

Charles Hayward

SR 9580 Oral History Interview with Charles Hayward,
by Linda Dodds

1979 December 5



CH: Charles Hayward

LB: Linda Dodds (Linda Brody)

Transcribed by: Unknown; Carla Day, 2017

Audit/edit by: Sara Stroman, 2017

Tape 1, Side 1 **1979 December 5**

LB: Mr. Hayward, can you tell me about the anti-German sentiment that led up to the outbreak of World War I?

CH: Anti-German sentiment. I cannot because I was in school at the time. I read a little in the newspapers about it, but we really knew nothing about the outbreak of World War I until it was in August, when I was in surveying camp, when we heard that the Arch Duke had been assassinated and that the troops were moving.

I, at that time, did not realize much of the so-called anti-German sentiment. But there was a great deal of sharp feeling in my fraternity. We had two individuals, who for six months before that, had made themselves rather unpopular by going far, we felt so far, over backwards, in favor of Germany.

I'd known of the Black Tom explosion, was active in it. As a result of which, my father went on duty as a volunteer police officer. But beyond that, I knew nothing, really; didn't have any contact with it. When we got to after the war started, the picture was different. That goes beyond your question.

LB: Well, how did you feel about that, when the United States entered the war?

CH: Well, we knew war was coming. And most everyone did. For that reason, there at school, the great majority of the fellows figured war was coming and what we should do, without question, we were going to volunteer. We were going to serve and we, talking among ourselves, we decided, well, there in engineering, probably the Mosquito Fleet was one of our best openings where we could help most. The Mosquito Fleet at that time was to be made up of yachts donated by, loaned by individuals, to protect the coast of the United States from submarines.

And so beginning early November we went down to the Navy recruiting ship, *Granite State*, and took classes down there in the various subjects of signaling, maps, weather, completed a line of subjects which they had there to teach us about Navy. We also, beginning, just as soon as we came back from the Christmas vacation, we went up to the Coast Artillery armory up in the Bronx and there we drilled an hour, hour and a half, one afternoon per week under Captain Phillip Matthews of the Coast Artillery.

LB: Was this 1916?

CH: 1916, yes. Then we found several individuals who had been in the Spanish-American War and been in the Navy, and at school there they gave us, they taught us a good deal. By that time we had given up all afternoon classes. Those kids were not attending afternoon classes, which were primarily laboratories. In early February there was a big preparedness parade down Fifth Avenue; most of the school took part in that.

After that I remember relatively little until we heard war was declared and that morning we went to school and immediately after school about 40 of us went down to 61 Broadway, to the Navy's office down there, to take an examinations to apply for service. They gave us an examination, would have lasted, I guess, the rest of the

afternoon and some of the second afternoon. And then they told us you go on back to school, we'll notify you.

Back to school and last week in April, one of the fellows saw an ad in the morning paper: Balloon Division being organized; only graduate Engineers need apply. Apply at - and they gave an address of Mrs. Charles H. Van Rensselaer down on 57th Street.

There at Columbia, we had learned about balloons, because college men from all over the country going to and from the Lafayette Escadrille, the American Ambulance, would stop off overnight at the fraternity house and they would tell us about their experiences. So we knew something about balloons. So soon as we read that ad, right after school, I think we ate lunch first, then a whole bunch of us, about 25 of us went down to the Van Rensselaers and applied and gave her our names.

LB: You enlisted?

CH: No we did not. There was no such thing at that time. We gave her our names. "Graduate engineers?" "Oh yes." Truth is we were all just seniors. But we felt we were just that good enough. And she said, "Alright, we'll have Captain Eastman, the Chief Signal Officer of the East, will be up here within a week and I'll let you know; he'll contact you."

So we went back to school and we received telegrams. Captain Eastman was going to be in town and we were to see him at Mrs. Van Rensselaer's. At that time we found that she and Mr. Charles Sabin, President of Guaranty Trust Company, had been in contact with several other wealthy individuals and offered to set up funds for the training for the balloon service.

This followed an action by Mr. Davison of J.P. Morgan, who with his friends, had set up training for Heavier than Air, the Yale unit and several other units. Congress, at

that time, had appropriated no money, so that's the way it started. Eastman came there, took our names and so forth and, a few days later, we got a message, somehow, from him that we should go down to the Army building down in Lower Manhattan and enlist.

We went down there and were several other fellows other than our group who were there at the time and we enlisted. We enlisted as Privates First Class, Aviation Section, Signal Enlisted Reserve Corps. And, we were told that the next morning we should go to Governor's Island and take their Aviation Exam test, physical test. We went over there and some of the fellows were not lucky, fellows who were in good physical shape, but just couldn't pass the little trick things they gave us on this Aviation physical test. We were told, "Well, you go on back to school; you'll hear from us."

About three days later, we heard, "Alright you got to get going; now you are going to camp over at Staten Island." So on May 2nd, 25 of us went into an old building over at Staten Island which had been vacated by the Standard Aircraft Company. And that was the beginning of my service in the so-called Balloon Section.

LB: Was the Selective Service Act in operation at that time?

CH: No, I was not in, and I did not register. That came sometime along in June. No, I never registered for it.

LB: What was your reason for enlisting? Was it patriotic reasons, or were you adventurous, or?

CH: No, I sure wasn't adventurous. No, it was just a feeling of duty, that's all. There at the fraternity house - I can't tell you, I'm sorry; right now, I don't know how many we had at that time. I would estimate that we had about 45 or 50 members. All but two enlisted within the first three months.

LB: That's interesting. So it was quite a strong support.

CH: It was volunteer.

LB: Yes, but everyone seemed to support the idea.

CH: They did.

LB: Very strongly.

CH: The feeling was very widespread. It was a duty should be done.

LB: You mentioned that you went to Staten Island for your training. How long were you there?

CH: That extends the story quite a bit. [LB laughs] All right, were down Staten Island, there, and these folks were spending, had set up a fund, these, Mrs. Van Rensselaer and Mr. Sabin and others, had set up a fund to take care of us. It did not involve anything such as uniforms, there was nothing like that. It did involve just food. And so food was sent down to us. We had an old wood-burning cook stove. We took turns cooking. Cooking was frequently burned or really cooked. We were there about a week.

We got word that our enlistment was null and void, that the government in Washington had decided that the Coast Artillery would have balloons, not the Signal Corps. So our enlistment was null and void and - oh, I've got a make a correction. Our original enlistment was not in the Aviation section. Our original enlistment was in the Signal Corps, as a Private First Class. So, that enlistment was cancelled. And so we had to go back to the Army building again and we did; we traipsed over there on the ferry and reenlisted in the Coast Artillery Corps, again Privates First Class.

LB: Did you train again in Staten Island?

CH: No, we were our own - we usually had no military individual with us. We got ahold of some equipment, an old automobile engine, and a winch from a shipyard and a few other things like that to take care of this balloon when we expected they would send one to us to work with. They were going to send us some parachutes. None of that equipment ever came. About two weeks later we learned that that enlistment was null and void. So we had to reenlist.

Each time we lost several men that got disgusted, went to American Ambulance, went elsewhere, and the dickens with this thing. So we had to go back over there. By that time our elbows were worn through on our jackets and our clothes were getting rather ragged. We didn't have much money left, but we reenlisted this time as Sergeants in the Aviation Section Signal Enlisted Reserve Corps. And three days later, June 11th, we received orders to go to Fort Omaha.

LB: How many were in your training unit?

CH: At that time, of the original – well, the original group was 40 and it was cut down to 25. There were 25 of us in the building there at Little Clove Road in Staten Island. The final group that went to Omaha, there were only 14 of us left. Those 14 all later were commissioned. That was at that Omaha. Fort Omaha, was the whole Signal Corps base; there, there were two companies of Signal Corps enlisted men, regular Army, with their officers and their officers being sent in there were principally West Pointers. There we went through our infantry drill, variety of other types of drills, which they dreamed up at the time. We had no balloon equipment. They'd heard a lot and read a lot as to what we should do.

LB: What was your feeling about the officers? Were they competent? The officers that were turned out at the training school.

CH: The officers were excellent infantry drill men. Several of them were real soldiers. They'd been in the Philippine Scouts, Philippine Constabulary, had retired, and were

brought back, had come back into service. They would - the majority of the other officers we had knew absolutely nothing about balloons. They had no experience of any kind. And they had varying ideas; those ideas changed frequently. But in the meantime, England sent two officers, Major Hannay and Sergeant Hill. And when those fellows got over there, they immediately changed everything. They set up drills, they told us what to do, what not to do, et cetera. And very shortly we received several balloons, made by Goodyear in this country and one made in England. We had made our own winch trucks in this country, very ingenious, but we found were not very practical.

LB: When did you first ride in a balloon?

CH: About July 8th, 1917. We began our spherical balloon training. Which it – point was, if a captive balloon broke loose, then it would act as a free balloon and one had to know how to handle it, how to bring it to earth. So were trained in spherical balloons. We used either city gas or hydrogen. I was sent to St. Louis, and there for two weeks, I had a variety of rides in free and free balloons, as a result of which, I was given a spherical balloon pilot's license number 105.

LB: Did you feel, at the end of your training, that you were fairly competent with the balloon?

CH: Yes, we could handle a free balloon, yes. In fact, that was the last step, we had to each of us take, go off on a solo flight. Yes.

LB: That's your graduation from balloon school, solo flight?

CH: We were in balloon school off and on, frequently, but as far as a free balloon, yes.

LB: I'm wondering about your transportation to the war zone. When did you leave Omaha and embark on your trip?

CH: I'm going to start a little ahead of your question. Of course, we had many, many rumors. About the second week of November, we were told orders were coming through and that all of our supplies, our equipment, was to be left at Fort Omaha; it would meet us on the other side; it would be there when we arrived. We would go off, as the men, would go off separately by an entirely different route.

In the meantime, I had been made squadron supply officer. The squadron included the first four balloon companies. So it was my duty to turn over all of our equipment to post officers, about three and a half million dollar equipment, including 36 special body automobile trucks and a very complete line of materiel.

We went aboard a train, November 23rd, heading down through the - and we were going down through Ohio, when we were suddenly, we were stopped in a small town. We wondered why. They told us that one or two trains ahead of us, going through the next city, Steubenville, had been fired on. And therefore we were to be sent back by another route.

What happened was they sent us back from Ohio, up to Detroit, across to Windsor. In Windsor, after, that was Thanksgiving Day - that's not true, pardon me. The day before Thanksgiving, we, at Windsor, we got into Canadian trains and went across Canada to Buffalo. This was Thanksgiving Day. Ladies of Buffalo came down to the train with food, gave us a wonderful send off. We got in the train, and they held the train there until dark and they hooked a big locomotive on us and rushed us down to Jersey City. At Jersey City they put us on a ferry, carried us over to Long Island City, over to Camp Mills.

And Camp Mills was cold, and we were in tents, but we did our part in helping to build what became Mitchell Field. We dug ditches and put up barracks, so forth. We were there about eight days.

They took away our heavy overcoats, our issued overcoats, gave us little slickers instead and we were put on a train going up to, we didn't know where. Again, we moved at night only; it had to be secret. Went by train; coaches, without heat. We found it mighty cold. Up through Maine. There at Portland, in the early hours of the morning, ladies again gave us a tremendous quantity of sandwiches, cakes, coffee. We moved on to St. John, New Brunswick. There we got aboard the Steamship *Tunisian*. Freighter. And it turned out later on we were the only outfit ever to go out from St. John.

At St. John we had just started, when we learned of the explosion at Halifax. We get around to Halifax, came into the harbor; in the harbor we could see the results of that explosion. Smoke was still coming from the fires and the foundations of many of the homes. And as we saw the damage along the waterfront, just - and we had to move up slowly toward the inner harbor. Just before anchoring, we saw the first relief train come in from Montreal.

After anchoring, let's see what happened first? Oh yeah, the commissioned men mainly got busy. We had a meeting; talked among ourselves. Immediately called, got ahold of Colonel Rubottom, asked him to make arrangements so we could go ashore and help. We had 1,000 men and six doctors. Colonel Rubottom was under sealed orders and he could not radio Washington. So we just stayed there. We had missed our convoy. So we stayed there for six days, below zero weather, waiting the next convoy. Awaiting it - yes, the next convoy.

LB: Where were you housed during that time?

CH: In the boat. When the next convoy came along, we went out and joined it. It took us 16 days to get to Liverpool. We lost only one boat to submarines. In general, that's the quick story of our arrival in Europe.

LB: I see. How long were you in Liverpool then?

CH: As we came up the Mersey River on Christmas Day, our big ship, the *Tuscania*, was ahead of us and had anchored. That was her last trip. She was lost on the next trip. As we passed her, it was a marvelous sight to see 5,000 troops singing, "Goodbye Broadway, Hello France." Bands fore and aft, band leaders in the middle of the ship. We pulled on up farther and lighters took us ashore. We immediately went into a train and went across England.

It was dark that Christmas night, by the time we got to South Hampton. As we marched through South Hampton from the yard to a park, we saw the people there with their community kitchens. The entire populace was being fed from the community kitchens. The only lights they had were blue colored lanterns and everything was dark. We had...

LB: Was that for the air raids?

CH: The air raids, yes.

LB: Blackouts.

CH: We had had another experience crossing England, too. About three o'clock in the afternoon, don't know where it was, again we stopped and English ladies came with tea, cookies, and little bits of fancy sandwiches.

LB: I bet you were grateful for those things.

CH: Those things meant a lot.

LB: I'm sure they did.

CH: Pardon me. We stayed overnight in South Hampton, and the following day, about noon we went down to the quay, and mid-afternoon went on the steamship,

Archangel. There we were fed our sandwich and coffee, but later on, it must have been five o'clock, well before dark, a large number of infantry joined us. I believe it was a battalion of your 162nd Infantry. The boat was absolutely crowded, not room to lie down, majority had to stand to get across to - we were well protected, got across to Le Havre the following morning and there went on up, marched through the town on up to a so-called rest camp.

LB: How long was it until you reached the Front?

CH: [Laughs] It was a long while.

LB: Tell me about what happened in between.

CH: [Laughs] Oh, a long story. There the rest camp was another new experience for us. Marched up this hill to this rest camp, there were about six inches of snow on the ground; a number of tents, but not sufficient tents for all of us. So we were given a number of tents, which we put up, and that was our first experience...

LB: May we pause for a moment? I'm sorry.

[End of Tape 1, Side 1]

Tape 1, Side 2
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CH: Experiences...

LB: You were saying about the rest camp?

CH: Yes. This rest camp; that was our first experience with duckboards. A duckboard is like a ladder, with many cross pieces, oh, probably an inch and a half wide with about a half inch space in between; six feet long. Each fellow was given one of those to put on the snow. Of course, the tent would protect us from the wind at night. It was our first experience trying to roll up into our blankets on a duckboard without rolling off into the snow. It was cold. It was cool.

Also, the British fed us with their rations. Their rations were quite different from what we found out ours to be later on, but their rations were good.

LB: Whose command...

CH: The following morning we woke up and we found we were adjacent to a big barbed-wire barricade about 8 feet high, double barricade, police dogs in-between, guards. We saw fellows inside there were Senegalese with rings through their noses. The British had brought the Senegalese up (I believe it was Britain) from Africa with the agreement that they would serve for one year. At the end of the year, a steamship load of them had been sent back toward their home in Africa, but had been sunk. So Britain didn't dare send the rest back 'cause soon as their relatives got back they would know the loss of the first ship. So they were keeping these other fellows in this barricade here in Le Havre.

We stayed there three days and went by train down to Southern France to Camp de Souge, large artillery camp between Bordeaux and the ocean. There we separated. Two companies remained in de Souge. One company went up to - two companies went

to two other artillery training camps. The object was to train the artillery to work with balloons.

There at de Souge, again, we found we had no equipment. We found nothing had gotten over. In fact, that equipment we left at Omaha, we never saw any of it until mid-July, after a great deal of pressure, much correspondence, we finally did get the five original rolling kitchens, which were a luxury. But there at Bordeaux and the other camps, the French gave us their equipment. And they gave us good equipment, as good equipment as any of their companies had. Transportation had balloons. There were French officers there at de Souge to help us to train. I took no part in it. I did get up a couple of times. But my job was to get the outfits of those two companies equipped. So my days were spent in Bordeaux buying and having made and requisitioning, wherever I could, our needs, so as to get those two companies equipped.

LB: Were you working with American artillery?

CH: Yes, there was all American artillery there at de Souge at that time. Yes.

LB: Under American command?

CH: Under American command, yes, there were. Sorry I do not remember the units. As I said, I had no connection with them. My job was supply, at that time, to get these companies equipped.

LB: What did you say your rank was at that time?

CH: I was First Lieutenant throughout 'til May 19th, 1919. Luck was with me in getting equipment, of course, with the help of the French. They were marvelous. I'd had three years of French in high school which gave me a basis. I bought a dictionary about an inch and a quarter thick, and with the help of my little French and the dictionary and most cooperative French Army men and civilians, I was able to get our needs. So, by

February 20th, our commanding officer was able to report that we were prepared. And the French officers also sent the word out. So February 25th, I was sent up ahead of the outfit to build a balloon supply depot at Colombey-les-Belles to take care of the balloon companies when they would come up onto the line. Now, that answers your question as to when I first got up to the line. February 25th.

LB: How was your balloon corps organized? How many men were in a unit and what kind of jobs did they have and can you describe the operation?

CH: [Laughs] You ask - no I couldn't in under an hour. First, you asked how we were organized. In the U.S.A. [United States of America] they had a set up with four squadrons, four companies to a squadron, 'cause all they were thinking was Heavier than Air. Soon as we got on the other side, we found that a balloon company was an independent unit. Therefore, our numbers and names were changed. Companies A, B, C, and D were mainly changed to Companies 1, 2, 3, and 4. From there on companies were given consecutive numbers.

A balloon company was an independent unit. We were mobile units; we were under orders, of course, from the chief of air service of the Army. Particular units, that wanted our service especially, would have to ask through the chief's office and then we would be assigned or transferred. Sometimes we were divisional balloon, sometimes corps, sometimes Army. A company was made up of 174 men and about 10 officers and observers.

LB: What kind of equipment did you use in...

CH: We used French equipment entirely. We never saw anything come from the United States which was practical. The French gave us their equipment.

LB: Okay. So that would include a balloon...

CH: That included everything...

LB: Telephone.

CH: Glad you spoke of that. As far as the balloon equipment was concerned and its winch truck, to which it was anchored, and the tender, we had just ordinary standard trucks and three to carry the men and supplies and also three motorcycles. Now, you asked a question.

LB: The telephone?

CH: Oh, telephone equipment we originally had was French, but we were very fortunate. Before the companies actually got to the Front, we were able to obtain U.S. [United States] Signal Corps field telephones. And by the time the 1st and 4th Companies got on the line we were able to exchange their French equipment with U.S. equipment. And so that was the one type of equipment which we were very thankful for, which we had throughout. For machine guns, we had British; Hotchkiss.

As far as the organization of a balloon company, it's something I could take a long while to describe. We were highly organized into several details. Our men were the above average type of men. I've got to put this in.

Practically all the men, the enlisted men of the first four companies, first eight companies, were men who had volunteered to get into Aviation. They were men who hoped to become pilots. They'd been sent down to Texas, some 15,000 arrived down there and they couldn't begin to handle them, so they had this surplus. Of that surplus, 2,000 were sent up to Fort Omaha to the balloon section. They went out of their way to choose men of 178 pounds and over, because they figured they were a little heavy for airplanes, but they were excellent for us, because our maneuvering detail, who held the ropes on the balloon, needed men of weight. And so, I'd say, we had a very intelligent group of men.

LB: Can you tell me when...

CH: The majority generally had more than two years of college. Pardon me, what?

LB: Can you explain what the balloon what looked like physically? And perhaps...

CH: What it looked like is what the French called *la saucisse*, meaning sausage. It was just a streamlined sausage, in effect. It was 92 feet long, 26 feet in diameter. Contained hydrogen, sufficient capacity to lift men in the basket and then - that's alright. To lift men in the basket and to lift the steel cable, which tied us to the ground. It was a 3/8 inch steel cable. The weight of that cable was such that the lift of the balloon could carry us to a height of between 3,400 and 3,600 feet. That difference varied according to the speed of the wind and the heat of the warmth of the sun.

LB: Can you tell me how these balloons aided the war effort? I've read that the balloons were called the Eyes of the Artillery, and they were important to the war effort.

CH: We were actually the Eyes of the Army, because it wasn't all artillery. As far as the Eyes were concerned, yes, it so worked out that their experience with the first four companies was such that G.H.Q. [General Headquarters] cabled for 200 more balloon companies to the United States. That cable, we were told, went through in the latter part of June.

As far as we were concerned, the observer in the basket just covered almost everything. He was busy every second. With good visibility, he could see a great deal. And general surveillance was first, and that was any reporting any movements of trucks, truck trains, railroad trains, any artillery gun flashes from spots where we didn't know - didn't already have a German battery located. And also, we'd our special requests from

G2 Intelligence¹ asking us to look for a certain particular item, and we could report on that. As far as our visibility's concerned, we could not see much beyond eight to nine kilometers behind the lines. Beyond that, Heavier than Air took care of it. Furthermore, we could not see behind hills. We were defiladed there. There again, Heavier than Air with their photographs took care of that.

Basically, our work was artillery regulation and that regulation was also primarily with the 155 millimeter guns. Both the Howitzer, the shorts and the rifles. We did some with the 75 millimeter guns and barrage. When there was to be a raid or an advance, the 75s gave a barrage. It was our duty to - we had to know ahead of time the details of that raid, of that advance. The time, the goals, and also general types of signals they would give, because when they would reach certain locations they would need to light a smoke pot, sending up smoke, or they would use a Very pistol which is like a Roman Candle.

That Very pistol had three different colors, yellow, red and green - or blue, sort of a blue. And the sequence and the time between those colored signals meant different things to them. We had to know about what they were taught to look for, so they would tell us ahead.

LB: Did you have any...

CH: And it was our duty to, on a barrage - pardon me, just a second. On a barrage, all we did was what was reported breaks in the curtain of fire. In other words, if the fire was not uniform, we had to tell 'em where it was not uniform, so they would move the guns and fill in that space. Also, wherever we would see a smoke pot or a signal, we had to immediately report because that showed the infantry had reached those points and our artillery had to raise so they would be over the heads of the artillery. Pardon me, you had a question.

¹ Military intelligence staff of a unit in the United States Army.

LB: Did you have a briefing before you went into these battles with the ground unit?

CH: On things like something such as that, yes, they would telephone us and we would get orders from G2 to where we had to go to it. Rarely was that done over telephone. Our telephone wires were tapped, very, very frequently. But we would.

Now, also, as far as preparedness was concerned on our regulation of the 155 guns, we tried, if possible, to plan that ahead of time. And if so, then the observer would go out to - our motorcycle would take us pretty close to them, and we would go there to the battery, and with the battery, we'd discuss the target, we would discuss the type of shell they would use, the shrapnel or [incendiary] or contact or deep penetration. Would discuss whether there were going to be signal guns fired or our salvo, those fire two to four guns simultaneously. And also set the time where it would take place. Also, if an emergency came in during the fire, we had to break it off either side, how we would get back together again.

And, in general, the observer would get back and get in the air, the time would come, our people in our chart room and our telephone exchanges would hook, connect us through to that battery. And, that battery, men with the battery would report to the observer, say either, "battery fired," and according to the type of shell, we knew the time the flight. We'd set the - we had four 1/10th second stopwatches. We'd set our first stopwatch and watch that, keep an eye on that. Of course, there were things we had to watch in between times, too, because somewhere around 14 seconds, frequently, we'd watch the stopwatches moving up toward there. Then we'd look for the target.

The basket, of course, is swinging back and forth. Also, the balloon itself, just like any kite, is climbing and diving, and so it took a few moments to get our eye on the target. We'd seen it beforehand, judged ahead of time the distances right and left, over and back, of known objects, which would be seen on the map, their map, as well as our map, which were together. Incidentally, we also had - We'd synchronized our watches; first thing we did when we were connected by telephone. And then they give us and

they tell us “gunfire” and so that we knew then, either 13 or 15 seconds after that, we could expect a burst at about where expected.

LB: How many observers in the basket?

CH: One observer. There was only room for one. You had your maps; you had more than you could take care of. You had to be free, to turn, move every way.

LB: What other equipment did you have?

CH: Maps. We had to have a binoculars, but they were not valuable because of the movement of the basket. Just couldn't do it.

LB: You mentioned stereoscope pictures.

CH: That was the Heavier Than Air. That's a little different.

First, just a minute on this other, as we would see the burst, we would report to the battery the location of the burst relative to target. Their field of fire, of course, is a long ellipse. Let's say, for instance, that for the first shell was 80 over 20 right. That's meters, everything's in meters. 80 over 20 right. Then they knew it: that gun had to be brought closer and a little to the left, so the gun setter would correct his gun accordingly. And then they'd fire again, and again we would give them the figures. And we'd repeat that and bring the gun closer to target until, so far as we could see it, they had target.

Now you asked about the stereo. On important targets we'd want to know, did we destroy the target? And so, at important times, we would ask Heavier than Air observation squadron to get us the picture. By stereo pictures meant that they flew about 5,000 meters, usually, altitude and they would take two successive pictures of the same object. Two successive pictures gave an angle which gave a stereoscopic effect, which meant, as any camera flies over the gun, it would see through that. Those

pictures of theirs were very, very valuable and from those pictures we would constantly - and also pictures of trenches and so forth they sent a batch of every day and we corrected our firing maps accordingly. Firing maps had to be absolutely accurate. Our maps covered every installation back beyond the German third lines.

LB: How far away were you from the Front?

CH: It varied. Our balloon bed, our base, had to be just beyond the range of the German 150 rifles. And, so then the winch let the balloon up, then we could move forward. As we moved forward, it then depended on the location entirely, where the winch could find a spot to work from. We usually moved up about two kilometers, and that would be, oh gee, I'd say, probably, five kilometers back of the actual, of the line. The line varied, of course; some places the trenches were only four to five shell holes, were only 50 meters apart. Other places, according to the ground conditions, they were as much as, oh, 300 meters apart. And, so I hesitate to say just how close I can measure from you. I have some maps and can measure and telephone you and answer that question and try to take an average of different locations.

LB: What was the ideal place to set up the balloon? Did you have a preference, like either in an open field, or up in a clearing of a forest or was there a place that was safer than another place?

CH: Well, now I will speak about in the fixed position. Most of our war was fixed position. We did not become a war of movement until after [Battle of] Chateau Thierry. At that time we would pre-plan where our winch would be located. There was an assistant maneuvering officer and sergeant would go up on a motorcycle and choose a place. It had to be adjacent to a road. Those trucks were heavy. They weighed nine to 11 tons. And we had to be on firm ground. And soon as they'd pick out a place, adjacent to a road, then they made a call to part of the maneuvering detail to get up there with a tender, which carried the pick axes and the shovels and so forth and they'd get busy

and make a place for us, where we'd go. Sometimes we would use that spot just one day; sometimes we would be at that spot for several weeks.

Was there a spot in the woods? No, we were not in any woods. We were in the open. There had been woods; there were tree stumps, sure. But no, we were in the open. Practically never - I shouldn't say that. The outfit I was with did not operate a winch from any village. The result, of course, was the villages' roofs were all gone, but there were walls, but those things were so accurately located on maps that we wouldn't want to be close to that. We wanted to make them find us if they could. They did. They found us every once in a while, but they - because of that, as I say, in general we were in the open on a road. That did help. The fellows knew the same, they had to do the same; we knew where they were, too. We found where they were.

LB: How mobile was your unit? I mean, how long did it take to pack up and move?

CH: Excellent question! As far as we were concerned, theoretically, we were always - we were under orders to be able to move on 24 hour notice. Actually, we just couldn't do it. We never had enough trucks, far as that's concerned. When we did move, the trucks usually had to make, two trips, or else we would get trucks from the neighboring company would come over and help.

That, as far as moving from Toul to Chateau Thierry and things like that it had to work. We had - our telephone was so important. We just could not move quickly. So every morning our fellows would roll our bed packs, roll our packs, that is, unless they were soaking wet, then we'd just left them out hoping the sun would dry them out some. But, we were rolled up, and in general, we tried - were told to be able to move and get going. But the point is, when we moved it meant, unless we were taking the place of some other balloon, a French balloon, which we did occasionally, or another U.S. balloon, which happened occasionally, too, we'd have to allow for time to get communications set.

Our telephone detail had about 25 cable men. And we'd run anywhere from 15 to 25 kilometers of wire. We had to be connected through an advance exchange, which was usually in a dugout, to the infantry either way and to the 75 millimeter guns. We had to be connected back to our base to the 155 batteries in our neighborhood. We had to be connected back to our own headquarters. We had to be connected to division, corps and army. Usually, we couldn't connect to a neighboring balloon; he was too far away, but frequently we could connect to him either through corps or army. Because of that telephone wire connection, the theory of being able to move in 24 hours was something that West Point also thought of but just didn't work out. We told people, we'd tell people, yes, we're a mobile unit.

Our orders came to us as an independent unit assuming that we could move. The orders would come out, you'd see these big orders would come out to corps, and the corps would list it in its various divisions and so forth telling them just what they should do, but along with these divisions would be the balloon company also. And the final move was just to move up to the Rhine, it was another story, because that was the Armistice and you had nothing out, that – sure. You got your orders, and you could move overnight. But, in general, I will repeat, we were mobile units.

[End of Tape 1, Side 2]

Tape 2, Side 1
1979 December 5

CH: What I've been saying, is from my experience with the Fourth Balloon Company as Observer. Every company had different experience. Observers had different experiences, many of them much sharper than mine. Almost every day conditions changed some, but what I'm speaking of was experience in a generally quiet sector, the so-called Toul Sector, the original U.S. sector. As an observer, I was fortunate in obtaining 25 proven *réglages*, the requirement of G.H.Q. to give me a rating as Balloon Observer. Later on G.H.Q. gave me a rating of Reserve Military Aeronaut, which was automatic to an observer who'd had three months' experience as observer. Also, later I became the Company Commander of the 13th.

I guess, now, let's change, let's go back to your questions.

LB: What I would like to know, you said it was relatively quiet sector in the war, but I was wondering what battles you might have participated in?

CH: As far as battles were concerned, I was not in any real battle. The Toul Sector as such, was one side of the Saint Mihiel salient. We were directly in front of Montsec. We had the Battle of Apremont, it was about April 19th, and the Battle of Seicheprey, that was early May. I don't recall the other actions really labeled as Battles. There was the Million Dollar Raid and there were other actions at that time. We started with the First Division and carried on with the 26th Division and then the 82nd Division.

After that I was sent back to the S.O.S. [Services of Supply] as a winch instructor and got free from that, and then they sent me up to meet the 13th Company coming from the United States; to train them at Camp Coetquidan, artillery camp, in and bring them up to the Line. That was the end of my active experience.

LB: Was your unit ever in any danger?

CH: Yes, the Fourth Company men were always in danger. They - hard to say. In other words, when we were working, the men on the ground were always open to artillery fire, German 150 shells and occasionally gas. There was a number of our men went back to hospital. Well, I guess our closest escape was back of [Brussey-Raulecourt, France]. We found the, we saw the winch was bracketed after having [been] pulled down once, and so we knew we immediately had to move and we moved as far as we could.

Overhead wires became too frequent. So we had to pull down and tie the balloon down; which the men did, did as quickly as experience taught them to do, anchored her; the trucks got out of the way, the men got out of the way in every direction. Unfortunately, a section of the 101st engineers was in the remains of a wood right nearby and they were curious; they didn't see our men vanishing and didn't realize what they were up against. So those men came over to see the balloon on the ground and the next salvo of shells came over and one of them hit the nose of the balloon partially deflating it and, as a result of that salvo, two of the engineers were killed and several were wounded. We did not have a man lost at that point. That was about our closest general experience on the ground. We lost three balloons, they were burned.

LB: I was going to ask about the observer, would he be in any danger up in the balloon by himself?

CH: At that particular time, no. When the winch moved, the fellow in the balloon just moved back with him. While the winch was moving our telephone connection was lost. So we were cut off from our work at that time. I was not in the air at Raulecourt; I was over working with the battery preparing the next day's work. We were out of commission the rest of the day. We had to get a new balloon, the balloon had been damaged. We were out of commission all the rest of the day and part of the day following. We immediately started making another working position.

Actually, we decided we were going to get out of that area entirely, which hadn't been very satisfactory and we were going to move over to a position almost two kilometers east, to a place called L'Hermitage where Second Company had once worked from. And we decided, well, we were going over there and used one of their working positions, already prepared for us. The whole company moved; moved just about, I'd say, two kilometers east and got settled over there a couple days afterward. That was the only, that's the closest experience we had to losing a portion of the company.

LB: What about airplane attacks on the balloons?

CH: That's the duty of the German airplane, to get rid of the balloon. And he did it usually with incendiary bullets. Of course, we were doing ours on the other side, too. And the incendiary bullet contains phosphorus, the phosphorus going into the hydrogen would normally set fire to the hydrogen if there was some oxygen mixed with that. When the balloon was first put up, she was filled with pure hydrogen. If she was first put up then and a German came along with his bullets, every fifth bullet probably was incendiary, two of them were tracers so you could see where the bullets were going, and if he'd come down and fired into a balloon of almost pure hydrogen, it did not catch fire, just holes in the bag, which our riggers would find at night and repair.

However, because of the permeability of the fabric, hydrogen did escape, and naturally, the suction drew in air through the fabric below and hence air with its oxygen came in and became mixed with the hydrogen. And with that mixture, that mixture did burn rapidly as soon as incendiary bullets hit it. The bullet would hit it, looking at it you first would see a trace of a blue flame just around the bag. That was the hydrogen leak coming out and burning. Coming out through the hole and burning. That flame very quickly would catch the fabric. That fabric was cotton fabric, rubber coated. As soon as the fabric would catch, then it immediately opened a big hole and very quickly, the entire fabric would burn. The weight of the cable would immediately pull everything toward earth.

As far as the German airplanes were concerned, the observer in the basket was busy. It was not his duty and he didn't see the German airplane. I never saw a German airplane while I was working, except a couple of times while I was being pulled down.

On the ground, around the winch, in a circle, we had our lookouts. The lookouts were on duty, each man watching their section of the sky; those men were conscientious and very careful. They watched their section of the sky, if they'd see a German airplane go into a cloud at a distance, they were watching the direction of the clouds, of course, they knew that was the clouds were going to come over us, they'd tell the other fellows and they would watch that particular cloud especially. Also they had to keep an eye on down low because, most frequently, did the Germans would come in low and then come up under the balloon. Because that way they could come over the infantry so fast, the infantry didn't have time to get their guns on it and they wouldn't be seen until they were very close to us. And then they'd come up to us.

Also, they had - the other thing we had to watch and that was when the fellow come over from above. And when he come over from above, the lookouts warn, "Watch out, a plane coming down." "Watch out, get ready." The lookouts would warn our telephone man on our winch truck and he would break in and pass the word of our maneuvering officer up to the observer, "Get ready." And the balloon would immediately be pulled down. Sometimes the German airplane would move off for one reason or another, he wouldn't even come near the balloon, but he fooled us nevertheless and the bag had to be pulled down. The bag was not pulled down below 1,000 feet, the reason being that we had to allow that distance for the parachute to be sure to open.

But down to 1,000 feet was pretty close to the ground and when she was close to the ground the Germans would know that our bag was just about over our winch. We did the same, of course. Two fellows would get a bearing on the balloon then and getting that bearing, they would know where the winch was. So, they'd immediately get their guns onto the winch. Also, just at that time, a second airplane would come along,

cooperating with the first. He was watching, he'd seen the balloon pulled down because the first fellow coming in had forced us down and he'd come in over the ground and he would have us down low and with being down low, our machine guns dare not fire when he was close because of our fellow coming down through with his parachute and so on. And so, with this double teaming, they did get us occasionally.

LB: What did the observer do when the balloon caught on fire?

CH: Hopefully, he was away from the bag by the time it actually caught. All he did was just one thing and that is get out of the basket. He looked first. He already - he should have been warned. We had a couple times the fella, the observer, didn't get a warning, but he should have been warned and should have been ready. All he did was go out over the side of the basket in the same position where his parachute rope came in. He had to go out over his parachute; carry with him, all of his maps. He had nothing else to do. You are tied by your back and you just dropped until the parachute rope reached its end and pulls the parachute out of its container and the parachute floats you down to the ground. Coming toward ground, you would swing your arms out, trying to turn so that the moment you hit ground, you would be facing forward. Of course, you're moving along with the speed of the ground wind and sometimes that was pretty harsh. And there was a lot of barbed wire around there too, but, all the observer could do, would be to try to land facing forward.

I was careless, made the mistake, I don't know how, I just didn't judge right, so the moment I hit, I hit facing backward. Of course, I took a back somersault and came up running, and with my knife I was able to cut my parachute rope immediately. And, of course, as soon as the parachute rope is cut, the parachute just drops to the ground. It doesn't pull you at all.

LB: Were you injured?

CH: Not at all.

LB: Were you ever injured?

CH: No. Never. I was - change that. I was injured, but that had nothing to do with the air. That was in lifting a balloon which got away from us in Omaha.

LB: How was the morale in your balloon...

CH: Marvelous. Always. Let's say they were all men who volunteered, a high type men. The large majority that had more than two years of college. They wanted to get the war over with. That was their job. Whatever their duty was, whether they were on the maneuvering detail pulling the ropes or whether in the telephone detail or whether in the transportation detail or whether in the chart room, the men who kept the records, made the maps or whatever the detail was, the men were conscientious, and we never had any trouble whatever. They were on the job.

It was disheartening at times. The weather, the rain and so forth, was disheartening, as far as that's concerned, the mud and so forth. There was many weeks when we didn't take our clothes off day or night, but, I don't know. The Lord made us so that we could take those things.

LB: How long were you in the balloon corps altogether?

CH: Two and a half years.

LB: What happened when the Armistice was signed?

CH: I can only report on myself. I was in command of the 13th Company. Our train was - I had sealed orders to report to the Chief Air Service, Second Army. I knew nothing beyond that. We were going along through fairly open country and we saw steam coming from a little village out there, from a little plant. We couldn't imagine

wasting steam like that. It was about two o'clock in the afternoon on November 11th. The train stopped and our woman conductor came running back, "*Le guerre fini, le guerre fini!*" Then we realized that it was a jelly factory over there in the town and they were just letting off steam. Then we could see the inhabitants. They were all out celebrating.

We'd been on the train with, as I said, sealed orders. That night we had quite a celebration, but we continued on the train 'til we got to Toul two days later, and there we learned that we had been scheduled to go on through Northern Italy to the new Eastern Front, which had been opened November 7th, after the Austrians and Italians had given up.

LB: What did you do then?

CH: What did we do? Well, we continued - at Toul where we reported to the Chief's office. Major Jouett welcomed me to his office. As soon as the train stopped, I left the men on the train, and I ran up there, I knew where his office was, and I came in, [Major Jouett said] "Hayward, what are you doing here?" I said here are my orders. Where do I go? [He said] "What? We don't anything about it. What do you mean you have orders?" Here you are, here are my orders. I want to know what our orders are. [He said] "We haven't any orders for you. Don't you know the war is over? Everything is stopped. We got nothing here at all for you."

So that was the end as far as we were concerned. What actually happened was, [Major Jouett] telephoned out to two companies on the Line there, they sent in trucks, took us out of the railroad yards and we had no transportation equipment at all. We'd been told to leave all of that. Later on we learned that at Camp Le Valdahon, at the French border, our transportation equipment was waiting for us. So there we were with nothing, no transportation equipment. But two Companies, 69th and 26th Companies, took us up to the Line where they were and between them there were a number of vacant buildings that had been occupied by Germans. Incidentally, there was a German

camp in there, which I had fired on. I'd seen their breakfast smoke a couple of times and I sent shrapnel in there and seen the smoke instantly stop.

We moved in there and about 10 o'clock the night of the 15th, a motorcycle dispatch came with orders telling us to move the following morning. The Army would advance and told us our position in line, in column, indicating we probably wouldn't move until two o'clock that afternoon, going forward following the retreat of the German Army. All I could do was, I had to endorse that order, then reporting that 13th Company could not move. We had no transportation, whatsoever. We would have to remain there until we could get some and just as soon as we could get some we would report accordingly and move. The other outfits moved out and left us on the Line. We stayed there in the mud and rain 'til the 17th of January before we could get enough equipment to move forward to our position up on the Rhine.

LB: Goodness. And how long were you on the Rhine?

CH: We were on the Rhine until three days after Germany accepted the terms of the Armistice. May 23rd.

LB: Were you working in the balloon company then?

CH: Oh yes. Sure, we had the right flank. We were the furthest town up the Rhine at the American bridgehead. The whole Army was there, poised, ready to go, if Germany did not accept the terms. As I say, we were covering the right flank. Another company was down at Sinzig [Germany] covering the left flank and there were three companies at Fort Ehrenbreitstein, in the middle covering the middle of the Army. We were ready, we had our bag in the air; we were well settled in the beautiful little town of Rhens. A dandy little town.

On May 23rd, we got our orders, oh, May 22nd we got our orders to move, that's right. We moved on May 23rd moved back to the S.O.S., moved back to Colombey-

les-Belles, the First Air Depot, and thence by train down to Marseilles and then back to the U.S. We left France, May 30th.

LB: Where were you discharged then?

CH: I couldn't get my discharge because my Company had been chosen to be a Regular Army unit. We were demobilized at Hazelhurst Field, Long Island. Before demobilization, we had partial responsibility for the ZR-2, which came in from England, the big British dirigible. We were responsible for the starboard rear, to help take care of her there for the week she was there. Five days she was there. Then the Company was demobilized, but because the Company was to continue in the Regular service, I had to take the Company records onto Ross Field, Arcadia, California, and that was to be the station of the 13th Balloon Company. I had to stay there with the papers and it was a skeleton organization until regular Army officers were assigned, that freed me. I finally got my discharge, October 9, 1919.

[End of Tape 2, Side 1]
[End of Interview]