

The British Commonwealth Air Training Plan

One of a series of articles written specially for Weekly Newspapers by Hugh Tompkin, Editor of the Fergus News-Record

BOMBING AND GUNNERY SPECIALIZED OCCUPATIONS

This is the tenth and last of the series of stories about the training of Pilots and Observers in the R.C.A.F., under the British Commonwealth Air Training Plan, written for the weekly newspapers of Ontario and distributed through the C.W.N.A.

Until I visited the Jarvis Bombing and Gunnery School, I had supposed that the Initial Training School at Eglington was the most interesting place the Royal Canadian Air Force had to show its visitors. At Eglington, the doctors, now disguised as Flying Officers, carry on scientific experiments in low pressure chambers, attach electric wires to the skull to test the brain waves, and send men and materials into chambers where cold winds blow at 40 below zero.

There's nothing like that at Jarvis. Science and mathematics and invention have combined to produce the wonders that are kept locked up in special buildings at the Bombing and Gunnery school, but they have to do with the arts of war and destruction, rather than medicine and healing.

After a convention in Hamilton in May, a group of editors and their ladies spent an afternoon at a wings parade at Jarvis School and they saw the buildings and learned something of the training methods. They marvelled at the beautifully furnished recreation rooms. They had fleeting glances of bomb-sights in the nooses of Fairey Battle bombing planes or noticed the loads of small practice

problems arising from it; fuses and carriers; use of flares; theory of sighting machine guns; tracer bullets; cannon guns; gunnery tactics; types of turrets, and aircraft recognition.

That doesn't mean much to most of us, but it sounds like a heavy course of study to be mastered in six weeks.

Camera Guns Save Ammunition

First practice with actual machine guns is on the 25-yard range. Vickers guns are used there, though they are now out-dated and Brownings are used for more advanced work. The machine gunners stand inside a long building, open at the front, and shoot at targets with bursts of fire, eight to fifteen bullets at a time.

Inside another building, in separate rooms, are power operated machine gun turrets which give the British gunners an advantage early in the war. They were completely equipped but the actual guns had been removed and replaced by dummy guns which shot a ray of light at a tiny German plane which moved against a painted sky. A student was banging away at it, and every time he scored a hit a bell rang. Amusement parks have similar devices, without the turret, which is the important part. The young man at the camera guns was doing fairly well, scoring hits with about half his shots. Dials on a nearby desk indicated exactly what he was doing.

He finished and I climbed up inside the turret. A table lowered over my knees and a lever at my side brought up a seat and wedged me in like a sardine in a can. Apparently I was a

ing or a ship. There are bombs that pierce armor before exploding. The bombs can be adjusted for various purposes, in nose and tail. Bombs are carried on racks, underneath the wings, inside the fuselage or in other places, depending on the type of the bombing plane. They are released electrically by pulling a little lever.

Much has been heard about bomb sights in recent months. The bomb-sight is an elaborate instrument used to ensure that the bomb will land on or near the target. In the early days of the last great war, bombs were simply dropped over the edge by the pilot. Planes moved slowly and fairly low. Even at that, many of these first bombs probably landed a mile from the place that they were intended to strike.

A modern bombsight is a most complicated instrument. There are some ten adjustments. Not only the height of the plane above the ground, the speed at which it is traveling, the direction and velocity of the wind affect the fall of the bomb, but even the temperature.

The bombsight is covered with knobs and dials and scales. When all these have been adjusted, the observer watches the landscape through a eyepiece. He sees it apparently moving down between two pairs of wires with colored beads at intervals along them. At last, the railway station, factory or whatever the target happens to be, appears between two tiny pointers. The observer pulls a lever and the bomb starts on its way. It may be 20 seconds before it hits and another 10 before it explodes.

The Bombing "Teacher" Students learn to operate the bombsight with the aid of a "teacher" which is one of the most interesting and ingenious machines I ever saw. It is contained in a specially built three-storey building and kept locked.

I watched Flying Officer Johnson adjust the bombsight, after drawing lines across the face of its compass and making calculations. Then I lay on my stomach and looked through the sights. We were in the gallery of the building. Upstairs, intricate projectors, designed by a British inventor, adjusted for altitude, wind speed and so on, ground away. Down below me, the landscape of the enemy country moved past. I could see its farms, the towns and cities, the line of the coast. I chose a factory in the distance, watched it come down between the wires and as it reached the pointer, pulled the trigger. For some twenty seconds, the time it took that bomb to drop, the scenery moved past. Then it stopped and a white light showed where the bomb had landed.

Actual bombing is done over Lake Erie. Small practice bombs, attached under the wings of the Fairey Battle are aimed at a red raft from lights well over a mile. A puff of smoke goes up as the bomb hits the water. Observers on shore watch the puffs of smoke, use some simple trigonometry, and plot the places where the bombs drop. The student marks where he thought they went. The best target hangs in the conference room. Over it is a sign: "Best this and yours will hang here instead."

Also, no doubt, the owner of the target will head his class at the next wings parade.

THE END

FALL FAIR DATES

Toronto (Canadian National Exhibition)	Aug. 22-Sept. 6
Elmira	Aug. 29-Sept. 1
Durham	Sept. 4-5
Tavistock	Sept. 5-6
Almonte	Sept. 8-10
Bellefleur	Sept. 8-10
BRAMPTON	Sept. 9-10
FERGUS	Sept. 11-12
Hanover	Sept. 11-12
Midland	Sept. 11-12
Milverton	Sept. 11-12
GEORGETOWN	Sept. 12 and 13
New Hamburg	Sept. 12-13
Tilsonburg	Sept. 12-13
Wairton	Sept. 18-19
Alliston	Sept. 18-19
Barrie	Sept. 15-17
Bracebridge	Sept. 18-19
Coldwater	Sept. 17-18
CALT	Sept. 18-20
Lindsay	Sept. 17-18
Markdale	Sept. 18-19
Mildmay	Sept. 16-17
Mount Forest	Sept. 18-19
Palmerston	Sept. 19-20
Stratford	Sept. 15-17
Thorold	Sept. 16-17
Collingwood	Sept. 25-27
Elmvale	Sept. 25-27
Grand Valley	Sept. 26-27
Mitchell	Sept. 23-24
Owen Sound	Sept. 27-30

Treasurer's Sale of Land for Taxes

Township of Esquesing County of Halton

BY VIRTUE of a Warrant issued by the Reeve of the Township of Esquesing bearing date the fifth day of May, 1941, a sale of lands in arrears of taxes in the Township of Esquesing will be held at the Council Chamber in the Village of Stewartstown at the hour of ten o'clock in the forenoon on the Eleventh day of October, 1941, unless the taxes and costs are sooner paid.

NOTICE IS HEREBY GIVEN that the list of lands for sale in arrears of taxes has been prepared, that copies of the said list may be had at my office, that the list of all lands for sale for arrears of taxes is being published in The Ontario Gazette on July 5th, August 2nd, and September 6th, 1941, and that in default of payment of taxes and costs the lands will be sold for the said taxes and costs.

TREASURER'S OFFICE this 2nd day of July, 1941.

NORMAN R. THOMPSON, Treasurer.

William Foster Died Suddenly in Toronto

SPENT MOST OF LIFE IN CHEL-TENHAM DISTRICT

A resident of Cheltenham and Acton for many years, William Foster passed away suddenly at his home, 74 Delaware Avenue, Toronto, on Monday, August 11th, from a heart attack. He was in his 70th year.

He was born on the 6th line west, Chinguacousy, and was a son of the late Thomas Foster and Sarah Tuslingham Foster. For many years he managed a stone quarry on his farm

at Cheltenham. He later moved to Acton, and prior to moving to Toronto six years ago, he operated a farm at Norval Station.

He is survived by his widow, the former Jennie Sharpe, eight daughters and a son. One son, Roy, predeceased him three years ago in March. The family are: Mrs. Martha Shaw, Toronto; Mrs. George Burt (Pearl), Georgetown; Mrs. Thomas Lock (Florence), Toronto; Mrs. Edward Lucy (Daisy), Toronto; Mrs. Allan McCullough (Mildred), Guelph; Mrs. Charles Flint (Verna), Toronto; Tuslingham, Dorothy and Georgina at home. Also surviving are four sisters: Mrs. Allen McPherson, Acton; Mrs. Sarah Ferguson, Stouffville; Mrs. William Sharpe, Cheltenham, and Mrs. James Sharpe, Campbell's Cross, and six grandchildren.

The funeral was held on Wednesday, August 13th, with a private ser-

vice at the Meyers-Elliott Funeral Parlours, Toronto, conducted by Rev. L. I. Hunter, followed by a public service at Cheltenham United Church, conducted by Rev. Norman McLeod, Brampton.

Many beautiful floral tributes marked the high esteem in which Mr. Foster was held. The Cheltenham United Church choir sang during the service. The pallbearers were six very dear friends: Thomas Lyons, W. H. Henry, William Fraser, George Harris, Hugh Caldwell and Silas Clarridge. Interment was in the family plot in Cheltenham Cemetery.

Photographer: "Watch and see the birdie." Modern child: "Pay attention to your exposure or you'll ruin the plate."



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Fixing the Bombs in the Racks under the Wings of a Plane — Royal Canadian Air Force Photograph

bombs attached to the wings. They saw the drogue planes come in and drop the drogues, or targets, riddled with machine gun bullets and they felt grateful for an insight into the training of the student observers in the R.C.A.F. and kindred Air Forces of the Empire.

Really what they saw was only a fraction of what the student sees. I was at Jarvis school with the other editors in May. I returned in August and was admitted to the various buildings where the doors are kept locked and few are privileged to enter. I was allowed to use the power driven machine gun turrets of actual fighting planes; I was initiated into the mysteries of the bombsight, as far as was possible in an hour or so; I was offered a flight with one of the machine gunners out over the water of nearby Lake Erie, and I saw the inside workings of the "Bombing Teacher," a machine that literally amazed me.

Difficult Course of Studies Group Captain G. E. Wait is the Commanding Officer at the Jarvis School. After a cordial welcome, he turned me over to Flying Officer O. T. Johnson, with instructions that I was to be shown everything and allowed to try out the various machines used in training. And Flying Officer Johnson literally carried out those instructions. If I didn't learn everything about bombing and the use of machine guns, it was because one can't do that in an afternoon.

First, we went over the details of the course of study together. It was like the curriculum of a university course in engineering, with its various formulae and its applied mathematics. I wondered that students could pick it up unless they had been particularly good in mathematics in their high school days, but the Flying Officer said that few failed. Those who did not understand the theories could memorize the formulae.

Study included the theory of bombing; trajectory angles, use of the Vector attachment for bomb-sights when aiming at moving targets; setting bombsights; low and high level bombing; wind drift and

but oversize to make a good gunner. Five or six switches set the machinery in motion and I looked through a small reflecting sight, already described in an earlier story. With my left hand I worked a "stick" similar to those that control small planes. A touch of my thumb on a button on top of the lever started the machine gun. But the mechanism was too fast for me. I got in a few shots, but I scored not a hit.

Another turret was of somewhat different pattern. Hand-bars like those on a bicycle controlled the motion—a turn to right or left made the turret turn and by lifting up or pressing down, the machine gun was moved.

Actual practice with machine guns is carried out over Lake Erie. The planes used are Fairey Battles, used earlier in the war as medium bombers. Some are "drogue planes," painted with yellow and black stripes as a warning to other planes that they are trailing behind them a long steel wire. At the end of the wire dangles a drogue, or cloth target, cylindrical in shape and about eight feet long.

The machine gunners go up two at a time in another plane of similar make. An experienced pilot sits up in front, the two gunners side by side back near the tail, where it is rather bumpy. The planes follow a definite schedule, meeting the drogue plane over the lake and firing in a certain area. Bullets in the machine guns are dipped in paint. Those fired by one gunner leave red holes; the other blue. That cuts the flights in half and requires less targets. The drogue plane circles back over the field and drops its drogue, releasing another at the end of the wire to take its place. Flights of the planes with the gunners take only about ten minutes.

Bombs and Bombsights

Bombs and bombing have become important in this war. Much might be written about them. The bombs are of several types, depending on the purpose for which they are intended. They tend to increase in size, weight and destructiveness. Some explode on contact; others go through the roof and explode inside the build-

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