the voice.

Germans Raid Base. Maurice M. Moore of Washington, D. C., jumped into the camp itney and started for the place where the rescued men were. He had to drive over exposed lands, but he made the journey safely, his car loaded with blankets. He took the men aboard and started home. Suddenly shells began exploding in front of him and back of him. But through the canopy of bursting shells the little flying machine sped safely for more than five miles getting in without even a scratch.

Meanwhile the German bombing

MR. KAISER OF BERLIN FIRST TO REGISTER

Berlin, Conn.—That this town is doing its best to live down its name was indicated when 300 men of the town stepped up to register. And first among them, strange to say, was J. H. Kaiser. The town was one of the first in the state to erect a huge human roll, which is evidence to visitors and passing motorists that there is no local lack of patriotism.

planes started to raid the base. The sound of exploding bombs dropping around the air base was heard by Mr. Moore even before the automobile was near home.

"Where is Stevens?" asked the executive officer, as the car drew up.

"Taken prisoner by the Germans," was the reply.

"Well, I guess he is lucky at that. His pet place, in which he always stands when the raiders come, was blown to pieces half an hour ago."

"We have been wondering who is the luckier of the two—Stevens or Dooley," said the executive officer. "Dooley for not being captured or Stevens for not being killed."

YANKEE NURSES SHOW METTLE

London.—American has poured a veritable army of her womanhood into war-torn Europe. To date over 12,000 American nurses have been sent over. Within the year there will be right here on the ground more than 24,000 of these American "girls behind the lines."

This is the estimate of Miss Carrie M. Hall of Boston, head of all American Red Cross nurses in Great Britain. Of the 12,000 now here, between 600 and 700 are working in Great Britain in the dozen or more American hospitals that have sprung into being within the past six months. The remainder are staffing hospitals behind the lines in France.

With the arrival of American soldiers at Vladivostok came a contingent of nurses from the American Red Cross unit at Tokyo, Japan. As hostilities and American casualties began there more United States army regular nurses probably will be sent to Russia.

All Highly Trained.

All women sent over so far are highly trained graduate nurses, bacteriologists, dietitians and college trained hygiene experts. The war department in Washington has ruled that only those trained women may be sent over for the time being at least.

For this reason General Pershing's recent call for 5,000 girl workers with the American army in France will be filled by British instead of American girls. England's women army, the "Waves" (Women's Army Auxiliary Corps) is now conducting a nationwide recruiting campaign here for

these British girl volunteers for duty as clerks, chauffeurs, typists, orderlies, telephonists, etc., with the American army.

Practically every troop convoy from the United States brings scores more of these women experts. From peace loving American homes that have not yet felt the grim hand of war these blue-clad Yankee girls, like their big brothers, are plunging into this unrelenting war with a determination and efficiency that has won for them already the unstinted praise of all the allies.

They know they've got a man-sized job before them, stripped of all the so-called glamour of war, and they're tackling it in a hard way. Up in the field and base hospitals under shell-fire and valiantly braving air raid threats, they're "crying on" untiringly, night and day, working unceasingly to save the lives of our boys.

Miss Hall, who was one of the first American nurses to arrive in France immediately after the United States decided to jump into this job of winning up the wraith on the Rhine, was witness of the sterling quality of American womanhood in this war under fire.

Morale Is Perfect.

"I was one of the first to come over with the Harvard Base hospital unit. No sooner were we landed than we were attached to the British and hurried up near the first line to staff a little tented hospital city near Cambrin. There were two other American field hospitals near us.

"It was a bright moonlight night. Our tents were shown up like a silver city. At midnight the alarm sounded. We leaped from our beds. There was no panic. The hum of the Boche machine was plainly audible. Suddenly five deafening explosions told the hand gotten our camp. It only lasted about five minutes, but in that short time their five bombs dropped in a straight line had nearly demolished our camp.

"Tents containing American wounded were ripped to shreds, temporary hospital buildings moved down like a pack of cards. Six soldier patients were killed and a score or more injured. The morale of the nurses and doctors was wonderful. Forgetting self, they plunged into the work of rescue.

"One girl, Eva Furnace of Boston was on duty in one of the tents most badly hit. One bomb fell so near her clothing was ripped and torn by bits of flying debris and pieces of sand lodged in the flesh of her face. Unattended, she fished out through it all, rushing here and there dithering, wounded and assisting in the work of rescue. Not until it was all over did she notice the state of her clothes or the bits of sand in her hair."

CUPID GETS 'HELLO GIRLS

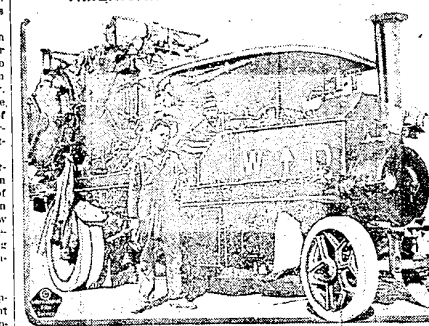
London Telephone Company Has Difficulty in Keeping Corps of Operators.

London.—Dan Cupid is playing havoc with the London telephone system. So many "hello girls" have been married lately that the staffs of the various exchanges are very short-handed. Wages up to \$7 a week, the lure of the telephone brings in raw recruits, but as soon as they are sufficiently trained some coming voice over the phone lures them and there's a new untrained girl on the job next day, telephone officials complain.

Negro Women as Nurses.

Kansas City, Mo.—The first free school in the United States to train negro women for nurses for negro soldiers with the American expeditionary forces in France has been established here. Dr. William F. Thompson has been charged with the work under supervision of the city hospital and the health board. The course of training will be eight weeks.

AMERICAN ARMY STEAM LAUNDRY



An American steam laundry going close to the lines to clean and sterilize the underwear and uniforms of our soldiers. The big drums behind the engine filled with boiling water are needed to give the Yanks a decent appearance again after their battles.

YANKS ENJOY CHOW

With the American Army in France, the only time French soldiers are quiet. They munch their bread and meat and vegetables and drink their wine in silence.

Not so with the Americans. It's a big time. First of all, there's speculation on "what's the chow for today?" Then they sit around on the ground, on ruins, or under trees, and that satisfied feeling of having eaten a good meal goes upon them, there's lots of life and joking among the doughboys.

"Doughboy chow" is good. Usually there is soup. Then there are meat and vegetables, usually two kinds. There are always big slices of white bread and coffee. Some times out of ten there's dessert, probably pudding or fruit.

Each man has a pan with a handle that folds into it, in a cup. Some say they got some of everything in a four-course meal into these two instruments and never mix foods.

There's lots of animation at "chow time" among the Americans. A crowd of Frenchmen is quiet while eating. They'll be lined up, and in front of each line there'll be a field kitchen steaming away with a prepping army cook dishing out grub that makes you want to "grab some tools and get in line" too.

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