FLYING ONE OF SAFEST AND FASTEST MEANS OF TRANSPORTATION

The Growth and History of Aviation—A Resume of How It Started and Developed

(By Henry Poysky in Montreal Gazette)

Daedalus was the hero of the earliest flying story. He lived about 4,000 yeras ago and his name means "clever engineer." Although he was born in Italy, his skill was so great he was employed by the King of Crete to build part of his palace. One day he offended the King and Daedalus and his son Icarus were thrown into prison. In an effort to escape, Daedalus made wings of feathers, cementing them together with wax so that he and son might fly away from the King's prison. Daedalus told his son not to fly too high, and not too low, but to follow him. Icarus became so excited by the joy of the flying that, as both reached the outskirts of Crete he forgot his father's warning and mounted up until the heat of the sun melted the wax of his wings. He fell into the sea and was drowned. Daedalus flew on and arrived in Sicily.

The second attempt to fly was made in 1507 by another Italian, John Damian, who was attached to the Court of King James the Fourth of Scotland. He made wings of birds' feathers, and said he would fly to France. He jumped into the air from the top of the wall of Stirling Castle, fell to the ground and broke his leg. He attributed his failure to using fowls' feathers, asserting that fowls are bad fliers.

Then came a Frenchman, the Marquis of Bacqueville, who designed planes which were to be attached to his arms and legs. In 1742 he launched himself from the upper storey of his house in an attempt to glide 200 yards to the gardens on the other side of the river. After gliding a short way he fell onto a barge on the river and broke his leg.

The First Airship

When efforts to build planes had failed, men turned to the idea of building ships for travel by air. The first such ship was built in 1670 by Francesco Lana, a Jesuit. It never worked. It had a car made of baskets attached to four large globes, made of thin copper sheeting. Lana's ship, however, was never completed. The globes were so thin they could not be used. Although a failure, this strange design made Lana the first inventor of the balloon.

In 1762, Dr. Joseph Black, professor of chemistry in Edinburgh University, suggested that a balloon filled with hydrogen would rise in the air. Strangely enough, the first balloon that rose into the air was filled with a new-found gas.

During the same year Joseph and Stephen Montgolfier, sons of a wealthy papermaker of Annonoy, near Lyons, in France, saw thick clouds float high in the sky. This gave them an idea. If they could fill a bag with a smoky vapor it would rise. They tried small balloons, then they built a large linen balloon 33 feet in diameter, and filled it with smoke by holding it over a fire. On June 5, 1783, the balloon rose easily and travelled about a mile and a half. But it was not the smoke that caused it to rise. It rose because the fire had warmed the air inside of the balloon and made it expand until it became lighter than air. When the heated air cooled the balloon came down.

The Montgolfier machine became known as the fire balloon. News of its success reached Paris, where a similar balloon was made of varnished silk. On August 27, 1783, it rose from the Champ de Mars and travelled 15 miles into the country. When it came down it caused a panic among the country people.

On September 19 of the same year, Joseph Montgolfier sent up his balloon before the French King and Queen at Versailles. It rose 1,500 feet into the air, carrying with it a sheep, a cock and a duck. These first air passengers in history landed unhurt after a short flight, except for the cock, who had its right wing injured by a kick from the sheep.

First Man to Ascend

The first man to ascend in the air was Monsieur Pilatre de Roz-Fier, who used a fire balloon. On October 15, 1783, he went up with a rope attached to the balloon and to the ground He came down safely.

In Great Britain, James Tytler was the first Englishman to navigate the air. He rose from Comely Gardens, Edinburgh, on August 27, 1784, and travelled half a mile. Then Vincenzo Lunardi, who was secretary to the Neapolitan Ambassador in England, rose in a gas balloon from the Artillery Ground in Moorfields on September 15, 1784, before nearly 200,000 spectators. He landed near Ware, in Hertfordshire.

Blanchard, a French aeronaut, crossed the English Channel from Dover on January 7, 1785. Pilatre was killed on June 15 of the same year in an attempt to cross the Channel from Boulogne. His balloon caught fire at 3,000 feet and he fell in flames before he had left France.

Balloons were not considered a fast means of transportation, and during the nineteenth century secret flights by means of wings were attempted.

The first success was reached by means of gliders, the original glider being built by Otto Lillenthal of Berlin. He began by studying birds in 1891 he started gliding. His machine was made of peeled willow sticks covered with cotton shirting, and weighed less than 40 pounds. He supported himself in it by his forearms and guided and balanced the glider by shifting his body. On August 9, 1896, Lillenthal was killed when his glider was caught in a gust of wind and plunged to the ground.

In 1893, Percy Pilcher, assistant lecturer in naval architecture and marine engineering at Glasgow University, built gliders known as the Beetle, the Hull, and the Hawk. On September 30 1899, the Hawk crashed when it was 30 feet up and Pilcher suffered injuries from which he died two days later.

The Wright Brothers

Then came the famous Wright Brothers. They decided that balance was the greatest difficulty in flying. They watched the birds and studied various gliding machines. They built their own gliding machine, and in 1900 lying face downwards on it, they practised gliding. They tried to balance by twisting the wings. In 1902, however, they fitted their glider with a vertical rudder like that of a ship. That was the secret of their success. They could steer the machine in any direction and balance it perfectly, because they had three controls. The Wright Brothers were the first to build a glider that could be mastered by the pilot, In 1903 they built an engine and put it to a test. This proved to be a great success, and thus the age of flying machines arrived.

The La France, the first airship which returned to its starting point, was built in 1884. This success made Germany turn to construction of balloons, with the result that an engineer called Woolfert built the first airship, which was smaller but more powerful than the La France. It flew in Berlin in 1836. On June 14, 1897, Woolfert and his assistants were killed when their balloon caught fire and crashed.

The first zeppelin made its trial trip in 1900. It was shaped like a pencil and was 420 feet long. Numerous trials gave definite proof that balloons could be made safe, and in 1901 Count von Zeppelin started to build better ships. In 1910 the eleventh Zeppelin, the Viktoria Louise, carried passengers for the first time and flew 29,430 miles. Two other ships, the Hansa and the Sachsen, also carried passengers.

In the days between 1903 and 1910 the pioneer heroes of the air were nearly all French. In 1908 a French family the Voisins, made biplanes. During the same year, a Frenchman. Bleriot, changed to monoplanes. When Wilbur Wright came to France, he surpassed all the French fliers. He made figures of eight and other manoeuvres in the air which astounded the French. The secret lay in his three controls. The French soon seized upon the triple control idea, and built more modern ships.

The first aviation meet in the world was held at Rheims, France, in 1909. In 1910 the London Daily Mail offered a prize of £10,000 for a flight from London to Manchester. Cross-country flying soon became popular and many attempts were made. A New York newspaper offered a prize of £2,000 for a flight from Albany to New York.

It was in 1910 that Captain Geoffrey de Havilland built his first airplane. The first time he took off, his machine was wrecked, but he was unhurt. In 1933 he won the King's Cup air race, flying one of his own machines. Of the many famous machines he has built none has accomplished a more wonderful flight than the airplane which won the race from England to Melbourne in 71 hours, in October 1934

The planes of today are very different from the machines of the pioneers. Speeds of 440 miles per hour have been flown, heights of 45,000 feet reached, non-stop flights of over 70 hours made and more than 6,000 miles covered without landing.

The word airplane covers all flying machines that are heavier than air. These are landplanes, floating seaplanes, flying boats and amphibians. The land airplane is equipped with wheels fitted with tires like an automobile. It can alight on the ground and on a ship with a special flying deck. On fast planes the landing wheels are drawn up inside the body of the wings, so they do not slow-up the machine by dragging through the air when flying. For ice and snow, the wheels are replaced by skiis. For use on water, the plane can be equipped with floats.

Pupils learning to flg are usually taught on a light type of airplane.

On the big passenger carrying planes of the air service now in operation, throughout the world, there are stewards. as well as pilots, navigators and wireless operators.

Recently automatic pilots have been used and can do everything except take off and land. This pilot is controlled by levers and dials.

Thus we have a resume of how flying was started. and how it gradually developed to become one of the fastest and perhaps safest means of transportation. Many fliers have lost their lives in the development of air travel, but now air voyages may be made to practically every country in the world.

CONSERVATIVE SMOKER HELD SATURDAY NIGHT

Club Rooms Filled to Capacity — Speeches and Songs and Tasty Refreshments — Election Issues Dealt With.

The Conservative committee rooms on York street were filled to capacity Saturday night when the government party entetrained at a club smoker. Several supporters of the party addressed the gathering and an impromptu program of entertainment was carried out by some of the club members. An orchestra was in attendance and at the close of the speeches refreshments were served. W. G. Quinn chairman of the meeting, introduced the speakers of the evening, who were Lee McCutcheon, Horace Hanson and Ernest VanDine, all of Fredericton.

Mr. McCutcheon delivered an impressive address in support of the Tilley government, touching on the many accomplishments of the government. He also dealt with the platform of the government and attacked the opposition party, claiming that the latter had made certain misrepresentations of the government platform. He paid high tribute to Hon. L. P. D. Tilley, premier, and said that the latter was the greatest friend that New Brunswick Labor had ever known.

Horace Hanson, the second speaker, dealt with the issues of the coming election, paying particular attention to the minimum wage scale introduced by Premier Tilley in the forest operations. He said that this legislation was right in line with the political and social progress of the times. The speaker declared that Premier Tilley was doing his best for the province.

Ernest VanDine dealt with the opposition platform and declared that it revealed many inconsistencies of the Liberal party.

At the close of the meeting three cheers were given for Premier Tilley.

The Voice of Experience now has a brand new godchild and namesake, Paul Taylor Rogers, son of Elmer Rogers, who is the radio oracle's manager and attorney. In case someone in the house doesn't know where the namesake comes in, it has long since ceased to be a secret that the Voice's name is Marion Sayle Taylor.

PRISON REFORM NEEDED

Of the necessity for a definite plan of prison reform in Canada, there is no reasonable doubt. The Prime Minister of the Dominion is in favour of it. Public opinion has been steadily awakening to the undesirability of many existing conditions, and the testimony of social workers who come into constant contact with criminals and with first offenders is unanimous on the point. Even our own penitentiary officials would welcome it, for a good deal of odium has attached to them for conditions and circumstances beyond their individual control.

The Montreal Star says:

The first congress of penal workers in Canada was held here last night, and it brought forth a good deal of candid comment upon present conditions and the urgency of the need for a change. It is quite true, as General Ormond pointed out, that something has already been done towards the segregation of first offenders from habituals criminals, but it is still possible for many first offenders to find themselves in the penitentiary alone with habitual criminals. It is not so much the petty offender who receives a few weeks' or two or three months' sentence whom the reformers have to mind, as those who have been misguided or driven, often through circumstances for which they could not be held wholly responsible, to commit offences that earn for them a sentence of two years or more, even for a first offence.

That such offenders are more liable to return to a criminal career after they come out of the penitentiary if they have remained during their sentence in daily contact with hardened criminals is not denied by anybody who has experience of prison life or work. That they ought not to be placed in such contact, but should be segregated, is the general admission. General Ormond claims that segregation is not possible save in Ontario and Quebec, by reason of population. But that argument is open to question, and in any event, since the administration of the penitentiaries of the Dominion is a Federal affair, it does not seem unreasonable to ask that such amendments be made and such steps be taken as to make special institutions throughout the land available for first offenders.

The Borstal system deals with youthful offenders only—usually those from sixteen to twenty-one, though the age limit may be raised to twenty-three. Briefly, it is a system of training rather than punishment. The idea behind the scheme is to give such youthful offenders a new mental outlook while their minds are still in the plastic stage, and, through the personal influence and example of the staff, to create a corporate spirit and a standard of social endeavour which, it is hoped, will continue after their release. The minimum Borstal sentence is two years, the maximum three years, but the commissioners have power to release any female prisoner after three months and any male prisoner after six months, if they are satisfied that there is a reasonable probability that such prisoners, if released then, will abstain from crime and lead a useful and industrious life. On the completion of their sentences, the prisoners under the Borstal system remain for a further year under the supervision of the commissioners.

Of the efficiency of this system there can be no doubt. Since it came into operation in Great Britain, of the several thousand offenders released, only thirty-five per cent have come into conflict with the law again. Roughly, two out of every three Borstal lads are reclaimed.

There are many other aspects of prison reforms that claim attention. Public sympathy is all too often aroused in the wrong direction, and morbid sentiment all too frequently plays a dangerous part. But the reform movement in Canada has in mind no turning of penitentiaries into jolly clubs for criminals. It seeks rather to save the first offender. Hardened habitual criminals are generally regarded as beyond saving. But there is no justification for treating even the latter as animals or denying them reasonable ameliorations of living, or of creating conditions that tend to develop the bestial in them. In these directions there is plenty of room for reform, entirely apart from the first offenders' class.