THE THREE MUSKETEERS OF THE AIR

THEIR CONQUEST OF THE ATLANTIC FROM EAST TO WEST

BY

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PART I
BY
CAPTAIN HERMANN KOEHL

BOYHOOD-MILITARY TRAINING-WAR--LEARNING TO FLY-WOUNDS AND PROMOTION.

I celebrated my 40th birthday on Greenly Island. My father certainly did not dream of this when I was born in Neu-Ulm, Bavarian Swabia, on April 15th, 1888, the second of eight children.
I spent my early childhood in this small Bavarian town, Neu-Ulm, which forms a part of my home town Ulm, which is built on the soil of Wuerttemberg. There I grew up around the impressive cathedral of Ulm, the magnificence and beauty of which impressed itself upon my soul.
My first school years which I spent in the Elementary School in Neu-Ulm were not a source of happiness either to me or to my father. Nor did things improve when I began to torture myself with Latin verbs in the High School in Ulm. My heart longed for freedom. I was much more disposed, to my teachers' great disapproval, to follow wild bandit and soldier games than to sit still on the forms in school.
When my father, who was then Captain and Battery Commander of the 1st Bavarian Foot Artillery Regiment, was transferred to Muenchen in 1897, I found that the knowledge I had acquired in 'Ulm was not sufficient to justify the Professors of the Ludwig High School in Muenchen in admitting me into the next highest class. I only succeeded in gaining admittance, on trial, in the lower class.
At this slow pace I continued my studies for another few years. Gradually, however, I began to realize how essential a good education was. Then to some extent I forsook my youthful tricks.
At this time I began to long to wear, like my elder brother, the smart uniform of the Bavarian Cadets. Perhaps this was the chief reason why a few weeks before the dreaded entrance examination I forced myself to sit down to acquire the necessary knowledge.
My brother Ludwig, who was killed in the war, was in the same class with me in the Luitpold High School in Muenchen. In our last year in the school an unpleasant fate threatened me—the possibility that I should have to steep my mind a second time in the past year's studies. On the other hand, my brother, who was younger than I, had a strong chance of passing me. The days before and

after the entrance examination were for me real days of ambitious study. I was rewarded. During the first days of our beautiful vacation I was full of fears, but these were dispelled when the news came through that both my brother and I had passed the entrance examination of the Muenchen Cadet Corps (Military School). I was inordinately proud when I learned, moreover, that in the examination results I had come out 9th, whereas my younger and so much more ambitious brother was 21st, the last but one.

How proud I was of my nice blue Cadet uniform, even though I did not often have the opportunity of displaying it on Sundays to my envious friends. I had to spend many Sunday afternoons in the Cadet Corps study rooms, either because my silver buttons were not polished, or because I had failed to show a sufficient understanding of the great irregularity of Latin verbs.

Mathematics and Gymnastics were my favorite subjects; to which in later years I added Drawing. I was rather bad at foreign languages, but managed somehow to pass the danger mark.

I must confess that I was not one of the best behaved or most industrious students. Nevertheless, even today I fail to see the expediency of one of the many punishments I received. I was kept at school for not knowing the irregular Latin verbs. For weeks and weeks I had to recite all these verbs over and over again. I had tried hard, but in vain, during four weeks to obtain by hard study one free Sunday afternoon. Above all, I wished to get off the Sunday that followed the fifth week, because this was the last Sunday that my parents were to spend in Muenchen, before moving to Ingolstadt, to which city my father had been transferred. That week I actually did succeed in escaping the strictures of my Latin Professor, by taking my irregular Latin verbs with me to bed where I recited them night after night.

Each Saturday at noon, when we left the classroom, the list of those permitted Sunday afternoon leave was hung up in the corridor. Possessed by the happy knowledge of my ability, I looked at the official list expecting to read the official acknowledgment of this ability. I was crushed by what I read. Not only was there no notation permitting me to have the Sunday afternoon off, but my name stood at the bottom of those who were to diet on Sunday. And at the call it was read aloud: "Cadet Hermann Koch! is punished with a fortnight's diet and interdiction of leave for continuous misbehavior in connection with the punishment of the last four weeks." I need not emphasize that this kind of pedagogy has remained a thorn in my flesh for the rest of my life. If in later years comrades or superiors considered that I was somewhat too kind and

lenient in the treatment of my subordinates, then this fault of mine must be attributed to the unjust treatment I received, the memory of which remains deeply rooted in my heart.



But all this tended to increase my energy and power of resistance.
I spent my last youthful years in the Colleges of the beautiful towns of Nuernberg and Augsburg. I always recall those times with great pleasure. The much greater freedom I there enjoyed, as compared with the Cadet Corps, was the nicest part of those school years. During all those years, my most fervent desire, naturally, was to become a soldier like my father. And finally when after many many school years the goal seemed close to me, I concentrated all my efforts in an endeavour to finish school definitely. I passed my final examinations in June, 1909. Away from school I joined the Pioneers of Ulm as an ensign.
I was attached to the Pioneer Battalion No. 13 of Wuerttemberg. The first months of training which I and two other privates underwent were not pleasant. We left early in the morning for training, and late at night we dropped exhausted upon our hard soldier's bed and sank into deep sleep. In the morning we were

awakened by the sound of the reveille. I can hardly describe all the toil I went through during this time. We had to drill and carry on gymnastics to such an excessive extent, that 2 or 3 times a day, especially during the hot weather, we looked as if we had been literally dragged out of water. But this hard time only lasted until we became attached to the company, shortly before the maneuvers. Then we escaped the strict surveillance of our sergeant and began to like our soldiers life a little more.

After the maneuvers I was promoted to Corporal, and later to non-commissioned officer. Still later I was transferred to the military school in Hannover.

I returned from the military school in Hannover in the autumn of 1910 and soon afterwards I became Second Lieutenant. My first years as a Second Lieutenant were almost as hard as my months as a private. In order to be able correctly to carry out our company duties we were obliged to learn a fearful lot. The short training period we had had as privates and in the military school was not sufficient to turn us into old experienced soldiers. But we acquired a good deal of knowledge by paying the strictest attention to every detail of our duties. The many technical and tactical tasks required of officers made our lives rather sour. Nevertheless on the whole we were quite happy, and I have delightful memories of many joyful days in our quarters in Ulm, on our sporting grounds, in the barracks and water training camps on the Danube.

After two years' service in the field I was ordered to the Military Technical College in Berlin. There I was to undergo two years' theoretical training after my two years' field training. I saw for the first time Germany's greatest city. Berlin and the College awakened my highest interest. During those years I heard for the first time more exact facts about aviation. My wish to become an aviator was very great. However, I knew that while I was a Pioneer I could not succeed in getting into the Air Service because I knew that I would have to serve at least four full years before the Commander of my Battalion would endorse and forward my application.

The Military Technical College in Berlin provided a two years' training period. At the end of the first year we returned for a short time to our Battalions for field service. From there we went straight to Strassburg for special pontonier drill. Then the world war broke out. We returned, singing roaring war songs, to Ulm. There we were mobilized.

My first contact with our adversaries was in the Vosges. There I underwent my baptism of fire. With my pioneer squad I marched as a rule in the forefront of the division, in order to eliminate all

obstacles which might retard the progress of the march. It often happened that I found myself with my small faithful troup all of a sudden amidst the infantry and took part with great enthusiasm in all the charges at the head of the infantry.



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CAPTAIN HERMANN KOEHL AND BARON GUENTHER VON HUENEFELD

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At such a charge I sustained my first wound. We had rushed far ahead and all of a sudden found ourselves alone with the enemy. After the crossing of a brook, at the "Sprung auf marsch-marsch" (Jump up ; march, march) I received a shot in my left shinbone. To my great disappointment I was forced to return home. But it turned out happily for me, because it enabled me to fulfil my warmest wish. As I was temporarily unfit for foot troop service, I reported myself, in order to be able to return immediately to the front, to the aviation corps, which was just beginning to get going in those days. It was not too easy to get there, because although the Commander of my Reserve Battalion was willing to support my request, he hesitated to exchange the necessary telegrams with Headquarters. Then for the first time I actively interfered with my fate. I myself drafted the necessary report containing my special qualifications and technical knowledge, which was so essential in order to ensure a quick response to my request, and telegraphed it to headquarters. Eight days elapsed, and then I was called to join the aviation corps. In the meantime I had to face my commander's reproaches, who was seriously annoyed and expressed his deepest displeasure that I should have acted independently and personally approached the highest authorities. It was only because he was a good friend of my father's, that I escaped punishment.

My first activity in aviation was to report myself at the Adlershof Flying Reserve Detachment at the Johannisthal aerodrome. I was put down as airplane observer for Flying Detachment 41. In those days no special training was provided for observers. I jumped into every machine that took off, and I did not care who flew her, whether the pilot was making his first solo flight or his examination landings. The only thing I wanted was to get up into the air and to see what the earth looked like from above; to follow on the map the many roads, houses, rivers, &c., thus learning how to see from the air. Naturally I was especially interested from the very beginning in the traffic on railroads and roads as seen from low and high altitudes.

I made my first long distance flight with Second Lieutenant Flascha to Leipzig. I acquired the necessary maps for this flight and on them I made all the necessary notations. The plane we flew was an Albatros training machine. In those days we did not know that it was advisable to get weather reports before starting on such a flight. Near Wittenberg, halfway between Berlin and Leipzig, a thick ceiling of clouds rose. We flew over the clouds, timing ourselves as we did so. When I judged that we were in the vicinity of the aerodrome Leipzig-Mockau, I gave my pilot the sign to descend. He

promptly and bravely descended through the clouds. We emerged exactly in front of the Zeppelin hangar in Leipzig. Rain was pelting down, and it was impossible to take our bearings. As we did not know the field itself and could not find it in the bad weather, we landed on a favourable stubble field. Later on we discovered that we had brought our machine down in the immediate vicinity of the flying field. After refuelling for the further flight, Flascha took off again. At the end of the field there was a tall row of trees. A strong gust of wind caught us soon after the take-off, and we side slipped. This was the first crash I had experienced. Apart from the smashed plane, everything was all right. We packed our camera and started sadly towards the railroad station in Leipzig.



Shortly afterwards I made another flight with Flascha to Leipzig. The flight there was successful, but on the return flight we had to make several forced landings on account of engine trouble, and were finally compelled at a forced landing near Windisch-Wilmersdorf to dismantle the plane.

Such was my training as an observer. It was crowned with a short stay in Schwerin where the Fokker Works were then situated. There we were trained in starting the Oberursel Motors. Equipped with such knowledge we arrived with our Fokker monoplanes in Gent, where the planes were assembled. In the flight to the aerodrome

only my pilot and I managed to land on the field provided. It was days before the other planes succeeded in reaching their destination. Two of the planes even had to be towed there by truck. Because I succeeded in finding the field immediately, I was dubbed a "Beobachter Kanone" (observer-gun), and this title has stuck to me ever since.

I had the opportunity to acquire special experience in every phase of an airplane observer's duties, and the various branches filled me with immeasurable interest. I succeeded everywhere in achieving good results and in winning the goodwill of my superiors. But I must state frankly that I experienced great difficulties in my first reconnoitering flights and in directing artillery fire, as I was unable during my first flights to discern the numerous roads and railroads which intersect each other in front of Ypres. I was almost unable to locate on the map the batteries firing below us and especially to direct the fire of our artillery upon them. It often happened in the beginning that we returned from our artillery flights rather unsuccessful. However, the artillery was to be blamed for this in many instances, because they did not always fire. After repeated flights, however, became more experienced. My activities as "Bild-Offizier" (Picture Officer) for the detachment helped me in becoming a well-trained and experienced observer since in that capacity I had numerous opportunities to study photographs which showed how the field across the line looked when seen from airplanes. I worked day and night to perfect myself as an airplane observer. My greatest sorrow was that sometimes days passed without my being ordered into a plane. Yet I saw that many others were unable to accomplish the tasks set them by Headquarters because they lacked the necessary experience. My own desire to train as a pilot came to nothing because I could not be spared as an observer.

In the beginning my aviation activities took place mainly in Flanders. The battle of the Somme brought me for the first time into the surroundings of the Somme in a different capacity. I was promoted to Lieutenant, and transferred as echelon leader to the combat squadron No. 4. For the first time I was in an independent position as a flier and could lead my echelons to the best of my judgment. My field of activity was limited to the artillery defense of our artillery planes. This, however, did not appeal to me in the least. I would have liked to attack myself instead of being a mere onlooker observing how other young artillery observers missed the chances for attack that the good weather afforded. And so I turned my echelon to other tasks, to night flights. We made use of the beautiful clear moonlight nights, and began systematically to

develop night bombing flights. Because of the excellent results we achieved during our occasional night flights, the fighting squadrons were within a short time gradually transformed into night bombing squadrons.



MAJOR JAMES FITZMAURICE

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Here I must mention how, in spite of all the opposition of my detachment chiefs, I finally succeeded in becoming a pilot myself.
My first detachment chief was in charge of the Flying Reserve Detachment in Boeblingen. He invited me to pay him a visit on my next leave. I accepted the invitation upon the condition that during my stay he would permit me to undergo a training at the Flying Detachment he was in charge of. Upon his promise to do so, I immediately took the leave which had been due to me for a long time, and left at once for Boeblingen. In three days, during the morning and evening hours, I managed to get in about 40 training flights, and then made my first solo flight, the re. suit of which, however, was not to my entire satisfaction. My somewhat timid and nervous teacher had never really let me take full charge of the controls during the preceding days; so I felt rather queer sitting all alone in the plane, and knowing that I alone was responsible for everything that might happen. My salvation seemed to lie in giving my plane the gun, but I did not then know that at such a speed it would be rather difficult to bank the plane. My first curve around the Boeblingen field, preceding my landing, was rather sharp and at a high speed, and I did not reach the point from which I had intended to land. I started too high, but knowing that in such cases it was necessary once more to give the engine more gas, I did so, but two or three seconds too late, with the result that upon landing the under carriage collapsed and my propeller was damaged. And so my first solo flight was behind me. Though I did not land quite smoothly, the damage was slight. The following morning at 5 o'clock things went much better. I passed on this same day my pilot's examination, which consisted of flying three figure eights at an altitude of 500 meters. My subsequent landings were all fairly good.
With this knowledge of flying I returned from DIY leave. However, I was unable further to perfect it, for reasons I have previously mentioned, so that my fervent desire to become a "Jagdflieger" (pursuit flyer) was baulked.
But after a time, as I was an echelon leader, the opportunity presented itself to me to resume pay interrupted flying studies. I equipped a training plane in my echelon, again made several training flights and then proceeded to fly myself all the various types of planes in my echelon. However, as pilot I had several unpleasant experiences with the observers sitting behind me, and when it came to action I found that it was better for me to resume the command of my squadron in the capacity of an observer. And I flew as a pilot only with pursuit-planes.

At the end of 1916 I got into a fight with two enemy Nieuport pursuit planes. One of them succeeded in getting me into the range of the machine-gun. Our plane was hit so vitally that the motor was shot to pieces and we at once fell down into the clouds. I myself received a serious shot in my upper thigh. We succeeded, however, in gliding over the front lines of the enemy and in reaching the first line of our trenches, behind which we landed, capsizing our machine as a result of the shell holes. After two hours barrage upon our machine, during which I was thrown back and forth by the pressure of the exploding shells, I dragged myself into shelter, from which I was later rescued by my wounded pilot and soldiers from the trenches. They dragged me back to safety, and I spent a quarter of the year in hospital. While still on crutches I reported myself at my old squadron for duty and received another echelon.



We had just received the first of the two engined giant planes. These were not very useful, but those that followed were quite good. We proceeded to develop this type of plane further, and made many more night flights.

At the beginning of March, 1918, I was due for promotion and was made a Captain. On the same day I obtained the command of a Bombing-Squadron. My activities in this capacity were, however, of short duration, because during the night of May 20-21, I was hit by a shell and forced down behind the enemy lines. This literally meant the end of my war activities.

FORCED DOWN-CAPTURED BEHIND THE LINES-A PRISONER OF WAR-ESCAPE-SIX DAYS OF TERROR.

Many were the bullets that had whizzed past me during the years of the war up to this stage. it required great nerve to disregard these dangers and to expose oneself to them day after day, month after month, and year after year, without losing one's peace of mind or becoming unduly reckless. But my nerves had not given way, and so far I had come through. In order to withstand everything it was necessary to formulate definite principles, and to live up to them. First of all I had tried to picture all the possibilities that might happen. There was the possibility of being wounded; I had already been wounded twice and was well acquainted with this way of being knocked out. Naturally there was the further possibility that I might sustain wounds which would have a life-long effect. But I felt that come what might, life for me under all conditions would seem worth living.

The second possibility was the danger of being captured, a risk with which we were always confronted. I had had no experience in this direction, but I thought that life even as a prisoner would be worth while, especially as there would always be the possibility of escaping. It seemed to me that this second possibility, especially when one thought of the possibility that one might escape, was certainly preferable to the third possibility of being killed in action. But I certainly had to face this possibility; and the only thing to do was to face all dangers calmly and without fear, and if the bullet that was intended for me came, to await the end with a smile.

When during our reconnoitering flight of the night of May 20-21 a shell exploded in the immediate vicinity of our plane, I felt that of all the possibilities I have just mentioned, it was the second that awaited me: the possibility of capture. A splinter must have hit the gasoline line, because all of a sudden our gasoline gauge began to drop, and as a result one of our motors stalled. We tried to reach our own lines with the other motor and the remainder of our fuel, but the distance was too great. We had not covered quite half of the

distance when the second motor stalled at an altitude of 500 meters. Below us spread quietly in the moonlight a small French village, over which we glided towards a nice meadow on the edge of a wood. We landed silently, without causing the least damage to our plane.



THE BREMEN IN IRELAND WAITING FOR FAVORABLE WEATHER

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Nobody noticed us, because only the swish of the wind through the wires of the plane could have betrayed us. My pilot did not quite know where we were, and asked me whether we had landed on the German side. I had to tell him that unfortunately we were still 50 to 60 kilometers away from our first lines. We were both rather annoyed, but there we were, 60 kilometers behind the lines of the enemy, without knowing their customs and without knowing the language of the country. We had to act quickly. The first thing was to make sure that our plane would not fall intact into the hands of our enemy. This was easy. We carried with us two airplane-destroyers. Everything that we thought would be of use to us in the near future was removed from the plane. Everything which should not fall into the hands of the enemy was piled up so that it would be destroyed. We placed our destroyers between the oil tanks and the

cylinders of both motors, and set off both primers at the same time. Then we got away as quickly as we could.



We decided to try to reach our lines. We transformed our flying suits into walking garb and set off straightway in a northeasterly direction. We crossed several railroad tracks and soon found our bearings. Our progress was not very rapid, because we were afraid of every noise and at times we had to cower in the ditch along the road for half an hour at a time until the sounds we had detected, subsided. In the morning we sank down for a rest in a cornfield. When we awoke from our first slumber, we were tortured by dreadful hunger, which we tried to appease by all possible means, but in vain, because it was too early in the season for much to grow. It was a beautiful May day. The sun rose and its hot rays made us feel appallingly thirsty, but we could not leave our hiding place. We observed in our immediate vicinity the drilling of recruits, and saw a number of automobiles passing along the road towards the front. Our thoughts followed them. We had to wait in our hiding place for

night to fall. Then we proceeded on our way. At midnight we had already reached Compiegne.
We were happy that we had already passed two sentries, and became gradually less careful. With our flashlight we threw a beam of light upon a roadsign and marched on. A French sentry noticed the flash, and shouted "Halt." We could not distinguish the sentry standing in the shade. I tried to make him believe that I was an English Captain by shouting: "Captain Cook." But it had not the desired effect. He stepped forward from the shadow of the moon and captured us. He declared that we would have to follow him to the guard, and ordered us to pass through a gate in the wall into a courtyard. I saw the sentry, and behind the gate unavoidable imprisonment loomed up. Only a few seconds separated me from it, and in those seconds my will rebelled against it.
I bade the sentry with a polite gesture lead the way. He took off his bayonet, and the moment he tried to pass through the gate I gave him a violent push and ran away. My pilot who was standing near me, also ran, but in a different direction. The sentry must have been rather stunned as the result of this not too amiable treatment, because I did not hear a sound for the next ten seconds. Then, however, things livened up, and I suspected that the pursuit of us two criminals was in full swing. Although I was in a great hurry to get away from the streets of Compiegne I was forced once more to resume a rather slow pace. From across the street a soldier started towards me and asked me the way to the railroad station. Although I understood the purport of his question, I could not reply. I pretended in the beginning that I had not understood him, and remained on my side of the street. Upon his repeated question, I turned around, and pointed in a different direction from the one I had come, with the word: "Directement." That was all of my French that I could remember at that moment. The soldier, rather dissatisfied, started on his way, and I walked on. I turned into a garden, and from there I came into the open country. I had escaped from my first capture!
I did not know where my pilot was. I was now alone. I consider that in such difficult circumstances, being alone is not exactly a bad thing, because one man alone can fight his way through easier and is able to follow sudden impulses more easily than two. The few seconds that are necessary to communicate one's thoughts to the other are often sufficient to turn fortunate ideas into failure.
I encountered another patrol that night, just as I was about to cross the main road. A French police official ran straight into my stomach. Before he could entirely recover from his surprise, descend from his

bicycle and take in the situation, I had already disappeared some 50 meters away in a cornfield. From then onwards I timidly avoided every road, or effected its crossing in moonlight when it was necessary by wriggling along on my stomach.
I fought my way through for four days. On the fifth night I had reached the foremost line and had spent a full day lying in shell holes. As the firing from the German side was rather heavy, and as often quite unexpected fire was scattered over the whole territory I saw very little of any soldiers. Apart from the detonations and whistling of the shells, dead silence prevailed. As the evening approached, things began to liven up. I had just crawled up a tree, and below me I saw troops appear who began to dig out trenches in my immediate vicinity. Everything proceeded in comparative silence. The moment had come for me to overcome the last obstacles and so reach our trenches. I had to cross a hollow which had been transformed into a position of defence. I stepped into the hollow, then all of a sudden heard steps near me. The "bleu horizont" of the French uniform was so adapted for these nights that I could only hear the men who walked beside me. In the shade of the trenches with the moonlight pouring on them, the men could actually only be seen at a very close range. A squad of 15 men had already passed me, when suddenly I heard from forward the leader of the squad say something to those behind him. The man who stood nearest to me gave an answer which I am unable to repeat. Thereupon the leader of the squad returned. I hoped that by keeping perfectly quiet I would escape detection. But the private touched me, and then all of them threw themselves upon me. I was captured.
Between the minute of my capture and the lay of my successful escape sixteen months passed. During the whole of this time I was ender strong guard, but always my thoughts end endeavours were directed towards an escape. I made very many futile plans for flight, over the roofs, across the barbed wire obstacles and ender the ground. They were all doomed to failure. Little points were overlooked, which caused the failure of my plans.
The first few months were the most disagree_ able part of my imprisonment. During this time I became well acquainted with small narrow cells, in which I was left entirely alone with my thoughts and impressions. I learned how unutterably miserable and dreary a prisoner's cell could be. It was only by thinking of the hundreds of thousands of other men dragging out a similar existence, and by reminding myself that my imprisonment could not possibly last forever, that I conquered my depression. Enforced inaction and the impossibility of getting away to help my country, so hard pressed in

the great world fight, was the second bitter drop in my glass of sorrow. But what could I do? I had to resign myself to circumstances and to find a way of living through that time without going crazy or becoming forever dulled. I observed the progress of the rays of the sun which shot into my cell across the high window, and constructed a sun dial. In such ways I managed to kill the hours. I piled my table and chairs upon each other and crawled up to the window to enjoy a few whiffs of fresh air and to gaze out upon the distant blue sky. At night I observed for hours at a time the course of the stars.



THE BREMEN AFTER LANDING ON GREENLY ISLAND

My clothes had been very much torn during my march towards the front. My gaoler gave me needle and thread, and for hours I mended my dilapidated garments, in which art I gradually became quite proficient.

I underwent several trials during the first weeks of my imprisonment. My examiners made all kinds of attempts to drag out of me in every conceivable way information about our troops, the organization on our side, etc. They soon became convinced, however, that they could not learn anything from me at an open

trial and then resorted to other methods. Each day the German prisoners were locked up together for a short time in the tiny court, to enjoy the fresh air. I do not know whether there were more than two spies let loose among them, but twice I detected French spies disguised in the uniform of German officers. I need not mention that I tried in every way to mislead them, and I lied to them just as I had lied at my trials.

My imprisonment only became bearable after my removal to the Officers' Prisoners Camp of Montoir. There I found 250 German officers and 80 orderlies locked up together in a rather limited space. As I had been a Captain I was given what was in the circumstances quite considerable space, and I was satisfied with my fate. I spent the first two weeks recuperating from the ill effects of the various prisons I had been in. It was July, and I lay outside in an easy chair in the beautiful sunshine. After a fortnight, however, I became tired of peace and rest, and from that time onward I began seriously to plan and work out the possibilities of an escape. We tried several means of escape, unsuccessfully.

One of our plans was to try to reach one of the surrounding courts through a big hole which we had made in the roof of our lodging house. Unfortunately, one of the tiles fell down and attracted the attention of the guard standing below, so we had to make a retreat before the dawn.

Another attempt was to have been made through the barbed wire obstacles and the fence. After displaying much craft and cunning, and after many days of careful work, we felt that we had arranged a way in which we could slip through. There were three of us. Second Lieutenant Sand clipped the last few wires and had just finished his job. He had already reached the far side of the barbed wire obstruction. There the path of the patrol had to be crossed. The second of our little band was to follow, and I came third. The two of us could see Sand already far ahead on the edge of a small river, which cut off the camp from the outside world. We intended to swim across that river. At that moment the sentry on duty walked down the path and discovered us both in the barbed wire obstruction. On seeing us he naturally raised a fearful alarm, but as there were two of us, he could not lay hands on us both. My friend was captured. I managed to escape by retreating into the camp. It was rather dark, and I hoped that as the sentry had not seen me often before, he would be unable to recognize me later. My garments were naturally badly torn by the barbed wire. I spent all the night restoring them to their original condition so that in the morning at the call they would not betray me. The next morning the sentry did not recognize

me, but picked out another prisoner as being the one who had attempted the escape. This fellow was promptly punished with one month in jail. Later when I reported to the commander of the camp that I was the one they had been looking for, I was also sentenced to jail. After twelve days, however, I was set free.

I discovered later that the superior officer of the commander of the camp did not consider that my statement, which was diametrically opposed to the official statement of a French soldier, could possibly be true. I was thankful that the authorities did not punish me for lying by locking me up with the other poor innocent fellow.

Another time we worked for weeks digging out a very long tunnel from one of the shacks. Everything proceeded in the greatest possible secrecy. After the tunnel had been completed to such an extent that we hoped to break through the top at night, feeling that from there we should be able to get away, we formed our group. The evening before the escape was to take place, however, the authorities discovered our intentions, called the roll all of a sudden, seized our nice provisions, and put in jail for one month all those who somehow carelessly betrayed their participation or who seemed suspicious. Again I fortunately slipped through and received quite a lot of the chocolate from the confiscated escape supplies.

Another attempt of two of us to escape by the shortest route was over the wall with the ladder that the lamp lighter used each day. I came second; my comrade had already got over the wall, and I was just about to clamber over it myself, pulling up the ladder after me, when a shot was fired from the other side. My partner ran straight into the hands of a sentry we did not know. It was not difficult for me to turn round and return to the camp without being recognized. There I again got some chocolate, while my comrade had to sit in jail.

From then on I began to feel that an attempt to escape could only be successful if undertaken alone, and kept a secret from everybody in the camp.

While I had been making these fruitless attempts to escape, a long time had elapsed. The 9th of November, 1918, arrived. My hopes of soon returning home began to fade as day after day went by. The conditions became worse than ever during those sad winter days.

So during the coming spring I began to think of new plans and resolved this time to escape alone. I only confided in those whose assistance in the carrying out of my plans was absolutely necessary. Not even my room mates knew anything about it.

On a beautiful moonlit night in September, 1919, the hour for escape had arrived. My preparations had been made down to the

smallest detail. Each evening the officer on duty, accompanied by a German interpreter, made a round of all the rooms. I proceeded with my work until he had passed me. My room was situated on the first floor. Adjoining it were other small rooms, in each of which two men were housed. In one of these rooms I had already secreted two blankets. Immediately after the officer had left our section of the camp, I hurried into this room, quickly tied together the two blankets, and asked the occupants of this room to hold the blankets for me. I swung myself over the window sill and let myself down with the blankets into the open yard. There, behind a bush, I waited until the officer crossed the yard towards the other quarters. I walked behind him as nonchalantly as I could in the direction of the main guard. At that particular moment most of the guards were on duty at their various posts, and only a few remained in the guard house. In full sight of these guards I stepped into a stable adjoining the guard house. There I obtained a broom with a very long handle and proceeded to climb the gutter pipe in the corner, in order to clamber over the roof of the stable into the neighbouring courtyard. The climb was not as easy as I had imagined it would be. Supporting myself with the broomstick, with a considerable effort I reached the last hook, and by clinging to it I managed to pull myself up. While I was on the top of the roof, guard after guard passed below me. However, I had previously noticed that the guard did not look into this particular corner, but towards the interior of the camp. Finally even the last guard with the inspection officer, the German interpreter and the lock guard passed me. It was indescribably lucky that they did not detect me.

I waited for a time on top of the roof and listened for any suspicious sounds from the camp which might indicate that my escape had been noticed. Then I descended into the adjoining garden, in the same way that I had made my ascent. I used every possible caution. First of all I made sure that the house which stood in that garden was not inhabited. It was not ; the owner was probably still away at the beach. The gate leading into the open market square was locked. I looked around to see if it were possible to reach the open over the roofs of the adjoining houses. But that was a more dangerous way than by the market square. I hid the broom in a cart shed in which I found several boxes. I packed my uniform in one of these light wooden boxes, and changed into more or less civilian clothes. I had two kinds of trousers, a luster jacket, a civilian vest, a khaki shirt, my uniform coat, and a sports cap which I had made myself. Everything that I did not need I packed into the box.

The only chance of emerging from my hiding place without attracting too much attention was through the gate into the market square, which I would have to break open. Half of the small town of Montoire seemed assembled in the market place. Diagonally across the square from the gate there was a small puppet show, around which sat a multitude of people. Apparently a very funny play was in full swing. I stood for a few minutes behind the gate, and soon found that it would be possible to force it open. Then all of a sudden two cabs came rattling over the cobbles. One cab had already gone by; and the other was just approaching. I considered the noise very opportune, as it would drown the noise I made in forcing the gate. I broke it open and stepped into the market place behind the rolling cab. With the box on my back I now started to walk out of Montoire along the middle of the road. I could have walked in the shade, but there I should certainly have caused more suspicion than in the middle of the road. I did not even go out of the way of people, but went along muttering to myself. They did not think that I was a German officer and prisoner of war from the camp, or else they would have raised an alarm.

In this way I left the small town in which our prison camp was situated. With my box I plodded along for another half hour, until I reached the next village, where a bridge led across the Loire. I made a bundle of my coat. My infantry cap I threw into the river and saw it drift away. After passing through this small village, and as everything seemed quiet, I sat down behind a hedge along the road to rest for a while. I must confess that inwardly I was rather excited and that my heart was still beating fast. I did not know which direction to take. There was a moon, but I had not yet had time to notice its course. In an airplane I should have been rather at a loss. Here, however, I had sufficient time to sit until I could determine my direction. Ten minutes later I had found my bearings. I saw the polar star, and noticed how the moon moved along westward, and so I knew where the East, the direction of my country, lay. I walked in this direction for the whole night.

It was a beautiful moonlight night, as beautiful as any I had ever experienced during my night flights. Peace reigned over the land. I passed through villages and farms; dogs barked; the echo died away as I went on. I reached the road connecting Verdome with Tours, which crossed the path of my escape. There I lay down behind a dense bush along the road, to await the morning. In spite of being very much fatigued I had only a short sleep. I was afraid that I might snore and attract the attention of passers-by. The morning came, and seldom in my life have I seen such a wonderful

sunrise. The entire easterly sky from North to South was a pink hemisphere which pushed the blue silvery night westward.
Before the sun rose like a shimmering glowing sea, the first villagers came pilgrimaging along the road. I gave up the idea of marching across the devastated territory to Holland. Happy in my newly acquired freedom, I decided to select a nice long route. I had never seen the South of France and Switzerland, so I bent my steps in their direction.
The first day I had to cross certain heights. I almost died of thirst in the dreadful heat. I dare not enter a house and ask for water; and water could be had only from deep wells. For four days I marched along in this manner. I slept by night in woods and fields, and walked by day. Often I ran great risks of being detected, mostly because I did not know the language of the country, and also through trying to buy things in the various towns. On my march I had studied in various railroad stations how to buy a railroad ticket and how the trains were controlled. So on the afternoon of the fourth day, I decided to try to continue my journey with a quicker means of transportation, by the railroad. In Blois I bought myself my first railroad ticket to Bourges. In the compartment I attached myself to a family, and reached my destination without any trouble. The next morning I bought another ticket for Lyons, after having spent a night full of fears in Bourges, and after being nearly discovered by a guard. Naturally I could only buy tickets for places, the names of which I was somehow able to pronounce. My trip from Lyons to the Swiss frontier was quite dangerous. I was often addressed, without being able to reply. Every time this happened I moved into another compartment of the train.
During the trip to Belgard I knew I should have to contend with a passport inspection. I gathered from the conversation of the passengers that this inspection would be held in Belgard, and I decided to leave the train before arriving there. On looking out of the window, however, I noticed that the train was going through a narrow passage lined with cliffs, so that it would be impossible to leave it unnoticed. The train arrived in Belgard. I did not have much time to consider whether it would be best to hide myself in the train, on the top of it, or under it. It was surrounded by customs officials, and policemen with dogs. It was impossible to stay in any longer. Besides, I did not know whether the train was to proceed over the frontier into Switzerland.
I was almost the last to descend, and there was nothing left but to follow the crowd. We went through a subway passage to a large waiting room, where a wooden railing was fitted. There was only

room to pass in single file to the end of the railing where passports were examined. Three policemen stood there, and looked at the passes of everybody going by. I did not possess a passport. In front of me stood a few peasant women, who fumbled about with their passes which they held in their hands. I saw these passes and wished I had one. I knew that if I reached the policemen before obtaining one my trip would be at an end.

The day before I had bought a newspaper for 10 centimes, by handing the dealer the money and taking the paper without saying a word. At the back of this paper there was an advertisement which had a slight resemblance both in its wording and size to the passes that the peasant women were holding in their hands. I folded the paper up so that only this advertisement showed, and held my railroad ticket on to the spot where the photograph stood on the passes. To the casual observer it actually did look like a pass. I squeezed myself in between the peasant women. My clothing was such that I might have been considered as belonging to them. We came to the policemen. One policeman stood on one side of the line; the other two stood together on the other side. Every pass was looked at. The women were just showing theirs. I had mine in my right hand. I looked at one policeman and showed my pass to the next one. After I had passed the first policeman, I showed it to the second one, and looked at the third. I had passed the inspection! As a matter of fact I was somewhat astonished that I had managed to get by. I had already planned how I would pretend to be deaf and dumb, and then wait for an opportunity to escape while I was being transported to the police station or after being imprisoned. I became quite confident after this success. I had no trouble in getting past the gates with my railroad ticket.

In Belgard my way led across a bridge where a soldier stood on guard. Whether it was necessary or not to show him a pass I do not know. At any rate I managed to cross also this bridge, by heading straight for the guard, who almost had to step out of my way. As it was pitch dark and raining I naturally did not know which way to take next. An opportunity to establish the cardinal directions did not present itself. Therefore I waited for day to break. Then, after having met with a few more incidents similar to the passport inspection, I marched towards the frontier. I still had approximately 20 kilometers to cover, and it took me practically the entire day.

As the evening approached, I came close to the frontier which at this particular spot is formed by the Rhone. A strong storm had arisen, heavy rain came .pelting down, and dark night set in. Therefore I was able to approach the frontier without being noticed.

In addition I had the enormous advantage that no sentry stood in the open owing to the storm. I passed through villages which I could only see in the flashes of lightning. I placed my small supply of food and everything that I did not absolutely need on the banks of the river, as I intended in the first place to attempt to swim across the Rhone. During this attempt I was dragged by the tearing current into the stream. It was almost impossible for me to swim, because the small bundle that I had tied on the top of my head pressed my head into the water, and I nearly drowned. I tore the bundle off my head, dragging it alongside of me, and then I managed to make the opposite shore. There I reported at the Gendarmery station, from where I was taken the following morning to the German Consulate. The joy I experienced at the success of my flight from captivity was almost as great as the joy we felt when we awoke at Greenly Island from a heavy slumber the morning following our landing.

PEACE AT LAST-PERILS OF NIGHT FLYING-THE CHALLENGE OF THE NORTH ATLANTIC-MEETING HUENEFELD--PREPARATIONS

After my successful escape from imprisonment I returned again to aviation. At Boeblingen I was given planes to fly of every possible type. 'The one I like most was the Fokker D7, with which I enjoyed looping about in the air for half hours at a time. During this time I met with a small airplane accident.

I was flying with my Police Flying Echelon, which had just been formed, in my first propaganda flight over our Swabian capital, Stuttgart. Even at the take-off it seemed to me as if something were out of order with my fuel system. As we descended in spirals over Stuttgart, the motor stopped all of a sudden at an altitude of 200 meters, and the propeller stood still. I had very little time in which to think. I did not wish to land in the parks or streets of the city, as this would have greatly endangered the public. But I could not get beyond the city as Stuttgart is situated in a basin and the surrounding heights are thickly wooded. But I decided to land in the woods. I pressed the elevator down and flew at full speed towards the lower edge of them, then I pulled the plane up to such an extent that

she sat down on top of the trees just at a moment when she threatened to side slip. Then she gradually turned over to one side

and slipped with me a short distance downwards. Thus I was suspended in my plane between heaven and earth. I climbed out of the plane, clambered down along a wing and jumped the last few feet to the ground. The damage to the plane was not so regrettable, as we had many more planes in Boeblingen which were to be smashed during the next few days!

As, owing to the Peace Treaty, all aviation corps had been disbanded, I decided during May 1920 to leave the Police Aviation and to join the Reichswehr. From Boeblingen I went to Ludwigsburg, where for a considerable time I had the pleasure of commanding the 7th Company of their Infantry Regiment. Compared with my previous years that was quite a restful time.

Besides running the Company I found a good deal of quiet diversion in other directions such as painting and dancing. One could indulge for a very little money in both in those days of inflation. I threw myself with great enthusiasm into the restoration of the accustomed social arrangements of our old days. These had suffered blow after blow and almost disappeared during the War days and the unsatisfactory conditions of the inflation period. My Battalion arranged a dance in Ludwigsburg on the lines of our old happy days. I must confess that my keen participation in this work of restoration had an egotistical basis. I wished after the long war years to sail into the harbor of marriage and I thought that by participating in these social affairs I might reach my goal sooner. Having thus paved the way I found the right lady, although in the beginning I liked her much better than she liked me. But after a siege of a year and a half she surrendered, and we celebrated our wedding in Ludwigsburg.

The inflation period had reached its height in the days following our wedding, and we had to bring our short honeymoon in Austria to an abrupt conclusion in order to make sure that with our funds, the savings of a year and a half, which we had thought would be ample for a holiday of six weeks, we could at least reach Munich. We decided we could do better with our depreciated money in Germany. The mark was not stabilized until a year and a half later. We had ample opportunity to taste all the pleasures and sorrows of those times.

Each year we spent my Reichswehr leave in our Bavarian mountains where we enjoyed skiing and where military training camps were established. We learned to love this delightful sport during those years to such an extent that we have remained devoted to it ever since.

Any advancement in the "Reichswehr" seemed to me to be rather hopeless, because during the war I had spent all my time at the

front and never behind the front in general staff activity. So I asked for my transfer from Ludwigsburg to the Pioneers in Neu-Ulm. It seemed to me that my superiors did not seriously consider the question of giving me any job connected with flying.
Already in the Spring of 1922, during my three months commission in the Wacht (Guard) Regiment in Berlin, I had begun to make connections with the civil aviation companies which were then just beginning to be formed. Among such connections, the most valuable one was my connection with Director Sachsenberg, one of the most active and important founders of the German air service. Thanks to it I succeeded in 1924 in co-operating with the Junkers-Luftverkehrs A.G. in the establishment of the first German night flight route from Berlin to Warnemuende. For this purpose I had taken the leave due to me. The organization of this night route required, of course, more time than I had at my disposal, so I could only co-operate during the first fortnight. Still, those days were sufficient to create in my patrons a desire to keep me in this job. When the next year the night flight trials on the route Berlin to Warnemuende were extended by the Junkers-Luftverkehrs A.G., to Stockholm, I took off my soldier's uniform and joined the Company.
1925 was the year of development of night flights in the history of German aviation. I was in charge of the entire management and organization of the tests on the land route between Berlin to Warnemuende. There followed the extension of the night route by sea planes from Warnemuende to Stockholm. Here I had a good opportunity to acquire some experience in flying sea planes both in the day time and at night.
When I look back upon my work of that year I feel quite creepy. I spent all my time in night flight work, and I did not have five minutes for anything else. During the whole year I did not even once go to a theater or to a party. Even when at 11 o'clock at night I occasionally succeeded in paying a short visit to some of my jolly friends, they could rest assured that my share of the entertainment would consist of lying down upon something with a solid foundation and going to sleep.
Nevertheless, that period of relentless day and night work afforded me a great deal of satisfaction. I was able to work freely and independently and the rapid progress we made from month to month was a source of intense gratification to me. Again and again it spurred me on to renewed inceasing action.
At the end of 1925 we had crudely developed ,he night flight. We had devoted ourselves to the cause to such an extent that often we had risked itir lives in order to gain vital experience. Then rate

intervened. It became impossible for the Junkers-Luftverkehrs A.G. to carry on. They lacked the necessary capital and there was no one willing to finance the Company. At the same time the subsidies ceased.



The result was the two largest German air transportation Companies were merged into a new company, the German Lufthansa. I was given charge of the Night Flight Department, but the work no longer proceeded as in the previous year. I had less trouble with night and fog flights, but was hampered by a good deal of red tape. I was no longer independent. My propositions in regard to landings in fog and the further development of the night service met with less understanding than before. I felt that I could not work indefinitely in this manner, and so I began to look around for another occupation.
From then on all my endeavors were directed towards the unhindered development of aviation, the future of which I believe rested in the further development of flights at night and in fog.
Whilst in 1925 I had flown most of the night flights myself, my liking for them at the Lufthansa became less and less.
I was on the point of looking for another field of action which would give me more satisfaction. In Germany this was rather difficult because the whole field was monopolized by the Lufthansa. In those

sad days I did not think of looking for something in America, in the land where opportunities are not so limited; and of starting a new existence there.

Then last year the era of Ocean flights began. Nungesser and Coli disappeared; Lindbergh succeeded in his epic flight, the wonder of which cannot be expressed in words; Chamberlin arrived in Germany; Byrd landed on the French coast; the Americans flew to Honolulu; Brock and Schlee circled the earth; Miss Elder and her faithful companion Haldeman caught a steamer past the Azores. Many unfortunately disappeared in the waves, or in the icy regions of the North.

I had followed all the flights with great interest. I studied their technical foundations and the actual possibilities. Again and again I found that the night time, which all the flyers encountered, was the most difficult part of the flights. Those black storm-swept nights must

have decided the fate of all those pioneers of the air whose voices died away forever.

I awaited Chamberlin's arrival at the Tempelhof aerodrome with feverish anxiety. There all those who had any voice in aviation matters assembled, and during those hours I discussed with a few good friends from the old Junkers-Luftverkehr the possibilities of an East to West flight. The first decisive steps in this direction were taken during that night. It was again my esteemed friend, Director Sachsenberg, who gave me a helping hand. He told me that the Junkers Works were greatly interested in such flights. Thereupon I gave all the available airplane types a thorough test in order to discover which of them would be the best suited for such a flight. The Junkers W33 showed the best records. It was a matter of honor for me that both plane and engine should be exclusively of German make. I found that only the W33 could comply with these vital requirements.

However, she had to be somewhat altered according to my instructions. From then onwards; I remained in constant touch with Dessau.. There, again through Director Sachsenberg, I made the acquaintance of my friend Huenefeld. Our becoming acquainted was of enormous importance to me, because he is one of those unswerving beings who would sacrifice everything: for his ideals rather than lose them. He and I got on splendidly together. Our first attempt to cross the Ocean in 1927 failed owing to unfavorable weather conditions, and our next attempt was postponed until the following year.

During the last winter which preceded our flight, I went thoroughly over all the flight experiences I had had, and discussed everything with Huenefeld in true alliance.
So far as my work at the Lufthansa would permit me, I concentrated all my thoughts and efforts exclusively upon the carrying out the next year's flight. At the Lufthansa, apart from my work connected with night flights, I had to work extensively in other fields such as the aerial radio and aerial navigation. My experience in this work came in very handy during our Atlantic flight.
A fortnight of my leave from the Lufthansa I spent in the Bavarian Alps enjoying the winter sports. The rest of my leave I used in taking a sea voyage to Ireland with my friend Huenefeld in order to inspect the Irish flying fields. This trip, as well as our other preparations remained rather a secret, although only until I began to carry out the trials with our plane.
Looking back upon my life I must say that I did not have great ambitions, but the tasks I have set myself so far I have achieved, with God's help, even though they entailed many years of hard fighting.

ARRIVAL IN IRELAND-GHOSTS OF THE OCEAN-THE TAKE-OFF AT DAWN-THE LAST FAREWELL-ENDLESS WATER-A MOMENT OF ANXIETY-"GOD IS WITH US."

The weather following our arrival in Ireland was so incredibly bad, that in spite of all our eagerness we were unable to take off. Owing to the long heavy rains, the soil on the Baldonnel aerodome had become softened to such an extent, that we could not consider taking off with a heavily loaded plane unless a concrete or wooden runway had been at our disposal. The construction of such a runway would undoubtedly have taken weeks, so it was better to wait for the kind sun to do the whole job in two or three days with the heat of its rays.
On April 9 it seemed as though the weather were beginning to improve. The reports from the British Air Ministry on the Ocean itself, however, were such that we could not count on reasonably favorable weather conditions. It was not until April 11 that the British Air Ministry reported that weather on the ocean seemed to be improving. In the evening of April 11 the reports of a better outlook increased in number, and so we decided to take off on April 12. As a

matter of fact, in Baldonnel itself the weather conditions were rather doubtful for the take-off. But over the greater part of the ocean, conditions prevailed which showed that a high pressure area was about to develop on the Eastern half of the Atlantic. The strong winds of the last few days had abated to some extent ; they blew only with a strength of 20 to 25 miles per hour on the surface of the water; and it was possible that the wind would slacken still further.

The weather conditions prevailing on the Western part of the Ocean, East and North of Newfoundland were rather more unfavorable. From there we received reports of a thick low cloud bank, reaching as far South as New York. Wide regions of rain lay between Labrador and New York. There was an area of low pressure progressing seemingly South. This might have become dangerous for us, because at the time we were in the vicinity of the coast of Newfoundland, on the evening of April 12, this low pressure area had probably moved further South. I realized that this circumstance was rather critical for carrying out the flight, and perhaps we should have considered whether on the basis of that report a further postponement of the flight was advisable. But I knew from all my past observations that an East to West flight could never be carried out without flying through a greater or smaller minimum (low pressure area), and so we did not let this circumstance influence our decision whether the flight should or should not be made.

Under the given circumstances, therefore, we counted on bad weather near Newfoundland, and on the eve of our take-off we decided upon the course to steer if our predictions came true. On the evening of April 11 a fresh Southerly wind was blowing in Baldonnel, which was rather f avorable for the takeoff in the direction we had chosen. We hoped that this wind would keep on until the crucial hour.

After an evening bite in the messroom of the Baldonnel Flying Corps we remained there for another hour chatting around the cozy fireplace. We went to bed at about 9 o'clock. It was not very easy to sleep. I had already tried the expedient of drinking more stout than usual, an additional glass in fact. But sleep did not come as quickly as usual. My esteemed friend, Herr Schuenzinger, the engineer of the Junkers Works in Dessau, shared the same room as I did. His less troubled mind enabled him to doze off much quicker than I did. I had to listen to his quiet breathing for a long time before a light but restless sleep overtook me. The flight, the take-off, and the thousand and one possibilities which might present themselves, caused my heart, I roust confess, to beat a little faster than usual.

And in my restless sleep I thought I could hear it beat. Whether it was fear or excitement I do not want to decide.
There were many risks one had to take, and as I have said, many possibilities to face which might arouse fears. One had to face conditions as utterly unknown as the ice fogs of Newfoundland, the Western gales and cyclones of the Ocean; also the moonless April night, considerably lengthened in an East to West flight, and lastly the problem as to whether the engine would hold out. Would the Bremen stand all weather conditions? A small mishap, some trouble in the water, oil or gasoline system, and death would be unavoidable. We could hardly hope to be saved, drifted on the wide expanse of the Ocean, if we were forced to land on the water, as we had chosen the Northern route, where very few steamers pass, especially at this season of the year.
In my sleep these thoughts pursued me, and made me toss on my field cot. The funeral speeches which my ex-superiors in Berlin had delivered me, the many warnings I had received from my friends, came into my memory, and in my dreams showed themselves as menacing ghosts. The last night, certainly did not bring me the sleep which was really necessary before the long voyage and struggle in front of me. The take-off caused me the most anxiety. And when I had banished all the ghosts of the Ocean, I began to think of the various points which I intended to observe at the take-off, and so I did not get that which was the most essential for it, adequate sleep. I had never yet taken off with such a heavy machine, and when I remembered all the stories I had heard about getting up with a heavy tonnage, my optimism did not increase. Yet optimism for such an undertaking was essential.
In spite of all the daring attributed to me I am, as long as it is possible, very thoughtful and careful. Again and again the thought crossed my mind, had I made a mistake anywhere? The take-off provided the greatest difficulties.
From my restless dreams I was awakened by the Captain on duty in the camp, who had had no sleep at all that night. My first question was: "What wind?" "No wind" was the reply. This did not please me at all, because it caused me great misgivings as to the success of the take-off. I had always counted on some south-westerly wind, which had blown so unceasing during the last few days.
The theoretical limit of possibilities was stretched to the extreme through this unpleasant circumstance. My eyes tried to detect wind even through the window, but in the darkness I could not establish anything. Instead I noticed our friend, reporter Jenkewitsch, with serious eyes watching the awakening of the heroes of the

approaching day, in order to be able later on to report their doings to the listening world. It was still very early, and not the slightest glimmer of the dawn showed on the horizon. I jumped out of bed at 3:45. With cold water I chased away the gloomy dreams of the night. Even the restless and short sleep had refreshed me to such an extent that my old spirit was unbroken. My heart, which during the restless night had spoken so anxiously, became quiet again. The fresh morning air and the first glimmer of the dawning morning made me feel freer and happier than ever before. The gloomy hints, the friendly warnings were all swept away. And I could not understand why melancholy thoughts and miserable presentiments had tortured me during my light slumber. I felt full of hope and ready for action. My thoughts flew back home. "You, my dear Germany, I want to serve and hel; and you, my nice world, I want to conquer." Now let everything come—the mighty elements, gales, waves, nights and fogs—I would fight all, or die in the struggle.

I dressed quickly and hurried to the officers' mess for breakfast. There I found all our kind and courageous Irish comrades already sitting at their breakfast: some of them had not even gone to bed during the night. Our hearty breakfast consisted of three eggs, bread and butter, and tea. The fruit intended for the completion of our breakfast was put aboard the machine for consumption after the take-off.

I closed my diary, in which I had made entries of all the weather observations so far, and wrote on its last page a million greetings and kisses to my heroic little wife at home. I then put it in an envelope and gave it to my friend Schuenzinger, with the request that it be handed to her.

Then we started towards the machine. Some unknown friends took me to the flying field in their car, where they violently shook my hands before I left the car. The fact that I was Captain Koehl, and that I could tell this to the guard convincingly, got me past the posts quickly.

In front of me, glimmering silvery grey in the first dawn of the morning, stood the Bremen, set up between the large hangars. I went up to her, and like a child stroked her slender propeller. In my thoughts I said to her : "You and I must both keep up, if the flight is to succeed." The glistening propeller sparkled at me encouraging.

Then came greetings and our leave taking. I was privileged to shake hands with the President of the Irish Free State and his ladies. Our German Consul General, and many other dear acquaintances shook hands with me quickly and said "au revoir."

It was five minutes to five when we climbed into the Bremen. I proceeded to make myself comfortable. I stowed away the numerous cushions, thermos bottles and packages piled up on the second seat, so that I could reach them from my seat during the flight.
The take-off was arranged for five o'clock, but it was not yet light enough to see the small flags which lined the runway. Therefore we waited a while. I was still hoping for a southerly wind to rise, because the wind indicator was still hanging down slack. The absence of this wind was a real misfortune. For days a strong wind had blown, which had almost torn our clothes from our body, and now calmness prevailed. At 5:10 Weller and Lengrich turned the propeller with sinewy arms. Upon the third "Frei" ("free") it started, not to stop again until it broke the thin crust of ice on Greenly Island after our long relentless struggle with the elements.
In the meantime Huenefeld had also taken his seat. He arranged our provisions in the cabin. I had given my friend Fitzmaurice another five minutes in which he might once more say goodbye to his wife and child. As soon as he was ready, he also took his seat. We were ready for our journey.
We put the engine on. It ran regularly and made its normal required revolutions, 1375 per minute. Both magnetos were tested; they were good. Once more I pulled back the gas lever. Fitzmaurice and I checked up on our fingers whether all the valves were set right, whether the gasoline tank was full and everything else all right. We looked at each other and bowed. Then came the moment when the gas lever was pressed forward.
From outside the tired eyes of our dear Weller looked at us full of earnest concern. Serious were the eyes of the many present, who watched tensely the course of events.
All my fears were gone; my heart leapt with joy, because we had again reached the point of starting on our flight. On with the fight! Come victory, for the quicker progress of aviation, the peace task of mankind!
"Good God, help me now." I ask once more: "Blocks away?" "Free" is the cry from outside, and slowly we press forward the gas lever. First slowly, but then quicker and quicker moves the Bremen. She tries to swerve to the left at the very beginning, but the dangerous stretch between the hangars is covered. She tries again to swerve to the left from the narrow filled-in ditch. I turn hard against it. She obeys, and slowly she gets upon her right path. We run straight along the small flags, over all those many places which I have so often examined and which I know as well as my own pocket. On our

first 400 meters, however, it seems to me as if we are not gaining sufficient speed. The Bremen rolls so slowly. And a speed of 130 kilometers per hour is required to lift her off the ground! The first 400 meters of the runway are slightly uphill. I can see that to take off with such a heavy plane uphill is rather difficult. I know that after the first 400 meters the runway is even, and after that it goes downhill. After the first 400 meters we actually pick up speed, and then it goes faster and faster. The trembling speedometer, which at first did not go over 80, climbs up gradually and trembles just above 100. But we have not yet reached the speed that Schuenzinger figured out for me, a speed of 130 kilometers per hour.



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MISS HERTHA JUNKERS HOPS OFF FROM NEW YORK FOR GREENLY ISLAND WITH SPARE PARTS FOR THE BREMEN

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We already begin to descend towards the end of the field. I can see the white stripe in the middle of the green grass where we had the wall pulled down for us for seventy good English pounds, approach rapidly, and still I cannot lift the Bremen. The speedometer has only reached 110. But I know: after the wall, after the white stripe, there are another 700 meters, and there I hope with certainty to take the plane off the ground. I know it will go.

Then—amid all these deliberations—what was that? Fitzmaurice who sits on my right and who has to look out on the right, pulls up the altitude rudder; the plane rises 1 to 2 meters off the ground but

drops down again because she has not yet acquired the necessary speed. She begins to jump. Why is this? -What is it all about? I have no time now to settle this question. Now only keeping calm can help me, and a holding, holding, steady holding of the wheel. After several jumps, the enormous danger of which I fully realize, the plane resumes her course and gathers up the lost speed. Will the meadow behind the wall be sufficient? Shall we be able to clear the 6 meter high dam at the other end of the meadow? Will our Ocean flight end right there? Or should I cut off the gas beforehand, and so save if not the machine at least ourselves?

In a few short seconds all this flashes through my mind. And with my brain working in this fashion, I hold our heavy "bird" as steady as I can. Only a very short stretch to the dam—the Bremen is in the air! Actually in the air; and at the same moment we have to rise gently in order to clear the hedge by inches, the first obstacle in our flight. Has the take-off been successful?

No, not yet, a mountain looms up in front of us. The Bremen rises, but the mountain rises quicker. The Bremen cannot fly over it yet. She has to unfold her free wings in the open air; she has to gather speed; and meanwhile the mountain approaches. Again there come moments of doubt; whether we shall be able and how we shall be able, to surmount this new obstacle. The Bremen leans over and turns to the right, away from the mountain into the deep valley. During the curve the right wing is hardly more than half a meter off the ground. With it we sweep the green bushes, but already the valley goes downward, and this is our salvation. The Bremen now has a chance to gather up speed. The propeller digs into the fresh Irish morning air and the wings carry us out over the Irish landscape towards the Ocean.

The first, and for me most difficult, task is accomplished. Thank God! I am filled with joy and happiness, and as always happens after such moments of danger, I burst out in a hearty "Jodler" such as I give in my home mountains of Bavaria when I climb those heights. My eyes search for those of my comrades in the battle, Fitzmaurice and Huenefeld. I press strongly, very strongly the hand of Fitzmaurice sitting beside me. Happiness shines in our eyes. We stroke tenderly and appreciatively the good faithful Bremen and the revolution indicator as the representative of the engine, both of which have behaved so wonderfully during the most difficult stage of our voyage. My friend Huenefeld is still obliged to sit in front near us between the large fuel tanks. Our eyes understand each other; our thoughts are the same. We reach each other's thoughts: We have got over the takeoff, which we feared more than anything else

and which perhaps was the most uncertain factor in our entire venture." A grateful "Thank God" seems to escape our still lips.
A little later I write to my friend Huenefeld the following message: "Fifty meters more and things would have been fatal. We are throttling down, speed two hundred kilometers. Throw a message containing this information down over Galway." The Baron bows at me understandingly. We cannot speak to each other because of the noise of the motor and the thundering vibration. We fly over the green bushes and meadows of Ireland, and the world has an entirely different aspect. How dreadful it would have been, and what a shame for us, if the Bremen had now been lying with broken wings and undercarriage at the end of the runway or at the foot of the mountain. The doubters would have been right! But doubts and the dust of the earth are left behind.
The Bremen climbs and climbs higher. The land and the people below become smaller and smaller. We are shooting along at a speed of 200 kilometers per hour. Below us pass Ireland's walls, meadows and bushes, and then follow rivers, cities and villages, from where ruins loom up and glistening castles. Who knows what our Fitzmaurice, the brave Irishman, thinks as he looks down once more upon these sights before his fate takes him out over the uncertain Ocean. He is so gay and happy; perhaps he is already dreaming of the honors which await him there below in his country after the successful completion of the flight. Let him dream on like this for hours, until the sun disappears behind the clouds, until the gales begin, the fogs rise and the night appears. Then when above the clouds, stars like will o' the wisps appear, deceiving and mocking the tired eyes, will come the battle of frail man with the elements; his fight with the uninhabited, wintry cold, desolate stretches of forests, where starvation and the possibility of death by freezing await, and from which we will barely escape with the last drops of our fuel.
It is a wonderful morning flight ahead of the sun, which appears behind our backs in a golden hue, the light of which fills us with happy confidence. Now for the first time Fitzmaurice takes the controls for two hours. I am busy with the navigation. I establish the direction and strength
of the wind. I ascertain our course from the wind triangle, and establish our speed. We have throttled down our engine long ago, but nevertheless we are flying faster than the Irish planes escorting us. They cannot keep pace with us. We have to leave them behind, because our goal is far ahead and solitude must be our companion over the wide expanse of water. We are between Baldonnel and

Galway. The green meadows disappear, and a whitish low ceiling of fog, like a morning gown rises up from the lowlands.
Galway, which we had intended to greet, is hidden below the fog, and only the top of a church steeple sticks out of the hazy veil. But to our right and left, grey-blue mountains rise which we approach rapidly. They are passed very closely, and soon left behind us. The coast of the Atlantic Ocean appears. Low rocks, rigid and grey, their heads washed by countless seas, bearing signs of their eternal struggle with the gales and waves of the ocean, pass below us. They mark the last of Europe's coast, which we leave at 7.05 for a long long time. A lonely watchman and warner of shipping stands sideways from us, washed by foaming white waves. We fly again low and so close to the lighthouse that we are able to throw our last farewell to the keeper. Whether he is still up, or gone to take his rest, we do not know. Later on we learn that he reported our passing to the anxiously awaiting world.
After that last farewell to Europe we encounter a steamer approaching far off from the southeast, and dragging behind her a trail of smoke. From this we notice that a southerly wind prevails. It pushes a ceiling of clouds in front of us between the sky and the ocean. With our enormous speed, however, we quickly leave even this last sign of life behind us.
Before us stretches far the endless water which seems to tremble in the light southerly breeze. And we are glad of this light warm southerly wind, because it does not hinder us on our roaring flight towards our distant aim. The sea is as calm as on my first sea voyage to Ireland. I cannot see the mountainous waves, of which I have heard so much, waves driven to continuous rising and falling by icy lashing winds. It really seems as if there exist weather conditions under which we may venture out with our present day machines. But within me a careful voice speaks: "Do not triumph too soon; the sea is wide and so different in the various zones. The day is not yet over, and the uncertain night is still before you." But I enjoy the present and take no heed of what may be coming.
The good weather seems to accompany us.
During the first ten hours we relieve each other at the controls every two hours; later on, every hour. The greater part of our attention is concentrated in our compass course which we have written in big figures on a board in front of us. On the distant clouds our eyes are fixed. Every now and again I return to my task of navigation; I calculate and write; observe the wind and the fuel consumption from the various tanks. During the first hours everything goes as normally as possible. As we have some head

wind, and know that this head wind is weakest on the surface of the water, we fly at an altitude of 10 to 20 meters over the quiet dark blue waves.
Shortly after leaving the coast the weather outlook seems to become worse. Low clouds hang over us, and a quiet drizzling rain curls the surface of the water. The clouds hang between us and the sun, and immediately it begins to get colder in the plane, so cold that we begin to shiver. A southwesterly wind, stronger than before, presses against us, and throws the waves from West to East. Long streaks of foam stretch in this direction over the water. They give us accurately the direction of the wind. But this weather does not last very long. It soon improves, and clear sunny patches appear far behind the dark clouds, giving us a hopeful outlook for the next hours.



The motor begins to sputter, the revolutions trop down suddenly, we are dragged warningly out of our hopeful dreams. The noise (to get -sack into the past) was only momentary. We throttled down the engine immediately, and it was not heard any more. But still, it filled us with great anxiety because here, so far out over the endless

ocean, with another 30 to 40 hours ahead of us, such noises could not be taken as 1, joke. What was it? Was the mixture too lean, had some cogwheel broken, or what had happened? In addition to throttling down, we :hanged the air mixture control and listened most anxiously for a long time to the sound of the motor, but our attentive ears could not detect anything.

So the hours passed. The eyes of the one who was at the controls were fixed upon the distant clouds. We hardly touched the controls; the Bremen seemed to fly all by herself over the vast stretches. Noon came. The sun which seemed to lag behind us reached the meridian slowly, and a long time elapsed before it began to shine into our faces. Then it was noon according to the sun, but our watches were already ahead by 13/4 hours. We estimated that at that time we had passed approximately the 30th meridian.

As we had no sextant aboard we could not measure the altitude of the sun. Still, our noon calculations were sufficient to give us an idea of our progress and the distance so far covered. We were glad of the result, because it showed that our speed was still over 170 kilometers per hour.

The engine was working like a watch. After the first fright it had given us, it had run on smoothly without the slightest unusual sound, and had regained our full confidence. The L. V. motor in its construction with its six cylinders was so simple, so clearly arranged and so well designed that after ten hours regular running time it could be assumed that this motor would keep on running even for fifty hours if sufficient gasoline were supplied. We had flown by noon about 1,500 kilometers, and had somewhat more than 2,000 kilometers still in front of us to reach the sanctuary of the coast. Therefore, we had by no means covered half of the distance between land and land.

It was then that we began to relieve each other at the controls every hour. We had had our first breakfast in the plane at about 9 o'clock; it consisted of strong bouillon and excellent sandwiches. It was now time for lunch. Lunch consisted of the same courses as breakfast, to which we added a few bananas and some chocolate. From time to time I stuck the bananas and chocolate in bits into Fitz's mouth; he was sitting at the controls. Then I took a short afternoon nap, in order to prepare myself for the approaching night. We took turns in sleeping. My sleep was not too long. I never slept more than ten minutes at a time; then my eyes opened consciously, and I looked at the compass and other instruments. As our flight was progressing seemingly without any trouble, happy excitement prevented me from sleeping deeply. I had already made up my

mind during our last flight that on this attempt I would sleep properly. Still, it was not surprising that my interest in all the new things made it difficult for me to close my eyes for any length of time. I felt I must enjoy the voyage across the ocean and all the unusual experiences. I hoped to get sufficient sleep after the trip !
On my next trip, however, I shall not fail to carry a sleeping draught with me, to take in case sleep refuses to come. It is essential that one should be perfectly fresh and well rested to face the dangers of the night. Fitzmaurice had made a big mistake during our last night in Ireland, by hardly going to bed or sleeping at all. As a result he slept now, quite soundly, for half hours at a time, and I was delighted to see this because I knew rest was needed before the onslaught of the night.
When our watch according to Irish time showed that it was about 4 o'clock, the wind began to freshen up. Judging by the wave caps below us the wind was blowing from behind. In order to establish this fact, Fitzmaurice took a curve and I threw down two smoke bombs made by Deichmann. The first one did not seem to function; the second fell like a yellow band, and when it hit the water this yellow band drifted with considerable speed in a northwesterly direction. According to my estimate we had a southeasterly wind of at least 10 miles per hour. Having established this we flew the next hours at a higher altitude. We flew, making full use of the East to West air current, at an altitude of 500 to 600 meters. Every opportunity of getting ahead had to be seized, for our course still stretched far far ahead of us. I hoped more and more to sight the lights of Newfoundland before night set in. I little knew what was in front of us!
Still, although everything was going well, the unfortunate fate of all the flyers who had tried before us to cross the Ocean from East to West, made me always careful. It was for me a constant warning not to triumph too soon. The weather conditions encountered so far had not afforded me any clue as to the fate which had befallen our brave predecessors.
At this time Fitzmaurice, who had followed the good progress of the flight, as I had, wrote to me on a scrap of paper: "We shall probably sight the lighthouse of Newfoundland before the beginning of the night."
I was filled with the same hopes, and wished that he would be right. I wrote back to him on the same scrap: "God is with us and our task." And so He was.

DODGING THE SLEET-AN ANGRY WIND-MOUNTAINS OF CLOUDS-THE INFERNO OF THE SEA -A BATTLE IN THE DARKNESS.

The weather during the noon hours became even sunnier than before. Beautiful light clouds were hanging in the fresh sunny air. The endless water stretched in front of us, as still as if it were a small inland lake. The course of the wind, marked by the foam bubbles, veered in the meantime all the way round from South-East to North-West. The streaks of foam came wrigling against us like long snakes. Out of the thick cumulus clouds which hung in the sunshine white streaks of rain fell down to the sea. But we were able easily to fly around these local patches of rain. Sometimes the warm rays of the sun would shine into the cockpit at my side, while the other side of the plane would be hit by cold air currents from the showers of rain and sleet which pelted down upon the ocean at that side. We always skimmed, as it were, the edges of these patches in which snow and ice lashed the waves. Woe to the pilot who at night, without noticing it, gets into these dangerous snow and hail storms. Whether he would be lost, or whether there existed a way of fighting through these barricades to victory, I did not yet know. But knowing that the threatening moonless night was coming, these thoughts pressed heavily upon my heart.

The first unpleasant effects of the long flight began to manifest themselves about this time. We had had continuously to fix our eyes upon the distant horizon and the bright clouds, and then turn them to the darkness of the plane, in order to keep a steady course on our compass. Our eyes began to burn. As it grew later, and the sun sank lower and lower, the dazzling burning rays which were thrown upon us reflected by the water became more and more glaring. It was particularly painful for me on the left side, and often I had to close my eyes to give them a rest. I had dark goggles to protect me from the sun rays, but even these were not sufficient in the long run.

Gradually, five o'clock came and I invited Fitzmaurice to tea. The table was not set as nicely as usual, but the tea in our thermos bot-
ties was just as hot as when it was poured into them in the morning. It was refreshing and tasted better than usual. We had the same things as at lunch time; sandwiches, bananas and chocolate.

After tea, we felt refreshed and looked forward happily to the coming evening. We had good reason to feel happy, because the

motor was humming its song industriously, and did not make the slightest unusual sound. It seemed to strive westward with real pleasure, and the Junkers propeller cut glistening on through the sunny air. We showed our joy and appreciation of the good old engine, by stroking both speedometer and plane lovingly.
We made another observation of the wind at that time, and noticed all of a sudden a very strong wind from the northwest.
We therefore corrected our course by 15 degrees towards the North and came down to the lowest possible altitude over the already darkening curled bluish grey waters.
Flying within 10 meters of the water we could constantly observe by the splashing of the foam capped waves that this air current kept on.
The checking of our gasoline supply was one of the most important tasks in our navigation. Our gasoline gauges were not good; they did not register correctly. The gauges showed a normal steady decrease of the fuel, but what is of such vital importance on such flights, the exact control of the gasoline by direct observation cannot be carried out with gauges. Besides, there is never any real guarantee when the tanks will become absolutely exhausted. Our most essential control consisted in establishing the time in which we used up the various tanks and comparing it with the average revolutions of the propeller. But even these figures were not accurate, because quite a considerable quantity of gasoline might have been left in the numerous tanks, which could have led to false conclusions. Also, whether we flew with a lean or rich mixture made a considerable difference in the consumption.
We had on our plane a system of 14 tanks distributed in the wings, and cabin, and could use fuel from two or three of these tanks at the same time. This gave us a comparatively accurate control of our fuel consumption.
From 5:30 to 9:35 A.M. we were using fuel from the two cabin tanks on the right, which as the name indicates, were mounted in the cabin. The average revolutions during this period amounted to 1440. We used these tanks first, mainly to equalize the distribution of the load in our plane. We could not therefore establish how much fuel we had consumed out of these tanks and had to rely on past experiences. We were not certain of our consumption, and later when we started to use fuel from these tanks again, our uncertainty increased.
At 9:35 we cut off these two tanks, because we bad reached a favorable distribution of weights. We switched on the four wing tanks, which had a capacity, according to our previous tests and

calculations, of 10 1/2 hours flying time. Shortly after tea time we had therefore another two hours to fly with these wing tanks. As we had to count, however, on the possibility that they might be exhausted much sooner, we had to watch for that moment very carefully. Half an hour earlier than we had calculated, at 7:20 Irish time, the gasoline level in the indicator dropped suddenly, and the gasoline control wheel which was driven by the overflow stopped. We had to cut off the wing tanks and switch on three cabin tanks. We pumped by hand sufficient gasoline into the gravity tank to fill it up again. After three minutes' work the gasoline supply was regular again. The cabin tanks, according to my calculation, would keep us going for about 14 hours.

I made a line with my red pencil on my second clock, indicating the hour at which the exhaustion of these tanks would have to be expected. In order to be on the safe side, I also marked with a red line four hours ahead, to remind us in good time during the night of the possible exhaustion of the tanks and the necessity of switching on of fresh tanks. Such precautions had to be taken, because we had to count strongly upon the fatigue factor. It could easily have happened that during our fight with the elements through the night the engine might have run out of fuel through carelessness and thus come to a standstill.

We had exhausted the wing tanks in 9 hours and 45 minutes instead of in 101/2 hours. At that time this small difference did not worry me very much.

The sun was in its late afternoon. The previous day in Baldonnel I had gone with Schuenzinger to the highest point of the field and watched the sun disappear in the West. That was at 7:45 ; at 9:30 there was perfect darkness in Baldonnel. To-day at 7:20 the sun stood quite high in the sky, and we were very glad that it lagged behind. From 7:45 onwards we began to count one degree for every four minutes that elapsed while we flew in sunshine. We hoped that we would reach a considerable figure by the time the sun sank below the horizon. We would thus have had a good check up on our position for our further flight into the night.

But unfortunately things went differently! After 1 1/2 hours our attention was suddenly diverted from counting degrees every four minutes. An unpleasant sight, which we had not seen before, manifested itself.

The glowing stripe the sun had painted on the water, and which had stretched itself far out to the horizon, was suddenly cut off. A whitish stripe seemed to replace it vanishing on the distant horizon.

Behind this whitish milky stripe rose gigantic mountains of clouds, which stretched as far as the eye could see from North to South, and which actually looked like Northern mountains, dark and threatening. I looked through my glasses, and saw that they were not the coast or mountains, but bad—very bad—formation of clouds, which rose on the horizon to an altitude of several thousand meters, so high that it would hardly be possible to fly over them.

From my Templehof experiences of cloud flights at high altitudes, I knew that there, if we were unable to fly over those clouds, we would encounter icy cold fogs, in which our plane would certainly collect ice to such an extent that we would have to make a forced landing.

The entire formation of the clouds looked as if we had encountered an area of low barometric pressure, which had developed more quickly than usually. My theories that on an East to West flight it is hardly possible with a plane to avoid encountering these low areas were proven. Happy is he who encounters such a region during the day time. Woe to him who does not possess a splendid machine and the best of instruments if he hits upon such a region at night. We came into the second category.

My thoughts therefore were busy with the Bremen. Would she be able to hold through and stand this enormous test? In my opinion the low pressure area stretched out far West for hundreds of miles. It was not certain that we would get through it. Hitherto I had never got into such weather either in the day or at night. If we encountered similar weather on our night flights we either turned back or landed carefully. Here it was impossible to turn back. We were too far from the saving coast of Europe, and very probably in the vicinity of Newfoundland. And this last circumstance even increased the danger of the approaching cloud masses, because we would soon have to count upon the possibility of land below us, and would have to fly high in order not to strike against elevations in the night and fog. I had fought through many a gale at night and without moonlight, but my previous experiences were child's play compared with what was threatening now after 20 hours' flight. My hopes that we would succeed and come through
unscathed and, after the thick dark masses of -clouds, again encounter a clear starlit night were very, very small.

We had to get ready for action. Our only weapon for this fight were the two Askania "Wendezeiger" Indicators. One of these had been in constant use during our 20 hour flight so far. We had not fitted the wind jacket of the second one, in order to reduce air resistance. Thereby we had made, even though not much, still a little better

speed with our plane. Fitzmaurice started to fit this second wind jacket, a task which was accomplished in four minutes. For both of us that was a sign of the coming struggle. Hitherto we had grasped each other's hands joyously in recognition of our happy progress; this time we clasped them in utter seriousness. As we shook hands, our eyes met, and without words we promised each other faithful comradeship and to fight through bravely, come what might, to the very end.

I thought of veering a little more towards the South, but we had still a strong wind from the North. And I was afraid of drifting too far South into the water wastes, and then perhaps being unable to reach land. I estimated the distance from the banks of Newfoundland to be 200 to 300 miles.

Then began our fight with the unchained elements, night and fog,—a fight for which in my haughtiness I had often longed. In our many talks about the flight I had often given expression to this desire. I had said that anybody could fly in the moonlight and with a starlit sky; that it was black night and fog which tempted me. Now after a tiring day flight, my wish was about to be granted; and I must confess that I experienced a little sinking feeling. As, however, fear was the last thing which could help us in our struggle, I made every effort to force a smile upon my face.

We could not follow the good old sun, which had shone upon us for such a long time, in its daily path down the sky. While still high in the sky, it disappeared behind grey haze, and the icy shade of clouds enveloped our faithful Bremen. When we first saw this fog bank it had seemed to hang close above the water; now it crept nearer and nearer. When it got below us it seemed to rise. We therefore gave the Bremen some more gas, and tried first to fly above it.

After we had winged our way for half an hour through the cloud masses, holes appeared suddenly in the clouds, through which we were able to look down upon the wild sea. How different the ocean now looked! White stripes of foam dashed over the caps of the high waves driven by the wind incessantly. In the tumult it seemed as if sea were giving birth to sea. Hell seemed to be let loose down there. We were flying already at an altitude of 2000 meters and still we could not get above the towering clouds. So we fought our way westward. We could not fly on like this much further, because high above us another ceiling of clouds hung, which seemed to join our clouds not very far ahead of us.

The moment had come for us to dive into all this uncertainty, into the clouds of fog below us. As we had noticed the stormy sea earlier

through the holes in the clouds, we presumed that the lower edge of the clouds would be at least 30 to 40 meters above the waves. I did not consider it advisable to try to hunt up these holes and to dive through them downward, because they would already have closed in and this would only have caused delay in our progress. We dived into the clouds. My heart was beating fast, but I was full of confidence. We had not yet consumed half of our fuel supply, so that the flight with our heavy plane through the fog was an entirely new experience for me. But all went well. We lost altitude gradually. We flew into the clouds at an altitude of 2000 meters. The altimeter began to drop and was already registering zero, when all of a sudden gray and black jaggs with white stripes appeared below the dark fog. We were 70 meters above the raging ocean.

The altimeter registered minus 150. We knew that we had got into a proper minimum. Pelting rain beat upon the closed windows. The sea was ploughed up by the gale to an extent I had never imagined possible even in my wildest phantasies. Ploughed up to the depth of its depth, it stretched beneath us, foaming its black tongues against us, thirsting for new victims, for the tiny living beings who between two elements fought for their lives.

Our machine literally trembled in all her parts. The wings vibrated and bent, and the rudder received shocks of incredible violence. Deep troughs of waves alternated with onrolling mountains of water, the caps of which collapsed in their white abyss. I must confess that this sight did not cheer me very much. It seemed to be too audacious for small frail man to fight against these powers of nature. How would it all end? It was a fight for life or death. But so long as there was life in us, we intended to struggle.

As upon the battlefield in merciless fight, every feeling of fear suddenly left me. Now that the contest was on I wished to absorb every move in this mighty experience. Thrown about and shaken by the gale, I could hardly reach the hand of my friend Fitzmaurice. And in this stress I prayed and I regained fully my peace of mind. I gradually began to realize that the Bremen was fit for this battle, and again I shook hopefully the hands of my comrade in distress. Again we pledged ourselves to fight to the very end.

The gale kept on like this for hours, and as one gets used to everything, I got used to this sort of flying. The main thing now was to keep upon our compass course. The compass swung and shook under the terrible gusts, but it registered, and it was still light enough for me to keep my direction by the dark clouds which raced by and the waves.

I kept on comparing my direction with the compass and correcting the course accordingly. It was not easy any more to keep direction, and often we were thrown off our course up to 30 degrees. As long as it was light we managed somehow. My hopes of achieving victory in this fight with the elements, which had waned in the beginning, began to increase, and with a pressure of the hand I conveyed these feelings to Fitzmaurice and nodded happily to Huenefeld in the cabin.

Then something unexpected happened, which seemed to take away our last hopes. It was still light enough to see the gauge tubes. Hours ago we had opened the reserve oil tank and let fresh oil flow into the motor tank. The tube filled up half an hour ago, and we again shut off the reserve tank to prevent too much oil flowing into the motor tank. And now! Half an hour later the level in the tube had sunk again almost to the point where it stood before we started filling up. There seemed to be no doubt—we were losing oil. Fitzmaurice wrote to me in red pencil on a scrap of paper these words: We seem to be losing oil." Throughout the day some oil had been seeping through along the axle of our revolution indicator and had drizzled down the instrument board and collected under the pilot seat. Fitzmaurice climbed in the shaking gale into the cabin, lay down on the floor and searched with his flashlight underneath this seat. He thought because everything there was oily, that this was a confirmation of his belief that there was a leak somewhere in the oil pipe or in the oil tank through which we were so rapidly losing our precious oil. I was inclined to believe so myself, because we had already experienced a small leak in the motor tank on our flight from Berlin to Baldonnel. As soon as Fitz, with a hopeless expression on his face, returned to his seat, he wrote to me below his previous remark: "Get to land as quickly as possible; we are losing oil very badly."

A nauseous sickening feeling arose within me. Everything had gone so splendidly so far; the motor had held up faithfully; the Bremen had withstood the gale and fog; we had remained masters of the elements; how tragic, if a small trouble in the oiling system should now lose us victory and bring our flight to an end. At this time night approached. Originally I had intended, when total darkness fell, to change our course further South, in order to remain the whole night over the ocean; and then when the dawn broke to turn again into a northwesterly direction until we reached the coast. This intention was now thwarted. We had presumably many more kilogrammes of oil in our reserve tank, but with the rapid consumption we noticed on our gauge it would only last us for a few hours. As I did not think

that land was too far away, the only solution was to take up a course which would bring us to land as soon as possible. I must say that I had considered such a possibility already in Baldonnel, and had figured out which would be the best course to steer in such an event. Nevertheless, the situation seemed rather hopeless. But where distress is the greatest, God is nearest. Again I prayed, and shook Fitzmaurice's hand to cheer him up. I must say I felt very sorry indeed for his wife and child, especially as in Baldonnel I had been the first to say to Huenefeld: Well take him along."

And now it became dark. We were no longer able to establish the strength and direction of the wind. A11 I could hope was that sooner or later we would emerge on the far side of the low pressure area where northerly and northeasterly winds should prevail. These would drift us on to land, over Newfoundland into Labrador. Considering that we wanted to reach land, I was perfectly satisfied with that possibility. We therefore altered our course still further slightly Northward. Now we learned to fly blindly in the gale. But another unpleasant experience awaited us: the electric lights of our compass began to grow dimmer and dimmer, and it became extremely difficult to fly by the compass. We had to resort to our flashlights. From time to time I threw a flash upon the compass, and every time established unfortunately, that the gale had thrown us off our course. It was rather hard to get back into the right course again, so we began to flash our lights throughout the night.

It was now impossible to establish how far South or North the gale was driving us. I hoped to get ahead in spite of everything by keeping a course exactly West, so as to reach land after a while. We hoped to see lighthouses, and then follow the coast Southwards. Under the weather conditions which prevailed, however, we had to fly at a high altitude, for safety's sake, and, flying in the fog, might miss the lighthouses. It was, probable that in the dawn, according to my sea charts, we would find ourselves over Labrador, because as I have already said I was counting upon northerly winds.

In the meantime by opening the reserve oil tank, the level in the gauge tube had risen again somewhat, and with it our hopes that we would be able to keep up for a number of hours with our supply. Our watches showed that it was midnight Irish time, and as complete darkness enveloped us we judged that we had come quite a distance West. But this we could not establish with absolute certainty owing to the thick clouds and heavy fog through which we were flying.

Our intention to reach Mitchel Field was, I considered, thwarted. I thought we would not be able to sight the lighthouses on the East

coast of America, and if we failed to locate such points we would have to fly on through clouds, fog and night until the dawn broke. Only then could we grope our way down and search for the ground. The question remained: Where were we drifting to? Which quarter did the wind come from? How strong was the wind?

I shouted to Fitz. "Coffee," and he passed the word on to Huenefeld. He knew what this meant. It was the last drug to keep us going. The struggle was hard, very hard. The coffee perked me up and I fought on in the fog.

The compass was dark. I checked it up with my flashlight. The trusty "Askania" was wonderful. The Bremen began to turn around, the long hours of experience in fog flights proved invaluable. I managed to bring her back upon her course, and we flew straight ahead, only I did not know into what territory we were heading. A wireless now would have been helpful, very helpful. I knew that beforehand, but the outfit was so heavy, and I based our safety upon the gasoline supply, with which I hoped under all circumstances to reach safety. Now that we had actually flown in the fog for an hour, my confidence grew. We still had oil; more still poured from the reserve tank! I felt we were beyond the danger of running short of oil! I had no time to establish this more closely-. Fitz was reading the instruments, and handing me coffee. He drank some himself. I became more hopeful and happier, even though I did not know how things would end. I often felt for Fitzmaurice's hand, which I pressed—at least I felt that we two were one in the battle.

AN' ETERNITY OF NIGHT-FLYING BY THE STARS-LAND OR WATER?-BLEAK WILDERNESS-ONE HOUR OF FUEL-THE "STEAMER" IN THE ICE -LANDING AT GREENLY ISLAND.

For five hours nothing but night—I could not even see the fog. My flashlight beams every now and then, lit up the compass. My eyes were tired and sore. But happy hopes filled me. We still had gasoline for many more hours, and could correct an error in our course in the morning. I sometimes closed my burning eyes and fought the attacks of tiredness.

We climbed slowly. I did not want to give the Bremen too much gas, and I observed carefully my thermometer. It dropped, and registered 2 degrees above freezing point. This meant that we did not have to fear that ice would collect on the plane. We hoped now to be over land, but no light could be seen in the sea of clouds. The tired eyes saw mirages. Lights seemed to flash up here and there.

But I knew by experience that one must be extremely careful under such conditions and must not follow any deceiving lights, or else all would be lost. It was extremely difficult to fly now by compass. In fact it was rather difficult to continue checking our momentary course in the glaring cone of the flashlight. Time seemed at a standstill. "If only the stars would come, or the day!" But day was a long way off. The night has eight hours, and if we progressed far West, even nine. Endlessly long crept by the minutes in the dark stormy night.

We knew that we would soon reach the hour in which the cabin tank would be exhausted. We climbed repeatedly and then descended again in dense fog. At 7:30 Irish time the gasoline level in the gauge tube began to drop. We switched over and pumped. The fuel consumption this time had been too large. The tanks were exhausted three and a half hours too soon. It is true I flew with a richer mixture in the fog. We finished switching on to the fresh tanks, the Bremen banks, and the compass revolves. With the "Askania," however, we gradually brought her back upon her course. I handled the rudder after my own fashion; step on the left, step on the right, and so on, and soon we were on our course again. We were really getting on quite well, on the first long fog flight I was forced to fly. The "Askania" altimeter helped me along well. It is rather difficult to keep altitude, but even this we managed. The hours passed. A few hours more, and the dawn should come. My hopes rose again. We should certainly reach our objective, the American continent.

Suddenly it became lighter in the clouds of fog. I could see lights ; they were stars; and again they disappeared and we were in a new fog. But now I knew that if we had more altitude, we could get over the clouds, that the clouds were not inaccessibly high, and that we would gradually emerge from the low pressure area. The last I considered the most important factor of all. I carefully gave the engine more gas. The Bremen climbed and all of a sudden we both seemed to see lights ahead. We shouted it at each other happily. But it was a mistake. They were stars, many stars, and they glimmered like the lights of as many lighthouses. Every now and again they or we disappeared in the sea of clouds. But the glimpses we caught became longer and longer, and soon we had above us a starlit sky.

Below us heaved milky white fog and dark clouds. We flew at an altitude of 2000 meters. Now I handed over the controls to Fitz, and looked after the navigation. "Where can we be? Below us nothing can be seen." I looked for the polar star. The star easily found, I

compared the compass with it. The compass seemed to me to have gone crazy, it registered entirely wrong. We must have been a good way off our course towards North, I could not establish how far. We picked out stars for our direction.
Fitzmaurice flew and I closed my eyes. I could not keep them open any longer. I tried to fix them upon a star, but I could not hold it. I slept for five minutes. In my sleep I could see the stars sparkle and circle. The short sleep and the remainder of the coffee refreshed me, and onward we flew. It was soon Fitzmaurice's turn to take a nap. He also had scarcely closed his eyes during the whole night.
It began to clear up, and suddenly the clouds below us disappeared. Strange formations appeared below. Great patches of whiteness, with long black stretches in between. I believed that I was seeing icebergs. "Is it land or water?" I could not decide. I thought it was possibly icebergs on the sea. But it was land which stretched below us. We kept a southwesterly course according to the polar star. Fitz shouted to me "Labrador," and though I was inclined to believe it, I was only certain after Fitz had fired off a few light rockets, in the shimmer of which we noticed forests and snow. Our joy was great.
We kept on with our flight towards the southwest. Finally light appeared on the horizon, the moon began to rise on our left and in the East it began to dawn. We now saw high mountains around us, which we had to dodge, and around which we encountered wind gusts of enormous strength. Once, in front of a high mountain, we bumped our heads hard against the ceiling of the plane. I wondered how Baron von Huenefeld felt in his cabin.
We were of the opinion, that we were now over the American continent, but where? This we could not tell. It must be way up North, because under us there were still only dark forests and snow.
Our oil tank was full again. We did not have to worry about this any longer. We had neglected to fill the motor tank from the reserve tank. When it actually came to filling it, the oil had flowed straight into the gauge tube; whereupon we thought that the main tank was filled and closed the valves ; the oil then flowed from the gauge tube into the tank. This resulted in the rapid drop of the oil level, which had caused us so many anxious hours.
The sun came with its brightness, and found me happy and cheerful again. Below us was land crossed by valleys. At our altitude, however, we did not seem to make any headway. We faced a strong south-west wind which hindered our progress. We descended and followed the course of an open river, which brought us to long drawn out lakes. We flew on in the valley at an altitude of 10 meters. At each bend I had to give a little more gas, in order to get

over the pines on the slopes. The snow seemed to be deep. Who had planted those pines, we wondered, as we shot by. I shouted with joy into the fresh morning.
Far down in the southeast came a big lake. Surely some human beings lived there. We got there; but no houses, no paths, nothing betrayed the presence of men. This wide expanse of uninhabited land began to seem uncanny to us. We had flown for hours with our center tanks. We produced our maps and studied them. We had only sea charts of Labrador on which only rivers and lakes were marked; but so many, that we did not know which one this was. We presumed that we were here, and there; but how could we be sure that our assumptions were correct?
We flew on. We had to climb high mountains, plateaus, and there we were shaken by terrible gusts of wind. He hoped that the sea, the St. Lawrence gulf or something would appear behind the mountains. We flew on and on, from hill to hill, but we were wrong. We seemed to see a long coast line with islands in the sea. Our eyes deceived us. Fitz saw the island Anticosti in the sea. We headed for it, but it was a forest. Forests and forests and snow; but no roads, no paths, no houses! I began to feel rather disheartened. Where were we? The sun disappeared behind streaks of clouds. I could no longer see it. My compass read southwest, but it jumped very much because the Bremen was continuously shaken by gales. These lifeless stretches were weird. While crossing a big lake, Fitz thought he saw a settlement. I turned around and convinced myself that he was mistaken.
Meanwhile our watches showed 11 o'clock. We rose up high to 2200 meters. No coast could be seen. We passed the glasses from hand to hand. Nothing but forests, snow, mountains and valleys. An icy fear came over.
If we were forced to land here we would be lost. And our fuel supply was running low! I experienced no little fright when I thought of our last check up, when our tanks were exhausted 4 hours earlier than we had expected. Maybe something had gone wrong which caused a heavier consumption of fuel? I considered all this, and wrote in a hurry to Huenefeld: "We have gasoline only for a few hours, are over unknown land and might have to make a forced landing." What would happen then we did not say to each other, but we all thought the same.
What could we do? Fly on to the last drop of our fuel; throttle down, and fly in such a manner as to reach as far as possible; keep steady on our course in a southwesterly direction, because we might be in Labrador or just as well way up in the North of Canada.

We would be lost if we did not reach the coast. I now made an accurate estimate of our gasoline supply. The center tanks showed a contents of about 200 liters each. We cut off these and then entirely pumped out the rest of the tanks. We managed to scrape together from those tanks fuel sufficient for one hour and twenty minutes. The aforesaid twice 200 liters would last us quite a while, but considering that we were coming to the end of our supply, it was not quite safe to rely too closely upon our calculations.

The dreadful possibility which now threatened us seemed worse than a disaster over the ocean.

And now began a flight one meter above the pines, making use of the slopes and valleys—a frantic race. We tried to fly with as lean a mixture as possible. The good old motor growled, it did not seem to like it, but it had to be. Thank God, the gasoline consumption began to drop, and if the gauge was correct, it would last us for quite some hours.

It was a race between life and death. We were all very serious. With our glasses and our aching and tired eyes we looked for roads, huts and smoke. But for hours we saw nothing but forests and snow. It became colder and colder, and above us blew a southern wind which caught us in its grip even though we were flying so close to the ground. The further South we came, more and more wintry was the aspect the landscape assumed. Was our compass wrong? Did disturbing regions cause excessive deviation? On the sea chart there was a disquieting notation: "The coastal region in the Northern part of the Gulf of St. Lawrence is rich in local magnetic disturbances."

We could not see the sun. Were we flying towards southeast? Maybe our deviation of 35 to 30 degrees was not correct? But all we could do was to keep steady on our course, and under no condition cruise. Our salvation lay in the South. Our watch showed 5 o'clock. The terrain began to rise, a rocky plateau appeared. The wind increased and the gusts became furious.

Behind the plateau, however, the weather changed. Icy fogs rose and were either torn in the air or else covered the rocky ground. My hopes were renewed. We climbed higher to obtain a better view, and in order to make better speed through the fog Southwards. We saw wide frozen expanses of water that Fitzmaurice wanted to fly across, because he thought he could see land. My glasses showed open water. It seemed better not to fly over there as our gasoline might soon come to an end. Along the coast we flew Eastward. It appeared to be either a big lake or the Gulf of St. Lawrence. And while we thought about it Fitzmaurice saw in the middle of the ice what looked like a frozen-in steamer. Through my glasses I noticed

that it was a lighthouse with a house next to it, and many huts nearby.
"Saved! We are saved!" We broke through the clouds of fog and circled the island. The house appeared to be inhabited, for the door was open. We looked for a landing place. A small icy snow field in front of an electric cable seemed to be suitable. I dropped a smoke bomb and to my astonishment established that the wind below us came from the opposite direction. And I forgot to think how strong the wind might be.
We prepared to land. Twice I gave the motor more gas in order to clear a wall and a road, and then we were upon the ice. The Bremen settled down gently, but she did not roll; the ice broke, she tipped forward and stood on her head. Only after opening the deck did we notice what a violent gale raged there. I was the first to climb out. The wind simply blew me away on the smooth ice. Fitzmaurice followed, and then Baron von Huenefeld. Men rushed forward. They told us that we were actually in Canada; on Greenly Island; in the strait of Belle Isle.
In the wind we straightened the Bremen, intending to salvage her. She stood with her wheels half in the water. The gale repeatedly knocked us down upon the ice and threw us over the rocks. The willing inhabitants brought ropes, and after repeated attempts with these to pull our good Bremen up to land, the right axle broke. We discontinued our futile attempts—I stepped up to my knees in the icy water and drained the radiator.
With strong ropes around the wings we fastened the Bremen down to North American soil.
The first Trans-Oceanic East to West flight was behind us. Great experiences are to crown our relentless fight. Kind fate has ordained that we should end our flight on American soil, just where a Canadian airline ends; an airline leading straight into the heart of Canada, and ending there where railroads begin. Twelve hundred kilometers separated us from Murray Bay.
It would be a few days presumably before the Bremen would be able to resume her flight upon skis into the new world. The days spent in waiting for propeller, skis and axle were not lost.
New ideas already presented themselves. We began to make plans for the future, plans which we were anxious to carry out as soon as possible.
While writing my report I looked out through the double window. Flowers stood on the window-sill, as at home. Through the window I saw sunny distances, and my gaze wandered over

mighty rocks, and jagged pack ice stretching towards the South and ending there in the open blue sea. Behind that ice there was a dark blue streak, Newfoundland, the country of icy fogs and the storm corner of North America.
I thought of the first fliers to attempt to reach the goal. Now I know where death lies in wait; where they disappeared.
My first thoughts were devoted to them, the dead heroes.
Volare neccesse est vivere non est.

TO MURRAY BAY WITH BALCHEN-CRUEL BEAUTY - CIVILIZATION'S GREETING-OVER QUEBEC AND MONTREAL-THE FLIGHT DOWN THE HUDSON-NEW YORK!

On April 26 the weather cleared after the southeast storm of the previous day which had broken the ice close to the coast. In the morning we had at first quite a thick ground fog, but this was not very high, and in all probability would move off soon. Therefore we had to postpone our take-off which was originally set for 5 o'clock.
But towards 7 A.M. the fog had cleared entirely. It was flying weather. We were just intending to start the engines when Balchen, the relief pilot who had come to take us back to civilization returned after once more ascending the hill in order to observe from there the weather conditions. He informed us that from the direction in which we intended to fly, bad weather with drifting snow was approaching. So once more we had to postpone the take-off. Soon afterwards it began to snow heavily, and we were glad we had not started. Later, we all climbed again the height of Long Point, and established there that weather conditions were improving. The snowstorm had stopped, and on the Eastern horizon clear sunshine shimmered through.
This evident sign of improving weather facilitated our decision to take off. We intended that day with the Ford plane at least to reach Murray Bay. The distance from Greenly Island to Murray Bay is about 700 miles. In the meantime it was 8:30 A.M. With the not too strong head wind we hoped to make Murray Bay on the same day. We took off at 8:30. In the plane, whose actual pilot was Balchen, my friend Fitzmaurice was first at the controls. Huenefeld and I as well as our friend Murphy sat in the narrow cabin; the mechanic behind us in the packing room in which stood the large gasoline

tanks behind each other. The take-off with skis on the ice was effected quite well, although we had quite a long run.
The route to Murray Bay from Greenly Island leads continuously along the coast. Now we could see the country towards the North over which days ago we had fought with the raging gale. On that long route there is hardly a spot where we could have landed with our planes fitted with wheels. Only planes with skis could land there. The enormous cracks in the ice, made by the storm of the previous day, looked up at us blackly and threateningly. A very few scattered settlements, situated mostly at the frozen-in mouths of rivers, greeted us. These small wooden huts looked poor and needy.
Then came again 100 miles of rocky heights covered with ice and snow, and interrupted at long intervals by small expanses of lower wooded country. No signs of human life existed anywhere. The airplanes of the Canadian Airways which during the Winter months are fitted up with skis and fly over this route twice a week to Long Point, always take with them provisions for eight days. If a plane were forced down in these regions, it might be weeks before human help could reach the occupants. The connection between Long Point and Quebec, apart from this one airline of the Canadian Airways, is only possible with good sleds. The fishermen and fur trappers, whose settlements are to be found almost exclusively along the coast, avail themselves of "dog sleds." With these the journey to Quebec takes a full month. The path is marked only by the telegraph cable, and ends at Long Point.
Every now and then from the plane I could dearly follow the telegraph line. Sometimes in the vicinity of the settlements I noticed sled tracks parallel with the cable.
For hours our course took us along the coast between rocky mountains and the ice floes which over the sea; a vast land in which chill winter still reigned. In the meantime the last clouds had disappeared and we had sunshine. In the sunshine, the landscape below us appeared much more beautiful, and it looked as if we were flying ever the snowclad peaks of our country in the wintertime.
We crossed several large rivers, the first of which was the Matashqwan. The ice floes ao longer appeared in thick masses towering above each other; now we saw only large ice fields drifting upon the dark waters, and perceptibly melting under the rays of the scorching sun. In the clear weather which now prevailed Are could see far out South upon the sea, the out-dries of the island Anticosti, whose coast grad-.rally approached, until we passed it at a distance of 50 kilometers. Then out of a large bay emerged seven islands:—Seven Islands Bay. This is an intermediate landing place for planes

which cannot carry sufficient fuel and are equipped with skis. But the sun had already done its work during the noon hours, and after another week it would hardly be possible to land with skis. Another day or two and the Canadian Airway would have to suspend her operations on this route. Two small huts were all we could see of a settlement.

Our course then turned towards the southwest. The mountains again became higher, rising steeply and precipitously from the sea. Great fjord-like cuts extended themselves deep into the land in a Northerly direction. As far as the eye could reach to North and West one saw towering mountains, ice and snow. The sparse ice floes drifting on the water had disappeared, but the land itself was still covered with a white cloak of snow. There where the wind swept the rocks, bald dark-grey, jagged cliffs appeared, often reaching an altitude of 1000 meters.

Again a dark line appeared on the Southern horizon, the South coast of the St. Lawrence river. This coast line came nearer and nearer, and accompanied us on our way to Murray Bay. We crossed many more deep snowy alleys, through which tearing currents roared. Our path continued further North towards numberless peaks which shone and glistened under the rays of the sun. Suddenly the settlements became more numerous. Small villages with churches greeted us, and showed us that there civilization began. Murray Bay appeared in front of us. The settlements reached further inland. Then we came to a small, delightful city, nestling against a mountain slope. The valley streets winding in narrow bends around the mouth of the river were dotted with charming villas, some large, others small. It was Murray Bay! Our landing field was a short distance beyond, on Lake St. Agnes. There stood a hangar and many planes. We circled the field and landed, and were surprised by a storm of wild enthusiasm such as we were to be privileged to experience on all the days that followed.

After all the hearty greetings, we proceeded first on sleds, and later in cars to Murray Bay. There we were put up in a charming villa. We took refreshing baths, and, for the first time since leaving Dublin, we found ourselves really in the midst of civilization. A small festive reception, the presentation of gifts, etc., took up the evening. We went to bed very late. We were awakened the next morning at 3 A.M. We had breakfast in kind company. The lady of the house was up and waited on us herself. Her presence as well as that of Miss Hertha Junkers graced the breakfast table.

Afterwards we proceeded by car and sled to the flying field, a journey of two hours. A trip with sleds is more strenuous than many

a flight. Sometimes we cut deep furrows into the snow covering the road. Again we were heartily received on the flying field. The sturdy trimotored Ford was ready. Balchen, fair, fresh and sprightly, awaited us. The ocean flier, Chamberlin, who was present the previous day at the reception given to us, was also ready with his plane. There was a great deal of rushing about, and disorder in the building. One saw signs of all the hurry and scurry of the last few days. All kinds of things lay about the rooms. Excitement could be seen on all faces; it was not an everyday occasion and happy excitement was felt by everybody. One saw that everybody felt that a new land mark had been made in the history of the conquest of the air. We stood with beating hearts in the center of all this. Already the hours spent in the battle with the elements seemed far behind: in front of us dangled the maturing fruits of victory.

It was 7 o'clock. We went to the plane. A hearty farewell was said. The engines were started, we waved our hands, and taxied over to the runway. We needed the whole length of the lake for our take-off, but the energetic Wright Whirlwind motors lifted us out of the narrow valley and carried us over the hills wooded with pine trees and birches. Chamberlin, the hardy fighter of the air, and Ocean hero followed us.

The goal was first New York, and then Washington, where a hero of the air was that day being buried. He had done everything in his power to come to our aid; had asked for us in his feverish death struggle; and had died at the very moment when in Greenly Island we took his seat in the plane which he had occupied on his last flight. Happiness and sorrow trod close upon each other's heels. To you, dead conqueror of the ocean and pioneer of the air over the icy North Pole, we pay humble tribute.

Our flight goes Westward along the St. Lawrence river. What could be seen only occasionally yesterday, became more frequent to-day, settlements cluster round the shores of the river. From the lonely lighthouse on Greenly Island, we are flying into the heart of the world and over New York to the seat of the government of the United States. At 8 o'clock we reach Quebec, our first large city. We see many evidences of early morning activity. Bridges span the river, railroads are embedded in straight lines in the crust of the earth, and accompany us on our way.

Our cabin looks as if the occupants had been awake through the night. There they slumber, wrapped in coats and blankets, those who, after the events of the past days, had been too excited to sleep. Miss Hertha Junkers, wrapped up in my coat, is sleeping the sound sleep of exhaustion. My dear friend Huenefeld lies on top of

the large gasoline tank on a soft bed made of flying suits. Mr. Murphy, the reporter, lies on the floor of the cabin. He, too, seems to sleep really deeply and soundly. His flowing pen during many night hours has written much which to-day the world is reading about us. At the controls sits Fitzmaurice, fresh and happy, though he had only slept one hour. He only feels really well when he has the opportunity of directing with a steady hand the plane towards the distant goal. Balchen sits next to him, and takes care of his dear "bird." His thoughts are hurrying forward to the funeral of his brave dead comrade. The sky seems to further our progress. The sun shines through the distant mist. A clear wind takes us quickly to our goal.

Since we left Quebec the mountain tops shimmering in snow have disappeared. In front of us stretches distant flat land and enormous patches of forests. Ploughed fields, which are cut off straight as if with a rule speak eloquently of the industry of the inhabitants. Brook after brook winds in serpent like fashion to the St. Lawrence river. At 8:45, Montreal, the city of a million inhabitants, appears westward in a cloud of smoke. South from Montreal stretches, as far as the eye can see, the United States with all of its riches, power and determination.

Southward goes our flight, toward the heart of the land of unlimited possibilities. At 9 o'clock sharp we cross the American-Canadian border, and on we go in rapid flight. Hilly country alternates with fertile plains, through which more and more veins of traffic are directed towards one point. To our right and left high snowcapped mountains rise. We are flying now, without having to trouble much about orientation, along the Hudson, the main artery of this stretch of land. The first large city to greet us is Albany, the capital of the State of New York. We marvel at our first sight of skyscrapers towering towards Heaven. Factories follow factories; the smoke from their chimneys proclaiming the industry of the workers. Only another hour's flight remains. New landscape presents itself. Many railroad tracks wind along the river. Mountains crowd together and through them winds the Hudson. Behind them lies the pulsing heart of America, New York.

Luxurious residences appear, green golf links, parks, then low houses, which follow each other; and then the skyscrapers of New York. An overpowering sight for us who see it now for the first time. It becomes hazy. South of New York there is bad weather. It is also raining slightly. We decide to land on Curtiss Field. The plane begins to descend gently. We land, Policemen on motor cycles encircle the

plane. Sirens howl, automobiles roar forward; behind them is the storming crowd that demands to see us. We are in New York!

Part II
by
Major James C. Fitzmaurice

SCHOOLDAYS-ENLISTING IN THE IRISH NATIONAL VOLUNTEERS-WAR CLOUDS IN THE WEST-WITH "THE DEATH OR GLORY BOYS"-MY FIRST PROMOTION-OFF FOR FRANCE.

An autobiography is a peculiar thing. As I sit here quietly reviewing the kaleidoscopic cinema of my past—a short 30 years—I wonder if it is possible to gather the true prospective of my deeds.

Mine has been a life peculiar to the times—a restless chip in the turbulent sea of the factional disputes of Europe. Long before I was twenty-one I had gazed into the glassy upturned eyes of broken soldiers; trodden a field wet with blood and still shuddering from the blows of a world conflict.

Even before the down on my cheeks had surrendered itself to the bristles of a man's beard, I had grown to know that the blot of war can only be wiped away in the brief days between each onslaught, by a sodden attempt to fill the mind with the glistening baubles of dissipation.

Is it possible then to bring into mortal words the autobiographical impressions of a life which has only begun and yet which, as I review the events in passing, seems to be so jumbled that there is hardly a beginning and as yet there is no end?

I was born in the City of Dublin about noon on the 6th of January, 1898. My father, Michael Fitzmaurice, the son of a Limerick farmer, was a civil service official, and my mother—formerly Mary O'Riordan—was the daughter of a County Limerick farmer.

According to family history the first three years of my life were spent in the City of Dublin, at the end of which time we moved to Queens County and resided in the town of Maryborough.

Here I lived and received what little education I can boast of, at the Christian Brothers School until I reached the age of 16 years. Peaceful days, wide cool green expanses of grass in the schoolyard. Woods where we went bird-nesting, and friendly taskmasters who exhorted us to study hard, are but fragments of memories of my boyhood days. Breaking out of bounds to visit the forbidden sweetshop, and practicing many other pranks of boyhood mischief

brought the inevitable school punishment. But these whippings were only passing summer storms that failed to divert my path from that of the average schoolboy of those days. I must admit that I was not a very outstanding figure at that time.

As far as I can remember, I was always the last boy in the last desk of each class I passed through, and just managed to scramble through the various examinations. The end of each term, with the inevitable report on conduct, always filled me with foreboding.

My parents did not seem to believe that I had sufficient personal pride to feel hurt at the marks that I received, but added to my sense of ignominy with a stern lecture.

Somewhere early in 1913 I was sent to the City of Waterford to undergo a general course of business training. The idea of business life was abhorrent to me at the time, and in this establishment I was perpetually in trouble of one sort or another. The climax came at the end of about a year, when I was sent home to my people as an incorrigible in disgrace.

The routine of this business training followed very much on the lines of my earlier academic training. I slept in a large dormitory with a number of other boys about my own age, and at nine o'clock every night we received a signal for lights out. During the day we usually hatched some diabolical plot for mischief, and immediately the signal for lights out was given we would proceed to execute our plan.

The particularly devastating scheme which foreshortened my career in business studies was a plan to attack a neighboring dory Napoleonic prowess for strategy members of my dormitory under my or the attack, which was to take place.

One mistake however was made Overlooked the fact that the dear old slept in a room directly underneath the dormitory which we were attacking. As the 'zero hour' arrived we crept silently down the tall. The ghostly moonlight, shining window, was reflected from the shimmering nightshirts of the more timorous members of our raiding party. Stealthily we opened the d for attack, and launched ourselves upon the beds of our unsuspecting victims. The battle was at its height when our scouts observed use authorities were coming up the stair to investigate the situation. Word was passed along, and a general scramble started for out room. Strategic as had been our advance, I must admit that our retreat was rather poorly planned.

Smothered in a tangle of bedclothes and rolling grotesquely about the floor, I learned that my lads had given place to superior forces when I catapulted directly into the stomach of one of the portly

house authorities. The following very severe manager informed me ling had fallen upon the housekeeper who was asleep in bed at the time and had nearly scared her out of her wits. He also informed me that my continued presence in the house was not conducive to the maintenance of the best possible standard of discipline among the other students. A railway ticket was handed to me, my traps were packed, and I commenced the most miserable railway journey of my whole life.

My arrival at home coincided with the receipt by my parents of a long letter from the school giving the details of my disgraceful conduct. A very serious lecture was delivered, and after negotiations between my parents and the officials of the business school—which lasted for several days—I was finally allowed to return to continue my studies.

At this time the Irish Home Rule Bill was receiving serious consideration in the British Houses of Parliament and the Irish Nationalist Party under the able leadership of the late Mr. John Redmond was beginning to see the materialization of the dream of centuries—a free Ireland. The Unionist Party in the north under the equally able leadership of the then Sir Edward, now Lord Carson, was becoming uneasy, and foolishly decided upon a policy of armed resistance. Volunteer military forces were formed in the north with the object of preventing the passing of the Home Rule Bill. The gauntlet
was thrown down. Redmond, acting on a policy of self-preservation, issued an appeal to the youth of Ireland to arm, drill and prepare to fight if necessary for the liberty of the people of our country.

The call to arms appealed to me and I was one of the first to enroll in the City of Waterford battalion of the Irish National Volunteers. Endeavors were now made by the British military authorities to suppress this organization. The more they tried to suppress it the more enthusiastic and keen we became. Parades, instruction, drill and policy were all held, delivered and discussed in secret. My association with this volunteer military organization wrote the word "finis" to my business studies.

Almost every modern boy at some time or another in his life has longed to play a part in secret service for his country. Think then how it fired my boyhood imagination to attend these secret meetings where we fervently hoped that we would "do or die" for Ireland. In the midst of my embryonic ambitions to be a great soldier came the outbreak of the European War in August, 1914, followed almost immediately by the formation of the great Lord Kitchener's Army. An appeal was made for volunteer troops, and the

late John Redmond, ever anxious to render assistance to those in trouble,—even to those who opposed him—called upon the youth of Ireland to come forward for foreign service with the Armies of England.



CLARENCE CHAMBERLIN GREETS BARON VON HUENEFELD AND MAJOR FITZMAURICE

Now came a chance to throw myself into the tempest of modern warfare; the angry clouds of conflict were rapidly gathering on the Western Frontier. Wild stories of the rapid advance of the relentless German Armies fired my imaginative ambitions, and in the early days of the War I found myself enrolling in the Cadet Company of the 7th Leinster Regiment. My period of service with this famous regiment was of very short duration. My parents called upon the Commanding Officer, produced my birth certificate, and I was taken out of the regiment owing to the fact that I was considerably under age for military service.

Three months later however the desire to see service in the Great War again reached a fever height, and I slipped away quietly and enlisted as a Trooper in the 17th Lancers, then known as the "Death or Glory Boys," one of the finest regiments of British Cavalry. My parents now seemed to become reconciled to my desire for a military career. They therefore decided to leave me in the regiment, but sent my birth certificate to the Commanding Officer explaining that I was not to be sent on active service until I had reached 19 years of age—which is the minimum age for foreign service. They kept hoping against hope that the War would finish before I reached that age, while I on the other hand was ever fearful that it would end before I managed to get into active fighting.

The enthusiasm of youth coupled with a natural liking. For the life of a soldier carried me quickly through my recruit period of training. Horsemanship, one of my hobbies right from the cradle, presented little difficulty and I soon became the leading file of my ride in the equitation school. Many difficult and laborious hours were however spent on the barrack square and in the riding school in an endeavor to master the art of handling the lance, sword and rifle. My efforts were not wasted because shortly after passing as a trained soldier the notification of my promotion to the dizzy altitude of "acting unpaid lance corporal" appeared in Regimental Daily Routine Orders. I was indeed proud and happy. That single stripe on my tunic sleeve seemed to exude all the concentrated rays of the sun's light. My period of probation in this rank lasted three months. At the end of this period I was apparently considered satisfactory and duly confirmed in my rank. This was most important for the reason that my rate of pay to date merely amounted to one shilling and two pence per day—truly a great wage for a hard day's work. The confirmation of my rank meant an increase in pay of three pence per day.

Shortly after this I sustained rather a serious accident whilst employed in breaking and training young troop horses in the

remount depot. Upon coming out of the hospital a period of light duty was ordered by the medical officer and I found myself posted as non-commissioned officer in charge of the waiters in the Sergeants' mess. In other words I was the headwaiter. This form of employment was very distasteful to me but orders were orders and it had to be done. Very soon however I was again passed fit for duty and although still less than 18 years of age I found my name on the next oversea's list for service in France. This was obviously due to some error in the Orderly Room but it was far from me to be the one to correct it. In due course the draft marched out of camp en route for France to the strain of "Come Back to Erin."

UNDER SHELL-FIRE--ON PATROL IN "NO MAN'S LAND"-HUMAN TARGETS TRENCH FEVER -A MASSACRE-EXAMINATIONS AND COMMISSION.

Upon arrival in France we were very disappointed to discover that the war had settled down to a serious checkmate business, known as trench warfare. There was no use for cavalry so we were transferred to infantry regiments. About forty of us were posted to the 7th Service Battalion of the Queen's Royal West Surrey Regiment, a unit of the 55th Brigade of the 18th Division, one of the most famous battalions of the best fighting division which passed through the Great War.

It is impossible to describe my feelings when we first came under shell-fire. It is sufficient for me to say that my enthusiasm and eagerness to get right into the war were considerably dampened. Our first job was the transport of rations and engineering supplies from the back area to the forward positions. The ground we passed over had been the scene of a terrific battle a few days before. It was simply pockmarked with huge shell holes. Dead German, British and French soldiers lay about in every conceivable position and condition—here and there a dead horse, a broken field gun. I had never seen a dead man before. My whole soul was filled with an indescribable feeling of horror. I felt sick right down in the pit of my stomach. I tried to visualize the position. I looked again at those dead soldiers—I looked at the poor dumb beasts —dead with their poor glassy eyes turned to the heavens. It was impossible to think. I decided that a very serious job had to be done, that I had better

stop thinking and get along with my own particular portion of this big job—C'est la guerre.



It has been said that one can get used to almost anything. Such was not my experience during those awful days in the trenches. Having the misfortune to be gifted with an extraordinary imagination my feelings under shell fire were simply indescribable. I was always very frightened and decided that my mind must be kept fully occupied if I was not to lose my sanity and desert the line. Night time was always the worst and it was difficult to find suitable employment during those long dreary hours. The solution of the problem however appeared in the shape of an order to participate in a patrol in No Man's Land." I had specialized in grenade work and decided this was the job for me. Therefore each evening before dusk I was always to be found hanging about the company headquarters dugout seeking permission to carry out a patrol or a bombing raid. I got quite a good reputation for this particular form of work and was even regarded by some as a brave young fellow. I never had the courage to admit that I took on this particularly nerve-racking j ob because I was too frightened to stand in the lines.
At the time of the German retreat on the Somme in January, 1917, I was eighteen years old and more or less a seasoned old veteran carrying the acting rank of Sergeant and commanding Platoon No.

13 of D Company of my battalion. We were at this time holding a line of shell holes in front of Grandcourt ready to carry out a big offensive when it was discovered that the Germans had evacuated their positions leaving only a small party behind to cover the retreat by fighting a rear guard action. Whilst here it suddenly dawned upon me that it was my 19th birthday, and I smiled at the thought of my birth certificate, lying in the safe in the Orderly Room of Ponsomby Barracks at the Curragh Camp, England. I could visualize my parents' instructions still attached requesting the Government not to send me overseas until I had reached the age for such service.

More serious thoughts however soon replaced these. The Germans were retreating, we were advancing, word had gone round that the war had finished. After many weary days marching contact was again made with the retreating German troops and a line was established in front of the villages of Irles, Pis and Serres. Here I had the narrowest squeak of being either killed or captured. My platoon was detailed as portion of a force to advance on the village of Irles for the purpose of discovering whether it was occupied. We had to advance across the open in broad daylight with not even a kindly shell hole into which to throw ourselves in case fire was opened on us. We were simply human targets —"a draw fire party." Everything went well until we reached the outskirts of the village when hostile troops, who had been watching our every movement from the time we started, appeared in great numbers from nowhere firing from the hip as they rushed upon us.

The order to open rapid fire was given. It was however useless, we were hopelessly outnumbered so the order to retire was next shouted. My comrades were all either killed or taken prisoner. Three of us managed to rush back about 100 yards with a hail of lead buzzing about our ears. Z-Z-Zing, the steel-jacketed messengers of death buried themselves into the ground about us, casting little puffs of dust into the air. It was a hail of death! How we ever reached the shelter of the large disused watertank which lay in the middle of the field is a matter of conjecture. My eyes were blurred by the fury of a pounding heart. It was like a nightmare. Our feet seemed to be glued to the ground and at any moment I expected to feel a sudden burning flash as a bullet tore its way through my flesh. In an instant we were burrowing into the ground like madmen, tearing and clawing at the earth

with broken nails and bleeding fingers. The noise about us was deafening. I watched with fascinated eyes the little curling bits of steel that suddenly protruded from the tank, and I knew that

another bullet had hurled itself through the metal and out over our heads.



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MAJOR FITZMAURICE, FLOYD BENNETT, DUKE SCHILLER AND BERNT BALCHEN MEET AT LAKE ST. AGNES

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Until nightfall we remained behind the shelter of the watertank, and under cover of darkness we slithered and crawled from one tiny sheltering objective to another until we reached our own lines. Literally hundreds of holes had filled the watertank behind which we had been hiding, and my last reflection of our haven of refuge was that it looked like a giant upturned sieve as it disappeared behind us into the darkness.

There is little time in modern warfare for reverie. With daylight we again threw ourselves on to the German lines. Shortly after this I received a bullet wound in the right leg, and was taken to No. 1 Australian Casualty Clearing Station near Albert, the town in which was situated the cathedral famous after its destruction for the leaning statue of the Virgin Mary. In addition to this trouble I was also suffering from a very severe attack of trench fever. For days I lay on a stretcher bed in a delirious condition.

Once on the mend, however, I soon got well again and found myself on the road searching for my battalion which was on the move to a new sector of the line with the remainder of the division. After travelling for a week all over France in cattle trucks, motor lorries, etc., I located the battalion in a small village near Bethune. In due course we reached Bethune and were billeted in the workhouse buildings, ready to move into the line at six hours notice. We were to act as reinforcement should the occasion arise, of a new division which was enjoying its baptism of fire.

This did not last long. After about a week we were rushed post haste to Arras, entered the line between Cherisey and Fontaine les Croixelles at 12 midnight on the 2nd of May, 1917, and attacked the German lines at 3 :45 A.M. on the following morning. This was the most awful engagement in which I was involved throughout the war, principally owing to the fact that the whole attack was a colossal failure—chaos reigned supreme and terrific casualties were sustained. Battalions of 700 strong in the morning barely mustered 20 to 30 in all ranks in the evening. I was one of those who was fortunate enough to get away with a whole skin. For my work during this engagement I was recommended with other members of my battalion for the award of the Military Medal. This decoration was never received, presumably for the reason that my company commander, who was responsible for putting my name forward for the award, was killed in action shortly afterwards.

Soon after this I was recommended on the field for commissioned rank, interviewed by the Brigadier Commander and received orders to return to England for a course of instruction at the Cadet School.

In due course I arrived in England and reported to the 20th Officers Training Battalion at Church Crookham, near Aldershot, where I underwent a four months course of instruction to fit me for my new responsibility. At the end of this term I sat for and passed the British War Office examinations and was eventually gazetted as a 2nd Lieutenant in the 8th Irish King's (Liverpool) Regiment. It was rather a disappointment not being gazetted to a completely Irish Regiment but before I severed my connection with the 8th Irish Kings I was quite pleased because I found it to be one of the finest fighting regiments with which one could have had the honor to serve.

IN THE ROYAL FLYING CORPS-MY FIRST AEROPLANE RIDE-ALONE IN THE SKY-A CRASH -LOOPS AND SPINS-DISAPPOINTMENT-A WAR ROMANCE-DEMOBILIZATION.

About this time the war in the air on the Western Front was becoming a very serious matter, terrific casualties were being sustained on all sides and appeals were made by the War Office for young subalterns to come forward for training in flying, and service with the Royal Flying Corps. Before this date I had made several endeavors without result to get into the Flying Corps. I was therefore very pleased to avail myself of the opportunity offered and was one of the first to volunteer for service with the Royal Flying Corps. I passed my medical examination, satisfied the Selection Committee that I was a suitable type for flying duty, and was eventually posted to the School of Military Aeronautics at Reading. After two months of intensive study of the theoretical technical subjects in connection with flying I sat for and passed the examinations in ground subjects and was posted to a course in practical flying training at Eastbourne Aerodrome, then the 206th Training Depot Station but later renumbered No. 50 Training Depot Station.

Never will I forget my first airplane ride! Our elementary instruction was given on the Gnome Avro Training Planes and I must admit that they were rather oil-spattered, flimsy looking contraptions.

"All set, my boy?" It was Captain Freddy Mills, my instructor. "I'm going to give you a little flip in the air to test your air sense."

With my helmet and goggles adjusted and the safety strap attached around my waist, I nodded to Captain Mills. With a sudden roar the

motor leapt into life. The plane trembled and started to roll across the aerodrome. Gripping the side of the cockpit I glanced cautiously towards the ground. It appeared to be slipping away, and the buildings assumed an alarming prospective. We were in the air—at last I was flying!

How fresh and clean this seemed after the clinging mud of the French battlefields. To fight in the air—what a thrilling sense of superiority. My thoughts jumbled one over the other. Suddenly I noticed that the earth seemed to be sliding away from beneath us. Where but a moment ago I had glanced downward to see the tiny buildings and winding roads below, there now appeared the horizon and the skyline. I clung tighter to the fuselage but I could not realize what had happened. Glancing down I noticed that the sky was beneath us and looking above my head I saw the field and buildings.

Captain Mills looped, rolled and spun the little Avro until I was not only dizzy but so hopelessly jumbled and frightened that I lost all sense of where we were. I just clung to the airplane, scared out of my wits, and wondered what type of superman it required to control an airplane.

A ghastly feeling seemed to creep over me that I would never be able to learn to fly. I was benumbed with an aching pain of regret when I stepped from the machine. Even my admiration for Captain Freddy Mills was dampened by the horrible thought that after all my fighting was still to be done in the trenches.

The following flights, when I underwent dual instruction, gradually became more or less a matter of course and after about five hours of dual flying I successfully carried out my first solo flight. This time I sat alone in the Avro, and listened to the mechanic say "Switch off, petrol on, suck in," as he turned the propeller over and primed the engine.

"Contact!" With a jerk the engine fired and the propeller began turning over. The machine had previously been warmed up, and my instructor waved me away. Flying into the wind and out towards the middle of the field, I gave the machine full throttle, shoved the stick slightly forward, and then feeling the controls take hold I eased gently back. The nose began to rise. We were taking the air! Dimly I remembered the oft-repeated instruction, "Keep your nose down laddie boy," and again I eased the stick forward. We were now in a level flight and getting away into the sky. By gradual stages I worked the ship up to about 1,250 feet before I allowed myself to realize that at last I was alone in the plane and must master the

intricacies of aerial maneuvers without the assuring presence of Captain Mills.



That is an awful feeling—to be all alone in the sky on your first flight. Oh, how you wish that you could only be down on the field again! Clenching my teeth, I eased back the throttle and prepared to make my first landing. Easing the nose further downward I started into a gentle glide for the field. After a few moments of ticklish and very amateurish reactions, I managed to bring the plane safely back to the lines.

After carrying out my first solo flight I gained about 20 hours experience flying solo at the end of which time I was tested in the handling of the elementary machine by my Flight Commander, Squadron Leader Grange, D.S.C. After passing all my tests I was permitted to fly the intermediate training machine, the single seater Sop-with Pup.

My experiences while flying solo on the elementary training machine were not very exciting. My first, and only crash to date, occurred on my first cross country flight. This happened after I had about seven hours solo experience. I was detailed to fly to three aerodromes, effect landings and obtain signatures from the commanding officers

of the stations saying whether my landings were good, bad or indifferent. When about 20 miles away from the aerodrome my engine commenced to run very roughly and gradually came to a stop. I was flying at the time at about three thousand feet over very heavily wooded country with absolutely no suitable landing place. I quickly picked out the only spot in which I could possibly land and circled down towards the ground.

My judgment in bringing the machine in for the landing was very good but I was considerably handicapped owing to the fact that a line of telegraph wires ran along the boundary of the field. I however "sideslipped" over these and was beginning to congratulate myself upon effecting a safe landing when I discovered that I was not only landing down a very steep hill but also downwind. This meant a terrific speed over the ground with some large wooden palings and a fir copse waiting to greet me. When about three or four yards from the fence I let go the control column and placed my arms over my face in an endeavor to protect myself from serious injury through being thrown forward on to the instrument board. The wooden palings neatly sheared off the undercarriage and the two bottom planes. The aeroplane and myself continued to go forward, the nose of the machine coming between two fir trees, the two top planes were swept back over my head and we came to an abrupt stop.

Upon scrambling out of the wreckage I found two Canadian Red Cross men standing beside the machine, or I should say, what had once been a machine, complete with a nice comfortable looking stretcher. Beyond two very nasty bruises on my shoulders I sustained no other injury so needless to say, I did not avail myself of their very kind invitation to give me a jaunt to the hospital. It appeared I had landed right beside a Canadian Convalescent Camp.

Having notified my authorities by telephone of the mishap I sat down and patiently awaited the arrival of the break-down at the scene of the accident. Later that afternoon one of the instructors from the training school arrived by air. He endeavored to land and although I should not really say it, I felt rather tickled when he also crashed his machine in landing, because I knew that his accident would exonerate me from all blame.

After about 15 hours solo flying on the Sop-with Pup I was ready to commence on my service aeroplane, the Sopwith Camel. I was very sorry to finish my period on the Sopwith Pup because it was a very beautiful little aeroplane to handle in the air, but unfortunately they were no longer of any practical use as service fighting machines. At last the dreaded day arrived when I had to carry out my first flight

on my service aeroplane, the Camel. I was on the early morning tour of duty at this time which meant that flying commenced at four o'clock in the morning. Somewhere about this unearthly hour I had to climb into my machine (feeling more asleep than awake) and sit patiently there while my instructor Captain Knight, better known as "Noisy Knight," explained all the controls, instruments and peculiarities of the machine which were not unknown to me as I had already spent many hours prior to this time sitting in this type of machine with a view to becoming accustomed to everything, in preparation for this particular moment.

The Camel was an extremely difficult machine to fly, it was tremendously sensitive on the controls and had a very nasty habit of going into accidental spins if not properly controlled. A large number of fatal accidents occurred at the training stations on these machines for that reason. I was therefore "keyed up" with intense excitement and my knees were visibly shaky. I was very pleased when the chocks were waved clear and I opened up the engine to take off. Raving climbed the machine flying straight all the time I gained a ceiling or approximately 4,000 feet. At this safe altitude I practiced some gentle turns, felt the stalling speed of the machine with the engine on and off and feeling that I knew all about it and that my previous fears were unfounded I decided to try to execute some stunts.

A loop being the most simple I decided to try this first. Not being used, however, to the very sensitive controls I carried out what appeared to me to be a loop and a half and found myself on my back hanging in the belt and holding on tightly to the control column—it was an awful moment. I next realized we were in an inverted spin. I thought it was all up and that I was due to go the same way many others had gone before me. I did not however give up hope and after trying many things with the controls I eventually found myself in an ordinary spin but had lost over 3000 feet height. The machine was very quickly brought to a level keel and I was beginning to congratulate myself when we went into another spin in the opposite direction. From this position however I quickly righted the machine and displaying extreme caution I glided down and effected a fairly good landing on the aerodrome. Upon getting out of the machine after taxiing over to the hangar I felt very proud of having successfully flown my service aeroplane. My instructor congratulated me on having carried out some stunts on my first solo flight. I did not have the heart to disillusion him and tell him that it was all quite accidental and that it had given me a great fright.

Later, however, after having gained a little more experience on the machine I came to like it very much and having passed all my tests at the training school I was posted to the No. 1 School of Fighting and Aerial Gunnery at Marske, Yorkshire. From here I was posted to the Pilots Pool in France and was due to sail on the 11th of November, 1918, which turned out to be the day upon which the Armistice was signed. It was a bitter disappointment to me when my orders were cancelled as I was very anxious to see some service in the air in France. I was posted back to my original unit at Eastbourne and from there transferred for a special course in Aerial Navigation to the Admiralty Compass Observatory at Datchet near Windsor.

Because of the drastic casualties of war and due to the dire necessity of placing every eligible man in active service in the combatant forces, England had recruited a number of girls into a unit known as the W.R.A.F. (Women's Royal Air Force). It was whilst training at Eastbourne that I met and incidentally fell in love with one of the beautiful little non-commissioned officers. How attractive they looked in their smart service uniforms, and each one was so earnestly doing her bit to help those who were taking the brunt of the conflict.

Our early association and eventual marriage were filled with the spice of romance. We were forced to meet clandestinely, due to the fact that the disciplinary code of the Royal Air Force forbade commissioned officers to associate with, or be seen in public with, non-commissioned members of the W.R.A.F. It is literally true that love increases when the difficulties increase, and our many meetings were made even more interesting by the fact that we were in love despite all the rules to the contrary notwithstanding. Our meetings were made even more difficult because of the fact that we were stationed at the same aerodrome.

Our marriage was celebrated on my 21st birthday, and was held in secret. It was not until many months later that we dared allow the fact to become generally known. Bill, as she is affectionately known to all her friends, has been the best of pals since we have been together. Her experiences in the war have developed in her that high sense of fortitude which is such a necessary qualification for a soldier's wife. She has always had the greatest confidence in my ability or luck to succeed in the face of the greatest difficulties and dangers. She has been my inspiration and is responsible to a great extent for the successes of the many adventures which I have undertaken.

At the conclusion of the special navigation course at Datchet, and after having successfully passed my examinations, I was posted to No. 110 Squadron of the Royal Air Force in the capacity of Squadron Navigation Officer. This squadron, under the command of Major Stanley Clarke, M. G., was at the time engaged in experimental aerial mail work between Folkstone, Kent and Cologne on the Rhine. In addition to my ordinary duties as Navigation Officer I was posted to a flight and employed as a mail pilot.

My first flight to Cologne was not quite successful. Upon arriving over Brussels I came to the end of the section of map on which I was then working and whilst trying to get the next section out of the map case it became caught in the slip-stream of the propeller and disappeared over the side. I had therefore no map from Brussels on to Cologne, nor did I know the route as I had not flown over it before. As leader of a formation of three machines I circled around several times in the endeavor to get one of the other machines to take the lead, but they did not understand my signal and continued to follow me around. Under the circumstances there was only one thing to be done and that was to proceed in an easterly direction until we struck the Rhine—which runs north and south—and then endeavor to locate ourselves.

Unfortunately after flying for about a half hour we encountered heavy rain, low clouds and a very strong wind. We had been in the air for approximately four hours from the time of departure. By this time the Rhine should have been below us. A heavy cloud bank obscured our vision and I decided it would be best to effect a landing in a field and ascertain our position. One of the other machines had followed me all this time, the other had had a forced landing somewhere along the route. I found myself in a very heavily wooded country and picked out a small field which appeared to be a meadow, shut off my engine and proceeded to land. As I was landing I discovered that the field was a corn field practically ready for cutting. Some peasants came across and after great difficulty they succeeded in explaining to us that we had passed over the Neutral Zone and had landed near a little village called Warstein. This was rather serious, as we were in military uniform and our machines were military craft. We decided to get out as quickly as possible before we were apprehended by the authorities. My companion succeeded in getting his machine into the air safely, but although I made a very determined effort and raced down the entire length of the corn field I did not manage to get into the air owing to the fact that I was carrying a very heavy load. The water in the radiator boiled and the propeller became badly damaged through

contact with the corn. I had therefore to shut off my engine and await developments.



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MISS JUNKERS AND MAJOR FITZMAURICE AT LAKE ST. AGNES

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In a few moments I was surrounded by the very angry owners of the field and was very glad when the police arrived from the village.

Arrangements were made to compensate the owners for the damage to the corn, a police guard was placed on the machine whilst myself and the mail bags were removed to the local police station. Here I received very kind treatment and was permitted to sleep in the local hotel that night with a police guard. The following day a military officer and an escort of two soldiers arrived from the garrison town of Soest. I was removed to the military barracks in this town, where I was interrogated by the Garrison Commander, who informed me that he very much regretted that he would have to detain me until he received instructions from the War Office in Berlin. After three weeks detention I was permitted to return to Cologne by air, provided with a passport and proceeded to the field in which the machine had been left to find that a new propeller had been fitted by the repair party, who had come especially from Cologne.

With the assistance of the military guard who accompanied me from Soest the engine was started and I was soon on my way to Cologne. I had therefore the unique experience of being a prisoner of peace. This experience gave me a better understanding and appreciation of the German people whom I had been led to believe, during the war, were anything but what I now found them to be. I was treated with every courtesy, kindness and consideration.

I continued to be employed with the 110th Squadron on mail work until close to the end of 1919. The experience gained from this particular work was extremely useful to me, as we had to fly in the most impossible weather conditions on many different types of aeroplanes, as the whole object of the service was to ascertain some idea of operating costs and the regularity with which a commercial mail service might be carried on. During my service with this squadron I was chosen as Second Pilot and Navigator for the first experimental night air mail flight ever carried on in Europe. The machine used was the Dell 10 Number 551, fitted with two 400 horsepower Liberty motors. Capain Barrett, A. F. C., acted as Chief Pilot and Second Lieutenant Oliver was our observer. We left Folkstone at 10:15 P.M. on the night of the 14th May, 1919, and after a very thrilling flight landed safely at Bickendorf Aerodrome on the outskirts of Cologne at 1:20 A.M. on the 15th May. We were especially commended for this flight by Air Vice Marshall Sir John Salmond, who commanded the active service air force at that time. We were also informed that we would be chosen to carry out the flight from London to Cape Town via Cairo, which was under consideration at the time. Unfortunately this flight never materialized.

At the termination of the experimental air service I was appointed to the command of the Squadron, which was stationed at my old Aerodrome in Kent and during the three months I was employed in this capacity I closed down and removed all technical and quartermasters stores from six aerodromes which had been evacuated. This was very useful, as I gained considerable experience in stores organization, establishment and administration. I was demobilized and transferred to the Reserve in December, 1919.

CIVIL WAR-FLYING FOR IRELAND-A COUPLE OP NARROW SQUEAKS-LOOSING FOR THRILLS-. MY FIRST TRANSATLANTIC ATTEMPT-THE MEETING WITH KOEHL AND HUENEFELD.

Upon returning to civil life I entered business in London with the North British and Mercantile Insurance Company and after eighteen months of successes and failures I decided in June, 1921, that I would like to return to flying again, and accepted a short service commission in the British Royal Air Force for four years with the colors and four years on the reserve. I was gazetted to No. 25 Single Seater Fighting Squadron, which was stationed at my old Aerodrome at Folkstone and equipped with the single seater Sopwith snipe. In August of the same year I was placed under orders at very short notice for service in India, but unfortunately owing to the situation in Ireland at that time and the fact that our little daughter Pat was scarcely 3 months old, I was reluctantly compelled to resign my commission. I therefore left the Royal Air Force and returned to business once more.

On the outbreak of the Civil War in Ireland in 1922, shortly after the signing of the Anglo-Irish Treaty, I immediately offered my services to the government of my country and was appointed to a commission with the rank of Lieutenant in the new Irish Free State Army Air Corps. In September, 1922, I was posted to Fermoy Aerodrome, County Cork, from which center we operated against the Irregular Forces in the south of Ireland. Our duties consisted mainly in reconnaissance, observation train escort duty and cooperation with infantry. During my service in this area I had many narrow escapes through forced landings in areas not occupied by

troops. In addition I experienced the delights and thrills of being ambushed on more than one occasion whilst driving through the country on motor transport.

The most exciting of these experiences occurred in October, 1922. The Government declared a general amnesty to the Irregular Forces offering a free pardon to those who would surrender their arms by a certain date. My unit was called upon to distribute these amnesty proclamation circulars over the mountains of West Cork and County Kerry in order to bring the notice to the attention of those who might fail to see it in the newspapers.

One Saturday morning I set out from my aerodrome at Fermoy in a single seater Martinsyde Scout aeroplane powered with a 300 horsepower Hispano Suiza engine, carrying a large load of these amnesty proclamation circulars, made up in bundles of 50, to be distributed over the Kerry Mountains. Upon arrival over the mountainous district outside Ireland's most famous beauty spot, Killarney, my engine failed and I was compelled to make a forced landing. I landed safely in a small field outside the Killarney Lunatic Asylum. I worked on my engine all Saturday and had everything all ready to get off late on Sunday evening. Killarney was at this time completely isolated, as the telephone wires connecting it with the outside world had all been destroyed and wireless had not at that time been installed in the town. In addition the town was completely surrounded by strong columns of Irregular Forces. It was therefore impossible to send any communication to my aerodrome regarding my forced landing. They were very anxious regarding my safety and had search parties from every garrison town searching the hills for me.

On Sunday evening at about 5 o'clock, with the aid of some local troops, I started my engine, and being given a flying start, managed to stall over some large pine trees at the end of the field. I was beginning to consider myself exceptionally lucky at being safely in the air again when I was greeted with strong bursts of machine gun fire from members of Irregulars who had been waiting for me to hop off. The wings and fuselage of my machine were riddled with bullets, but fortunately neither myself nor any vital part of the engine or machine was hit. By nightfall I succeeded in reaching the town of Mallow, about 18 miles away from my aerodrome, but here again, owing to engine trouble, I was compelled to effect a forced landing about two miles outside the town. On examining the engine the following day it was discovered that the machine could only be flown out of the field by installing a new engine, but as the roads were absolutely impassable at that time owing to trees having been felled

in many places across the road and all bridges being destroyed it was decided to dismantle the machine and store it in the military barracks for the time being.

This work having been completed, I set out by car for my aerodrome at Fermoy. Upon arrival in the village of Castletownroache, about halfway between Fermoy and Mallow, it was necessary to leave the car for the purpose of placing large planks across a destroyed bridge to drive the car over. It was practically dark at this time and whilst walking down the village street towards the bridge in company with a despatch rider, fire was opened on us at a distance of about 20 yards by a gentleman armed with the famous American Thompson portable machine gun. We escaped in some miraculous manner from being hit, but became involved in a fight with about 200 Irregulars, which lasted about an hour and a half. We were exceedingly fortunate in getting away and returned safely to Mallow that night. The next day an aeroplane came from my aerodrome and I flew back to Fermoy.

Not so long afterwards I had another thrilling experience and a narrow escape from being shot. I was returning to my aerodrome after searching the West Cork Mountains for a Rolls Royce Whippet armored car which had been treacherously handed over to the Irregular Forces by a Scotchman who was then serving in the National Army. My instructions were to bomb the car should I discover it in the mountains, in order to render it useless. My search was thorough but futile. Whilst flying towards the City of Cork my engine suddenly stopped over a very mountainous district divided up into very small fields surrounded with thick hedge rows. I however managed to land safely to discover that my troubles were only commencing, as the district in which I had landed was the headquarters of a very strong Irregular column. Having unstrapped the service rifle, which I always carried on the side of my machine for use in emergencies of this description, I proceeded to the village, where I ascertained that the nearest military post was four miles away at the Halfway House near Kinsale Junction.

In the meantime quite a number of people had gathered about my machine, and upon returning five minutes later it did not take me long to discover that their main purpose in life was to obliterate the Irish Free State aerial steed and make my life an exceedingly miserable one. Being alone I wondered how I might best safeguard my machine until I could manage to reach the military barracks and secure an appropriate guard.

Several of the more valiant yokels were threateningly waving their shovels and hoe handles. The moment for action had arrived.

Assuming my best Irish accent—which had been somewhat impaired by many years in the English Service—I warned them that at any moment the airplane was liable to explode. I noticed an immediate lack of interest on the part of the onlookers to further investigate the airplane, and taking this as my cue I hurried back to the village, hoping to be able to purloin a bicycle or other form of conveyance to cover the four miles which separated me from the military post.



Immediately my intentions became known every push bicycle was hidden away. I decided that I could not waste any further time, so entered the nearest farmyard, searched the stables for a useful horse, but did not meet with very much success, as the only thing available was a heavy young plough horse with an extremely sharp back. No saddle was available, so I rode him bareback to the Halfway House. It was now getting dusk and I cannot help thinking that I presented an extraordinary spectacle galloping along the road on this noble charger attired in a flying helmet and goggles and

carrying a rifle at the trail on my right hip. Everything went well until I reached the outskirts of the military post, where a barricade had been erected across the road as a protective measure by the troops occupying the post. The sentry on duty was no doubt scared out of his life upon seeing such an apparition charging towards his post and did what any ordinary fellow would do under the circumstances, fired point blank at me three times and, possibly thanks to his fright, missed me.

Dear old Nellie, or whatever the young plough horse's name might be, seemed somewhat taken aback at the welcome we received from the sentry, while I myself presented a delightful target for further potshots. I have since learned from the members of the Garrison, who watched the procedure with some rare delight, that I did a royal "Prince of Wales" over the horse's neck; but I maintain that my position required immediate action and that I threw myself upon the road to prevent a continuance of the delightful welcome that was awarded me. While my full-blooded Irish plough horse was careening across the landscape I managed to convince the sentry that I had serious intentions of entering his camp and speaking with the Commander of the Post.

In less time than it takes to tell, a party of Troopers on bicycles arrived at the scene of my forced landing. Flames were issuing from the cockpit and also from underneath the engine cowling. It appeared that some hostile Irish country gentleman had placed large dry gorse bushes in the cockpit and underneath the engine cowling and had set them alight. Fortunately the petrol did not set fire, and we succeeded in putting out the conflagration, thus saving the machine. The aeroplane was later dismantled and transported by road back to my aerodrome at Fermoy.

Early in 1923 I was promoted to the rank of Captain and appointed to the command of the detachment stationed at Fermoy Aerodrome. The Civil War was now drawing to a close, as practically every town and village in the south of Ireland was occupied by military forces and the Irregulars found it impossible to continue their operations. Active service units were no longer necessary and we were enabled at last to concentrate on the organization, establishment and training of the present Free State Army Air Corps. Owing to the small size of the whole corps it was decided to withdraw all units to the headquarters of the corps at Baldonnel Aerodrome, to which I returned with my unit early in 1924.

Upon arrival in Baldonnel I was appointed Officer in Charge of No. 1 Training Squadron and Chief Instructor to the corps. I carried out the duties of this appointment until September, 1925, when my

immediate Commanding Officer and great personal friend, Major T. J. Moloney, was killed during the maneuvers which are held annually. In order to fill the vacancy which occurred through his unfortunate death I was appointed second in command of the Corps and promoted to the rank of Commandant. I carried out the duties of this appointment until early in October, 1926, when I was appointed to the Command of the Corps after the transfer of my Commanding Officer, Colonel Charles F. Russell, to Army General Headquarters. I have been employed in this capacity to date.

At the conclusion of the Civil War in 1923 I found the dull routine of ordinary peace-time service very boring and monotonous and therefore searched around for some new field which, whilst producing a certain amount of thrills and excitement, would at the same time aid in the progress and development of the great science of aviation. My mind immediately turned to the wonderful flight carried out in 1919 by the late Sir John Alcock and Sir Arthur Whitten Brown from St. John's, Newfoundland, to Clifden, Ireland. I thought that the first flight in the opposite direction should start from Ireland and that such a flight should be carried out by Irishmen.

Once this idea entered my mind I devoted practically my whole attention to a study of the engines, aeroplanes, and instruments which would be suitable for a flight of this magnitude. I also made an intensive study of the subject of aerial navigation over the ocean and particularly meteorological conditions over the North Allan--tie Ocean. In 1924 I was convinced that a flight from Ireland to the American continent was a feasible proposition with the aircraft engines and instruments available for such work at that time.

Early in 1925, with the able assistance of my then Commanding Officer, Colonel Charles F. Russell, I succeeded in raising the sum of eleven thousand pounds to finance a flight to the American continent. Owing, however, to the fact that the Air Corps was in course of development and only a very small number of flying officers being available, the necessary authority to carry out the flight was not granted. We had therefore to abandon the idea, although our paper organization was absolutely complete. In 1926 a further endeavor was made to carry out the projected flight, but for the same reasons as in the previous year, permission could not be granted. In September of 1927, Captain R. H. MacIntosh communicated with me regarding the possibility of utilizing my headquarters aerodrome as a taking-off ground for a transatlantic flight. Every possible facility was offered him and he arrived on the Aerodrome a few days on the Fokker Monoplane "Princess Xenia."

He invited me to join him as co-pilot, which invitation was gladly accepted by me, and I succeeded in obtaining leave of absence for the purpose of accompanying him on the flight. All our tests were carried out at Baldonnel Aerodrome and after many days of anxious waiting a fairly good weather report of conditions over the Atlantic was received from the British Air Ministry Meteorological Department and we decided to leave on the following morning.

We took off at 1 P.M. on the 16th day of September, but after reaching a point between four and six hundred miles off the west coast of Ireland, flying all the time through the most impossible weather, rain, fog and half a gale blowing from the northwest, we decided that it would be insane to continue any further. We therefore turned the machine and made for the Irish Coast. Immediately after turning we decided that as we might have to effect a forced landing immediately upon reaching the coast we should release as much of the petrol as possible to insure against damaging the machine through landing with too heavy a load. We therefore cut the connection of one of the cabin tanks containing between 200 and 250 gallons of petrol. This was poured by means of a rubber connection through a hole in the floor of the cabin of the machine in which the Drift Gauge Bearing Plate was fixed. Owing to the very poor visibility we narrowly escaped flying into the cliffs, where we hit the coast in County Clare. Our difficulties were only now starting, as the west coast of Ireland, being extremely mountainous and rugged, offers very poor landing facilities. It was impossible to get inland over the mountains, as the clouds were sitting right down on top of them and a heavy Scotch mist prevailed. I realized our only possibility was to land on the estuary of the River Shannon. We therefore headed the machine south, keeping as close to the coast as possible. After a lot of difficulty we eventually picked out our destination and were fortunate enough to find that the tide was out. We made a safe landing on the beach at Bealestrand, about five miles from the seaside resort of Ballybunion.

After landing we discovered that the tide was coming in rapidly and that the wheels of the heavy machine were sinking in the soft sand. After three hours of hard work, with the aid of about fifty local peasants, we succeeded in moving the machine up on the main land, where it was securely pegged down for the night. We reached the local hotel saturated to the skin, but happy in the thought that the machine was safe and available for a further attempt during the month should the weather prove kind enough. Unfortunately weather conditions were not suitable so the machine returned to

England and I settled down to the organization of a flight, utilizing all the experience I had gained on our unsuccessful endeavor.



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COLONEL LINDBERGH ARRIVES AT QUEBEC

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I was determined upon seeing an all Irish flight start in the late spring or early summer of the present year, but was seriously handicapped in the endeavor to organize this project through having to attend a senior officer's course of instruction at the Military Academy on the Cur-. ragh Training Camp during the months of Octo bers November and December. Owing to the intensive nature of the course which kept me fully occupied, very little time was available for the organization of the projected flight. Every spare moment and every week end leave was devoted towards this work, but upon my return to my aerodrome at Baldonnel at the end of December I realized that it would be absolutely impossible to have everything ready in time to compete with the many expeditions which were at that time being organized throughout practically the whole of Europe.

On March 26th, Captain Koehl and Baron Von Huenefeld arrived at my headquarters aerodrome on the Junkers Monoplane Bremen ready to start on the East-West Atlantic flight as soon as weather conditions were suitable. After they had been a few days on the aerodrome they invited me through our mutual friend, Mr. Klose, of the North German Lloyd Company, to participate with them in the undertaking. I was, of course, delighted to avail myself of the opportunity and immediately accepted, knowing that the machine was as good as, if not better than, anything which could be prepared for such a flight and that Captain Koehl possessed in a high degree the qualifications which are so essential to the success of any undertaking such as the flight in question.

IMMORTALS - THE BREMEN'S PURPOSE - TEST FLIGHTS-THE SHIP TAKES WING-GOODBY IRELAND-A GHASTLY VISION-INTO THE FUTURE.

For four years there has been an increasing fire of ambition burning in my mind to make an East to West transatlantic flight. Disappointment followed disappointment but when over all Ireland the word was flashed that the glorious son of America, Colonel Lindbergh, was soaring across our green hills toward France in the Spirit of St. Louis, the embers of those smouldering hopes burst forth into renewed flame. With the crossing of Chamberlin and Levine in the Wright-engined Bellanca monoplane, followed by

Commander Byrd and his valiant crew, Acosta, Balchen, Noville, as well as by Brock and Schlee, intrepid round-the-world fliers who crossed from Newfoundland to London, I determined to do everything within my power to bring the honor of an East to West flight to Ireland. Four times in as many months American pilots had dared to face the raging tempests of the North Atlantic and had reached the shores of the Old World. Pioneers they were from the Western Hemisphere—aerial pioneers of the Twentieth Century. Four times they have brought the challenge to the airmen of Europe.

Plane after plane vaulted into the gray European skies and hurled itself against the curtain of impregnable fate. Mystery will forever surround the tragic end of these brave European airmen; pilots who buffeted a succession of treacherous gales, perilous fog, and relentless sleet, until their planes had become but tragically staggering ice-covered tombs of death. Immortal on the pages of aviation history are the names of those who have pierced the veil of eternity: Nungesser and Coli, Hamilton, Minchin, and Princess Lowenstein-Wertheim, Hinchcliffe and Eleanor Mackay. To the flying fraternity in Europe these names have constituted a debt of the dead which must be paid by the living. It was inevitable that the Atlantic should be spanned from East to West by the pilots of Europe.

The flight of the Bremen was not one undertaken as the result of a sudden impulse. It had been carefully planned by Captain Hermann Koehl and Baron E. G. Von Huenefeld for many months before they landed at the Irish Free State Aerodrome at Baldonnel on March 26th from the Dessau Aerodrome eighty miles south of Berlin. As the sturdy all-metal Junkers monoplane landed and taxied up to the line there stepped from the cockpit the smiling and rotund little pilot Koehl, followed immediately by Baron Von Huenefeld, a typical product of German aristocracy. This was not the first time that I had had the pleasure of associating with these two intrepid airmen. On their first attempt to cross the Atlantic when they, like Captain MacIntosh and myself had struck impossible flying weather, and had returned to Ireland they landed at Baldonnel. As Commanding Officer I was happy to be able to offer them all the facilities of my post and aided them in every way possible in gathering weather reports and data for their transatlantic flight. Due to the lateness of the season and the continued bad weather they were forced to postpone their attempt until 1928.

As so often happens in the lives of those in the flying fraternity a chance meeting such as this frequently leads to a bond of unbreakable friendship.



Hearing of the arrival of the German plane quite a number of interested spectators had gathered on the scene. The Air Corps men and mechanics wheeled the Bremen into one of our hangars which had been vacated in order to accommodate the plane. For the next hour or so we stood about discussing the various features of the plane which had been specially prepared for the long arduous task which laid before it.

Special flotation gear had been incorporated in the wing structure so that in the event that the Bremen was forced to land upon the water, there would be a reasonable chance that it would float until aid could reach the scene of disaster. All the skill and science of the German designers and mechanics had been put into the all-metal Junkers. It had fuel enough for forty-four hours flying which amounted to about 520 gallons of petrol weighing nearly two and one-half tons. After scrutinizing the cockpit and installation features I became convinced that indeed the Bremen had every chance of success.

Later in the evening when the lads had tucked away a bite of food and a cup of tea the Baron extended to me the invitation to accompany them on their East to West flight. And here again I wish to thank my gallant German comrades in the name of Ireland for allowing me to participate in this epoch-making event. The fact that I was able to accomplish this flight with Baron Von Huenefeld and Captain Koehl in itself demonstrates the great progress which has been made in transforming aviation from a weapon of war into a messenger of peace. It is a striking example of the understanding of human beings by closer association when only a brief few years ago we were hurling ourselves at each others throats in mortal combat. We fought for years and yet it only took a matter of a few days for our understanding to implant an perishable friendship.

In this flight we have fought side by side with the hope that our attempt would bring greater good-will and better understanding between the peoples of the earth. The history of civilization and progress has been based to a tremendous extent upon the development of communication and transportation. Misunderstanding becomes more and more difficult when our neighbors are brought closer home to us by the rapid communication of the ideas, thoughts and motives which go to make up the traditions of that country. The airplane will be a tremendous factor in bringing about a universal peace. It is not hard to realize that many years ago, when a hundred miles seemed a formidable distance, suspicion, greed and hatred were allowed to run rife. As the feudal systems of the Old World gave way to nationalism so will nationalism give way to universalism when our systems of communication are perfected to a degree that we are all bound together with a common understanding.

The radio, telegraph, television, telephoto, steamships, railways, automobiles and airplanes are forging communication links between nations that envoys and foreign chancellors will find difficult to break through petty political quarrels and personal greed.

In that days that followed March 26th at Baldonnel Captain Koehl and myself made several test flights in the Bremen in order that I might become completely familiar with the fuel system and the flying qualities of the machine which was soon to carry us far out to sea. These hops were joyous little affairs filled with the tingle of anticipation and with the thrill of novel intricacies of a new aircraft. The Bremen is one of the best ships that it has ever been my good fortune to fly. I found her to be exceedingly stable not only in level flight but in gentle banks. The aileron control was so light that it was possible to turn the ship in the air by a gentle touch of the finger.

On the cross country hops which we made in order to test our navigation instruments I found that it was possible to remove both my hands and feet from the controls and the Bremen would remain in level flight without deviation for a considerable period of time. Needless to say these features of the plane filled me with a sense of great satisfaction for after many hours flying and after the tired nerves have become almost stupefied from lack of rest, a plane which has any treacherous in flight is liable to become especially.

These preliminaries, however, were soon over and we settled down to the unwelcome task of waiting for favorable weather reports. Mrs. Fitzmaurice did everything to add to our coin_ fort and peace of mind during the restless days that we wandered about feeling very much like caged lions. Never once did she allow the slightest note of fear to creep into her voice; in fact she accepted my proposal to fly the Atlantic with Captain Koehl and Baron Von Huenefeld as stoically as though I had casually mentioned the fact that I was going to fly from Baldonnel to London. Her fortitude and bravery added greatly to my peace of mind during these days.

Late in the evening of April 11th we received a weather report from the British Air Ministry which indicated that there was a general improvement in the conditions over the Atlantic. We decided at 9:00 o'clock that night to hop off at dawn on the following morning. I was elated; as cheered as a boy who has just learned that the little old red schoolhouse has been burned down. Waving the weather report I dashed into the officers' mess and called out to the lads: "Crack goes the whip, off go the horses, round go the wheels. At 5:00 o'clock tomorrow morning we will be heading for the good old U.S.A."

A cheer greeted my announcement and we all proceeded to drink a toast to the success of our attempt. Word was flashed through the camp in an instant and friends poured in from every side to toss off a bit of the cup that cheers and to pipe out a farewell ditty for good luck.

"Now look here, Fitz, you'd better push off to sleep," they urged.

"Not a bit of it," I replied. "It is silly to go to bed too early and besides I know that I won't be able to sleep. Why should I worry to-night just because I have a bit of work to do tomorrow? We'll just carry on in the usual manner."

The time stretched from 10:30 on past 11:00 and to 12:30 o'clock. There was no use protesting. The boys finally insisted that I go to bed and without more ado I tucked away in the room next to Patricia. Little Pat was sleeping the sleep of the just but I feel sure that had she known at 5:00 o'clock in the morning I was about to

hop off across the Atlantic, she would have immediately insisted that she be allowed to go along.



THE BREMEN FLYERS AND THEIR PERSONAL REPRESENTATIVES ON BOARD MUNICIPAL FERRY BOAT EN ROUTE TO MANHATTAN FROM STATEN ISLAND AFTER THE FLIGHT FROM WASHINGTON. LEFT TO RIGHT — RICHARD R. BLYTHE, CAPTAIN KOEHL, BARON VON HUENEFELD, MAJOR FITZMAURICE AND HARRY A. BRUNO

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Everything had been made ready for the morning. The tanks were filled with petrol. The oil supply had been stored away and the last final touches had been made. As the Bremen stood through that night in the silent hangar it must have sensed the air of tense expectancy which permeated the Aerodrome.

Arising at 3:30 the following morning April 12th I was handed the following weather report:

Wind to Longitude 15 degrees West is mainly between South and East averaging 15 to 20 miles an hour at the surface and 30 to 35 at an altitude of 2000 ft. West of Longitude 30 degrees winds tend to decrease toward New York. All along the route the sky is three-fourths to fully overcast, with a cloud base mainly 1000 to 2000 ft. above the surface of the sea. There probably will be a slight or moderate rain about Longitude 20. General visibility is five to ten

miles, apart from precipitation. There is no danger of fog, sleet or hail.
Barometric disturbances are such that an error in the altimeter will be in favor of the Bremen's pilots.
The darkness on the Aerodrome was giving place to the first gray streaks of dawn as we packed away the provisions in the cockpit. Koehl was silently walking about the plane fingering the charts. The Baron nervously glanced at the sky as though impatient for the hour to arrive when it would be light enough for our departure. Soon after 4:00 A.M., fifty of our Irish Free State soldiers wheeled the Bremen out of the hangar.
President Cosgrave, a number of government officials, the German Consul General, and quite a large crowd had motored or cycled out from Dublin after midnight to witness the start. How. graphically I recall the faces of those dear friends of mine who I feel sure were doing their best to suppress their emotions. It was bad enough to have to get up at such an unearthly hour without adding to it the feeling that most of them shared. Personally, I was feeling quite chipper at the time and we were all anxious to cut short the farewells and get under way. Friendly faces appeared everywhere with a "Cheerio and good luck, boys. Give our best regards to the Yankees."
A newspaper reporter pushed his way through the crowd and asked me for a statement before the hop-off. Somehow I recalled the remark now famous in aviation which was made by Wilbur Wright when he was approached by a member of the press for details regarding the progress that he and his brother Orville were making on their first airplane. He said, "The parrot is a bird which talks most and flies the least." It was an ideal phrase for this moment. We all wanted to get on with the job of completing the conquest of the North Atlantic, bringing nearer the next stage in aeronautical progress of long distance trans-oceanic commercial air lines. Such is the way of progress and a complete answer to those who ridicule transatlantic flying is that only by such means can progress be made. We smile gently now at Bleriot's effort in crossing the English Channel in 1909. Who knows but that our children will doubtless have the same outlook on the present-day transatlantic flying.
The feat of crossing the Atlantic is looked upon as a courageous effort. The voyage of Columbus was in his time an equally if not more courageous effort. The difference lies mainly in the means of locomotion that man has at his command. To-day transatlantic boat service is so safe and comfortable that such trips are known as pleasure voyages ; the day is coming when aerial transportation

between the Old World and the New will be looked upon in exactly the same way.

The large silver-gray monoplane stood on the runway in front of the hangar. Baron Von Huenefeld was seated in the cabin in the rear of the tanks surrounded by packages of food and other necessary utensils for our many hours in the air. On the left hand side of the cockpit Captain Koehl waited for the mechanic to swing the propeller. On the right hand side I glanced over the edge of the fuselage to catch the last fleeting glance of some late arriving friend on the field. It is hard to explain just how each of us felt at this moment. The chocks in front of the wheels held the plane from moving while our engine was warming up. The wind blew coldly back against our faces and the sun cast the first clear rays of daylight across the runway. Everything was clear. We tested our switches and glanced about to be sure that every bit of necessary equipment was in the ship.

Both Koehl and myself had hoped that we would have a bit of helping head-wind down the runway to aid us in our take-off but not a breath of air was stirring.. The heavily loaded Bremen would get off the ground much more easily had we been aided by the wind. We were now faced with the necessity of breaking away from Mother Earth by the sheer power from the motor. "All clear," the mechanics sang out. The chocks were jerked away from the wheels. Koehl nodded to me and I replied with a wave of my hand. One more fleeting glance down the runway; a peep into the cockpit to see that Baron Von Huenefeld was all set and Koehl opened the throttle wide.

The motor seemed to gulp ravenously at the sudden flow of gasoline through the carburetor into the cylinders. With a roar the propeller flashed through the air ripping a mighty wind over the wings and back against the tail. The wheels began turning and we both gripped the control column. Faster and faster we gained momentum. The tail rose into the air as the ship assumed flying position while still held to the ground by lack of speed. We were tearing along about fifty miles an hour, having travelled more than 1200 yards along the runway which had been specially prepared for the flight. We still lacked flying speed but were gaining acceleration at each moment.

Suddenly glancing over the side of my cockpit I beheld a ghastly sight—an obstruction in the form of a wandering sheep appeared directly on the runway in the path of the plane. To strike the animal at this time would have meant wrecking the plane. It was simply an awful moment. We felt that we were struck bang up against serious disaster at the outset. Turning for a second I yelled at the top of my

lungs above the roar of the engine "Sheep!" Fortunately sufficient speed was obtained to enable Koehl and myself to raise the machine off the ground. The sheep was clear and we rose into the air just in time to prevent crashing into a large tree at the end of the runway.

We were soon speeding over the mist-covered hills of Ireland, passing over Kildare, Kings and Galway counties, before heading over Galway Bay toward the open Atlantic.

It was a beautiful sight. About half-way across, the country was covered with a thick blanket of ground fog above which the conical shaped tops of the mountains appeared.

Here and there a sleepy hamlet passed below us. In the still morning air a few wisps of smoke rose as a token that the occupants were soon to begin another day's work. Winding roads and rivers entwined themselves in the green foliage of the hills. Dear old Ireland seemed nestled in peaceful sleep as we smashed through the air on our great adventure.

It does not take long to cross from Dublin to Galway. In fact the flight consumed somewhat less than an hour and a half. I could picture my dear old friends in Baldonnel slowly returning to their cars and beginning the ride to the city. And Bill—I wondered how she felt when she returned alone to Patsy. My last memory had been a kiss and a smile with a "Good luck, Fitz, I know you'll make it." A little lump seemed to rise in my throat. It was a shame to leave my old comrades of the air without being able to tell them how much I appreciated their friendship of the past. For a moment I almost wished that I could wave to them once more but the trail of mist was closing in behind us and far ahead I could faintly discern the coast line.

Captain Koehl and the Baron—I wondered what they too were thinking about—silent companions of our aerial voyage. Talking was impossible and the only way that we could convey
a message to one another was in writing. A further handicap in the communication of our ideas was the fact that Captain Koehl spoke little or no English. It was indeed a strange feeling to be seated there next to a companion, facing the unknown, with one who did not even understand your language.

Soon we were over the ocean speeding along the edge of the mountainous coast towards Slyne Head Lighthouse at which when passing we gazed longingly and waved a fond farewell. Ahead of us stretched the limitless Atlantic bathed in the flood of glistening sunlight. Great long ocean swells were ceaselessly curling up and falling into a trough in a steady march toward the sheer precipitous cliff-hewn coast line of Ireland. As the last visible signs of land faded

into the mist behind us it seemed as though we were poised over a huge rough gray expanse. Our progress now had to be measured by time. The ceaseless beat of the motor pounded on our consciousness.

We dropped closer to the surface of the ocean to observe our drift by checking the direction and the approximate velocity of the wind. This was done by dropping smoke bombs upon the water. When our charts and instruments indicated that we were holding our course, I would nod to the stolid little German pilot. When it was necessary to make a correction I would point to the number of degrees deviation of the wind marking it on our Atlantic chart.

Here and there on the horizon we could see the gathering clouds of a local storm and during the day we skirted the edges of these disturbances. One beautiful spectacle was that some of these isolated snow and sleet storms appeared like huge sprays of steam issuing up from the ocean, with sheer edges all around. We skirted the fringe of these snow storms for the purpose of ascertaining their density and to observe, if possible, the formation of the sleet and snow clouds. In each case we found that the snow and sleet was caused by precipitation in a cold area, usually on the fringe of an iceberg formation. At times we thought we saw icebergs in the distance but by the use of our binoculars we found them to be merely shadows of clouds on the water. Throughout the day Koehl and I flew in turn, each taking three hours on and three hours off and we navigated almost entirely by the sun. From Ireland to the mid-Atlantic line east and southeast winds were encountered for we were passing over an area that had been a low pressure area a few days earlier and which had started filling up the evening before we left.

These light, variable winds did not have much effect on the navigation of the Bremen. In the mid-Atlantic we ran into a fairly gusty northwesterly wind. As soon as we sensed the new turbulent atmospheric conditions we dropped some more "White Horses" and found by the smoke direction that the wind had a velocity which we estimated to be between fifteen and twenty miles an hour at the surface.

Such a wind merely meant the further checking of our course and showed us that it was a slight disturbance of local nature. In fact after an hour and a half to two hours flying we left our friend, the gusty little wind, far behind. The long rolling swells of the ocean seemed to smooth out and during the evening the sea looked like a sheet of glass with scarcely a ripple on it and hardly any noticeable wind.

Suddenly in the midst of our reverie and calm observations I heard the motor begin to splutter. The tachometer needle which indicates the number of revolutions of the propeller per minute began to bob back and forward. My heart stood still. With a glance at Koehl I could see that he was intensely listening to our engine. In the rear the Baron was sitting bolt upright and staring forward with a questioning look. Frankly, I got a terrible wind up for a moment. To have the motor fail six hundred or seven hundred miles out over the open Atlantic is rather an unpleasant feeling.

The ghastly vision of the Bremen waterlogged and rolling in the long swells of the Atlantic while we frantically waited for a passing steamer to see us, flashed before me. I visualized at that instant the lives of the others who had gone before us. Brave trail-blazers! For an instant my heart seemed struck with a cold chill.

It is difficult to say how long the motor spluttered; possibly for only a couple of seconds. It seemed like an eternity to me. Koehl smiled reassuringly as the throb of our sturdy power plant settled down to a rhythmic tone again. I hardly needed the advice of an expert mind-reader to realize that he, too, had sensed the extreme danger which had faced us.

The moments passed and I settled back to my thoughts. I pictured a giant multi-engined transatlantic air-liner leaving Ireland. In the cabin were seated men and women, voyagers of the future to whom the ocean means but a barrier between the nations and to whom the airplane represented the most rapid means of overcoming the obstacle. A spacious cargo compartment was loaded with precious bundles, negotiable securities, money and bank notes. The interest on this investment was being cut down from four days and nights of inactivity between Europe and America to a brief forty hours. This saving alone means much to the speeding up of international commerce. Below the pilot's cockpit would be a radio-room in which one of the two radio operators would keep in constant communication with ground and ship radio stations ascertaining and checking the position of the plane at all times both day and night. These reports after being handed to the navigator were used by the active pilot on duty for checking his instruments.

As the darkness came I could visualize the passengers entering their berths in a similar manner to which the train passengers do at night. During the long hours of the day the passengers were either occupied by reading or eating light nourishment which was provided from a small electrically operated compartment in the rear of the passengers' salon. The failure of any one or even two of the power plants in this giant transatlantic air-liner would cause but a

momentary readjustment of the other motors in order to take the additional load. I could see the motors installed in such a manner that they were easily accessible to the flying mechanic who would attempt to make repairs, if possible, while the plane was in flight.
The flight of the Bremen was no mere stunt. It was a carefully prepared scientific endeavor in which every possible danger or cause for failure
was written down and considered from every possible angle. The best precautions were adopted to eliminate or reduce these hazards to a minimum. The question of wireless received serious consideration but it was decided that an efficient and useful wireless set would weigh approximately 180 pounds. It was our opinion that this weight of benzol would be better.
This was the one weak point in the organization of the flight, as we now realize that had we had a wireless set on board upon our estimated arrival in the neighborhood of Newfoundland we could have been given almost our exact position by the direction-finding stations along the coast and informed of the precise direction and velocity of the wind over the area. Thus we would have been able to reach New York easily and therefore accomplish our objective. Wireless is absolutely necessary for all transatlantic flying of the future.
As time goes on and transatlantic flying is given even more serious consideration, I feel sure that a small Gyro compass should be perfected which would eliminate the dangers attendant upon the use of the ordinary magnetic compass. The magnetic needle is so often affected by large magnetic ore deposits that it renders the use of such a compass practically negligible.

ABOVE THE STARS-IN THE TEETH OF THE GALE---. AN OIL LEAK IN THE NIGHT-AGONIZING MOMENTS-LIFELESS LAND-FIGURES IN THE SNOW-SANCTUARY.

Switching back from thoughts of transatlantic flying I recall that we were carrying about a dozen beef sandwiches, some peeled oranges and bananas, hard-boiled eggs and vacuum flasks of coffee, tea, and beef tea. Our first meal consisted of one sandwich each, a hard-boiled egg and some tea. This we partook of about 11:00 o'clock on

Thursday morning, April 12th. Baron Von Huenefeld prepared the victuals and passed them to us through the opening in the cockpit.
It is hard to break old habits even if one happens to be hopping across the Atlantic by airplane. At 5:00 o'clock the Baron served tea but within an hour after we realized that the weather was beginning to break rather badly and decided to eat a substantial meal before we entered into the serious business of night flying. We had sandwiches, bananas, and drank beef tea and coffee.
For future transatlantic fliers I would like to record the fact that it is not wise to place the exhaust pipes from the engine too close to the cockpit. The benzol fumes from the motor mixed with my food did not rest at all well—in fact I became somewhat air-sick—for the first time in my life.
From the time that we left the Irish coast and until we arrived off the fog banks, throughout the day the Bremen was never more than about fifty feet above the surface of the water, except where we encountered the East winds and pulled up to about 1000 feet, in order to gain the greatest advantage by reason of the increased wind velocity at the greater height. Whenever we encountered adverse winds we stayed as low as possible. During the night we eased the plane up to an altitude of about 6000 feet, believing that in case we should reach the coast in thick weather and being unaware of the presence of the coast line, we would be in danger of running into a mountain. We remained at the altitude of 6000 feet throughout the night. As the darkness settled about us Koehl switched on the interior cabin lights but for some reason or other they failed to function and we were forced to use the hand flashlights with which we had prepared ourselves at Baldonnel. Unfortunately, we found that we could only use these in short flashes as the continuous beam reflecting from the glass-covered instruments created such a glare in the cockpit that we were almost blinded. Once while Koehl was flying I dropped off to sleep with a torch in my left hand. It slipped from my grasp and the floor of the cockpit under my feet, It was missed immediately I awoke as I wanted it the instruments, particularly the it owing to the confined space in the pilots cabin it was exceedingly hard to reach about and retrieve it. Eventually, however, we managed to fish it out from the bottom of our quarters.
During this part of the flight we experienced a most peculiar phenomenon. In the daytime we had been checking our course by the sun. When the stars came out we used celestial navigation. As time passed I was suddenly surprised to see that there were stars below us and I was filled with the peculiar feeling that we were

flying upside-down. Koehl, too, had noticed the apparently erratic action of the stars. At first glance I thought that I had seen a ship below us, then possibly a lighthouse and again it seemed as though a fleet of boats were passing underneath.



MISS JUNKERS AND HER PLANE WERE MISTAKEN FOR THE BREMEN FLIERS UPON HER ARRIVAL AT MITCHEL FIELD, NEW YORK

The horizon had entirely disappeared and we seemed to be suspended in a circular bowl coin-rounded by twinkling stars. It was only by observing one star in the heavens and then picking it out below us that we realized the phenomenon was caused by the stars being reflected in the glassy surface of the ocean.

In order to prepare for the bad weather which we felt sure we were going to meet as we neared the coast of North America, Koehl and myself took turns at piloting the Bremen in periods of one-half hour on and one-half hour off. In the rear the Baron sat in lonely solitude with his thoughts.

We were approaching what we believed to be the coast of Newfoundland and we estimated that we were within about 400 miles of land when directly in front of us and spread as far as the eye could see to the North and South there appeared a great

impregnable gray blanket of dreaded fog. Below us the ocean began to lash itself into a turmoil of beating fury. Raging billows loomed up beneath us seeming to stretch angry foam-lashed fingers at the undercarriage. We were both wide awake now and we made an endeavor to climb over the fog bank. A strong southeast gale was howling about us and our only hope of being able to maintain a steady course was to remain within sight of the stars. We realized that the compass would not be very helpful owing to the great differences in magnetic forces over short distances on this difficult stretch of the journey. We were rapidly approaching this bank of Newfoundland fog and we could see that it reached into the heavens combining with the low-hanging clouds which disappeared above us. Our only hope was to remain as low as possible and trust entirely to our instruments.

Pitch darkness surrounded us. Flying close to the great surging waves we experienced a number of downward bumps which all but precipitated our metal monoplane into the merciless sea. We realized the danger of remaining near the surface and we climbed higher and higher until we had again reached 6000 feet. The cold was intense. The fog and sleet wrapt itself about us like the clinging hand of fate. How thankful I was that at Baldonnel the mechanics had spread the wings and fuselage with paraffin and oil as a protection against sleet formation on the plane.

Koehl's face was set with a grim determination. His helmet and goggles seemed even to lend a sardonic twist to his countenance. It was the battle of man-power and a man-made instrument against the elements. Oh, the deadly monotony of the struggle! Pains and aches seemed to surge through my body. My eyes felt as though someone had thrown sand into them. Koehl, too, would occasionally lift his goggles to rub his blood-shot eyes and his fitful stretching showed that he, too, was suffering from cramped, aching and tired muscles.

The ghastly pall of fog seemed to cling about us with never varying density. Then came an other tremendous shock upon which to a certain extent hung the entire fate of the Bremen. As my flashlight dropped on the instrument board I noticed an enormous amount of oil on the floor of the cockpit and over my shoes. An oil leak! Tense as the situation was at this moment our nervous systems suddenly became as taut as a violin string stretched to breaking point. We suddenly realized that due to the long and continued vibration of the motor an oil line must have broken. The precious fluid was pouring itself away on the floor of the plane. I reached vainly about trying to locate the broken pipe. Captain Koehl turned on the reserve supply

of oil and I noticed with a great deal of satisfaction that the oil gauge on the instrument board showed "full."

Five minutes later when I glanced at the oil gauge I saw that instead of still being full it now showed three-quarters empty. We were facing a situation beyond words. At this time the Bremen was headed on a southwesterly course for the coast of Newfoundland, but when we realized that at any moment our oil supply might become entirely depleted, and we did not know how much oil had flown away before we noticed it, the logical thing to do was to head directly Northwest and endeavor to strike land as soon as possible.

There was now nothing to do but to grind our teeth, grin, and forge ahead into the West hoping that terra firma would soon loom up in front of us. We were both straining our eyes in the hopes of discerning the rays of a friendly lighthouse which would give us the longed for information that we were at least over land. Nothing appeared in the inky blackness. The very instruments were grinning and making faces at us as if to say how futile are our endeavours.

The agonizing moments dragged slowly by. The Bremen kept forging steadily into the West. So great was our fatigue that for moments I would drop off into slumber only to awake with a start and my heart pounding madly against my ribs. With brimming eyes and stumbling thoughts my benumbed consciousness would reconstruct the situation.

After what seemed to be interminable hours of endless flight the thick fog bank suddenly disappeared behind us and overhead the dark blue sky was studded with most welcome stars. The Great Bear and Pole stars, the fateful guide of mariners for so many centuries, were immediately located almost directly over our heads and slightly to our right. With a great sigh of relief we checked our course with the stars and continued for two long weary hours of flying into the West.

Suddenly upon looking below I saw what appeared to be large broken patches of low-lying fog over the waves. After a long scrutiny through the binoculars this turned out to be a vast snow-covered forest. I signalled Koehl to look below and noticed that his face assumed a broad smile when he realized that we had reached the coast of North America. Our eyes were too tired to make out definitely the expanse beneath us at the height at which we were flying.

Continuing our course we brought the Bremen closer to earth but still maintaining sufficient altitude for safety. A Very light pistol was dug up and a white flare was fired below while the plane slowly circled in order to give us ample time to make an observation. The

Stygian darkness swallowed up the light before we were able to observe clearly any of the objects below us. After firing two or three more white flares we were able to observe a large wooded hill directly below us. All patches of ground were covered with a blanket of white snow and the branches of the trees seemed laden with frost.

Our only course now was to continue flying in the direction in which we were headed and wait for the dawn. Daylight was due at almost any moment and with the first gray streaks we could discern a huge expanse of uninhabited snow covered forest and mountain country. Not a sign of life was evident.

Where were the long white concrete roads, the broad open aerodromes? Where were the great fabulous factories of America's industries? It seemed as though we had broken in upon the silent sepulcher of desolation. Not a puff of smoke, not a beaten path over the tractless wastes of white snow. Not even an animal or bird of any nature or description could be seen.

The hours of tossing about in the storm-racked fog, our change of course due to the oil leak, and the lack of lights in the cockpit had caused both Koehl and myself to become extremely worried as to our whereabouts. Hastily tearing a piece of envelope which was in my pocket, I scribbled the word "Labrador," and passed it to Koehl. He shook his head. He was clearly worried about our predicament.

We checked and re-checked our course, using the sun to collaborate our instruments, and finally decided that we were many miles inland over Labrador.

Veering to the southeast and using the sun as our guide, we held the nose of the Bremen into the biting cold wintry air of the desolate North country. Tired as we were, our eyes kept searching for the faintest sign of a landmark which we could identify upon our maps. The agonizing moments seemed to stretch into hours. Our hands and feet, our bodies and even our brains were numbed with the bitter coldness. At last we found a broad river with mountains on either side but it was frozen solid and covered with snow. Not a trace of a living thing seemed to touch the virgin whiteness that lay like a pall, stilling the rushing waters. Down we went until we were flying about the surface, no higher than about ten feet, and for two hours we continued but failed to pick out any recognizable landmark.

We were gravely concerned about our supply of petrol, and having tested all our tanks we came to the conclusion that we had sufficient fuel for only about three more hours of flying. We continued in a

southeasterly direction, searching forever the country below for a sign of life.

The strain of flying the Atlantic had been tremendous, but to face certain death in the bleak, cold, uninhabited wilderness of this Arctic country seemed such a cruel reward. After all that had happened to us I could not help but feel that those others who may have crossed the Atlantic westward by air may have "cracked up" in some such remote wilderness.

I tried to recall all that I had read of Labrador and the Arctic, the books of Dr. Grenfell and of Hudson Stuck, and those splendid tales of Cooper around the Indians of the North. Indeed I have even been lost once before myself. It was in the Bog of Allen, when, with two companions, I wandered for three days, living on the birds' eggs we had gone searching for, and finally reaching some men cutting turf they directed us to our homeward destination. I might add that I got a jolly good licking.

I decided that the first thing to do, if we should come down at some remote point, would be to hold a conference, in order to discover ways and means to get back to civilization. First of all, we would have to take a good rest, and that could be done in the machine. We could gain a general idea of our whereabouts from the stars and guess in which direction a human habitation would most easily and certainly be encountered. Here our compass would aid us. Snowshoes of some sort would be necessary as we would have to travel over soft snow. We carried a small axe in the Bremen. With this we would improvise skis, and the axe could be used in cutting firewood. This brought up the question of fires. We would need them for warmth and cooking purposes. But none of us carried matches. We had not taken them due to the risk of fire. Baron Von Huenefeld had a cigarette-lighter but if this would not work, we would all certainly die. I racked my brain for a solution, and finally found it in the starting magneto. We could remove it from the airplane. It was operated by a handle and made a good fat spark. If we took along some petrol as a precaution, we would be fairly certain to make a fire under any conditions. Here again the axe would come in handy to chop away one of the petrol tanks from inside the machine.

I tried to picture how we would live. We had with us some sandwiches and hard-boiled eggs and thermos flasks of coffee and tea. We had eaten barely anything so far, and we could take this food along. But what was to be done when no food was left at all? I thought that we would travel across country until we found a river and then make our way down it. We could fish if we chopped holes in the ice. Of course we had no rods, lines, or hooks but we could

use string arid a bent pin and red paper for bait. I knew this could be done as I had often watched fishermen lure the fish in this manner.

However I must admit that I had a frightful horror of wolves, which the blood-and-thunder books had given me. I recalled stories of people being chased by packs of them, I understood that a wolf will eat another wolf if it was dead, and in this manner we would be able to escape. But
the problem came up of killing them without being killed by one first! However I had my light signal pistol and fifteen cartridges which could be used if necessary.

I suddenly realized that we could not possibly travel with the magneto and the petrol tank and the fish we might catch, or the animals we might kill, without some means of transportation.

We could improvise some sort of sled by using the axe, and if we chose a river route we would not have much difficulty in dragging it. We could take turns doing this, just as Koehl and I had taken turns in piloting the Bremen. How would we sleep? Our heavy flying suits would keep us warm as we walked by day. At night however we would face the danger of attack by wild animals and that of freezing to death. In ordinary winter weather we would stand guard in turn until the break of day. However shelter of some kind would have to be improvised in extremely cold weather.

As I thought of what I had read it seemed to me that some of the Eskimos made their igloos by building a framework of branches and covering them with snow. We could survive the severest cold in such shelters. I knew that the distances were enormous. It might take us six months to make our way back to civilization. If the ice broke up, we might make a rough raft and float down stream, stopping only to drag it over rapids or when we slept.

Of course we might not survive, and I wondered in what order we would go, if we died of
exhaustion—who would be first and who last, and what it would feel like. I remembered Captain Scott's fate in the Antarctic and the bravery of that companion of his who stepped out into the snow when he realized he was imperilling the chances of the others.

But optimism took the place of all these gloomy thoughts, soon after. Of course, I always felt we would win out. Somehow or other I knew that we would get out of any emergency that might arise. Pilots have to, I suppose. And so I had no great fears as I formed these plans to offer to my companions in our first conference together should we crash on land.

But strange things happen over these limitless wastes. Tired eyes seem to have a way of playing tricks upon the leadened brain. Gazing hard ahead I could see a large town complete with church spires, domes, streets and even moving automobiles. To one side I saw an aerodrome fully laid out with hangars and living accommodations and airplanes outside the hangars. Binoculars were produced, and in each case when checking with Koehl these welcome sights turned out to be only a mirage. Perhaps the subconscious mind has a way of making the eyes see what it wishes. In the desert, travellers dying of thirst see but a few yards ahead of them luscious, bubbling green brooks and springs that mock them while the burning sands turn their tongues to choking hot coals. I seemed to see the smooth white runways of a perfectly appointed flying field. In fact I could almost picture the Bremen a few seconds later landing and taxiing up to the line.

Was it Fate with cruel mockery that was beckoning us to land in the treacherous snow-covered rocks to meet—instead of open arms in welcome—the shuddering crash of battle? I can imagine that both Koehl and the Baron are also suffering from the tremendous strain.

Two more long weary hours elapsed. We were searching for a suitable landing spot when we came to the edge of what appeared to be a huge frozen lake. Charts were produced and by making signs I discussed with Koehl our possible location on the maps. We decided to search for some habitation or sign of human life along the shore line. Hope seemed very' slim indeed! Suddenly a huge blizzard was seen approaching right in front of us. The faithful old Bremen began to bob about in the sudden, turbulent atmosphere. A howling gale was raging. Fate (seeming to feel that she was about to be cheated of her human sacrifice and seeming also to realize that the beautiful pictures which she had spread on the treacherous ground below us, were not to entice us to land) had placed a blinding blizzard of whirling, twisting snow in our path in order to drive us into the frozen earth.

Suddenly the curtain of snow lifted and we observed in the distance the outline of what we believed to be a large ship frozen in the ice. This time the binoculars proved that it was no mere hallucination! We were convinced that it was a ship. My shout of glee was drowned by the roaring motor.

Koehl's face was "set at a quarter-to-three" and glancing back at the Baron I could see that his face was "set at a quarter-past-nine." (Lest my gentle readers fail to interpret this expression, I might say that a grin in the Air Services is known as "setting your faces at a quarter-tothree.")

What a tremendous relief the first signs of human habitation we had observed since we waved a longing farewell to the lighthouse at Slyne Head, Ireland! With the engine throttled back we glided down to investigate it, bobbing about in the face of the Arctic gale and were surprised to make out the outlines of a stately lighthouse situated on a small island. After circling twice around the lighthouse we noticed that the noise of our motor had stirred a pack of dogs into action. Their movements on the snow were clearly discernible to us. No other sign of life was apparent. At first I thought they might possibly be a pack of wolves who had come to the edge of this solitary beacon in search of food. And fear struck my heart that the lighthouse might not be inhabited!

The continued noise of the engine, however, attracted the attention of the inhabitants and four people emerged from the lighthouse building. It is impossible to describe our feeling upon observing them. Here at last was a spot where the Bremen might rest, and where we would have an opportunity of checking up our fuel supply, ascertaining our exact position and if possible continuing on South to New York.

The island was snow-covered and ice-bound. Here and there in the bay we could see stretches of clear ice on which it might be possible to land. Being quite unfamiliar with conditions, we however chose the surface of the lagoon which was frozen over. After firing a smoke signal to obtain the correct direction of the wind we maneuvered into position and headed directly into the teeth of the 50 mile an hour gale, Koehl nosing the Bremen down and landing on the ice.

We did not know at that time however that only a few days before the spring thaw had melted the top of the ice and left several feet of water on the thicker ice beneath.

Freezing weather had then set in and the surface had frozen over so that it presented a deceptive appearance of safety. It was on this thin ice that Captain Koehl made a perfect three-point landing. Fortunately for us the head wind slowed up our speed to such an extent that when the weight of the Bremen was finally thrown upon the ice our forward speed had considerably diminished. Suddenly the ice broke through and the machine rocked violently forward on its nose. Koehl and myself were thrown forward on to the instrument board but the Baron—who had moved forward in the cabin—was thrown to the floor. Koehl received a rather severe cut on the forehead but the Baron and myself were uninjured.

Our landing—upon what we afterward discovered to be Greenly Island, was a bitter disappointment. We knew that many people

were gathered at Mitchel Field near New York, and that we would have to disappoint them. Furthermore, the machine which had brought us safely across the huge expanse of water, was resting grotesquely on its nose and had been injured.

THE WRECK OF THE BREMEN-IN TOUCH WITI THE WORLD-HOSPITALITY-MURRAY BAY AND RETURN-A WORD ABOUT FLOYD BENNETT-LOOKING FORWARD.

Upon getting out of the machine, our first concern was to ascertain as nearly as possible the full extent of the damage. We surveyed the machine thoroughly and found that the propeller tips were bent and that the undercarriage had been strained. But this was all.

Our first job was to lower the tail of the machine to the ground. This proved extremely difficult, for even with the aid of three of the natives of the island who came to our assistance, our numbers were far too small to be really effective. In addition, we did not have available the necessary tackle or equipment for work of this nature.

Fortunately for us, a gale was blowing which tended to force the tail of the machine down to the ground. The pressure of the gale on the tail of the machine was gradually forcing the nose of the machine out of the ice, and we were afraid that the tail might suddenly drop to the ground and result in irreparable damage to our trusty craft.

Three men lay on the nose of the machine to balance the pressure and a rope was obtained, lassoed around the tail skid, and after much effort we were delighted to find that we had succeeded in lowering it gently to the ground. The entire proceeding had lasted for about half an hour and we had been exposed to bitter cold and a lashing wind.

It was then suggested that we should adjourn to the comfortable quarters of the lighthouse, to which Baron Von Huenefeld had already gone because of a slight mishap. In getting out of the plane he had fallen into the water twice, and it had been necessary for him to leave us that he might dry off before he froze to death. But Captain Koehl was adverse to this suggestion. He, like a good airman, wanted to stand by his damaged machine and we therefore continued working on the machine.

With the snow falling and the wind howling we carried on with the work of examining the plane more closely and endeavoring to lift

the wheels out of the water with the intention of rolling it back onto solid ground. We secured some planks, and iron bars were used as levers for this work, but unfortunately after having succeeded in getting the right wheel onto the solid ice a large bang occurred. Upon examination we found that the axle had snapped in the middle.

We were almost heart-broken, because we had felt that with the available utensils in connection with a small forge at the lighthouse we would be able to straighten the propeller and go on to New York.

On the collapse of the undercarriage the machine subsided into the water again; and our work of nearly two hours proved futile. We decided that nothing further could be done, so we obtained some rope for the purpose of securing the machine so that it might be saved from the damaging wind during the night.

Now a new difficulty presented itself. The pickets could not be driven into the ground due to the fact that it is just like solid rock, owing to the intense cold experienced in this district. Finally we secured the machine by tying the ropes round large boulders which were littered about the place, as we were at the very edge of the lagoon. The water was drained out of the radiator, as it would otherwise have been badly damaged by the frost. We procured plenty of sack and carefully wrapped the engine for the night.

A man was employed to guard the machine throughout the night, not that we feared that anyone would steal it, but in order to warn us should the storm increase to greater force. As- sured now that our stout little craft was as comfortable as we could make her for the night, we adjourned to the lighthouse where our hostess, Mme. LeTamplier, greeted us with that charming hospitality so characteristic of the French people, particularly the French Canadians.

Our sheepskin flying boots and socks, which had become saturated during the work and had become frozen so that they were literally two cakes of ice, were removed and we were provided with stockings and moccasins.

Our first consideration here was to write out despatch telegrams and cables to our people, notifying them of our safe arrival on the American Continent. We had learned that there was a telegraph office at Blanc Sablon, a distance of about two miles, which was however almost inaccessible because of the snow and ice. The assistant keeper of the lighthouse very kindly offered to execute this commission for us, and we were happy in the thought that the waiting world would soon have news of our safety. We knew that we were long overdue, and that they must be anxious by this time.

Mme. LeTamplier now informed us that tea was ready and we sat down to what was our first real meal since the day before when we had breakfast at 4:30 A.M. and only sandwiches in between—and now incidentally, to our first meal in Canada. It would be impossible to describe how wonderful this meal tasted.

Extreme fatigue had now overtaken us, so we were shown to our bedroom. Here we found two beds. Baron Von Huenefeld and Koehl took one and I took the other. We undressed, tumbled into bed and were asleep in "two winks."

I awakened at about twelve noon the following day to be informed by the Baron that Captain Koehl—after having had three or four hours' sleep—had been working practically throughout the whole night compiling notes on scientific data, etc., which he had collected during the flight, whilst the matter was still fresh in his memory. Captain Koehl must certainly be commended for his tremendous will power, keenness for his work and concentration on his undertaking.

After our long rest we felt very fit, with the exception that our eyes were bloodshot and bunged up with pus. This strain had been caused by the fact that we had only one pair of goggles between us, as Koehl's had been lost out of the machine. However, after bathing our eyes in water we felt very much better. After breakfast we immediately commenced working again.

The machine stood exactly as we left her, with the exception that the water around the undercarriage had become frozen during the night and under the pressure of the ice the left tire had burst. Large petrol drums and planks were obtained, also a considerable supply of timber, and by nightfall we had succeeded in lifting the weight of the machine off the undercarriage by building up props under the wings at the roots.

We realized that this was all we could do. We went back to the lighthouse and dispatched cables, calling for assistance, and notifying the Junkers Company in New York of the extent of the damage to the machine, and the materials and spare parts required to get the machine in trim for the continuation of our flight to New York. There was nothing to do now but wait for help.

On Sunday we received news from Point Arthur radio station that "Duke" Schiller, the famous Canadian pilot; Dr. Louis Cuisinier, technical director of the Canadian Transcontinental Airways Company, and Eugene Thibault, a mechanic, were on their way in a Fairchild ship for the purpose of assisting us. The machine was scheduled to arrive before five o'clock, and we spent the intervening time in preparing messages recounting our experiences and our

needs. At 5:30 o'clock we were sitting in the lighthouse when we heard the drone of an airplane.
We pulled on our things and ran out. We saw the plane circling over the island. A Very light was fired from her and she circled to land on the ice of the frozen bay about a mile away. We travelled over by dog-sled and met those who had come to our relief.
We held a conference that night and learned that a considerable number of misleading reports had come out and that as a result of the poor telegram system and the enormous traffic on the line, due to our landing, our messages had been garbled and our needs not made clearly known. It was therefore decided that the machine should leave for Murray Bay the following morning and that one of us should accompany Mr. Schiller to Murray Bay to meet Miss Junkers, who we were told would be there upon our arrival, and explain to her the exact position and our requirements in order to insure that the flight could be continued as soon as possible. I was chosen to undertake this commission. The following day at noon, leaving Cuisinier and the mechanic behind, we left Greenly Island, en route for Murray Bay.
Upon getting up we learned that Cuisinier had arisen at 5 o'clock in the morning, had secured additional assistance, which he could more readily direct because of his knowledge of the language and the people, and had procured practically every dog team and sled in the countryside for the purpose of carting material to the scene of our landing. He intended to lower the water in the pond by drainage so that a wooden platform could be built under the machine to enable the mechanics to work in the dismantling of the damaged undercarriage and the fitting of the new one when it arrived. He confidently assured me before I left that he would have this work completed within ten hours. I could not possibly see how he could do it in the time stipulated, but I have since learned that he accomplished what he set out to do. It was a splendid feat of engineering!
Shortly after leaving Greenly Island we encountered fog and heavy snow. In addition to that the east wind, which prevailed at Greenly at the time of our departure, changed round to the west after about an hour's flying. This slowed us considerably and forced us to land at Natashquan, where we received every hospitality and stayed the night.
At noon on the next day we left again in a howling gale and heavy snow, and succeeded in reaching Clark City about 5 in the afternoon.

Here again we were compelled to land and we received utmost hospitality from Mr. Collier, the manager of the pulp mills.
The following day at noon we took off for Murray Bay, where I met Miss Junkers and explained our situation to her.
My return journey to Greenly Island to rejoin my comrades there was not altogether uneventful. I had left to get the parts with which, we felt, the Bremen could be repaired. These I took out on the three-motored Ford plane that was sent to our relief. This was the plane chartered by the New York World and North American Newspaper Alliance in which—while flying to Greenly Island--Floyd Bennett contracted pneumonia, which resulted in his death.
We left Lake Ste. Agnes, expecting to stop at Seven Islands, Quebec, and after fueling to hop off at once for Greenly, arriving there that afternoon. But luck was against us, for the petrol we expected at Seven Islands was not there. Press planes had used it up, and the nearest supply was at the village. It took us two hours to secure it.
Meanwhile the sun had been melting the snow badly and we doubted if we could get off. Nevertheless, we made the attempt. Twice we ran over the snow for two miles, but we could not get into the air. So we desisted and decided to spend the night there, hoping for a frost to harden the surface for us.
That night we were entertained by the Mayor and some of the local people, who treated us with every consideration. We started the engine the next morning at 6 o'clock, and this time successfully took off. We reached Greenly without any other incident.
I was surprised upon returning to find that the Bremen had been moved. She was not in the reservoir where she broke through the ice when we landed on it after our trip across from Ireland. Dr. Louis Cuisinier, the technical director of the Canadian Transcontinental Airways, and Koehl had done a remarkable feat of engineering and had hoisted her up on the embankment. They had also drained the water from the reservoir. The machine stood propped up, the damaged propeller taken off, and her undercarriage removed. All was in readiness for the work of repair.
The Junkers mechanic, Ernest Koeppen, wasted no time in getting to work. He started in to straighten out the propeller without having a bite to eat. In a small forge in the lighthouse on Greenly Koeppen hammered out the "prop." Then, bolting it on the shaft again, he started to put on the new undercarriage we had brought along. The original intention to try to take off from the reservoir had been abandoned. The ice in the bay was better, and without skis we knew we would need a long run. But the Bremen stood at the top of a

very steep gradient, and now that she was repaired we would have to get her down.

It was manifestly impossible to ease the Bremen down on her wheels. We would do her irreparable damage, we felt certain. We decided to use dog sleds, and putting one under each wheel, we began the task of moving her gently to the ice in the bay below. It was no easy task, and took three hours.

With the machine safely on the ice in the bay, we decided to stop work for that night. We held a consultation that evening and came to the conclusion that the best place for a take-off would be from the ice off Long Point on the mainland, about a mile away. We had placed a native as guard over the ship during the night.

Next morning conditions were extremely good. We woke at 5 and began to push the Bremen across the ice. She broke through soft spots in the ice three times, however, and we had to hoist her up again and place her on dog sleds. Then we started pushing her once more, this time successfully, finally reaching the smooth ice running parallel with the shore line. We decided to build a fire and warm the oil and try to warm the engine• A large vessel was procured for boiling water. We also heated the tins of oil for the engine. We took out the spark plugs and cleaned them thoroughly, as they had become badly fouled in the flight. We also cleaned the magneto and took down the distributor and the carbureter and cleaned them as well. After that the petrol was filled in.

At eight o'clock that morning we were ready to start the engine. We tried—without success.

She popped a few times, but she would not take hold. This was due to the fact that the engine has a very high compression, a ratio of seven, and we could not get compression except on two of the cylinders.

We concluded that the grease we put on the valves after we broke through the ice on Greenly had melted on the warm days and had trickled down the valve stems, running into the ports. Later this hardened, thus preventing the valves from heating properly except on the two cylinders. For an entire day we worked on this, even using blow lamps in an effort to clear the valves, but without success.

That evening there was every indication of an approaching gale. We decided to move the Bremen off the ice into the shelter of the harbor at Long Point. There we covered her up against the storm which we knew was coming. We were not mistaken. Before we had completed this work snow began to fall. Then a gale came up, and further work that night was impossible. Much of our optimism had

now left us. When the repair parts came we expected to install them quickly and take off without further delay. Now we decided to hold a conference.

We were no longer in our quarters on Greenly Island, but were installed on the mainland. The Baron and Koehl had been put up at the home of the telegram operator there, and I was taken to the house of the parish priest. However, we messed together at the operator's house, and it was there that we conferred that night.

At this time I would like to say a word about Floyd Bennett. I had never met him before he came to Lake Ste. Agnes with the relief plane. I had no idea when I left that he was so ill. His death came as a distinct shock to me. Aviation cannot help but miss him—he did so much for it. His loss is inestimably great. We were greatly depressed at the news of his death. Until this time the three of us had been overjoyed to be reunited. When I had left Greenly I had expected to return within two days; but my stay was an enforced one and my comrades showed every indication of pleasure at my return.

I brought back many necessary things. They hadn't had luxuries of any kind, and had barely the necessary clothing. I brought back cigars and delicacies to eat, and clean underwear and shirts to wear. That first night together in the lighthouse we had almost a feast. We hoped to be off in the morning. We felt certain that we could take off in the Bremen again. So we felt quite happy and had quite a party with the food and beer and wine, topping it off with cigars and cigarettes. We had a thoroughly enjoyable time.

We planned to get up at dawn the next day, and weather indications were fair. When we arose, however, conditions were bad, but we decided not to delay, however, and took off at 8:45 Atlantic Time, or 7:45 Eastern Standard Time on April 26th.

We encountered snow on part of our flight. The going was bad for 100 miles, and it was exceedingly bumpy in the air and we had a head wind which slowed us up. Balchen and I took the controls for the first three hours. Then Balchen and Koehl flew the next three hours. After the first two hours the weather cleared. Then we ran into bright sunshine and excellent visibility. We began to make better speed, too. We passed Godbout, Quebec, at 2 o'clock and Mille Vaches, Quebec, at 3 o'clock. About three-quarters of an hour later we were over Lake Ste. Agnes and saw the large crowd waiting for us on the ice. We landed at 3 :52.

Mr. Couture and Mr. Cannon of the Airways Company and Mme. Cuisinier, whose guest I had been before, and Miss Junkers came to meet us. The scene was familiar to me, but my comrades found it

strange and the faces were new to them. We were soon made at home, however.

We spent the evening in Murray Bay. The accommodations at the Airways base were limited, and a house had been placed at our disposal in the village. I looked forward to a fine hot tub.

The following day we began our journey to Washington and New York.

The rest of my little tale has been written by Captain Koehl and Baron Von Huenefeld. I would, however, like to register a few opinions and impressions which I have drawn from this first East to West crossing of the Atlantic.

The transatlantic aerial service will undoubtedly be the most important aerial route of the future, as it will connect the American and European countries. Much pioneer work remains to be done, even with present-day airplanes and engines. Such flights are not foolish in any case where they are properly organized and all the risks realized and provided against.

And those who think transatlantic aviation will never be a regular public utility service should endeavor to get away from the idea of the present-day airplane, engine and route organization, glance over the progress which has taken place in the development of aviation in such a short period, and attempt to visualize the aircraft and ground organization which will exist fifteen to twenty years hence. Airplanes will be produced which will be capable of riding out the roughest gale it is possible to encounter.

Much more reliable and more economic engines will also be designed; better and reliable compasses and instruments will be available; efficient direction-finding wireless of low weight and long range will also come; meteorological organization over the Atlantic will develop. These are the factors which have to be understood.

First, let us take the route. The shortest is obviously the best; that is, New York, Newfoundland, Ireland, London. The weather conditions, here, however, are slightly worse than those which would normally be encountered over the Southern route.

As already explained, this matter, however, can be overcome in time. It is a matter for international discussion and agreement. America and mid-Atlantic, and similarly England, France, Germany and Ireland, will have to carry on corresponding work from the west coast of Europe to mid-Atlantic. For this work of course special ships would have to be available at anchor in the ocean for the sole purpose of meteorological work. These ships would cooperate with the meteorological departments of the countries concerned, and the

reports would be collected and definite information be available at all times on conditions right across the ocean.
When a machine therefore is ready to leave on a voyage, the pilots and navigators will know exactly what conditions they will encounter and plan their course accordingly. Should, however, sudden violent storms arise after the departure of the machine, they can be informed of this by wireless and alter their course to avoid them. The wireless would also be useful to give the personnel of the machine helpful information throughout their journey, which would enable them to avoid adverse winds and plan their route to take advanage of every helping wind.
The position of the machine could be given at any time by means of direction-finding ground stations. This is of great importance, as the machines would know their exact position at any time and also the speed they were making over the ground.
Only an approximate idea of position and ground speed could be estimated on the flights already accomplished.
A. lot of work still remains to be done on instruments and compasses, but science and brain power are overcoming these problems and better and more reliable instruments and compasses are being produced from time to time.
Since Alcock and Whitten-Brown crossed from Newfoundland to Ireland in their Vickers Vimy machine in 1919 many improvements have taken place in instruments and compasses, making transatlantic aviation a much simpler and less risky undertaking than it was when they performed their marvellous feat. -While on their flight, while flying through fog and clouds, they had no idea of the position of the machine in relation to the ground.
Since then, however, many useful turn indicators have been introduced which show the pilot at a glance, when flying at night or through fog or clouds, whether his machine is on a level keel, turning or banking.
Next, what kind of machines will be used on the routes of the future? If I may be permitted to voice an opinion, I would say multi-engined flying boats capable of riding out the roughest sea.
This may sound ludicrous, but I believe that the transatlantic flying boat of the future will in effect be a flying submarine which, in addition to being a very deadly weapon in war, would also have considerable commercial value. It would fold its wings and not only could it fly, but it would ride over and through the waves.
At present when a large flying boat is loaded for a long-distance or ocean flight, it is an exceedingly difficult job to get it to take off, owing to the enormous drag of the water. This can easily be

overcome, I believe. Special light railways, a couple of miles in length, facing in the direction of the prevailing wind, can be laid down, and the boat loaded onto a specially constructed truck in the rear of the electric locomotive.

Then when the locomotive is travelling at the rate of about fifty miles an hour the engines of the flying boat can be opened up and she will easily lift into the air, pass over the engine and wing on her way.

The question of aerial navigation also requires considerable thought. The application of marine navigation methods to aerial navigation is unsatisfactory. It will not do at all. Aerial navigation is a technique unto itself and should be considered from the standpoint of flying, and suitable instruments and equipment should be produced to meet the requirements of the air.

Another useful point which suggests itself is quite easy to put into application immediately. It is the laying down of large signs easily distinguishable from the air beside coast lighthouses with the longitude and latitude of the position clearly marked. Lighthouses are the principal landmarks in marine navigation, but their usefulness to the aviator is almost nil. Overhead the light flashes cannot be seen, but the signs I suggest could be seen by day and be illuminated to be observable at night. They would tell the pilot exactly where he was.

In summary: The Atlantic has been flown from east to west and from west to east. The pioneer work—to a great extent—has been done and commercial services are certain to come.

E Better and different airplanes will be used, improved instruments employed on them, accurate information will be available, and the Atlantic will be crossed both ways without unusual danger or delay.

The first of these services will not be for passengers but mails. The week-end letter will supplement the night letter of to-day, and these and bank clearances and important commercial matters would provide a very useful pay load to begin with.

Part III
by
Baron Guenther von Huenefeld

THE WHIR OF PROPELLERS-AVIATION MADNESS-ILLNESS AND WAR INJURIES-MY THREE WIVES-THE SEA DEVIL-EXILE-A CHANGED GERMANY.

The date of my birth was May 1st, 1892. A memorable day—less for the history of mankind than for myself. No matter how one may regard one's day of birth, it remains a decisive factor in the life of every human being. This sounds like philosophy. However, it is not even satirical, but a cold truth. Thirty-six years have elapsed between the 1st of May and to-day. What shall I relate and what shall I conceal?

The whir of propellers. It could be heard fifteen years ago. Always the same! Gasoline and rotating motors! Who thinks nowadays of the old Farman contrivance? What progress we have made. It is no longer an exciting question at every landing whether the propeller or motor will come crashing in upon the pilot. And so we go forward. Automobile accidents increase. Why not fly? Bleriot flew . . . across the Channel. There are many channels, but only one called The Channel. Times change. The channel that airmen think about to-day is wider. Today it stretches from West to East, from East to West, and is called the Atlantic Ocean. Had Bleriot less courage than aviators of to-day? Was the feat he accomplished less important than the flights of to-day? No, most decidedly no ! I know the ship he flew, as I was trained with a similar type. Propeller and motor did not break my back. Yet it is a wonder that nothing happened. To fly with this machine from the British Isles to the Continent! What will our grandchildren say? Will the whir of propellers stop?

As I write, a vacuum cleaner burrs in the lobby, a reminder of the times we live in. Who was connected with aviation in 1913? Were we not Freemasons, who solidly held together? The One-eyed was given a full share, although he never obtained and will never receive a pilot's licence. He was called Huenefeld, and from his birth had only been able to see with his shortsighted right eye. That accounts

for the inseparable monocle. Weaknesses may become strength! Huenefeld without a monocle would look banal and commonplace. To say more would seem immodest.
One writes, one flies, and one is flown. Bohemian remains Bohemian. Who still remembers in Berlin the Cafe Groessenwahn, its ostentatiously painted interior trying to obliterate its past? Futile attempt! The past remains the past. Maximilian Bern, publisher of the "Zehnte Muse" (Tenth Muse); small, neat, his artistic hair brushed back, with a well groomed white pointed beard, the center of our table. Into this circle I, an aviator, introduced a new note. Was not aviation in those days almost an art? It was, and will remain so. One wrote bad poems, better short stories—perhaps too many—and one really good poem. The trench-edition of the "Zehnte Muse" contained the first openly recognized product of my pen. Happy news for the seriously wounded.
The years crowd each other, 1914, 1915? No, still 1913, still the Spring and Summer of 1914. In the summer, Johannisthal The native site of German aviation. Rumpler-Taube, L.V.G., Melli Beese—names of the past. The war forced the drawing pencil into Professor Junkers' hand and he began then to construct those airplanes which ultimately were destined to serve the most peaceful purpose the world has ever known; the connection of people with people, of continent with continent.
A flying day in Johannisthal, arranged by three to four persons, doctors to be, young naval officers and myself. Badly ironed top hats, waving black cloaks, enormous field glasses. "Hallo" all along the line. "Have you all gone mad ?" "Are you having an aviation meeting?" Was there such a thing in those days? Very improbably. We created new modes, transferred racing track manners to the young aviation field. We were almost beaten by enraged and laughing comrades and friends, to whom we had to stand drinks. Who had money in those days? We had not. The old Major von Huenefeld had to give his son 300 Marks—on the 1st of August, 1914—in order to enable him to redeem his watch and chain, tie pins, his ring with the family crest on it that he had pawned. Herr Hahn, the head waiter at the Cafe Groessenwahn had also to be satisfied. Who never knew whether we would live the next few days. We had to leave our house in order.
Masters Schoene and Schiovani, in the days when our paths first crossed, had you heard of propellers? Hardly! But you directed along sensible lines the enthusiastic love of my brother and myself for sports.

When I was thirteen years of age, and my brother fifteen, we started fencing. My Father was a member of the Board of Directors of the German Government Committee for Olympic Games, and co-operated eagerly in the develop- went of new sports. Athens 1906—a promising feat. The next Olympic fight should be welcome to my brother and myself as foil fencers. We set about training. Illness came creeping along insidiously. Weeks and months passed. The fifteen year old youth had to give up all sports on account of kidney trouble and a weak heart. But they could not control my longings and thoughts. My love of sport remained. Time passed; at last I was free, and the years in which I had to accept medical warnings and advice were behind me.

Johannisthal ! I think of many nights in overcrowding cafes; frothing glasses sealed the pact "We fly." The mornings followed. The night's rest? What of that? The young do not need sleep. The day's work? What are cigarettes for? They keep us awake.

I think of my early youth and of good old priest Hoehne, so good a Christian, one of the most industrious of men. For three and a half years you directed, not without effort, the studies of the Huenefeld brothers. What has become of your old protege? Do not worry. The spirit of Goethe, whom you always worshipped as one of the greatest of Germans, whose importance you succeeded in impressing upon us as children, will always be venerated by the sports-bohemian. Did not Goethe utter the motto—which is that of my life—"Denn ich bin ein Mensch und das heisst ein Kaempfer sein" (Fo I was a man, and that means to be a fighter) we love to fight. For the sake of the fight? Drily the mature man sees clearly the driving at. Youth wants to fight. seals, but still they are ideals. Who in the ill-reputed room of the Cafe L, the meeting place of Johannisthal night? The great names of brothers Jeanin, Leitsch, Hans, Reiterer pass before my eyes. Whereever they were, there the fight was in a sporting manner. While glasses were tinkling? Yes, then more than ever. Then fell all the barriers of nationality. We had one aim: "Conquering the air."

I must go back to earlier days. My grand-parents estate in far away Masuren had been sold; my father's estate disposed of in the same manner. It was not until 1903 that we acquired piece of land in the vicinity of Berlin. Since my father's sudden death, due to heart fail-three days before our first attempt to cross the ocean, my mother has made her home there. His death remains still a very sad memory, even of our successes. The veteran soldier who looked forward so proudly during the August days of 1927, who anticipated

a happy conclusion to our risky undertaking, was not allowed to live to see the accomplished feat.



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THE WELCOME TO BREMEN FLIERS ON LOWER BROADWAY

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Happy days of childhood emerge. The delicate mother fighting always against illness, an inheritance passed on to the younger son; the parents' home the meeting place of intellectual people; the hospitality simple, the artistic and intellectual pleasures on a high level. And so grew up the two sons, my elder brother and myself. Later on as students we sat in the gallery in the Royal Opera House as often as our purse and time permitted us.

I still remember the first military training in my early youth! The ex-Gendarmery Sergeant and Magistrate Secretary of the city of Berlin, Paul Elgner, was filled with happiness when we spoke to him a few years ago about our first drilling. It was he who instructed us brothers, at our father's request. "Slow step," "present arms," "march," varied with gymnastics, not to forget target practise—such was the routine we went through. "Discipline of the body creates discipline of the mind." This theory I consider correct enough for a life motto. Others might be of a different opinion.

The colorful years crowd one another. The first period of the war makes me a cripple. For years I am forced to walk on crutches. The great surgeon Lexer performs one operation after another. The last operation, two years ago, restored both my legs to equal length, and gave me full freedom of motion. The Private Assistant of Privy Councillor Bier, Dr. Krueger, who in spite of his young years, was one of the oldest and most faithful friends of my parents, removed from my left leg two centimeters of bone, restoring it to its normal position; and now nobody would notice from my gait any sign of the shrapnel splinters which shattered and maimed both my legs. The smell of the fumes of chloroform and ether come back to me. Altogether it required eleven operations to undo the ill effects of the War. Professor Gross in Bremen during the autumn of 1926 removed a third part of my stomach.

How did I have time to marry? Yet I am married! Moreover I am living in bigamy, and if I look at it clearly, I have three wives. Yet I am neither a Turk nor a Mormon. My first love was my pen, to which I have always remained faithful. It would be going too far to count up all my "immortal works,"—poems, dramas published in Germany. Good friends like Koehl insist that nowhere could they find a better nightcap. My political articles and manuscripts belong to my marriage to politics. A dangerous topic, and yet I must mention it. I have repeatedly emphasized during the enthusiastic days of my round trip in America that only a patriot can understand a patriot, and that only he who loves his own country with his whole heart and soul can respect and honor other nations and countries, and so arrive at that understanding and goodwill which tends closely to

bind all the nations. This thesis represents my conception of life. I have stood long and striven hard in, political fights, and shall never be so cowardly as to deny this.



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THE PARADE FOR THE FLIERS WENDS ITS WAY UP FIFTH AVENUE

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My third wife, the unhappiest love of my life, is aviation. I have previously mentioned that my eyes, hardly able to see stereoscopically, overestimate or underestimate distances. The Crown Prince, with whom I spent two years in Wieringen, complained lately that during my last visit in Oels, I did not break any glasses and did not spill any wine. He insisted that a visit of mine, without such displays of awkwardness, could not be called a visit at all. He may be right, but I believe I did not have a chance in those days to pour out my drinks.

One must recognize one's own weaknesses. A landing effected by myself could be successful only by chance. But I love this third wife of mine, maybe because she is so hard to master, with the same if not more fervor than I love the other two.

How one's energies are dissipated! 'What life is not frittered away! The simple straight line contains more curves under the microscope than the onlooker would suspect. I am becoming philosophical. Perhaps my professors in Berlin who lectured me on philosophy years ago, would be glad to see that their relentless efforts were not quite in vain. To graduate I had no time, and did not feel like it. But let us leave that alone.

The impressions of the war began to fade. For us, who had then tasted the first charm of youth, the years 1914-1918 will always remain an unforgettable experience. But somehow the world carried on; and now my great concern is that my hair is gradually disappearing. Soon I shall be on the threshold of senility. No wonder my gaze turns backward, and is only directed forward if new struggles and adventure loom up in front of me. So I will close this section of our book with a few more recollections.

Comparatively early I came in contact with persons whose names were already historical or have since become so. Who knew in 1914 the "Seeteufel" (The Sea Devil) ? At that time his deeds lay hidden in the future. He was simple and modest; the Naval First Lieutenant Count Luckner, but in some respects a queer fellow even in those days. Luckner, do you still remember the days we spent together in the Naval Hospital in Hamburg? Your desire for activity actually precipitated you into an almost unnecessary operation. Was not the Privy Councillor Lexer a fatherly and understanding soul, willing to gratify even that whim of yours? At eight o'clock in the morning the operation took place and your appendix was removed. At 4 P.M. you sat on my bed smoking a pipe. I can still see you, slightly bent forward in order to prevent the newly sewn up wound from tearing open. All my protests were ignored. You sat like a rock on my bed until late in the evening, when the nurse finally succeeded in

overcoming your obstinacy and induced you to go to bed. In spite of all our pains we spent many happy days in the small officers' quarters in the Naval Hospital, which originally was intended for the purpose of putting up emigrants of the Hamburg America Line. Did not Sister Elise and myself mail you your appendix well preserved in alcohol? If you should read these lines, remember your old comrade of the war.

Unforgotten are the years after the war on the island of exile in Wieringen. The thunderbolt had struck; old landmarks had been swept away. During the first years of his exile I was privileged to live with the man upon whose brow it once seemed that the Imperial Crown of Germany would rest. Not a word about politics! I am merely recalling the human interest of those years, years which were an unforgettable experience. To make the best of his fate was always his motto. Never a word of complaint passed his lips, in spite of the very primitive conditions under which we lived. Imagine two or three rooms in a tiny house, devoid of the simplest comforts. Thick fog day and night, oozing in through cracks in the doors and through crevices in the badly fitting windows. In order to obtain some protection from the cold we spent a large portion of the first weeks in bed,—beds which were, however, damp. Holland had no coal, and no coal oil to keep the lamps burning. It was the Post-War period! Writing and reading our chief occupation; long chats at night. Later it was made public how those five years were spent. I do not wish to say another word about them.

Eventful years in Germany had brought about many changes. Who still thinks of the inflation period? Goods were bought and sold without having even been seen. The frontiers were guarded, but goods and money nevertheless passed out of the country. The misery and need of the times resulted in dishonesty. Organizations attempted to regulate the order of economic life, but they collapsed as all unnatural institutions do. For two years I acted myself in an official capacity, endeavoring to seize and realize in the interest of the government goods illegally imported or exported. I became Manager of the "Realization Department of the Reichs-Finance-Administration" in Bremen. There my old friendship with the Kaffee Haag King, Ludwig Roselius, brought me much happiness. I discovered furniture vans supposedly carrying household articles over the frontier, which in reality contained marble crosses stuffed with paper marks amounting to milliards. As I said, necessity often drives people to dishonesty. In hard times bad elements rise to the surface. But slowly conditions improved; the mark became stabilized, and the German Mercantile began to resume operations.

In 1923 I joined the Norddeutscher Lloyd as a syndic. There I was in a better position to watch economic progress. My three wives were still with me, having remained true to me as I to them. My spare time was devoted to them, and one day my plans for the Ocean flight were ready. My life does not end with it. Or maybe it does? Nobody can look into the future. So far my life has had a meaning. What will the next years bring?

APPENDIX

It is possible, although rather improbable, that there will be readers unable to follow my thoughts, who will not clearly understand how I lived my life. For such readers, few though they may be, I am giving the following table:

Born May 1, 1892, in Koenigsberg, Prussia.

Schools : Gymnasium Steglitz, near Berlin. (A school preparing for the university, the classical languages being an essential part of the curriculum.)

From 1911 studying at the University of Berlin. Active as a writer from that date onward (philosophy and literature).

1914: Seriously wounded outside Antwerp.

1916: Spring, official mission in Sofia and Constantinople.

1916: Autumn, Imperial German Vice-Consul in Maastricht (Holland)

1918: November, Resigned from the Governmental service.

Until 1920 in Wieringen.

From 1921 Manager of the Realization Department of the Reichs-Finance-Administration in Bremen.

From the Spring 1923 Syndic of the Norddeutscher Lloyd in Bremen. At the same time devoting much time to aviation, writing and political activities.

The future: full of cares because of my liking for extravagant adventures.

Marriage and year of death: yet uncertain.

NEW ERA.-THE DREAM OF AN EAST TO WEST FLIGHT-CHOOSING THE RIGHT PLANE-DANGEROUS TESTS-LINDBERGH'S HELPFUL NOTATIONS-A PROPHECY.

The development of transportation is a curious thing. Every time a new mode of transportation becomes generally accepted, there is a recrudescence of the old difficulties and problems which had been

faced and, it was thought, conquered, in the days when such a means of transportation was merely a sport. When the first railroad began to run, voices were heard drawing attention to the great dangers to the public health which would ensue as a result of this new means of transportation. It was thought that such quick transportation would inevitably drive the people who availed themselves of it to the madhouse. Our generation laughs at the fears of our great-grandparents, but forgets that similar fears entered the public consideration when automobiles appeared for the first time. How one scorned those "carts without horses." One compared them to dogs without tails. The old volumes of humorous and satirical magazines of any nation which appeared round the change of the century are an excellent source from which collectors of such curiosities can draw.

Montgolfier, Count Zeppelin, the Wright brothers, these are names which will always stand out in the history of the technical development of mankind. And yet these are the names of persons who were laughed at, jeered at, and for years—until their endeavors were crowned with success—considered fools by the world. Then they were acknowledged. The same thing used to happen when conversations turned to flights across the Ocean. But the conquest of this wide expanse of water, separating two continents which depend on each other in cultural, commercial and industrial respects, was the life task and aim of the young generation.

From time to time it seemed as if those who maintained that such a task could only be solved with the aid of airships would prove to be right. The flight of the Z3, the Los Angeles of to-day, under the command of Dr. Eckener, seemed to open up a new era. The believers in airplanes looked with astonishment, not unmixed with scepticism, upon this achievement of the airship. But they still believed that in the long run leadership in this field would have to be accorded to the airplane. Enormous airships expose too large a surface for wind and weather to attack; they are extremely expensive to construct and to run. Airplanes require much less space, are more easily handled and will consequently take the lead in the long run.

Commander Read and the crew of the U. S. Naval N C-4 flying boat were the first to cross the Atlantic Ocean in 1919 from West to East, with intermediate stops followed by Alcock and Brown in a non-stop flight. Then came a pause of eight years, during which period the problem was little thought of, because the world was in a state of upheaval due to the cataclysmic events of 1914-1918 and had more complicated tasks to solve, important as this one was. Lindbergh's

brilliant and heroic attempt, crowned as it was by success, brought about a change. Everywhere there were discussions of the possibilities of West to East and East to West flights . . . and more than theoretical discussions. Life after life was lost in the attempt to fly across the Ocean from East to West. There was keen competition between land and sea planes, and recently a third type, the flying boat, has also entered the field. Believers in the single motored machine fought with those who confessed their belief in trimotored planes. Practical experience so far could not decide which was the best type.



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BEFORE THE MICROPHONE AT THE CITY HALL CEREMONIES

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Strange are the circumstances under which the members of the Bremen crew approached their aim. Independently of each other worked Fitzmaurice in Ireland, Koehl and Huenefeld in Germany. Each one in working towards the solution of the problem, thought that the single motored land plane would have the best chance of success in an East to West flight. Fitzmaurice experimented with the single motored Fokker in 1927. Koehl and Huenefeld, without knowing each other, each endeavored to tackle the transatlantic flight with the type W33 built by the Junkers Works in Dessau, a type to which the Bremen belongs. A happy coincidence brought

together first the two Germans, and later on all three. It will be seen from these facts that all three of us considered the same principles correct.

The flight from East to West, under the circumstances which prevailed, was considered a record flight. This may be true. But sport and record flights will gradually bring about organized transportation. The history of the automobile speaks for this.

When we decided that the Bremen type was the most suitable machine for such an attempt, we were by no means reckless. We gave up all devices which would have reduced our fuel supply, and which would have been justified only in an extreme emergency. We decided against carrying rubber boats, as these would be of no assistance on a rough sea in the middle of the ocean, although, as Commander Byrd and his companions proved, such rafts are an enormous help if a forced landing is made in the vicinity of land. We also gave up the thought of using a machine equipped with more engines.

We believe that at the present stage of technical development a plane equipped with three engines does not afford more safety on long distance flights than one equipped with a single motor. If one of the motors stalls, it is hardly possible to cover additional long distances, because a plane built for three engines becomes somewhat unstable after the stalling of one of her engines. Apart from this, a tri-motored plane has three sources of danger. The fuel supply must be trebled. All that makes for greater speed adds to the weight. The cruising radius of the machine does not increase, and the difficulties of the take-off remain the same. The feeding system of three engines is more complicated than the system for one. This also increases the sources of danger.

We are all convinced that within a short time these sources of danger will be overcome; and we are also convinced that in the future trimotored planes will be able to cover long distances, even after one of the motors has stalled. But at the moment of our take-off these difficulties had not been overcome.

The difficulties which present themselves at the take-off are just as great with a flying boat. During the preparations for our flight, and indeed while we are writing these pages, thoroughly seaworthy flying boats have not yet been tested practically. But we knew from the experiences of the summer of 1927, that flying boats of even the very best construction could not take off with a sufficiently large fuel supply. And we had seen that when landing on a rough sea, even flying boats were badly damaged and unable to remain afloat. Junkers effected a compromise to some extent by building cushions

and floats into the wings of the Bremen, whereby, after the removal of the gasoline tank (this could be accomplished very easily) , the plane could keep afloat for about twenty hours.
Record attempts under favorable circumstances in 1927 showed that our machine could be kept in the air even with strong head winds for a number of hours sufficient to cross the Ocean from East to West. We did not use balloon tires on the wheels. Thus we were compelled to select our runway very carefully but on the other hand we considerably reduced air resistance. This advantage must not be underestimated.
Apart from wind and weather, there are other dangers which confront the person attempting to undertake the East to West flight, as compared with the dangers faced by him who tries to fly in the opposite direction. Let us look at the map of the world. While Europe runs in a more or less straight line from North to South, the American continent recedes considerably in the South. The dangers of erroneous navigation for the pilot who has drifted South must not be underestimated. Theoretically it is possible that a machine after coming to the end of her cruising radius of sixty hours may sink into the sea somewhere in the neighborhood of Mexico. And another difficulty also arises. Europe consists of thickly populated countries bordering on each other. There are no uninhabited stretches along the coast to make even a successful landing fatal.
On our flight we proved that it is possible to reach the American continent, and in spite of having a reserve of 10 to 16 hours flying time, under certain circumstances to perish in the wide deserts of Labrador, where the summer is so incredibly short. We are all firmly convinced that from the air we saw the graves of our predecessors. We believe that all or most of them reached the American continent, but were forced to land after exhausting their fuel supply, and disappeared in the wilderness of Labrador without leaving a trace behind them. No man, no living creatures, came to their aid in those mighty forests, overshadowed by towering mountains. The cold and frosty winter kills every human being who is unwary or unlucky enough to approach this wilderness.
The fog which generally prevails in the vicinity of Newfoundland and the banks of Newfoundland naturally induces the aviator who has no exact knowledge of the country, acquired either personally or from accurate descriptions, to fly towards Labrador. Moreover, the magnetic fields of this part of the world cause deviations of the compass and magnetic needle, which under certain circumstances might have fatal results, since every hour lost reduces the fuel supply and thus reduces the chance of reaching inhabited spots of

the country. We could not have achieved the success we did in our East to West flight had we not carefully considered these circumstances. They are dangers which flyers in the future will be able to avoid.

One of the dangers first learned of from Lindbergh's notations was the accumulation of ice on the wings in the foggy zone of Newfoundland, so we tried to eliminate this by covering the plane, at Koehl's suggestion, with a thin layer of tallow. This prevents water from settling on the machine and we hoped it would eliminate the formation of ice. Our experience with this coating was most successful.

If one wishes to enumerate briefly the requirements for an East to West flight, one has to say that the following conditions are absolutely essential:

1. Stability of the plane, so that she may outride even heavy storms without her wings being damaged.
2. A reliable engine capable of running 60 to 100 hours at top speed.
3. A plane which over and above her normal load is capable of carrying and taking off with a fuel supply to last her for 40 to 60 hours flight.

I should have mentioned at the beginning of this chapter that the pilot who undertakes to fly over this route should undergo special training. Koehl's instruments for establishing the drift, and at the same time the head winds, and thus the absolute speed of the airplane, are an absolute necessity for every plane attempting such a flight. Astronomical knowledge, which considerably facilitates the establishment of one's position at night, must also be considered necessary. This astronomical knowledge, i. e., its application, is especially of great importance when one takes into account the before mentioned deviation of the magnetic needle. All these requirements must be well considered, especially when the plane in question does not carry a radio. The East to West flights of the future, especially when they become a regular service, will under no conditions be able to dispense with the radio. In the fog one will be abl_e to proceed on the basis of radio bearings. Experience has shown that it is the foggy zones on the East coast of America which constitute the greatest peril for airplanes arriving from Europe.

In our opinion the future of transatlantic air transportation will be largely based upon this most modern aid. It will always be possible to cover the distance between Ireland and Newfoundland,

if a straight course is kept, even in proportionately bad weather. The distance amounts to approximately 3,000 kilometers. Supposing an airplane possesses an absolute speed of 180 kilometers per hour, and is capable of carrying a fuel supply for 30 hours, then the goal would be reached *theoretically* even if a head wind of 80 kilometers per hour were blowing during the entire crossing. In practical experience these things naturally look somewhat different. It is certainly improbable that such a wind would be encountered along the entire route, but under certain circumstances cyclones and hurricanes might cause greater speed reduction and drift than a regular head wind blowing with a force of 80 km. per hour.

Furthermore, it must be considered that in this estimate no allowance is made for a reserve supply of gasoline. But it is essential that such a reserve supply should be carried in the event of the worst happening. Radio beacons and radio service in general will certainly eliminate a number of undesirable detours and delays. It must be borne in mind, however, that steamship service along the shortest northern route is rather scarce most of the year. In order to establish radio connections with ships along the main route the plane would have to be equipped with a long wave set, which again would be too bulky and add to the load. The dead weight of the plane would thus be increased, and the chances of a successful flight diminished. For this reason the creation of new types of radio sets must be welcomed; all the countries in the world are to-day engaged in their development. Therein lies the main possibility for the future of a regulated ocean air service.

The natural question which arises every time an East to West flight is considered, after all the difficulties connected with such a flight have been duly pondered, is whether it would not be possible to establish landing points on the sea, which would make a non-stop flight unnecessary. Such possibilities no doubt exist. There are already American and German patents which provide for islands in mid-ocean, where airplanes could safely land and take off. Refueling would thus be made possible, and the dangers of the flight would be considerably reduced. But as I have already emphasized, only practical experience will be able to test these ideas. No matter how

tempting these theoretical possibilities may seem, it would be impossible to accept or discard them without having proven their feasibility by practical experience.



A wide field of activity is still left for future exploration. In time East to West flights will become just as much ft matter of course as West to East flights. In our opinion such flights in the beginning will carry mail only, and for some time will remain almost exclusively mail flights. It will be years before passengers will be transported in great numbers across the Ocean, because during the next few years it will remain cheaper and more comfortable to transport the great masses of people by steamers. The transportation of mail and perishable valuable goods is a different matter. One airplane will be able to carry a great quantity of letters for a small extra charge per letter and soon turn such transportation into a profitable undertaking. Of course a limited passenger service will play some part during the next few years. But we will have to wait and see in which directions such progress will proceed. Our task is to keep a watch ful eye on this route in both directions and to develop it in the

interests of future world transportation. In the interests of world economics we must not lose sight of it for a single minute.

THE FIRST ATTEMPT - COMRADE PLANES THUNDER SQUALLS-DRIVEN BACK-POSTPONEMENT - A NEW ATTEMPT - WAITING OUT THE IRISH RAIN.

With Lindbergh's flight from New York to Paris a new chapter in the history of transportation opened. The flight which had hitherto existed only in dreams, and for which thousands of people had longed, became for the first time a reality: the successful crossing of the Atlantic. But although Nungesser and Coli, the unforgotten pioneers of the Atlantic flight, did not succeed in their last effort, their names will live on for ever as the men who were the first to believe in an East to West flight, and who paid for this belief with their lives.

Colonel Lindbergh's wonder and precise flight must be the more admired because it was the feat of a man alone with himself and his faith. Then others attempted to follow his example. After the visit of Miss Columbia to Germany with Chamberlin and Levine, the problem which

had become acute after Eckener's successful flight in 1924, leapt again into the foreground. The difficulties connected with a flight from East to West were known. It was clear that the cruising radius of a machine to be used for such an attempt had to be much greater than the cruising radius of a plane which winged its way in the opposite direction.

The rotation of the earth in an easterly direction seems to create winds over the ocean which are predominantly westerly in direction—numerous scientists believe in this theory. The fuel supply of a machine flying in an East to West direction—if these circumstances are taken into consideration—must necessarily be much larger than that of a machine starting in the opposite direction. Success depends on the hours such a machine is able to remain in the air rather than on the number of kilometers to be covered, because head winds might cause 100% or more delay.

Some initiated circles believed in the spring of 1927 that the Junkers machine type W33, which originally was built for carrying freight would be the type of machine capable of carrying out this task. This

airplane, though designed as a seaplane, could be fitted with wheels and could then, given a good runway, carry considerably more fuel and load than as a seaplane.
Had the machine been used as a seaplane the suction of the water would have made it impossible for this machine to take off when loaded as I have described. Apart from this, floats increase air resistance, thereby decreasing speed considerably. Therefore a land plane has much better chances of success.
In addition to this, Professor Junkers had just constructed a motor to which great hopes were attached. The requirements for an East to West flight were thus fulfilled. Quiet preparations were made in Dessau. The selection of the pilot was naturally of great importance. Experience in night flying and good knowledge of navigation were absolutely necessary qualifications. Koehl was the pilot who had had the widest experience in night flying. The night service of the Junker-Flugverkehr G.m.b.H. (Herman Airline) was developed along the lines of his experience and according to his advice. After the merger of this company with the Luft-Hansa (another German Airline) Koehl became Manager of the Night Flights Department of the German Luft-Hansa. So he seemed to be the man for this flight.
Huenefeld, who had studied the problem of the Atlantic flight for years, heard through his friend, Dr. von Hodenberg, of the preparations being made in Dessau. As a result of personal conferences carried on in Dessau, Huenefeld, together with Conrad Edzard, an aviator of Bremen, chartered an airplane of this type under the guarantee of the Norddeutscher Lloyd and the National Bank of Darmstadt.
Professor Junkers, who is a man of science and at the same time a man of practical experience, stipulated that an endurance flight test should be made with a machine especially equipped for the flight to America, before the Atlantic flight was embarked upon. Meantime the Hearst Press had chartered another ship of the same type and reached an agreement with Huenefeld whereby they were to take off at the same time. These two airplanes were called the Bremen and the Europa.
In July, 1927, both machines were ready to take off for the planned endurance flight. They were manned with the crew which it was intended should participate in the impending Atlantic flight. In the Bremen sat Koehl and Loose, the pilot of the Junkers Works in Dessau; Edzard and the Junkers' pilot Ristiez sat in the other machine. Knickerbocker, who should have flown as representative of Hearst's Press with the Europa, and Huenefeld who should have

embarked upon the flight with the Bremen did not participate in this endurance flight, in order to avoid unnecessary loading.
After three hours the Bremen was forced to land as the result of motor trouble. Koehl, who tried to lighten the load of his plane before landing by dumping superfluous gasoline, fainted in consequence of the escaping gases and contracted severe burns when he fell on the floor of the plane which was covered with gasoline. The Europa created the record of 52 hours. It was then thought that the crossing of the Atlantic from East to West was assured.
Both planes took off on August 14. The Europa encountered bad weather over the North Sea and made a forced landing in Bremen. The plane was badly damaged, but the crew escaped unhurt. The Bremen with Loose, Koehl and Huenefeld on board, continued her flight beyond Ireland. Huenefeld's report on the first attempted flight of the Bremen, which was written immediately upon the return to Dessau, follows.
"A short farewell feast was held in the office building of the Junkers Works. Ministerial Councillor Brandenburg, Professor Junkers, and Privy Councillor Stimming spoke a few simple words which went to the heart. The car was waiting. Director Sachsenberg accompanied us to the runway. The crews of both planes shook hands with each other quickly but heartily, and then we took our places in the Bremen.
The motor ran at top speed, and we began to rush along the runway. A few minutes later we found ourselves several meters above ground. The take-off was accomplished in spite of the heavily loaded plane, and through my cap and earlaps I could hear Koehl yelling out a hearty `Jodler.' The flight into the distance had begun.
"Only slowly did the machine work herself up to greater height. But even this height was not so considerable but that we could clearly see below us Germany in her Sunday repose. The news of our take-off must have spread rather rapidly, because in Magdeburg, for instance, I saw a number of excursionists looking for us earnestly and waving at us in a lively manner. Were we not carrying with us also their hopes? We felt more than ever that we were part of the German nation, and we decided to do everything in our power to bear with honor the German name.
"In the pocket of my coat which hung in front of me I heard the crackling of paper. I pulled it out, and saw the good wishes of Paul Koenig, captain of the U Deutschland. This telegram had reached me a few minutes before the take-off, and it wished us all the best of success. My thoughts wandered from aboard the Bremen to the

old Hansa town with her wonderful old steeples, her fairy-like gables. Surely the spirit of Hansa as well as the Junkers spirit was watching over us in our undertaking.



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MAYOR WALKER WELCOMES THE FLIERS TO NEW YORK CITY

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"The night quietly descended upon Germany. The beautiful green forests greeted us once more. They disappeared silently in the twilight, and already clouds shaded the horizon in front of us. The silent white full moon sailed through an overcast sky; every now and then we saw its light through rifts in the clouds. The sky began to be lit up by lightning. Koehl and Loose were not very pleased with the thunderstorm, which from an artistic standpoint gave me special pleasure.

"Maybe Bressler, who with Schnaebele was piloting the escort plane G 31 was then thinking of one of the exciting flights I had with him. In the beginning of September, 1925, I was released from the Clinic in Bremen after a stomach operation, and intended to go to my parents in order to recuperate. I was considered crazy when immediately after leaving the hospital I drove down to the flying field. But a man's will decides his actions, and if he is devoted to flying he will not miss any opportunity. Every seat on the F 13, the passenger plane to Berlin, was booked, except my favorite seat beside the pilot. Half an hour after the take-off we encountered two thunderstorms in succession.

The rain came pelting down, and turned the day into pitch dark night. We were encircled by flashes of lightning. And while I was looking at the map, Bressler with a steady hand piloted the machine through the storm. When we met again on the field, Bressler in his first words spoke of that flight which unconsciously had brought us closer together.

"Maybe the things that I was about to live through had had their beginning in that flight with Bressler, which took place almost two years ago. Squall after squall came and roared around us. The rain pelted down upon the machine and flash after flash of lightning shot down from the sky to the sea. Loose and Koehl were not at all disconcerted and I was infected by the confidence they radiated. We felt that nothing would hold us back.

"The lights of England appeared. We passed over a splendidly illuminated flying field. The storm which began on the North Sea increased in violence from minute to minute. Our Bremen carried on a veritable hell dance. But thanks to her designer and her pilots we struggled on. So the night wore away. Would a better morning follow? Our hopes were not fulfilled. Instead of subsiding, the storm increased in strength. I have never seen the coast of England and Ireland so lashed about as during those morning hours, and I have often passed it aboard our Lloyd steamers.

"I had just time enough to give a final glance to this glimmering island over which fog and clouds were chasing. It is only from the

sky that one can really realize how green this country is. Without being able to account for it, one has the feeling that down there lives a population which through every hour of the day and night has to fight with wind and weather, and which, perhaps because of this constant fight, is as closely attached to the soil as are our neighbors and the people living on the islands adjoining us.

"We had to turn back

"We had not yet abandoned every hope. We tried to fly round the storm. We took up a southerly course in an effort to reach our goal in spite of the appalling weather. But in vain ! Early in the morning after we had reached the Atlantic coast, and just as our machine started on her wildest dance and as the elements let loose their worst fury, such as I had never before experienced, Koehl handed me a slip of paper on which he had written these laconic words: 'We cannot count on reaching Newfoundland with such a head wind. We must return to Dessau.'

"This message did not take me by surprise, but as I read it one word unconsciously passed my lips. I cannot repeat it because it is not contained in any dictionary of the German language, but I believe it adequately expressed the feeling of Loose, Koehl and myself. Nevertheless none of us doubted even for one moment that we were doing the right thing. We had not embarked upon a wild adventure with only a faint chance of success. We were earnestly striving for ultimate victory. And that meant above all things, self control. We could not take foolhardy chances which might forever cut us off from victory. So we turned our course homeward—to succeed another day. In that moment when we decided to take the machine back undamaged and wait for a better opportunity, all three of us were convinced that this attempt would not be our last one.

"The homeward flight began. This flight also was one unceasing fight with the elements, a fight which strained the nerves of the pilots to an even greater extent than the flight outward bound. But they did not falter. The old Junkers spirit of which I have repeatedly spoken, again won through. We realized that rather than attempt the impossible we were in duty bound to take every possible precaution in order not to endanger the ultimate success of our task. The Dutch coast reappeared. The course led over Noordwyk and Scheveningen, the bathing resorts I know so well. In the summer of 1919 I spent many happy hours with dear Bremen friends in Noordwyk. Gradually we came into the zone of tail winds. We shot rapidly over the country and soon the German forests reappeared.

"I wondered whether down below they knew what had become of us. And I wondered how our comrades on the Europa had fared. This was the question which worried us the most, because we had lost sight of the other plane as soon as the storm began. We knew that on the Europa there prevailed the same spirit which did not permit mad speculation, but our fears nevertheless rose and they were not dispelled until we learnt our comrades' fate. Suddenly Loose turned round and spread out the five fingers of his hand. Five minutes later we landed safely. Our hands were shaken. Our first question was about the Europa. We learned to our very great relief that she also had landed in Bremen, and that her crew was safely on the way to Dessau aboard a special plane.



"America should not bear us any grudge because she waited for us in vain. We still hoped within a short time to be able in their own country to shake hands with the pioneers who had flown the Atlantic before us. But at that moment we could not foresee when this would happen. The desire of all of us was very much alive. We were more confident than ever that we could rely on our machine, and we felt that our flight of 23 hours through fog, night and storm was another step forward in experience which ultimately would bring us closely to our final goal."

An evil genius seemed to preside over the various attempts to cross the Atlantic which were made late in the summer of 1927. The Bremen made repeated efforts to take off, but was prevented by bad weather; and many lives were lost along the path that the ill-fated pioneers travelled. The loss of so many lives gradually brought about a change in the opinion of the entire world regarding such flights. The enthusiasm of the summer gave way to voices which, timid in the beginning, gradually increased in volume and strongly deprecated new attempts. After a time the public began to demand that such flights be strictly forbidden, in order to avoid the unnecessary loss of further lives.

The question was seriously discussed. Although this attitude was, of course, understandable from a human point of view, it was not materially justified. Every new method of transportation results in a certain number of victims, and he who embarks on such undertakings knows the risks he has to face. Therefore when Colonel Lindbergh made a statement, it was exceedingly welcome. He professed the point of view which we all had secretly harbored. Moreover, he openly expressed the opinion that official restrictions could not and should not prevent attempts which were helping forward the progress of mankind, even though such attempts might involve more loss of life and additional sacrifices.

But even his voice could not change public opinion, although it must be acknowledged that it did not come to official prohibition in any country. A flight attempted in the autumn of 1927 had very much the same fate as the Bremen. In Ireland the Scotch Captain Mackintosh started from Baldonnel Field with the commander of the Irish Air Force, Fitzmaurice. The machine
which was used for this flight was a 550 H.P. Fokker. After reaching the Atlantic this ma-
chine also met with exceedingly bad weather and
on September 16 was forced to return. This flight had a very special bearing on the later development of affairs. The eyes of the world, and the eyes of German pilots turned for the first time to the Irish flying field, and one was convinced that the problem would have to be approached step by step in order to ensure a successful solution.

The route, Ireland to Newfoundland, was decided upon. The attempts of the first crew of the Bremen in the autumn of 1927 to establish a contact with Ireland did not meet with success because of many factors, one of which was the advanced stage of the season. The nights were becoming longer, the days unfriendlier; and in addition to this, Loose left the crew in order to take part in another undertaking which was to fly a tri-motored Junkers machine

of Type G.24 as a seaplane over the Azores to the United States. His participation in this venture was decided after discussion with Koehl and Huenefeld, who readily understood that the offer to him to take part in this expedition seemed too tempting for him, an old Naval pilot, to refuse. The question of insurance constituted a difficulty of another nature, because after the return of the Bremen the insurance lapsed and it would have been very difficult in the short time which would have been at our disposal to arrange new insurance.

We now come to the events of the winter of 1927-28. The unsuccessful attempt of the courageous American, Ruth Elder; the two German seaplanes which intended to fly from Germany over the Azores; all this tended to increase the hostile opinion against East to West flight at tempts. As a result of this hostility, even those circles in Germany which had supported the undertakings of the Bremen and Europa could not bring themselves to make the new sacrifices which would have been absolutely necessary. So Koehl and Huenefeld were forced to take the matter of a new flight attempt into their own hands.

Koehl undertook the technical preparations for the flight. The wings had already after our first attempt at his suggestion been fitted with so-called "Eselsohren"—light attachments which could be bent upwards, thus giving the machine better stability without reducing the peed. Based upon his experience of flights at light and in fog he tested personally all the reuired instruments. The work the Askania Works in Berlin and Dessau had been carrying n, based upon the aeronautical experiences of ast summer, was a great help which must not e underestimated. Later on the Askania Wendezeiger," an indicator which ensures safe lying at night and in fog and does not require he navigator to remain in sight of land or sea, endered us most valuable service. Koehl caried out a number of experiments in taking off nd landing heavy planes, because we knew that he difficulties encountered at the take-off would ave to be faced first. We knew that a successful take-off meant the accomplishment of a substantial part of our task. We knew we would not have the facilities of the asphalt runway (which cost so much and took so long to build) which was placed at our disposal in Dessau in the summer of 1927.

The financial side of the matter was left in the hands of Huenefeld. He had only limited private means at his disposal with which to carry out the flight, but what he had he unhesitatingly used for this purpose. Then the struggle began. The sum for the purchase of the plane was raised only under enormous difficulties and after many

refusals. Those who participated were for the most part people in Bremen. We had altogether eleven small financial backers, who put at our disposal small sums as a loan and free of interest. We encountered still other difficulties in connection with the purchase of the plane itself, because owing to the force of public opinion all over the world, Junkers Works regarded such a sale for such a purpose unfavorably. But Professor Junkers, that wise old scientist and man of action was far sighted and showed great understanding, and eventually his word weighed the scales in our favor. The machine became Huenefeld's property in February, 1928.

The Bremen was carefully overhauled and was ready for the take-off in March, 1928. In the interval Koehl and Huenefeld had strengthened the ties with Ireland. They went with Waldemar Klose, a departmental manager of Norddeutscher Lloyd and who knew Ireland well, to the green island in order to study the landing fields and the possibilities for a take-off. This trip which was made in February, 1928, with the Lloyd steamer "Dresden" was welcomed most heartily by the Irish Authorities and the Irish people. Galway, a geographically advantageous point, was first considered. However, this idea had to be given up because before one could think of taking off with a machine whose capacity would so far exceed normal, one would have had to construct a runway on the old flying field, and this would have cost too much. The conditions at Baldonnel were different. Here we found a field which with some improvements could be made suitable even for the take-off of an Atlantic plane, so we decided that within a few weeks we would appear in Baldonnel in order to take off from that field.

The take-off of the Bremen took place quietly from the Templehof Field in Berlin on March 26. Only very few spectators were present. Among them was Knickerbocker who flew with the Europa. He wished to be the last to say goodbye to his old comrades of the summer. Secret preparations were necessary be-

cause, as already mentioned, public opinion was becoming more and more opposed to ocean flights, and although we had no fear of being actually forbidden to fly, some difficulties might have arisen which under certain circumstances would have caused delay and thereby threatened to endanger our flight. It was widely thought that Koehl and Huenefeld were no longer normal adventurers, but were trying to commit suicide in a modern fashion. Koehl was generally pitied; people deplored that he should have allowed himself to be dragged into such an undertaking by the abnormally adventuresome Huenefeld. Later on public opinion changed.

The crew of the Bremen lived through an exciting moment when the plane, while rolling over the field, seemed to stick for a moment in the soft soil which after a frost had only recently thawed. The Junkers mechanics who had given themselves whole-heartedly to the furthering of our flight, as indeed had the laborers, engineers and all other Junkers employees, gave the right side of the plane one jerk which pulled it out of the dangerous rut. The propeller reached the required revolutions and the take-off was accomplished at 8:30. The crew at this start consisted of Koehl, the co-pilot Spindel and Huenefeld. The fuel supply carried amounted to 700 kilograms.

The first two hours of the flight passed without incident. The visibility was good and bright sunshine showed the way. After Hannover things changed. Low flying clouds forced us to seek a higher altitude. Here we were helped by the experience gained during previous flights in fogs. The plane safely followed her course under Koehl's control. The Askania Wendezeiger stood its first test wonderfully. After Amsterdam the weather cleared up somewhat, but it was still rather hazy. The coast of Calais could not be seen, and we crossed the Channel as if in a fog. London spreading out for many miles in a soft mist could not be seen clearly. Soon the Irish sea was sighted, and nine hours after our start the Bremen landed safely on Baldonnel field.

In this Irish Aerodrome the composition of the Bremen crew was definitely decided upon. Their Irish comrades accorded Koehl and Huenefeld one of the nicest receptions they have ever experienced. Officers, non-commissioned officers and men competed with each other in extending all possible assistance and hospitality, so that when the long guarded secret became known that the Commander of the Irish Air Force, Major Fitzmaurice, was to fly as a copilot of the Bremen across the Atlantic, it was hardly possible for their sympathies to increase.

The days of waiting which followed were hard. Immediately after the arrival of the Bremen in Baldonnel the weather over the Atlantic, which until then had been rather favorable, changed. A take-off which we attempted a few days after our arrival failed at the outset because of the soil being soft as a result of heavy rains. One has to experience this Irish rain to realize what it means. It poured down, day and night, turning into mud every inch of the ground which in February had seemed hard and favorable for our purpose. We had to wait, but during this time we made important preparations to safeguard us against emergencies. We abandoned our original plan for a take-off in an East to West direction because at that time of

year one has to count more upon winds from the South than upon westerly winds. So the North South direction was chosen.
Another factor in our decision was that at the beginning of the runway between two big hangars there was a concrete patch of 40 meters length which would greatly facilitate the first impulse. Beyond this a path had to be made; the rough spots were flattened out by laying sleepers upon the ground and stamping them into the soil. When we were preparing our first runway we discovered that a steam roller which we had acquired with great difficulty and at much expense caused more damage than good, since all it did was to press the water out of the ground on to the surface, thereby creating impossible conditions. A lengthening of the runway was achieved by pulling down a wall which separated us from the neighboring meadows. The negotiations with the owner of this wall were rather difficult, but in the end he agreed to carry out our request for a sum of £75,—rather a high price to pay considering the small amount of work it involved. Still, this work remained priceless for us, because at the take-off we found that the removal of this wall was our salvation.
And gradually Easter approached. The weather reports on the Atlantic were still unfavorable. The rain still pelted down, although we felt the worst of the deluge was over. Shortly before the holidays we thought that a change for the better had set in. But the British Air Ministry, which had been good enough to telephone us regularly all the details of atmospheric conditions over the ocean, reported otherwise. Nevertheless, the Easter holidays brought us a special pleasure. Reginald Schinzinger, one of the best engineers of the Junkers Works who had taken quite a part in the designing and construction of our plane, made a sacrifice and spent his Easter holiday in Baldonnel, to see what further progress had been made towards the start of our flight. He was able to establish that Foreman Weller and his faithful assistant, the mechanic Lengerich, who had received leave from Junkers to accompany us to Baldonnel, had done exemplary work and neglected no detail.
Schinzinger's presence was the more important because he was able to reassure us from his calculations that under somewhat favorable conditions mathematically our runway would absolutely guarantee a take-off. The importance of such a theoretical basis must not be underestimated because it tends to give the pilot self confidence and that peace of mind which is essential in achieving a successful solution of an extraordinary task.
The plane stood ready and filled in the hangar. We had a number of visitors from Dublin. Nearly all the Ministers of the Irish Free State

visited us and looked at our machine with interested and understanding eyes. They wished us good luck and success in our flight. And thus slowly approached the day on which we were definitely to take off. On the 12th of April at 5:30 Irish time we were ready to take off for America.

FIRST HOURS OF THE FLIGHT-INTO THE STORM-THE LAND UNDER THE SUNRISE-SAFETYSYMBOLS OF FREEDOM-THE KEEPSAKE-FALSE RUMOR.

This time we were flying over Ireland in weather conditions which were very different from those which prevailed during our flight the previous summer. We took off at 5 :35 A.M., and the morning which followed was wonderful. A shining sky dotted with small specks of



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BARON VON BUENEFELD PLACES A WREATH ON THE NEW YORK WAR MEMORIAL

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clouds smiled over the green island which Koehl and I had soon learned to love, thanks to the great friendliness and kindness which we had experienced there. And as we reached Galway, flying quickly

at a speed of 200 kilometers per hour, we saw that the sea was a picture of peace. No howling winds confronted us, as in August. Sunshine and peace reigned everywhere.

We began the great crossing under the best of auspices. We continued in this peaceful manner for many wonderful hours. Every now and then we dropped smoke bombs in order to establish the velocity and direction of the wind. Slight engine troubles, such as all motors experience, were easily overcome, or perhaps I had better say cured themselves. On the whole the wind was favorable, and in a short time we covered many miles. After flying for fifteen hours, which considerably lengthened the day for us, as we were flying in an East to West direction, enormous strata of fog and clouds began to rise in front of us. The thermometer dropped. We had reached the ice zone of Newfoundland. Koehl lifted the machine over the clouds. Their weird uncanny formation had a threatening and at the same time grotesque effect. We encountered an icy cold, howling wind blowing from the West. What could we do? We had expected such an experience, and we had to come through it at any price.

We flew along over these masses of clouds which looked like fantastic mountains. I saw that Fitzmaurice was trying to shout something to Koehl. However, the noise of the storm and motor was too great. He grabbed a pencil. Koehl—I was familiar with his every move, with every motion of his well controlled body—became serious, even worried. I tried to cast a glance at the slip of paper, and succeeded. It contained this message: "Make land as long as it is possible. Our oil tank is apparently leaking." Charming news! Koehl afterwards told me that in order to collect himself at this point he muttered to himself the "pater noster" three times. He smiled at Fitzmaurice. Fitzmaurice gave a slight bow. All three of us knew that should our fears be confirmed we were hopelessly lost.

in the meantime the gale had acquired such terrible strength that the plane stood almost still in the air. We came down through the fog and clouds. Below us appeared the roaring sea. Thoughts of our first storm flight with the Bremen came back to our memory. She really did not seem to fly any more; she seemed to dance. But she kept up and somehow made headway—a sign that we did well to trust in Dessau.

As was the case nine months ago, the night set in just at the moment when hell seemed to descend upon us. Then, however, we had land beneath us, or at least close by. Here we were far from land and could not return. Still, we would not expect good weather along the entire route. We must go forward. Although it was night, the morning would follow. I threw a brief glance at the small golden

cross which hung in my cabin. It shone in the light of my flash lamp. What did they think of us at home? My mother, who had lost my father three days before our first attempt to cross the Atlantic, had given me the little heart I carried about with me in my pocket. We must not give in. We had all been in the war, and had fought then as now for an idea. On and still onward!

Night, fog and gale. The machine grounded and trembled. We went down from 6000 feet to 300, and then up again. Koehl, the founder of fog flights in Germany, knew how to stand the test. He could master the fog even at night. Many, many were the hours ; the minutes of which seemed years. Would the darkness never end? Here and there stars appeared. Light seemed to emerge. The coast, lighthouses? Mirage followed mirage. Will o' the wisps deceived us. We were in the zone of arctic light. Would this night never come to an end? Every now and then the polar star shone through. It became our guide. Something went wrong with the illumination of our instrument board. The icy fog blinded the eyes of the pilots. Gale, fog and night! We dozed off in turns for a few minutes. Still there was no sign of daybreak. But the day would come; and we hoped it would come for us.

The sun rose, glowing red. A warning of gales! Below us stretched the land. We had reached the other continent, and we were still in the air. Our flight continued, over endless woods, mostly snow covered, lonely and forlorn. Labrador? Probably! The deviation of the compass had assumed dimensions in excess of all our calculations. I shall return to this point later. Now we were busy with the gale, which again set in after having somewhat abated during the second part of the night. The sun was climbing the sky, and below stretched always the same picture. No house; no village; nothing but dead land. We kept on flying. Steep mountains, bald or white with snow, rose up; these had to be overflown in the howling gale. Giant rivers, forlorn and covered with ice, spread out below us. There was .no sign of human activity as far as the eye could see.

Due to the deviation of our compass, we had lost in the fog and gale the exact direction of our course. Moreover, our struggle with the elements had cost us more gasoline than we could afford. Our supply was running low. Well, another "pater noster." If we had to land now, we would probably be lost in the wilderness. Koehl remarked later that he would have felt himself the owner of an enormous forest! We had to keep our sense of humor! Let him who is doomed to die, die with dignity: but until everything is lost he must fight for his life.

The good old Bremen was doing her utmost. She knew what she

owed to her name and to her designer. Her pilots lived up to her. I myself took off my fur coat and in the icy coldness laid myself down between the tanks. On and on! So

far we had lived through, and experienced much that might be very important so far as the future of air transportation was concerned if only we won through to relate it. If we did not? "Into thy hands I commend my fate"

We changed our course. The mountains receded. In front of us glimmered frozen water. Were we going towards the pole? The compass became unreliable. The fuel could only last us for a very short time longer. Was this the end? All of a sudden Fitzmaurice shouts: "A boat." We kept an outlook. What we had thought to be a boat was a house on the coast. The house approached, and nearby a lighthouse emerged. Men and dogs became visible. We were safe.

A few minutes later Koehl with a masterful hand landed the machine on the ice. It was the shortest and best landing I have ever experienced. But the ice crust gave way, the plane broke through and tipped slightly forward. However, she stood and was only slightly damaged. We discovered that he had flown around Labrador, and that we were on Greenly Island. The first East to West flight across the Atlantic in a plane had succeeded! We were surrounded by touching hospitality and simple sincere kindness. Our fight for life had ended, and when the next day we received a touchingly kind message of welcome from the President of the United States we knew that our flight had been followed with sympathetic understanding.

Thoughts during the flight! They come and go. The cabin of the Bremen is full of all sorts of souvenirs and pictures of saints. I am not a Roman Catholic, but do not my comrades believe in the same God of Christianity, in Thee to whom also my prayers rise? In Baldonnel before our take-off we received a number of such proofs of the sympathy of the religious population. These I stuck with pins on to the fabric covered rods of the fuselage of our plane. How often did I glance at them during the flight? This I cannot tell. But every glance made me remember some kind word, some line written in friendship, or the handshake of a comrade. Is not our will in itself sufficient to lead us to success, if we trust in God? The pictures on the fuselage, the medallions and souvenirs in my pocket, became somehow welded with my will and that of my companions. Koehl said to me later on Greenly Island: "I only now realize fully that you had to have those tokens in front of your eyes. During the night hours when the gale roared around us, when all the elements of hell

seemed let loose, Fitzmaurice and I had to fight, and fight for our lives. But you were condemned to inaction; you had to sit still, to believe in us and trust." How well the friend understood the friend!
There hangs solemnly before me a small black cross. Thousands of these can be obtained in Ireland. This symbol of Christianity is to be found in every home of Irish patriots, no matter what its size may be. In the center is a harp, the emblem of the "Green Island." These crosses are carved out of ancient oaks, the stumps of which are sunk deep in the moors. One of them was given to me as a present during our first stay in Erin. One comes from Galway, that wonderful harbor, which seems doomed to inactivity until some future day when the whir of propellers will create in it new life. A friendly hand gave it to me.
Now what about the flight! Below us booms the ocean. Torn clouds chase by. Will o' the wisps appear and disappear. The plane bumps about to such an extent that I am thrown against the low ceiling of the cabin. In the fleeting shine of my flashlight sparkles the black cross. Ireland! In my mind's eye I see again the road I covered by car from Limerick to Galway, six weeks ago. Along that road there stood poor houses built in a rough and ready fashion of rock. Rocks lay scattered over the fields, crushing out all latent life and spread wing like an enormous shroud over the whole land. Flock after flock of crows fly over the field, circle round the scanty sycamores and round the dead houses and huts. For these abodes, built by living men for living men, are without life. Where are the occupants, and where are the builders ? Gone ! Driven by want and gnawing hunger they sought distant lands, and emigrated to mighty America to create for themselves a new existence under the Star Spangled Banner.
Ireland is unable to support her children. Yet her children love their mother soil with every bit of their hearts. They love it more than their own lives, which they are always ready to sacrifice in fighting for the freedom of green Erin. The streets of the large cities tell the same story as those uninhabited houses. To the right and left ruins rise, witnesses of the fight for freedom. And in the chasms of the mountains one cry was heard through the shots : "Freedom!" How goes the old word of the Bible? "Wenn die Menschen schweigen, werden die Steine reden." "When man shall be silent the stones will speak."
In this land the cry for freedom became a reality. Every clod in the fields, every rock of the towering mountains and hills, every stone of the ruins of the destroyed and burned houses on the roads and streets of Dublin, every breaker that hits Ireland's coast, every

wave of the tearing Shannon unite in a great cry, which rises from this tortured part of the world to Heaven. "Freedom!" Does not this word sound even now in the roar of the gale which lashes us? Do not the waves of the ocean under me sing the same song? "Freedom!" The fight of the Irish succeeded. Their cry was heard. Green, white and yellow waves their flag over the "Independent Irish Free State."
One of the two men, whose dark shadow-like form I can hardly see, who sits at the controls fighting for the life of the Bremen is a son of this free green island.



My pocketbook contains a slip with a few words written on it. Above the words a four-leafed clover is carefully pressed. I shall never forget the hour, my dear Irish comrade, in which you handed me this talisman of your fate, which later become the talisman of our fate. This little leaf, now yellow and withered, combines the symbol of both luck and Ireland. It had accompanied Fitzmaurice on his first attempt from which he, like Koehl and I on our first attempt, had had to return overwhelmed by a terrific gale. In the dawn of a rainy, stormy morning, as we sat shivering in the officers' messroom in Baldonnel, the commander of the Irish Air Force gave me his talisman. We Germans were then waiting to take off, and only the soaking wet ground kept us from going. At that moment, when Fitz-maurice in true comradeship handed me this talisman, when the

sportsman greeted the sportsmen, there grew in Koehl and me the thought that this man, who was capable of such a noble act, would be the most faithful and best comrade for our flight.
And now the flight has brought us close together. Side by side the two pilots are fighting for success. And the prayer rises in my soul: "God, lead this flight to success for the sake of Germany and Ireland." I look out lonely in the silent and at the same time noisy night. What will the morning bring? Whatever may come, victory or death, we shall die as comrades or live as comrades. The ties which have been formed between Germany and Ireland as a symbol that the past is gone and that a new life has begun, will remain forever unbroken either in life or death.
Bloody red dawns the morning. This redness seems to me to presage disaster. The seaman dreads the redness of the rising sun, just as he welcomes a red sky at night. I put my hand into my pocket and feel between my fingers a small wooden heart. This childish token was made in Bavaria. It is painted blue, skyblue, and on it in a white childish hand are the words: "God protect you." My mother gave me this heart, when one day I visited her in Munich at the end of last summer. My father had passed to his last rest fourteen days before. My first unsuccessful flight attempt was behind me and it was sheer luck that we were unhurt. We were intending to make another attempt, and one day when I visited her (she was staying for a few months with my brother) she pressed the small heart into my hand. It was a present that my father had given her and it was to bring me luck. How many prayers of a mother's heart are there incorporated in this small lifeless thing which I am holding in my stiff fingers?
My mother knew that nothing in the world could stop me from attempting the flight either until it succeeded or I was among the dead. Yet she was silent in those days, and did not say one word which would be sad for me to hear. Only once, in the winter, did she say to me: "I was thinking of the days of the war. It had to be. You had all gone to the field, and we had to pray and wait."
The rising sun shows land beneath us. We have reached the longed for continent. But still the gale blows with all its fury—and my two comrades in front of me still fight with the elements.
Koehl's report: "Our fuel is coming to an end. Lie down between the tanks to lighten the plane." I take off my fur coat and crawl between the tanks. The situation becomes serious, more serious than ever. My thoughts again fly back to Germany. Again I see in front of me the small cozy home of ex-Captain Koehl and his charming young wife. How brave is this "Peterle"; how careful not to make her

husband's heart heavy. She has the same spirit as my mother. I think of the days we three spent together on the balcony of Koehl's home. Hopes and fears alternated. We believed and hoped at the same time. We had disappointments and happy surprises. And the good comrade of her husband bore everything in silent womanly friendship and love. In Dessau she helped to nurse; and later helped us through our waiting. Will she ever see her "Hermanle" again? Mountain top after mountain top rises up, a grandiose picture of the powerful might of the Creator. Will He lead us to our objective, or will He bid us an eternal "halt"? Still whirs the propeller, still hopes my believing heart. When later on Fitzmaurice left Greenly Island to arrange for a continuation of our flight overhasty voices spoke of dissensionamong the Bremen crew. You faint hearted you not know that such a night as through has knit together our hearts to such an extent that we could never part in anger?

THE BREMEN MAKES A BOW-ISOLATION OF GREENLY ISLAND-THE RELIEF PLANE-ATTEMPTS TO SALVAGE THE BREMEN-FURTHER TRIBUTE TO FLOYD BENNETT-"FORWARD INTO THE FUTURE."

We landed on Greenly Island in a snowstorm and in this manner set foot on the American continent. We were frozen, exhausted and hungry, and had almost lost all hope of ever again speaking with human beings, of sitting in comfortable houses, or of being able to warm ourselves in front of crackling fires.

Our arrival in this little island was not entirely devoid of involuntary humor. First of all the plane tipped forward and made, as it were, a deep bow. This courtesy cost us our propeller; it was bent hopelessly. The ice crust on the water reservoir, on which we had hoped to land safely, was already weak. It gave way beneath the weight of the plane. Koehl banged his head with such force on the steering wheel that his face was covered with blood. Fitzmaurice escaped with a violent shock; and Huenefeld stood on his head. But the landing was accomplished: the East to West flight had succeeded.

We began to clamber out of the machine. None of us had ever experienced such a violent gale as the one which met us. It almost knocked each one of us down. Huenefeld took his first bath on American soil within a few seconds of landing, by falling with his

entire length into the icy water of the landing field. Koehl burst into roaring laughter at the spectacle, but was knocked down by the wind the next second, and also fell into the icy water. It was only by a great effort that Fitzmaurice held on to the machine. The reception the elements had given us was not at all amiable. How much more friendly was the reception extended us by the few inhabitants of this forlorn place. The lighthouse keeper of Greenly Island, Mr. LeTamplier, who with his large family carries out hard and, in the winter especially arduous duties there, showed us from the very first minute of our landing such hospitality and kindness that even to-day we can think of it only with a feeling of the deepest emotion.
In the beginning the inhabitants of the Island thought we had come from Quebec. They were very much astonished to learn that we had come straight from Europe, and Tamplier remarked "The good Lord led and saved you."



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AFTER THE PRESENTATION OF THE FLYING CROSS

LEFT TO RIGHT: PRESIDENT COOLIDGE, CAPTAIN KOEHL, BARON VON HUENEFELD AND MAJOR FITZMAURICE

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A good hour after our landing a curiously dressed crowd sat in the small living room of the lighthouse. First of all, Koehl and Fitzmaurice tried with the help of some of the inhabitants of the

island to pull the plane out of the basin in which she had stuck. The gale, the severe coldness and the strain the fliers had experienced prevented any systematic procedure, and so the undercarriage collapsed during the attempted salvage. Then Koehl and Fitzmaurice also came to the house, to which Huenefeld had already gone, to prevent the freezing of his garments onto his body after his refreshing bath. Moreover, in order to lighten the machine, Huenefeld had spent the last seven hours of the flight lying between the two tanks, a tight place which did not leave any room for a coat. His fur boots and gloves he had forgotten in Baldonnel. Thus his hands and feet were so stiff that he could not assist in the first salvage.

There we sat all three of us around the burning iron stove, clad in all kinds of garments of the Tamplier family, and glad to be still alive. The quickly prepared hot meal, which consisted of potatoes mixed with corned beef was most thoroughly enjoyed. Afterwards, however, we were quickly overtaken by extreme fatigue. We wrote out our first telegrams to our waiting families. By a coincidence, a messenger of the small village of Long Point, two miles away, had witnessed our landing and was just about to start back over the Straits of Belle Isle with his dog team. Long Point had a telegraph station, a fact which became of decisive importance during our stay on Greenly Island. Without that telegraph station we would have been, and would have remained, entirely cut off from civilization.

Innumerable telegrams, some mutilated, others intact, passed through Long Point during our ten days' stay on Greenly Island. Mr. Cornier, the kind postmaster of that small village, whose family later on vied with him in trying to make our last days before the continuation of our flight as pleasant as possible, told us later that he almost collapsed under the attack. We could well believe that, because the telegraph station was equipped for a capacity of eight to ten telegrams per month and not for 100 to 200 per day. Nevertheless, he coped with the situation. The efforts of Mr. Cornier, only made possible by his extreme good will, must not be underestimated.

Mrs. Tamplier, whose six children looked us with astonishment but not obtrusively, quickly prepared beds for us. Koehl and Huenefeld were put up in one wide bed, while Fitzmaurice received a resting place for himself alone. We had already almost fallen asleep at our meal, and at 4 P.M. we retired for good. That was a sleep whose beauty and depth could only have been surpassed on the battlefield. Koehl was the first to awake at 3 A.M. The coal oil lamp in our little

room had been left burning, as it also served the purpose of a stove. Koehl reached for his maps, which he had taken with him to bed, as he wanted to locate on them the exact spot of our landing. The sound awakened the other two. The first thing that Fitzmaurice and Huenefeld did was to light the last two cigarettes they possessed. The non-smoker could not understand the feeling that overcame Fitzmaurice and Huenefeld at this almost holy act. An Ocean flight of 36 1/2 hours may be strenuous, but 36 1/2 hours without smoking is not merely more strenuous, but is a torture! However, only true and passionate smokers can understand this. Fitzmaurice, who had been the first to notice the lighthouse kept on repeating "It's a good boat we're on, and it's my nice boat." Although we understood the name of this "boat" to be Greenly Island, we had not been in a position be fore going to sleep to establish where this Greenly Island was situated. So we started to search for it on the map. We found that there was a "Green Island" marked in the St. Lawrence river, in the gulf of which we undoubtedly found ourselves. This "Green Island" was situated about 300 miles from Quebec. A railroad line passed close to it. So we thought that within two or three days we would find ourselves in New York. Koehl began to make notations of the experiences of the flight upon the map ; the others went to sleep again. And so the morning came.

It brought us a surprise which bordered on disappointment. While Fitzmaurice and Huenefeld still sat talking over their breakfast, Koehl rushed to the machine in order to see in daylight how extensive was the damage caused by the landing. After a short while he returned and made the following sensational statement: "Do you boys really know where we are? We are not on Green Island but on Greenly Island!" He spread the map on the table and pointed with his finger to the spot where we were. This, of course, was very different from what we had dreamed of during the night. A railroad line? Only a visionary could believe that railroad lines could be close to Greenly Island. We saw we should have to use dog teams as our next means of transportation. Good generals IIP must plan for action. We decided that Koehl, whose heart always called him back to the damaged plane, should take care of our "bird" during the next few hours and attempt with the aid of the natives—who stood around watching us with great interest—to prop up the

machine.
Fitzmaurice and Huenefeld were to drive over to Long Point by dog team, reconnoiter the territory there, bring further help, and above all send telegrams requesting immediate assistance. The Junkers Corporation of America had to know what spare parts we required in order to repair our plane as soon as possible. This was the most important thing of all. So a telegram was drafted to Miss Hertha Junkers in New York, requesting her to procure a new propeller and a new undercarriage as complete as possible. Koehl still had a few Irish pounds in his pocket. Fitzmaurice and Huenefeld had not brought a penny with them, because they felt it would be a pity to lose their money in the waves of the Atlantic if the flight were to end unsuccessfully. So another telegram had to be sent to the Norddeutscher Lloyd in New York, in addition to that reporting the arrival, asking for money. Although Greenly Island is outside civilization money is necessary everywhere; cables and telex grams had to be paid for.
The trip across the ice afforded a new sensation for Fitzmaurice and Huenefeld. Neither of them had ever before travelled on a dog team, and the quick glide in this narrow and not too comfortable means of conveyance, with the loud barking dogs ahead, offered new charms. Once we came into harsh contact with the earth, owing to the unevenness of the snow and ice; but what did it matter, it was an experience hitherto unknown. Both Fitzmaurice and Huenefeld were welcomed with great kindness in Long Point, especially by the Cornier family. The necessary telegrams were dispatched, reports of the plane's safe arrival to the Irish and German governments, several communications to the "Senat der Patenstadt" (senate of the sponsorial city), etc. But especially had a telegram to be dispatched to the Canadian Government, notifying them of the plane's arrival.
Our appreciation of the assistance that Government extended to us in an incredibly short time can hardly be expressed in words. Meanwhile, the first replies had arrived in answer to the report of our happy landing, which by then had become generally known. One of the most charming telegrams was the one we received from the President of the United States, written in the warmest words of welcome.
But let us go back to our first excursion to Long Point. Fitzmaurice and Huenefeld there learned that levers and two cranes were available, which might help to free the machine from her uncomfortable position. These tools were obtained. Then the two travellers, under the guidance of young Cornier, who crowned his

kindness by offering, out of his own scanty supply, tobacco and cigarettes to the Bremen crew, in spite of the fact that such articles are difficult to obtain in the wintertime, went to the small village church, which stands empty during the winter months. They had intended to go sightseeing only, but unconsciously the two men knelt down. Although they spoke in different languages and belonged to different creeds, they were one in their belief in God, and, filled with thanks for the help that He had afforded the Bremen and her crew, they spoke a short but fervid prayer.

In the meantime Koehl had collected a number of assistants who were ready to help in the repair of the Bremen. So this important task could soon be started. The day ended in making the necessary preparations and in reading and writing telegrams. April 15th was a Sunday. It was also the 40th anniversary of Koehl's birthday. A strange scene of congratulations took place in the morning in the small bedroom. We spent a little longer time than usual over our chatting and dressing, and quite unconsciously we began to talk about the war, in which we had all participated on different sides. Koehl, later on during our tour of the American cities, often mentioned in his speeches, how on that strange Sunday morning we showed each other the scars of the wounds we had obtained in the war.

Good enemies may become good friends and comrades after the battle is over. The Bremen crew has the full right to say that they have proven the correctness of this statement in practice, and have shown how after the conclusion of hostilities old soldiers can fight side by side in close alliance for a common end.

A particularly pleasant birthday surprise awaited us at breakfast. The Canadian Transcontinental Airways in Quebec informed us that a plane with skis was under way to Greenly Island, and would arrive there in the afternoon. And while we were sitting at our lunch, the noise of a propeller was heard. The inhabitants of the lighthouse and their guests rushed out upon the ice. A plane circled around the tiny island and then landed safely on the frozen surface of the stream.

A flash of regret went through our brains. Had we only trusted that sheet of ice instead of the ice on the water reservoir, which from the air we had thought looked the safer! The door
of the cockpit opened, the first person to appear was Dr. Cuisinier, to whom later on, at Koehl's suggestion, we gave the nick name of "The Good God of Canada." A good deal will be written about him in this chapter, because everything that a man could do for other men, in practical, moral and medical directions, this man of quite exceptional character did for the Bremen crew. He was followed by

Mechanic Thibaut, and the pilot of the plane, a man of great originality known as Duke Schiller.
The kind doctor reached back into the cockpit. A basket with beer bottles appeared. Shouts of joy went up from the Bremen crew, which culminated in the words: "The nicest possible birthday present for the Bavarian Koehl." The new guests were taken with triumph into the lighthouse, and while Madame Tamplier served hot tea, a long series of questions and answers ensued. How long would we have to remain there? What did people think of us ? And what did the world look like in general? Only a few days had elapsed since our take-off, but already we had become quite accustomed to the isolation which surrounded us. And the thought that soon we would have to go back into the stream of life at times affected us almost painfully. There we had been happy in our knowledge of the successful flight; there we had had time to think; and thoughts had come to us which in the hurry and scurry of the world would never have occurred to us.
But the human heart is strange. At the same time we longed to get back into the pulsing life, and one question burned in our hearts and brains. What would be the quickest possible way to resume our communication with the outer world? Smilingly, mixing English with his French, Dr. Cuisinier, who used to be Doctor of Medicine at Sorbonne in Paris, but who for some years has been a Director of the Canadian Airways, told us everything we wished to know, and even more. He made the suggestion that one of us should take his seat in the plane on her return trip, in order to co-operate personally in the relief expedition for our machine. It was natural that Fitzmaurice should be chosen. He was the only one of us who could really talk English. The other two had only begun their studies in Baldonnel, and could only make themselves understood with difficulty. Besides, Fitzmaurice had excellent connections, dating back from the war, with Canadian aviation circles. By the time these arrangements were made, it was found to be too late in the evening for the take-off. So the newly arrived guests were also put up in the lighthouse.
Even to-day we do not know where Dr. Cuisinier slept that night, and where Thibaut spent it.
Duke Schiller shared Fitzmaurice's bed. The kind doctor, for kind he always remained to us, at once took the arrangements into his own hands. He assured us, always with the same pleasant smile, which lent a particular charm to this gigantic man, that he would take care of everything, and that we were not to bother about anything. We did not even get a chance to look after the comfort of the men who

were the first to come to our aid, who should really have been our guests.
That Sunday evening will always remain in the memory of every one of us. After Dr. Cuisinier had settled the most important questions of the day, he told us about the days when he flew with Bleriot in Paris, about the immensity and loneliness of the forests of Labrador which he himself had crossed during the summer. Without his noticing it, or intending it, his figure stood out in front of us like the picture of a Viking from old bygone days. And during the course of his stories we saw more and more clearly that it was by almost a miracle we had escaped the terrors of Labrador. No human assistance could ever have reached us in that wilderness of ice and snow. With our last drop of fuel our last hope of rescue would have vanished. The three of us looked silently at the pink twilight across the ice floes of the Straits of Belle
We looked silently at the slumbering forests Isle of Labrador: they had not become our graveyard. In silence our eyes turned to the cross which hung over the door of the little living room of the Tamplier family, the nicest decoration in the room.
The next morning the Oxilla took off with Fitzmaurice for Murray Bay, the headquarters of the Canadian Airways, where Miss Hertha Junkers was feverishly busy obtaining assistance for our machine. The flight was a hard tiresome one, because the machine on her return trip got into a snowstorm and took three days to reach her objective instead of eight hours. Huenefeld and Koehl in the meantime remained on Greenly Island. With them Dr. Cuisinier also remained, a truly guardian spirit. Never was such a spirit of sportsmanship displayed as during those days on Greenly Island. The "fair play" of sportsmanship brings the members of each nation who love and honor their own country, on to a common meeting ground of sports comradeship, and unites them more closely than a thousand conferences round a green table could ever achieve.
The derrick and pulley blocks which had in the meantime been brought along, were set up, but they never were made use of. Dr. Cuisinier helped us to form from the natives who gathered round us a willing group of workers, and introduced some system into the work which hitherto had been carried on in a rather haphazard manner. We had been greatly handicapped in not knowing the language. Here we had a man who knew both the language and the customs of the country. It was an easier job for him. Moreover, he gave the necessary instructions with both friendliness and quiet firmness and was able to get them carried out. Thus the day arrived when the Bremen was propped up, and only awaited the hour of the

arrival of a new propeller and new undercarriage to put new life into her. Koehl had worked with indefatigable energy, assisted by the native population and the faithful and valiant chief mechanic Thibaut.



In the meantime Huenefeld had met with another mishap. He poisoned himself and as a result was confined to his bed with a high fever. Dr. Cuisinier came to his rescue and helped him both with kind smiles and medicine from his Medicine chest. Huenefeld felt that he was probably about to die, and requested Koehl in the event of his death, to cut a hole in the ice, stick his body in a sack, weigh it down with stones and sink it in the Strait of Belle Isle. His request was waved aside with a smile, but later on Koehl confessed that both he and Dr. Cuisinier considered such an issue quite possible.
Gradually more and more visitors came to the island, which in the meantime had acquired a certain amount of fame. Apart from the fact that one fine day a second airplane of the Canadian Transcontinental Airways, piloted by Mr. Vachon, landed on the ice,

bringing two representatives of moving picture firms and illustration centers, the Paramount Film Co. had appeared even earlier on the scene with their own machine. Then the cranking of cameras began most industriously. Pictures of the plane were taken from every direction, and naturally the two Germans had to be photographed, in the circle of the Tamplier family, in front of the Bremen, on the dog team, in short, in every possible position. Another visitor appeared, quite an interesting one in the shape of a German called "Freitag," who with his family lives in South Labrador. He could not resist calling on his countrymen and bringing them tobacco, cigarettes and all sorts of nice things.

During the afternoons and evenings which Friedrich spent on Greenly Island we had many cosy chats, in which we learned a great deal about the lives and doings of the inhabitants of Labrador, who have to fight so hard for their life and existence. He told us about the magnetic fields which slumber deep in the mountains, which cause deviation of compass needles, resulting in errors which might become dangerous and even fatal to all airplanes.

The days went by, and still telegrams arrived speaking about preparations for the rescue. These, however, did not make it clear when the expected machine would arrive. The snowstorms gave way to warmer weather. From day to day the sun gained in strength, slowly but surely. The effect of the sun worried us somewhat. The ice cover which had spread itself across the Strait of Belle Isle during the winter, began to show cracks, and we felt that much more delay would mean that the wheels we were waiting for would be useless. On April 22 we received word by wire that a tri-motored Ford plane which Commander Byrd had placed at our disposal was under her way. Twenty-four hours later, on a beautiful noonday, this machine landed on skis. The city of New York together with the New York World had equipped an expedition, and out of the big plane emerged first a mechanic of the Junkers Works, Ernst Koeppe, Mr. Murphy, the representative of the New York World, and finally the two men at the controls, Major Fitzmaurice and Bernt Balchen, the young ex-Norwegian Naval Officer, who flew with Byrd upon his great Ocean flight in the summer of 1927.

The reunion of the three comrades was an extremely happy one, and it was a special joy to become acquainted with Balchen. Anyone who has once looked into the shining blue eyes of this man, eyes which resemble the fjords of his Northern fatherland, must feel a liking for him which will forever remain. Those eyes in the typical Northern face do not deceive. Balchen became and has remained one of our best and truest friends. From him we learned the sad

news of the sudden illness which had overtaken Floyd Bennett, who in Quebec had had to leave the plane which he intended to pilot, owing to a serious attack of pneumonia which necessitated his removal to a hospital. He had left the hospital in Detroit, where he was lying with a serious attack of grippe, when the cry for help reached him. This faithful comrade and greatest of all sportsmen disregarded his own sufferings, and did not hesitate for one moment, in spite of his waning strength, to come to the assistance of others.

Two days after Balchen's landing on Greenly Island, Floyd Bennett closed his eyes for ever. His memory, buried deep in our hearts, will live always. We shall never forget the hour when Murphy came in with the telegraphic news

"Floyd Bennett had died." We were sitting in the small sunny room of the Cornier family. A shadow fell over our circle, and through this shadow invisible hands seemed to reach forward to grasp each other. The spirit of sportsmanship exists regardless of the machinations of diplomacy. The free man extends his hand to the free man. Floyd Bennett's death opened a new chapter in the history of mankind. His grave signifies his adherence to one idea, that man shall love man and all men be as brothers. Out of one's love and honor of one's own country grows one's respect for all other countries. Floyd Bennett's death added in inextinguishable glowing letters one word to the history of the nations once so distracted by hatred and wars, the word "GOOD-WILL."

Case after case, in unexpected quantity, emerged from the giant bird. First of all the glistening steel propeller, which the Junkers Corporation of America had sacrificed from their own F13; boxes containing wine and beer, food and cigars, etc.; in short, everything which could be desired on that little far away island. Amidst all these good things, however, we did not forget our work. It began at once with very great zeal. Within a short time the Bremen had received a new axle and new wheels with broad rims, which we thought might still enable her to take off on the ice. Then began the trip with her down the hilly Greenly Island to the ice on the Strait of Belle Isle. In the meantime attempts were made to straighten the propeller of the Bremen. Forge fires and soldering lamps glowed. The evening saw a hopeful crowd gathered together in the dining room of the lighthouse. Dr. Cuisinier prepared a very dainty salad. Everybody retired early, as the take-off was planned for early the next morning.

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Corporation of America had sacrificed from their own F13; boxes containing wine and beer, food and cigars, etc.; in short, everything which could be desired on that little far away island. Amidst all these good things, however, we did not forget our work. It began at once with very great zeal. Within a short time the Bremen had received a new axle and new wheels with broad rims, which we thought might. The morning dawned. It brought new disappointments. We spent the whole day in trying to start the engine on the ice. We had the plane tanked up with gasoline brought by the Ford plane. The engine refused to start! Hours elapsed and night began to approach. We could no longer think of taking off that day. Then the effect of the sun which had been shining rather strongly, became noticeable. That evening we realized that we could no longer think of taking off without skis. And so the Bremen was placed on sleds again, and pulled by dogs and men, was slowly and sadly moved towards Long Point. We knew that it would not be possible to take off within a reasonable time, and so with heavy hearts we decided to leave the Bremen behind under the care of the self-sacrificing Dr. Cuisinier and his faithful Thibaut, and to fly with Balchen in his Ford plane to Murray Bay where we were eagerly expected.

But still another day elapsed; snowstorms followed the sunshine, and the weather reports on the intermediate route were so bad that we felt it was our duty to wait. Under the direction of Dr. Cuisinier we examined a spot up which we thought the Bremen would have to be pulled in order to enable her to take off from the land. The first attempt to take off was made later from that spot, after Fred Melchior, the courageous pilot of the Junkers Works, had reached the spot in a parachute. That take-off led to the total collapse of the machine. 6

There are things about which it is difficult to write. The feelings that overcame us at the news of the final collapse of our machine cannot be expressed in words. Each one of us felt as if he had lost his own child. This mishap put an end to the plans of the Bremen crew to fly back to Europe with the plane. Only the sportsman will understand what this fact meant to us. In the morning of April 26 we took off with the Ford plane from the bay near Long Point. We felt quite sorry to leave that spot with which we had become so familiar, and which we had begun to love during our stay of ten days. In front of us lay the uncertainty of the future.

Behind us was an exceptional experience which had reached a crisis in the death of Floyd Bennett. Our thoughts flew back to our machine which had been our stay and shelter during the most difficult hours of our life, which we had had to leave behind. We had

certainly entrusted our faithful bird to one of the noblest men we had ever met, but what would the next days and weeks bring? Our leave taking from the Doctor was short but hearty, as indeed was our leave taking from all the people of that region who had shown us such whole-hearted hospitality and help in our first hard days there. The three propellers sang their song: "Forward, forward into the future." We thought again of the very great kindness of Dr. Cuisinier which had touched us to the core: "Hommage à Cuisinier!"

OUR PURPOSE-RECEPTIONS-THE MAYOR-THE MAYOR'S COMMITTEE-THE PRESS-THE POLICE - PARADES - BANQUETS - MISCELLANEOUS-WASHINGTON.

Mere words are inadequate to describe our tour through the United States of America and Canada. At every stage of our trip our hearts were touched to the core. It is always difficult to describe one's feelings. There is always the danger of becoming sentimental and consequently tedious. Thereby one misses one's aim, and instead of describing one's true feelings in a spirit of thankfulness, one evolves empty phrases, at least seemingly so. Therefore in reviewing our experiences during the weeks of our stay on the American continent, we wish to write as shortly and objectively as possible. In this way we believe that we shall more fully fulfill our duty, and give expression more adequately to the feelings of deep and lasting thankfulness which fill our hearts. They fill our hearts not only because kindness and heartiness were everywhere showered upon us, but because we definitely felt the greetings, the welcomes and the honors extended to us, were extended not only to us but in a large degree to our countries Ireland and Germany.

One of the main objectives of our flight was to stretch a band, to strengthen the already existing ties, between these countries of old Europe and the American continent. In addition we hoped to build between these two parts of the world which are separated by water, shorter bridges than those already existing, in order to construct a practicable road for the peaceful intercourse of nation with nation and country with country. If our hope is fulfilled only in a small degree, we shall be extremely happy, and shall do everything in our power to advance the mutual task of the nations. We have always emphasized, with all the sincerity of our hearts, that we are by no means "heroes," but the servants of an idea; an idea whose

fulfillment will bring in its train—not we alone but innumerable others consider—blessings not only to the individual countries and peoples of the world, but to mankind as a whole.

In their forefront marches, it cannot be otherwise, His Honor, the Mayor of New York: Mr. James Walker. The citizens of his city are less familiar with this name. They call him "Jimmy Walker"; and this name, by which we also soon came to think of him, is not entirely devoid of a touch of kindness, and in no way implies anything disrespectful. Indeed, it shows that the citizens of the greatest city in the world love and trust their Mayor. No wonder that we also from our very first encounter with him were fascinated by the rare charm and ready humor of this man. Behind his vivacious spirit, his witty tongue always ready with satirical remarks, beats his overwhelmingly great, his living and warm heart. We shall never, Mayor Walker, forget that day and night—though as yet we had not made your acquaintance—that night when you waited vainly on Mitchel Field, New York.

You may rest assured that wherever we may go, and wherever we may have the opportunity of speaking about it, we will think of your generous attitude towards us. You embody for us the spirit and power of this gigantic city, in which the inhabitants, in spite of their different origins and different traditions, have banded themselves together in a community and have become as one unit. In our hearts you will always remain "the best fellow in the world." More we cannot and do not want to say. There are thoughts which lose in value if too loud expression is given to them. We cannot express in suitable words the feelings that the Bremen Crew feel towards "Jimmy Walker" of New York.

THE MAYOR'S COMMITTEE

Everybody must have a head. Every Committee needs a Chairman. Who of the visitors coming to the States on an official mission does not know the name of Grover 'Whalen? In spite of his correct exterior which seems to ward off familiarity and seems to demand official courtesy, his warm feelings and constant readiness to be of assistance banish the reserve of every visitor.

We called him our "Daddy." Dangers loomed up everywhere. They rose out of an excess of friendliness, but such heartiness and friendliness had to be accepted in a proper order. Grover Whalen knew how to arrange these things. He directed the current into its proper channel; he dammed the tide, without losing any of its elementary force. He helped us in the daytime as well as at night. We never discovered when Grover Whalen had his sleep. He

appeared in the evenings in immaculate attire, was careful to see that we retired to our rest in good time; and when the next morning we awakened from a good night's sleep, we learned that Grover Whalen had done another good day's work. But he shows no sign of his strenuous days. He smiles, displaying his shiny white teeth as he does so.

The Mayor's Committee certainly takes a good share of the work off his shoulders. Unforgotten are the names : George Mand, Leopold Philipp, T. R. Malone, Christy Bohnsack, and Major "Bill" Deegan.

They all seem to follow the example set by the chairman. They are always hearty, always kind and always on the alert to help their guests, who no longer feel merely guests, but at home at their fireplaces. Everything, however, centers in "Daddy Whalen" and will continue to center in him long after the names of the Bremen and her crew are forgotten.

THE PRESS

It is rather a delicate matter for one author to write about the press, and it becomes three times as dangerous when three authors are involved. It is almost impossible to write fully about the American Press. This press is powerful, but incredibly disciplined. It possesses all the tact of the man of the world, and combines with this tact the mighty impulse to action of the great country. Evidences of the press abound everywhere there is news. Yet it never becomes obtrusive. It understands how to obtain an interview without the subject of the interview noticing it, and even the pictures it takes, or causes to be taken, lack the constraint which the professional photographer so easily throws upon the object in front of his camera. Moreover, the press is sensitive; it not only observes facts, but observes emotions of the heart and spirit, interpreting those emotions correctly. To say more would be pretentious. To think more is unnecessary. The Press knows that it has our thanks.

THE STREET

The street! It is the heart of the city, and how it welcomed us! We had already passed through the snowstorms of Labrador and Greenly Island. After those snowstorms from the sky, the "snowstorms" which enveloped us in the streets of New York were a new experience. It seemed impossible that there was in the world such infinite masses of paper as those showered down upon us from the windows of the towering buildings where the great work of this city of ten million inhabitants is carried on. Yet it was a fact. One hears of the phantastic sums which are spent in cleaning the streets

after such receptions as ours, and in Europe when they read about such sums, they murmer the word "exaggeration"; but he who himself stood in the middle of this snowstorm might consider the sum even too small.
What is the howling of the ocean gales compared with the hooting of the sirens of steamers which greeted us on the Hudson? Is there more water in the Atlantic than the water which the tugboats spouted up to Heaven? We do not know! We were overcome! Was it possible there was so many hands to shake as those which we were permitted to grasp? We had not imagined that these things could be. We had to learn from the experiences we went through, what it means to win the heart of such a metropolis. And what made us the happiest of all? The fact that we were welcomed by all classes and all nationalities.
Such heartiness we shall never forget so long as we may live. The voice of New York spoke to us in this "snowstorm," in this blowing of automobile horns, in those joyous shouts, and her voice went to our hearts. Even though individual cries could not be distinguished but were merged in a common shout of welcome, New York can rest assured that the echo of this welcome will ring for ever in our hearts.

THE POLICE
New York's police force is indeed to be admired. This force is not only admirable, but also friendly, and this we must not forget. One hears them on the street as they race through with howling sirens—although only when this is absolutely necessary—stopping for a few seconds the terrific traffic in order that those in their care may pass through. Otherwise, they step into the background, although it is difficult to overlook their tall figures. This last factor is helpful, because whenever it becomes necessary to ask their advice for help, one can immediately detect where a New York policeman stands. One may be sure that one will obtain from him kind and correct advice.
To us, especially, these policemen seemed quite familiar. Are they not to a large extent descendants of Fitzmaurice's fatherland? We saw with sincere admiration how well they coped with their difficult task, and from our quiet observations we learned that only a force as well trained and tactful as this is, is capable of maintaining in perfect order the always lively and ever changing traffic of such a city as New York. The most conspicuous trait seemed to us to be the continuous jollity and the good healthy humor of these giants. The hand-shake of a New York policeman almost squashes the right

hand of the person thus greeted. We could feel these handshakes for weeks, although even without such clear proof we would never have forgotten the New York police. Their picture will always remain in our memory.

PARADES

Soldiers follow soldiers. He who has himself worn the soldier's coat and still wears it, is filled with pleasure. In the army is embodied the power and the decision to protect the soil of an entire nation. The parade of the troops in New York and elsewhere overwhelmed us, and at the same time touched us. Just before the mighty parade took place, we went to the "Eternal Light" to pay homage to the memory of those who died for their country. Fitzmaurice had fought on their side in the War. Koehl and Huenefeld had stood at the other side of the trenches. But in this moment we were united in one thought; in our belief in our own country and in our love of our fatherland! The dead, whose memory we were honoring, died for this belief, as did the sons of every country and nation who died for their convictions.

But after death comes pulsing life; waving flags and vigorous music. Life gains victory over the grave. The soldiers of the United States of America and of New York pass by. When we are back in Europe we will remember and in spirit shake hands with our comrades on the American continent. The honor you show us touches to the quick the hearts of those who have been or who are still soldiers themselves. The honor you show us will strengthen our mutual understanding, and will make for real peace between the nations, in a larger degree than may seem possible to one who does not understand the soul of the soldier.

BANQUETS

They were very numerous. They were exceptionally good. Speeches were made which far exceeded the average of every day, and which showed us that the spirit of our undertaking was understood in the United States. This made us very happy. Never before had we witnessed a celebration, the grandeur and importance of which were so apparent as at the banquet given us by the Mayor's Committee, followed by reception after reception, handshake after handshake. On looking back, we must, although single personalities emerge clearly, confine ourselves to the list of those corporations and societies which honored us with a banquet. We enumerate them below, so as to give the reader some conception of the measure of

friendliness showered upon us by New York, and in order, also, that he may gain some idea of the demands made upon our stomachs !
Dinners given by the City of New York; by the New York Merchants Association, by the Board of Trade of German-American Commerce; by the Catholic Club of the City of New York; dinner on board the steamer "Columbus"; dinner of the Advertising Club, Electrolux Society; dinner given by the Irish Trade Commissioner Lindsay Crawford; farewell dinner on board the Lloyd steamer "Columbus" for the Press and the Mayor's Committee; luncheon of the American Arbitration Association, Catholic Actors Guild.
To mention all the speeches made would be almost an impossibility, because of the large number of persons who spoke, and the diversity of subjects spoken on, all culminating, however, in the general desire for "good will." So we will merely mention a few names: Mayor James Walker, Grover Whalen, Mayor General William N. Haskell, Herbert Hoover, Eugen Henningson, Professor William R. Shepheard, Willis H. Booth, Lucius R. Eastman, the Swedish Consul General Olaf H. Lamm, Dr. Alfredo Pirelli, H. Schuengel, Victor Ridder, Irish Trade Commissioner Lindsay Crawford, Sir Charles Higham, Gilbert T. Hodges, Consul Dr. Haeuser, Richard Washburn Child, Judge O'Brien, Gustaf Sahlin, Harry F. Guggenheim, John Crosby.
These speeches were not only spoken, but as a result of the deep feeling behind them, they went straight to our hearts. We have taken them with us to Europe, and shall mention them in words of praise so long as we ourselves have the opportunity of talking.

MISCELLANEOUS
How did we live in New York ? Nobler than princes. The "Ritz Carlton" hotel put at our disposal rooms such as usually fall only to the lot of Heads of the State and very illustrious men. We came under neither category, but nevertheless we felt very much at home. And why should we not feel at home, in view of all the trouble taken by the herculean Mr. Keller—whose friendly smile beamed with fatherly kindness— and his staff. They all did their very utmost to make our lives as comfortable as possible. Why? We must repeatedly emphasize that we felt we were honored beyond our due. All we did was to fly from Baldonnel to Greenly Island. We should have reached New York—at least this was expected, although we did not set ourselves a definite goal—we wanted to reach the new continent. But New York was waiting for us. Huenefeld's last words before the take-off, "Mitchel Field or Heaven," which were meant to be a friendly arabesque, had become generally known.

Nevertheless New Yorkers did not bear us any grudge when later we did not land either in Heaven or Mitchel Field. At the banquet of the City of New York, Mayor Walker said he would have preferred Heaven! On the whole we would have preferred Mitchel Field, although we never saw it. This was one of the strangest things that happened to us on our journey; Mitchel Field prepared itself for a festive reception; all the world spoke about Mitchel field; yet of all the flying fields of the city of New York we only became acquainted with Curtiss Field. But this field gave us a very good idea of the facilities afforded by the well conducted fields of the City of New York.

For this reason, we were extremely pleased to hear shortly before leaving New York, that the management of the municipal flying field of New York had been entrusted to the proven care of Clarence Chamberlin. He whom we had all met in Europe, whose name over there is just as honored as it is celebrated here, is according to international ideas one of the "big guns" of aviation. The worries entailed by the management of the city affairs of New York are, thank God, far removed from us—and it is perhaps bold for us to express an opinion, but we believe that the selection of Clarence Chamberlin is an especially fortunate one.

Things that none of us had ever dreamt of became reality in New York. We appeared in the boxing ring. Unfortunately we could not take an active part in the fight. But that seemingly was not required of us. We were only shown to the audience, and felt extremely proud. Sport remains sport. Followers of different lines of sport understand each other at first sight. And that was probably the reason why our welcome in the ring was so especially hearty.

And the theatres! We witnessed performances in the theatres, and we spoke from the stage; Fitzmaurice in fluent, Koehl and Huenefeld in broken, English. But the audience understood all three—they understood the desire behind the speeches. And when on the top of all Mayor Walker appeared in person upon the stage to introduce the visitors, the success of the evening was assured. All these experiences enriched us. And then came an hour, when each one of us was reminded with special warmth of his own country. In the Irish and German societies and clubs so many proofs were given to the Bremen crew that those U. S. citizens who came originally from Europe have not forgotten the countries of their birth, that our hearts rejoiced. They all tried to show us how they still cling to their old countries, thereby causing us deep and lasting pleasure.

The Press and the public stated that we were exhausted and tired as a result of the attentions showered upon us. This was only

comparatively true. It was such a joy to be permitted to see so many nice things, and above all to experience them, that our pleasure far and away outweighed our fatigue, and banished it. Joy cannot wear one out, nor fortune exhaust. Those days in New York certainly showered happiness and pleasure upon us.

WASHINGTON

We experienced the highest honor that can be bestowed upon an American citizen or upon a foreigner in the United States. In Washington we were permitted to appear in person before the President of the United States, and to receive in the White House grounds from his hands the highest decoration that America bestows for accomplishments in the field of aviation. New York is the city of phenomenal growth and modernity. Washington's streets and monuments spoke to us in a spirit of quiet distinguished reticence. In Washington the past lives again. The history of this country awakens. The traditions of the American people manifest themselves in this capital of the Union.

Even as we stood in Wall Street, New York, before the statue of George Washington, a feeling overcame us which made us realize what it means to start life from a humble beginning, and with a strong hand and warm heart take over the leadership of a growing Nation. Our respect for the history of the country increased still more in Washington, the city which bears his name. Indicative of the love Americans bear their country, a symbol of power and might, stands the gigantic cupola of the Capitol, brightly illuminated at night—against the sky. And during the day the white obelisks point upward, indicating the path the nation has trod.

But it is not merely the past which lives and speaks in Washington. In the senate and congress we were permitted to tread upon ground forbidden to non-members, and were permitted to shake hands with men and women who to-day frame the laws of the United States.

He who has seen President Coolidge in the rooms of the White House, which reminded us of the early days of this great city, will never forget the impressions they take away. The celebration at which we were permitted to receive the Distinguished Flying Cross attained a particular significance, as it was not held in closed-in rooms, but under God's free heaven. The trees of the park, beautiful in the green of early Spring, were bathed in sunshine. Laws which in their original version prohibited the bestowing of crosses upon us, had been amended so that this became possible. The sky seemed to agree with this decision by beaming down sunshine upon us all.

The ceremonies of the White House have an awe-inspiring effect. Simple as it may be, its correctness and its importance place it in a class apart. The voice of a hundred million people, whose place in the world can never be overlooked, had spoken for us. This fact alone would have been sufficient to impress a special seal upon this day in Washington. Somewhere, however, the shadows of old days passed through even the light flooded garden. Somewhere one could see the figure of General Steuben, in his powdered wig, walking down the bushes; somewhere voices were whispering the names of the illustrious dead, Lincoln, Grant, Karl Schurz.

The sounds of feverish life seemed to be deadened, the rattling of motors seemed to die away. The past and present grasped each other's hands and signed a covenant for the future. Let the sunny heaven of these Washington days shine forever upon this covenant.

Upon the Military flying fields we were permitted to meet Lindbergh, for the first time, and he who has that privilege will realize that while America has such sons the history of this country will not be closed even after hundreds of years.

Secretary of State Kellogg spoke to us about the progress of culture, about the blessings of peace, and of the desire of the nations to agree with each other. As if to emphasize his words and to give them a better setting and resonance, high above our heads whirred propellers. In the background the crowd lined up. There stood America's air force ready to fight and struggle for new aims.

Fridtjof Nansen, one of the world's greatest sportsman, and a renowned explorer, spoke while we were on American soil these words : that he did not want to think of peace, he wanted to fight for peace. How invigorating are these words, uttered by this great old man, whose name the wide world over commands respect and admiration. Fridtjof Nansen, fighter for peace, has always fought for a just peace. And Abraham Lincoln, one of America's greatest sons, whose very name touches the heart of every American, Abraham Lincoln in front of whose Memorial we stood in Washington, did he not know what it meant to wage a war which was painful and bloody, and did he not celebrate a peace which pacified his one-time opponents, because it was a peace based on friendship and righteousness?

Washington inspires. New York impels one to action. Only in a country where both these forces unite can really purposeful action result. Washington, the city of memories, is a point of rest in the hurry and scurry of the new era. From there, however, at the same time emerge days of impulse whose effect is felt even in the most distant corners of the United States. This city which houses the

American Government seemed to us to combine both heart and brain.
We shall never think of Washington without also thinking of the first hazy rainy day, which we spent there. No festive reception, no parades, no celebrations greeted us, although many friendly words were spoken to us. On that occasion the objective of our visit was to visit Floyd Bennett's still fresh grave: that man who had given his life in coming to our aid and died for
us. Silently we deposited flowers; silently we laid the flags of our respective countries which had accompanied us upon our flight from East to West, upon the small sad mound. No words can ever express the sadness in our hearts. Floyd Bennett's name and his memory will live forever in our hearts. "Greater love hath no man than this, that a man lay down his life for his friends." We shall always treasure the few lines his brave widow wrote us, thanking us for paying tribute to her husband's memory. In those hours and days the feeling grew that it was most fitting that Floyd Bennett's grave should lie under the shadow of Washington's tomb. Nowhere else could they fittingly have lain him.
Shall we also write about the reception in this town? We grasped more than 6,000 hands in one day: the rest you can imagine.

THE TOUR-PHILADELPHIA-CLEVELAND-CHICA-. GO-MILWAUKEE-ST. LOUIS-INDIANAPOLIS - DETROIT - BOSTON - ALBANY - MONTREAL AND QUEBEC-EPILOGUE.

To give an account of our tour through the United States is at the same time difficult and easy. One could fill volumes with descriptions of all the receptions and festivities we attended.
And yet the human language is poor, because it only inadequately expresses the innermost emotions of our hearts. Our hearts overflowed with thanks and happiness. But if we tried to put down these emotions in black and white, they would lose their spontaneity. It is difficult through the medium of words, although they come from the heart, to reach the heart.
What shall we pick out of the heavy book of our memories? The machine put at our disposal by the Junkers Works, the F13 took us from New York to Philadelphia, and from that moment onwards we entered upon a series of days of mingled pleasure and unrest, whose pace from day to day became accelerated. The monuments

of Philadelphia spoke to us of the birth of the first American flag; they and Benjamin Franklin's grave stand out vividly in our memories of that day. Mayor Harry A. Mackay and his Committee were our advisers and guides. The hurrying travellers could not stay long. The strict program called them on.

The inhabitants of Cleveland flocked to the sunny landing place to welcome us. The gifts which we received filled us with deep thanks: but we could not stay. The propeller whirred again. The plane soared, and for a short time we flew through a thunderstorm. But with the approaching evening nature became more peaceful. After our landing in Chicago, we entered upon a new round of receptions marked by delightful spontaneous festivity. He who understands and feels the beating pulse of this city, experiences a feeling of deep admiration for the racing active eagerness with which this mighty city of the West is working in order to create new things upon old and in striving towards the light. Boldness is the motto of Chicago, and boldness is the motto of its Mayor, William Hale Thompson. This giant, with his warm and friendly heart, led us into the arena—tens of thousands filled the seats of this gigantic sport ground. Its soil had been wrested from the waters of Lake Michigan, and no better place could have been found to show the strangers what the will of Chicago meant and what it could achieve. The white head of the Chairman of the Reception Committee, George F. Getz, appeared. Our memories of Chicago are all linked up with our memories of Mr. Getz. He was as helpful and kind to us as was "Daddy" Whalen.

The wonderful view from Stevens's Hotel over Lake Michigan shows the beauties of nature— the view of the city from the plane shows the powerful energy of never ceasing industry. Onward we had to go.

We enjoyed Sunday with the citizens of Milwaukee, a Spring Sunday as beautiful as only a May day can be. Mayor Daniel W. Hoan, Governor Zimmermann and C. C. Youngreen, chairman of the reception committee were present in person on the flying field, and through rows of waving, cheering people, we proceeded to the lake. It was a most appropriate spot, which somehow emphasized the heartiness of the welcoming speeches. In the evening at the Banquet one or two events were especially noteworthy: one was the welcome extended to us by the Commander of the American Legion. His speech referred to, and laid emphasis on the newly formed and strengthened comradeship, and moved us deeply.

We could only clasp each other's hands in a firm spontaneous grip. The son of Theodore Roosevelt spoke of "old Europe"; spoke of the growth of goodwill in the world. The words "Ambassadors of

goodwill" were heard; they made us at once proud and happy. As we flew from Milwaukee to St. Louis, we again thought of these words as we dropped from the air the Irish and German flags over the City Hall of Springfield, a mark of reverence for the tomb of Abraham Lincoln.

By the time we got to St. Louis Old Sol tried to dampen our high spirits by hiding himself behind the clouds. Heavy rain pelted down shortly after our arrival in St. Louis but it could not drown the words of friendly Mayor Victor Miller.

In spite of all the rain the citizens of St. Louis stood in the streets to welcome us. The key of the city which Chicago handed us was small and dainty. St. Louis, the home town of the Spirit of St. Louis, the historic plane of Charles Lindbergh, gave us a mighty key to their gates.

Here, as well as in Chicago, the keys also opened the gates of our hearts, which closed again tightly after absorbing all the kindness and friendship extended to us.

A short stay in Indianapolis was prolonged by unfavorable weather reports. It was impossible to continue the flight on the same day. No official festivities were held, and yet we were surrounded by the friendly attentions of Mayor J. L. Duvall and his sincere followers. The next morning the weather outlook was more hopeful.

Detroit had waited for us one day in vain, but this disappointment which we, or rather the weather, caused the waiting citizens was nowhere taken grudgingly. The first to greet us were Mayor John Lodge and Mr. Edsel Ford. The next person upon whom we looked was the father of our flight, Professor Hugo Junkers. He had already been on American soil several weeks, but we had caught only glimpses of him here and there. Every time we meet the creator of the Bremen our joy is especially great and hearty.

Our trip into the city began. The Western center of industry was in a holiday mood. We were privileged to see the newest Packard motor, and the Ford works gave us Europeans some idea of the genius of this powerful "old man." The name of Henry Ford is almost historic, and we were surprised to encounter a personality so vigorous and full of youthful freshness. Lindbergh's birthplace gave us the opportunity and the joy of becoming personally acquainted with the mother of the great flier. We think with thankfulness of the hour in which Lindbergh's uncle, Mayor John Lodge, introduced us to this modest and distinguished lady. Is not her son one of the chief exponents of a life marked by creative action and bold daring?

Mr. Edsel Ford we shall always remember in a spirit of intense thankfulness and friendship. He was a kind comrade and our best friend in Detroit. Nowhere could we have found a better or kinder guide through this powerful city of industry than the Chairman of the Reception Committee. In him the spirit of sport and energy unite with a kind of personality, which came very close to our hearts. Brock and Schlee, Stinson, Haldeman, Rickenbacker, all these great American fliers we met in this birthplace of American aviation. How gladly we would have remained; how gladly we would have gone more deeply into all the interesting and beautiful things which there presented themselves. But our program called us onward. In order to make use of the night, we travelled to Boston by train, and while still in the train were greeted by Mayor Malcolm Nichols of that city. New festivities, new experiences of an unforgettable kind, awaited us. Memorial Day awakened old memories and new hopes. The parade of the garrison presented a glittering show in spite of the rain. The American Legion honored us with their highest decoration. Governor Fuller pinned the Medal of the State of Massachusetts on our breasts, and what else could we say but the small word "thanks." Boston is the last of the big U. S. cities which we visited on our tour. But in our hearts Boston will not take the last place.Our duty called us to Canada. We owed the Canadian Authorities many thanks for all the assistance they had rendered us. Governor Smith's kind invitation to visit him in Albany, was a special honor for us. Albany we thought somewhat akin to Washington. There the tradition of old America lives on: we were reminded of the birth of the greatest country in the world. Intimate, and thereby perhaps heartier, were the receptions and festivities in Albany. The Governor of the State of New York, the Mayor of the City of Albany, showered their hospitality upon us and wrote a new page in our book of memories. When night came we stepped into the waiting Pullman car. The following morning found us again on Canadian soil. Montreal extended to us our second welcome to Canada. On Greenly Island we received our first welcome. In spite of the early morning hour Mayor Camillien Houde was at the train. Again receptions followed receptions ; again the brain received impressions ; again the heart absorbed them. Our path took us through the wonderful

scenery of Canada, in the cars of the Canadian National Railroad to Quebec. There we were in the heart of the province, which was the first to show us, after our landing on the new continent, kindness and spontaneous hospitality. From hill tops we looked down upon the countryside, which was majestic and beautiful, yet which can become so threatening when snow and winter storms rage through it. Under the guidance of Mayor R. Auger we were permitted to attend a tree planting festival—we were allowed to plant trees ourselves, and as we did so we buried deep in the earth our feelings of thanks, and love. A short tea in the fairy-like situated palace of Lt. Gov. Narcisse Perideau, K.C., followed. In the evening in the banquet hall, Prime Minister the Honorable L. A. Taschereau, spoke to us words which came from his very heart and which resounded in our hearts. He advised us to choose the steamer route for our return trip. We were forced to do so, as our good Bremen was badly damaged, and no longer capable of flying. Nevertheless if a single flight can produce such feelings of friendliness as did our flight, we would not hesitate to repeat it at any time.

In Quebec our tour ended. It began, almost against our desire, there in the Province of Quebec. No wonder that our memories wandered back; no wonder if after all the festivities, which came to an end in German and Irish Societies' circles, there arose within us clear and strong the words which we felt at the moment of our landing:
"THANKS BE TO GOD, TO WHOM ALONE THE HONOR IS DUE."