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Ladies and gentlemen, members of the American Helicopter Society, and guests. This is our second annual banquet, and the Society welcomes you.

We hope you are having fun. That is primarily why we meet like this every year, so that we may get together

**THE AMERICAN HELICOPTER SOCIETY,
INC.**

This is not in the strictest sense a technical society but rather a general society interested in rotary wing flying, where one may come and rub elbows with those who know and also those who think they know.

This organization does not belong solely to the so-called long-haired group and as I look over the speakers' table, I don't see too many long hairs. (Laughter)

So, those of you who are not members of this Society may feel free to join us, if you wish. We are very happy

**Hotel Ambassador
New York, N.Y.**

December 7, 1945.

to have you.

The Society is now in its third year and from

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The Society is now in its third year and from

a handful of men who felt that the Helicopters should have its own society, we have grown to an organization of well over three hundred members in this short time.

We boast of a membership that reaches from the British Isles to Australia, and our membership is growing every day.

To meet this growth, we must set up an organization, an operating organization, that will be able to give the proper service; we must have a central office, a library and a permanent home where members can meet. This is being worked on and you will hear more about it from the subsequent speakers.

The growth of this organization was not wholly spontaneous for behind the scenes there are usually a few individuals who have done the hard, specialized work. Our success to date is largely due to the work of one man, our present secretary, a man who has served in this capacity since the beginning. He not only handles all the greater share of the details but he took full financial responsibility for the forming of this Society.

I don't know whether you know it or not but in the State of Connecticut where we are incorporated the

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society has no standing so one particular individual has to take that responsibility. I refer, of course, to Ray Coates who doesn't happen to be with us tonight. (Applause) His absence, however, is a happy one, for after many years, that biological phenomenon finally caught up with him (Laughter) and he is now the proud father of a six pound ten ounce girl. Tonight he is at home enjoying a new kind of banquet.

We are faced with an expanded financial program necessitated by our rapid growth and we are most fortunate in having as our treasurer a man fully qualified to meet this challenge. In addition to this, he happens to be chairman of the banquet committee. I don't know why I say banquet committee particularly since he is the whole committee. The entire evening's program was handled by him and if it is a success at all, it all belongs to him.

The financial program with which he is faced is one with which I dare not attempt to explain for he is far better qualified to do so than I am, and without further ado, I give you the chairman of the banquet committee and our treasurer, Mr. Vernon Short. Take over, Vern. (Applause)

MR. SHORT: I had this all engineered tonight to sit out there with you people. I stopped in to see Andy

and he said, "You know, I am introducing you at the banquet," so here I am.

When I look around I wonder how many of you wish there had been some other chairman on this job, but you look pretty well satisfied.

This program for financial development of the Society which Andy has been talking about is something we really have got to get behind. I am out to raise \$100,000 this year for the American Helicopter Society, (Applause) and that is peanuts.

In the last three or four years, those of you here who represent industry have thrown away more than that on foolish expenditures. (Laughter)

Really, in all seriousness, we have sent out letters as a sort of a feeler, to some five or six hundred people who should be interested in helicopters and their development. We know you are not going to get them tomorrow, even though people seem to think you are. We know that it is a long road before there will be a large competitive field but we think that the helicopter society should be a medium to help the man in the shop, the man at the drafting board and the man who is out trying to sell that heli-

copter to know what he is talking about, and very few of us do. other than Mr. Sikovsky.

As an exchange medium, we feel that the companies employing our members should be willing to support us the same as they support other organizations from which their employees derive benefits.

I sincerely hope that you will enjoy yourselves this evening and it is my extreme pleasure to introduce the Toastmaster, Casey Jones, and nothing else needs to be said. (Applause).

MR. JONES: Members of the Auto-gyro Society (Laughter), pardon me, the Rotary Wing -- I am sorry. What I am doing here, with all these whirling twerlies, is more than I know. Here I am, a pilot of long and conservative standing, and now being involved in anything like this is more than I can understand. Furthermore, I have right off the bat a very interesting announcement to make, and that is that tonight there was organized here a new organization which is going to be known as the Twirling Birds; in order to become a member of this organization you must have soloed in controlled flight in a helicopter prior to V-J day. The only trouble with that is the thing is going to die out

after a while, and the first president of this organization is none other than Mr. Sikorsky.

I am not going to call on Mr. Sikorsky but I thought you would be interested in that organization.

I had a bad experience coming down here tonight. I started down the street up here and I ran into a lot of guys with black ties and I followed them, and I found myself in the Waldorf. I was a little bit scared and then they said that was the National Association of Manufacturers, or something like that. I had just gotten the wrong hotel.

As a matter of fact, this whole thing reminds me of a story I heard about this pilot that came in out here at LaGuardia Field. He radioed the tower and he said, "Pilot to Tower, Pilot to Tower. Over the field. Have five minutes of gas. Please give me landing instructions. Over." The answer came back, "Tower to Pilot, Tower to Pilot. Field solid with fog. Cannot land." Silence for a few minutes. Then it came on again, "Pilot to Tower, Pilot to Tower. Over the field. Have two minutes of gas. Please give me landing instructions. Over." "Tower to pilot, Tower to pilot. Field still solid with fog. You cannot land." A few more minutes passed and then again, "Pilot to Tower, Pilot to

Tower. Gas gauge registers zero. Please give me instructions."

"Tower to pilot, tower to pilot. 'Our Father who art in Heaven.....'" (Laughter)

That is the situation I am in here tonight. (Laughter)

Now, before we go any further, I have been requested that Mr. Paul Thomas from Philadelphia has an important announcement to make and because of the fact that he wants to get away a little bit early, Paul, I will call on you right now if you want to make your announcement.

MR. THOMAS: I just wanted to say that the Second Annual Helicopter Forum in Philadelphia will be held on March 21 and 22. Some of you were undoubtedly down there last year and enjoyed it. I know we, in Philadelphia, thought we had a pretty grand time aside from the fact that we had to crowd a lot of activity into a very short time.

This year we are going to hold a two-day session which will be devoted to engineering questions and economic matters concerning the helicopter. You will hear more about it in formal announcements later but try and keep March 21st and 22nd open.

The meeting will be held at the Werrick Hotel

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and the Franklin Institute, and we have an interesting program planned. Thank you. (Applause)

MR. JONES: Thank you, Paul. You will be relieved to know that there are going to be no speeches tonight. Mr. Short tells me that it is customary here and I think that is probably the best thing I have heard in dinners in years.

However, I am going to introduce the people at the speakers' table and I am going to ask them just to get up and take a hand and then sit down.

On the extreme right is a gentleman whom I have known for many years and who is familiar to many of you, Reggie Brie, the Wing Commander of the R.A.F., now in civilian uniform and now associated with my old friend, the Sperry Company from England. (Applause)

This good looking gentleman next to him is known to most of you but, in case you don't know him, it is Dick Pruitt from Callet, Philadelphia. (Applause). I have never introduced a gentleman but I have to say something about him and, incidentally, we have got a very interesting story on this next gentleman. He was the military advisor on the Truman Committee. I don't know what that means but

what is more interesting is this: He ran into your old friend, Commander Erickson out here, and the Commander wanted to make somebody a guinea pig and he couldn't think of anybody better to try on than a gentleman who is right smart close to sixty who has never flown at all so he practised out on a gentleman who, without any previous experience, soloed the helicopter under eight hours. It gives me great pleasure to introduce General Low. (Applause)

He said he didn't solo but I don't believe it. (Laughter) He flew it. Well, that is enough.

The next gentleman is also very well known in these circles. He has started off with models. I have seen some of the stuff he has had up at Buffalo and he has been one of the fellows developing the Bell Helicopter, Art Young of Bell Aircraft. (Applause)

You don't need to hear about this fellow on my right. On my left here, there is another gentleman who has been long associated with this business, the past president of this Society, Less Morris of Bendix and Sikorsky, I don't know which. (Laughter) I wish somebody would make up my mind.

Another great friend of the Rotary Field, a fellow

who has done a great deal of experimental work and pioneering work, done a marvelous job with the Coast Guard, Commander Frank Erickson. (Applause) (Cheering)

The next gentleman, like myself, is one of the long-haired men mentioned by our Chairman, (Laughter) who certainly needs no introduction to anybody in the United States, Europe or Russia, or what not, Igor Sikorsky, (Applause and cheering) now President of the Twirling Birds, don't forget that. I don't think they got that in there from the hair down.

The next gentleman, they tell me, heads the Rotary Wing Desk, whatever that is, I know there is a lot of stuff that moves around in there in Washington, the Bureau of Aeronautics. Anyway, he heads the Rotary Wing Desk of the Bureau of Aeronautics, Commander Doll. (Applause)

The next gentleman is the general manager of the Helicopter Division of the Bell Company, Dave Foreman. (Applause)

And the last, but not least, your hard-working treasurer, the fellow that certainly has done a marvelous job getting up this dinner, Mr. V. R. Short. (Applause)

Now, we are not going on much longer. If you

can keep quiet down there for just a couple of minutes, I am going to let you get out and you can get all the drinks you want.

Of course, you understand tonight that my style is somewhat cramped. I didn't realize there were going to be ladies at this party. I was also greatly shocked to find out tonight and I inquired around if there had been a woman in the United States that had soloed a helicopter, and as near as I can find out from all these experts up at this table, there has been no woman that has soloed a helicopter.

It reminds me of the story about the couple that was holding their Thanksgiving dinner. There was the old man and his wife, and the three sons, and their married daughter, and they all gathered around the Thanksgiving table and the old man, looking around, said, "This is fine having you all here together." He said, "I sort of regret the absence of grandchildren." So, he said, "I have decided that I will offer \$50,000 to the first grandchild to grace our board." He said, "Now, let us pray," and when he looked up, they had all gone. (Laughter)

It doesn't make any difference who is the second

woman to fly the channel but there is going to be some honor for the first woman to fly a helicopter, so I expect all the boys are just going to be beseeched next morning by a bunch of these nice ladies that are here tonight and will want to come out and get in the parade.

Now, there are a lot of people out in the audience who, I think, will be interested in at least having a look at the first one.

I see a white haired fellow that has turned from an old buzzard into a humming bird, Frank Cuffyn, who has got license number 3. For some reason that I have never been able to find out, Philadelphia has always been a hotbed for this funny business that is going around and one of the old veterans is Bert Wilford, and I think Bert ought to get up and we will take a look at him.

You know, gentleman, I don't know quite why he is here tonight. He is a little like myself. He is sort of interested in other things but, like myself, he is generally interested in something new, Elmer Sperry. Elmer, where are you? (Applause)

And then down here to the right, we have a gentleman who has caused a good deal of sensation by his large-load-

carrying helicopter which I had the pleasure of seeing down in the Philadelphia area, Frank Piaseki (Applause), and somewhere down there with him ought to be his chief engineer, Elliott Daland. Elliott, where are you? (Applause)

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Jumped off Boy, that takes me back many long years when he used to make the best dusting machines you ever saw in his life (Laughter).

by. Then, They have also told me that somewhere in the audience there are the two gentlemen who got their names in the paper the other day by rescuing some people off the barge off here at Penfield Reef, Jimmy Veener and Captain Bieghle. Are they here somewhere? (Applause)

Company. The next gentleman I am going to introduce is an old friend of mine of long standing. He used to be out at Wright Field years ago when I was there and he was associated with many of my dear friends in the Air Corps. Many of you remember Major Hutchinson. He always used to have a faculty of getting into trouble and this fellow reminded me tonight about the test flight he was on at Wright Field a good many years ago when they were testing this bomber and all of a sudden there was an explosion and it blew the top out of the machine, it caught fire and so they finally had

to get out. This boy started to drop off the side of the plane and he went out on one side and his parachute went to the other, which was somewhat embarrassing. Finally, he shimmied his way back and, finally, he got it on and jumped off and let out a sigh of relief. Then, he looked up and the airplane was still there circling, coming right back at him. He slipped his chute this way and then it went by. Then, just to make it more interesting, the ship was loaded with machine guns and they started to go off and altogether it was a nice afternoon.

You can see why he went into this quite business of helicopters and so forth, Paul Stanley with the Pitcairn Company. (Applause)

When I came here tonight I saw a couple of gentlemen come in and I knew this business was going somewhere with Burnelli who has been fooling around with this business so long, it is funny, (Applause) Vince Burnelli. Vince has been fooling around for a long time with that big wind; maybe, he will get a rotary to help him.

Now, somebody said that Lawrence Le Page is here. I haven't seen him but, if he is, I want to look at him.

Are you here? (no response.) Out at the bar? Well, I will be with you in just a minute.

Now, I probably have forgotten a lot of people and, if I have, I am sorry, because I know I should introduce you all. In fact, they said they would have had the speakers' table longer, except for the fact that the paying customers sit down there and they had to have plenty of room for this. I think that is about all I have got to say, except I did want to end up with one story I heard Bill ~~St~~ tell the other day which is indicative of the mentality that keeps people in the airplane business and doesn't let them go into the rotary wing.

He told the story about the Notre Dame football game. I am a little bit worried about this fellow in front of me that keeps pounding this stuff off. This is supposed to be off the record but he keeps working on. (Laughter)

Anyway, the Notre Dame football game was supposed to be their big game and suddenly something happened and they said that all the players must take an examination and the professors out there are pretty proud of the Notre Dame team and they realized that some of the fellows worked too hard and they got together and decided that anybody that got by with an average

of fifty per cent would be passed. So, the first fellow went up and he happened to be the guard and they knew he was about the dumbest guy on the team and he had to go up for a chemistry exam. He was in there for about half an hour and he came out and the professors all gathered around. They gathered around the professor and they said, "Well, how did he do?" The professor said, "Well, he didn't do very well but he did get by." "Well, what do you mean by 'He did get by?'" "Well, he got fifty per cent and we just let it through. He just got by. Well, the first question I asked him was, 'What color was red litmus paper?' and he said, 'Blue' and, of course, that was wrong. Then I asked him whether he knew what H₂O was and he said he didn't know, and that was right, and so I passed him." (Laughter)

Now, this is honor night and, of course, it wouldn't do to have an honor night without some honors, so we are going to have some honors and we are going to do that right now. I am going to present, first, Mr. R. J. Anderson, the President, who is going to award the first honor. Mr. Anderson.

MR. ANDERSON: It is unique to be able to speak twice in the same evening. Every year the Society presents

to honorary fellowships to men and women who have made outstanding contributions to the Rotary Wing Field, and it is my privilege to make the presentation of one of these fellowships tonight.

The man who has earned that has done so the real hard way. In engineering development, it is one thing to have the financial resources of large corporations behind you. It is quite another thing to go it alone. The so-called lone wolves in the Rotary Wing Field are few and far between.

Arthur Young started his own research on helicopters down on his farm at Paolin, Pennsylvania, and it was there and all by himself that he worked out his theories and built flying models to prove his points.

He had no engineering organization to help him nor any financial group to pay for the experimentations. It is, therefore, unique that this man has come so far in the helicopter field and it was my privilege in 1939 to attend a Rotary Wing Meeting at Franklin Institute, in Philadelphia, and hear Mr. Young read a paper on his ideas of the helicopter.

Today he can sit back and see the fruits of

his efforts in actual operation and ready for production.

I need not say any more than to mention the Bell Helicopter and to present to you, Arthur Young, this honorary fellowship that you have so justly earned. (Applause.)

MR. YOUNG: Mr. President, members of the American Helicopter Society and guests. I am deeply moved by this honor and the challenge of responsibility which it places upon me. It means a great deal. For many years I have felt that something was needed in the helicopter field and that is fulfilled by the Helicopter Society.

I don't want to have a serious note here but it is our duty to try to get some of this helicopter out of the know-how and into the science, and we have all around us other sciences that have done very well in that respect. I am alluding to things like the atomic bomb and electronics. Helicopters still have had no real science in the way of some thing that is exchanged between fellow members and that role the Helicopter Society is providing and will provide.

It is rather difficult, however, I know by experience. A friend of mind was very anxious to see that some of these helicopters people got together and suggested that some of the Sikorsky engineers had some problems and

they wanted to ask some questions; that was very flattering. I bit and I said, "Fine." And in due course, this friend who probably had to engineer the other end just as hard as I had to engineer mine, and I was all steamed up about these three questions and I kept plying my guests with hints about what were these great questions about the difficulties they had with helicopters and I think the drinks were more effective than the questions but I finally got a result. "Oh, yes", one of these gentlemen said, "yes, we have great problems, great difficulties." And I said, "Yes, yes, go on." "Well, what specifically is your great problem?" "Well, for instance, we have now a terrific problem in going over fifty miles an hour backwards." Well, I really think that problems of the helicopters aren't quite as bad as they are reputed to be.

There are plenty of things that are difficult but I am very optimistic and I think we have a very dazzling future. (Applause)

MR. JONES: The next honorary fellowship will be presented by Mr. C. L. Morris. (Applause)

MR. MORRIS: I have a long speech written out here which I am going to make very short because I know that

the one you really want to hear is the man who is going to receive this thing, so I am going to skim very briefly over his history and just bring back to mind the fact that he started back in 1940 with the United States Coast Guard at Pearl Harbor. While he was over there, he heard something about a new kind of aircraft called a helicopter and he was reading whatever scant information he could pick up on the subject. In the course of his quest, he stumbled onto a guest editorial that Mr. Skirsky had written in Aero Digest. He had his interest fired by the thought that there were many ways in which the helicopter could assist the Coast Guard in life saving missions. Even at that early date, before a truly successful helicopter had even been constructed, certain applications were taking shape in his mind. A year later, the Japs struck at Pearl Harbor and he was too busy to do much about helicopters for a while. But fate arranged for his return to the States a few months later, and one of the first things he did was to journey to Stratford, Connecticut, to see at first hand the object of his fascination. He came, he saw, and it conquered! From that

Shortly thereafter, in fact, within two or three

day in June, 1942, Frank Erickson wedded his own future with the future of the helicopter. He knew it would be a long time before his dreams would come true, but they were worth waiting for, and working for.

During the next year, he laid his plans carefully and well. Time after time, when he brought Naval and Coast Guard officers to the plant, I would put the VS-300 through its paces for the benefit of his guests. Time after time, I would see in his eyes a glint that spoke both pride and envy. But it wasn't until the Spring of 1943 that I had the opportunity to invite him up for his first helicopter ride.

He had seen from the ground what a helicopter would do, but I guess he never really believed it because in that ten or fifteen minute demonstration he reacted as all newcomers do, including even grabbing for a hand-hold when we made a quick stop 100 feet in the air.

But in June of that year, he was one of my first class of eight students on the XR-4. When I soloed him on June 14th, he became the first Naval officer to graduate from a helicopter training program, and perhaps the first Naval or Coast Guard officer ever to pilot a helicopter. This latter statement is subject to confirmation.

Shortly thereafter, in fact, within two or three

weeks, the Coast Guard began to take delivery of YR-4-A's and Frank Erickson's dreams began to materialize. He established the operating unit at Floyd Bennett Field, the first helicopter operational base in the world. And he organized the first helicopter pilot school in the world, which was operated at Floyd Bennett in conjunction with the British.

In anticipation of extensive shipboard operations, he arranged to have a platform built that would roll at about the same angle and speed as the deck of a ship, and all pilots sooner or later gained experience by landing on it.

In January 1944, he piloted the first actual helicopter mercy mission when he flew through freezing snow and strong winds to carry plasma to the survivors of an explosion aboard a destroyer.

Numerous other projects were also undertaken, notably the conversion of the R-6 into a four-place machine, the adaptation of a winch for helicopter use that has already been responsible for saving many lives, and the creation of a special scientific device for training pilots.

His most recent project has been the removal of the R-4 landing gear, permitting greater load and higher

speed. Landing on the rigid skids attached to the fuselage longerons or landing back onto the undercarriage which has remained on the ground, are techniques which he had developed and put into practice.

The YR-4-A on which he first tried out these ideas is old "No. 40." It has appeared in many startling news pictures and movies. It is appropriate to give credit to this steed which has so faithfully served a hard-driving master.

Frank, it is an honor and a great personal pleasure to present to you this certificate of honorary fellowship in the American Helicopter Society in recognition of your outstanding service and leadership in putting the helicopter to practical use for the benefit of mankind. We have a confident expectation that you, being what you are, will continue to bring forth new, valuable and practical applications of the helicopter for a long time to come.

COMMANDER ERICKSON: Thank you! (Applause)

Ladies and Gentlemen, and members of the Helicopter Society, I am very happy to receive and greatly honored, as a matter of fact, to receive this award. It does, however, have its sad side in that the man who made it possible for me to be

here tonight, Captain William J. Kossler, passed away recently. He was to have been here as a guest at this dinner and I am very sorry that it had to be this way.

Air Sea Rescue is a new name for the protection of life and property at sea which has long been one of the most important of the many duties of the Coast Guard. In order to more efficiently perform this duty, the Coast Guard pioneered the development of rescue seaplanes and developed the technique of landing and taking off at sea. So many outstanding rescues were made it became generally accepted that Coast Guard planes could land any place at sea at any time.

This was far from the case because sea conditions greatly limited such operations making it necessary, whenever possible, to take advantage of the lee offered by islands or reefs. At best, landings and take-offs in the open seas during the greater part of the year could hardly be called routine.

Captain Kossler recognized that "Igor's Nightmare", as it was sometimes called in the early days, was the answer to the Coast Guard's Air-Sea Rescue problem for here was an aircraft that could hang motionless over a spot entire-

ly independent of sea conditions. He also believed that the helicopter could contribute in many other ways in the prosecution of the war. Being stationed at Floyd Bennett Field, I was in a position to unofficially assist Captain Kossler by serving in a liaison capacity with the Sikorsky Company. My principle function was to arrange flight demonstrations for any and all visiting officers.

Mr. Sikorsky was more than cooperative in this selling campaign even to the extent of interrupting test schedules for demonstration flights. Rear Admiral Stanley V. Parker, USCG, visited the Sikorsky plant in December, 1942 to meet Mr. Sikorsky and to witness a demonstration flight. His report to the Commandant was a masterpiece and I am sure that it helped to influence Admiral Waesche to pay an early visit to Stratford. He arrived at the Sikorsky plant on the 12th of February, 1943, accompanied by Rear Admirals Donohue and Gorman and several Captains and Commanders from Headquarters. I don't believe it was merely a coincidence that three days later the Chief of Naval Operations directed that the seagoing development of helicopters would be a function of the Coast Guard.

I reported to the Sikorsky plant in April 1943,

for what proved to be a most interesting and important assignment. Eight pilots descended on Les Morris for flight instructions on the original XR-4. They represented the AA Forces, the U. S. Navy, the U.S. Coast Guard, the R.A.F., the Royal Navy, and the Platt LePage Company. How Les managed to instruct all of us and still carry on his flight test program is beyond me as instructing in the XR-4 was very fatiguing.

During this period the ground work was laid for the excellent cooperation which we have had with AAF, the Navy, the NACA, and the CAA. Mr. Sikorsky, Michael Gluharoff, Bob Labonsky, and all the members of the engineering staff helped in many ways to develop our ideas and we are greatly indebted to them for this assistance. I enjoyed most of all the sessions with Vernon Short, Ray Coates, and Les Morris at the Little Restaurant in Stratford when we plotted and fought the "U" Boat war with helicopters. Unfortunately, they were not ready in time to assist in this job.

In the two years that the Coast Guard has operated helicopters, we have concentrated on adapting these aircraft for rescue work. The Vickers Company assisted us in the development of a hydraulic hoist for rescuing personnel from the open sea or inaccessible places ashore. The only heli-

copter available at that time was the Sikorsky HNS (R4) trainer. Its performance was marginal in hovering flight; hence it was necessary to lighten the aircraft as much as possible and to make the operation of the hoist as simple as possible to enable the pilot to fly the aircraft, operate the hoise, and still keep track of the person being hoisted to prevent him from being swung under the aircraft and injured. In the larger helicopters a member of the crew will normally operate the hoist but it will be possible for the pilot to do so if it becomes necessary to lower some one to adjust the pick-up harness on a helpless or injured person.

We soon learned that a quick means of communications with persons either at sea or in inaccessible places ashore was necessary in order to give instructions to those unfamiliar with the hoisting equipment. Recently our medical officer, Lieutenant Commander James L. Baker, was landed on board a vessel to treat several men who had been injured in an explosion. The pilot was unable to give the necessary instructions to the Captain of the vessel to head into the wind and to lower the flag pole and antenna wires which obstructed the deck. Dr. Baker narrowly escaped injury when he fouled the antenna as he was being lowered to the deck.

Further, there was no one stationed on deck to assist the doctor as he landed aboard. The roll of the vessel threw him off his feet preventing him from unhooking quickly. Before the pilot realized that he was not unhooked, he had picked him up again.

As a result of this experience, we have investigated an air borne loud speaker system which makes possible broadcasts of such essential information from flight. Preliminary test runs with a loud speaker mounted on a helicopter at the Bell Laboratories, Murray Hill, New Jersey, indicate that it is more efficient than a like installation on an airplane as the helicopter can hold its position throughout the broadcast, thereby insuring that the entire communication is received without varying the intensity of the signal due to change in distance.

The helicopter can also fly lower and closer to obstructions while making broadcasts and thus make it practical to use low powered light-weight equipment. Bell Laboratories have conducted similar sound tests on many types of aircraft. In the past it has always been necessary to transport the laboratory equipment to the scene of the test. Repeated flight runs had to be made with airplanes to obtain

the required information. However, in the case of the helicopter we were able to fly directly to the sound laboratories and in two hours complete tests which would have required days on any other aircraft. The airborne loud speaker has many applications in addition to the use outlined above, such as, for warning ground personnel to stand clear when landing in congested areas, for directing ship or boat traffic in harbors or in landing operations, for directing vehicular traffic ashore and for hurricane and disaster warning service. If it becomes necessary to relay information from a ship or from an inaccessible spot ashore to a helicopter in flight, it is only necessary to lower a telephone on a cable and carry on a two-way conversation. The telephone feature was demonstrated many times in the early days at the Sikorsky plant. However, I believe that this is the first time that plans have been made to install it as regular equipment.

Considerable flight, navigational and search equipment will be required to increase the effectiveness of the helicopter for rescue purposes. The radar, the flight altitude indicator and a search light for night operations are musts. An automatic direction finder may be required in the larger helicopters. The automatic pilot will become

necessary to relieve pilot strain as the range is increased.

For general Coast Guard rescue duty neither wheel nor float landing gear is entirely satisfactory. Wheels have insufficient holding surface for use aboard ship especially if the decks are wet or icy. They are also unsuited for operations on snow or mud because they will sink with the weight of the aircraft. Floats are excellent for use on snow, ice, mud or smooth water; however, their weight and drag is prohibitive. We have conducted experiments with skid gear on an HNS (R-4) and have found that the speed is increased approximately ten per cent over the wheel landing gear and at least fifteen per cent over the float installations. These skids weigh about one-third that of the regular wheel landing gear and one-fifth that of the floats, hence the hovering performance is also greatly increased.

It is planned that emergency flotation bags will be provided for all-over water operations. These bags folded neatly on top of the skids can be of very light construction, hence the over-all weight of the skids and the emergency flotation can still be kept well under that of the other types of landing gear. The skids will provide ample holding surface for operations aboard ship or for use on ice, snow or

mud. It will be necessary that some shock absorption be built into them, however, part of the landing shock can be taken by a shock absorber aboard ship. Sponge rubber mats were tried at Mr. Sikorsky's suggestion and found to be very satisfactory for this purpose.

The weight saved by using skids will permit the carrying of a large inflatable rubber boat to be used in rescues at sea involving more people than can possibly be picked up at a time by the helicopter. A member of the crew can be lowered in the boat with emergency rations and a first-aid kit. The more urgent cases can be picked for immediate transportation to shore or to the nearest vessel while the crew member is left behind to care for the others until they in turn can be picked up. On the last trip the rubber boat can also be recovered. This type of shuttle service was very ably demonstrated by Lieutenant Stewart Graham, United States Coast Guard last year at the Navy Air Sea Rescue demonstration held off Manasquan, New Jersey, when he completed four such round trips in a HNS trainer in less than ten minutes picking up men from life rafts and landing them aboard the Coast Guard Cutter Cobb.

Helicopters are still relatively short range air-

craft; however, they can be teamed up with other types of transportation to overcome this difficulty. They have on several occasions been transported long distances by transport planes for specific rescue missions. Last May, Lieutenant August Kleisch, United States Coast Guard, rescued nine survivors from a Canadian plane which was forced down in the Laborador wilderness. The mission was accomplished with a Sikorsky HNS trainer which was flown from Floyd Bennett Field to Goose Bay, Laborador, by the Army Air Transport Command. I am very pleased to state that Lieutenant Kleisch has been notified that he is to receive the Distinguished Flying Cross for this outstanding rescue. The range of present day helicopters can be extended almost indefinitely by supplying them on extended missions by parachuting fuel, oil, and food from transport planes which can be picked up, if necessary, by the helicopter in flight using the hoist.

Helicopters can be operated from almost any vessel of 2000 tons or more displacement and will probably be attached to Coast Guard vessels stationed along the transoceanic air routes. These vessels might serve as radio and visual beacons, weather and communications stations, and rescue ships. Helicopter flight operations will be possible from them under

almost any sea condition as the roll can be compensated for by means of a gyro-stabilized platform. In two or three years when large long-range helicopters become available, any point on the overseas airways can be reached within three hours from station ships spaced at intervals of 400 to 500 miles. In case an aircraft is forced down, the nearest station ship can proceed toward the scene, thereby shortening the return flight for the helicopters.

In commercial operations, helicopters will not compete with transport planes because they will normally be used on short hauls not covered by regular plane service. Rather, they will make it possible to extend air transportation to the entire population and thus in the long run increase transport plane volume. The savings in the cost of building and maintaining airports in outlying communities, plus the convenience of service to or near the business districts in the communities, favors the establishment of helicopter feeder services.

I would like to pay tribute to Captain W. J. Kossler, United States Coast Guard, and the Officers and men of the Coast Guard Air Station, Floyd Bennett Field, who worked with me to make possible these achievements. It

was only through Captain Kossler's tireless efforts that the Coast Guard Helicopter Program was initiated and a station provided for the program. He secured my assignment as Commanding Officer of this establishment and backed me to the limit with the training and development programs. With Captain Kossler's support and an efficient organization, it would have been strange if we had not contributed to the furtherance of the helicopters.

It is with great pleasure that I accept this honorary fellowship in the American Helicopter Society and I am especially pleased to receive it from the hand of Mr. Les Morris who not only taught me to fly in the old XR4 but has done so much in helping us set up our training program and assisted with developments. In closing, I would like to introduce the officers and men present from Floyd Bennett Field who made this award possible and who are here at this time, and I would like to ask the various people, as I read off their names, if they are present, to please stand:

Commander Smeder (Applause)

Dr. Baker (Applause)

Stewart Graham, Barney Mazonson, Sammy Constantino, Gersh O'Hara, and some of our enlisted men who contrib-

uted a great deal. I would like to have some of them get up. There is Donald Carroll. I think he is here. (Applause) And one individual who has been very important, Sergi Sikorsky, (applause) Harry Wirkus (applause), Robert Coates, Carl Yanuzzi, Oswald Backman. They are the few that I see here. I don't know if there are any others of that group here but there are a great many others, such as, Bud Fisher, Oliver Berry and Red Lubben and Vicki Simon -- It would take quite a while to name the whole lot but, after all, they are the people that put me up here and thank you so much for all you have done. (Applause)

MR. JONES: Thank you very much, Commander. I like this idea about that loud speaker. I would like to have one on the front of my car when I drive up home tonight. My wife probably will feel better. I have got a couple of letters here, one from Admiral Chalker who was invited to be here, who said that the pressure of business in Washington, D. C., keeps him there, and one from General Powers who has been interested from the Army standpoint saying that he was sorry he couldn't be here but he happened to be in Europe. (Laughter)

I overlooked a couple of people that I think we ought to have a look at. One is a pioneer in a number of

fields, including transoceanic flying and, more lately, in the helicopter field; Martin Johnson with Bendix (Applause).

And another gentleman who has contributed a lot through his instructions to a lot of people interested in this is Alexander Kleeman, and a fellow named Louis who probably tested more than any one of them.

And now, ladies and gentlemen, this brings this part of the program to a close. I have been asked to announce that shortly after this we are going to show some motion pictures in the other room.

I believe the bar is going to be opened and as soon as you get out of here and allow them to clear this table, this bar will be opened and at that time you can adjourn back here and we will be able to go on far into the night. Thank you. (Applause)