

RCAF Seeking Navigation Independent Of Ground

By DAVE MCINTOSH
 Canadian Press Staff Writer
 OTTAWA CP—New methods of aerial navigation completely independent of aids supplied from the ground are under close study by the RCAF.

The chief advantage of these methods is that they are not subject to radio jamming or interference.

Sqdn. Ldr. S. V. McKeague, secretary of the navigation research panel for the Defence Research Board, says that in the field of astro navigation, navigation by the stars "recent work on automatically computing sextants would suggest the possibility of automatic navigation in the not too distant future."

Astro navigation, of course, has been used since the invention of the sextant centuries ago. But devices now are being developed which are known as "star-trackers." Three used in conjunction can give an aircraft's position continuously.

HAS DRAWBACKS

Astro navigation is done by measuring with a sextant the angle between the line of sight to a celestial body and a line on a horizontal plane to the earth's surface. These angles are translated

into position lines along which the plane is flying. The plane's exact position is where the lines cross.

The trouble with astro navigation is that the stars must be visible. And in the daytime, only the sun can be used. Translating sextant shots into position lines also requires much time which a high-speed aircraft does not have.

Even better than astro is inertial navigation, still comparatively new though its principle has been known for a long time.

Inertial navigation depends on the accuracy of the gyroscope and many countries are trying to perfect this device. Inertial navigation is completely independent of ground-based aids and the stars are not used at all.

PROMISING RESEARCH

"Inertial navigation systems are rather complicated and expensive but when developed should provide nearly accurate automatic navigation," says Sqdn. Ldr. McKeague.

A freely-spinning gyroscope, like a child's top, possesses the property of maintaining a fixed direction in space.

The axis of a perfect gyroscope in a plane, therefore, would remain pointing in one direction no matter what direction the aircraft

might take.

The trouble with Second World War gyroscopes was they couldn't maintain one direction and even tumbled over completely if a plane took evasive action. The main problem apparently now being solved has been to develop a gyroscope that will keep constant direction and not tumble.

From the perfect or near-perfect gyroscope it is only a short step to accurate or near-accurate automatic navigation. This is done by measuring by means of the gyroscope the angle between a line from the point of takeoff to the centre of the earth and the line from the aircraft's position to the centre of the earth.

In other words, the inertia of the gyroscope-its tendency not to change directions and to remain fixed-substitutes for the fixed position of the star in astro navigation. All the navigator needs is some constant factor, whether it be a gyroscope or a celestial body. It is considered likely here that inertial navigation will be employed in guided missiles before planes. The reason is that the shorter the time it takes a missile to reach its target, the less the gyroscope will have lost its direction, making navigation that much more accurate.

Damaged Cathedral At Nicolet To Be Demolished

NICOLET, Que. (CP)—A frightful landslide that dumped a chunk of this town into the Nicolet river Saturday so undermined the twin-spired Cathedral of St. Jean Baptiste that it will have to be demolished.

Mgr. Albertus Martin, Roman Catholic bishop of Nicolet, made it clear Tuesday the church must be replaced but when and how the demolition will be carried out has not been decided.

It will be the third cathedral to disappear since the early days of this south shore town. The first collapsed, the second was destroyed by fire and now the third, 150 years old, must be torn down.

The cathedral has not been used for worship since Saturday when the landslide carried six buildings into a huge crater on the shore of the Nicolet river and killed three persons. But residents are able to attend services in the 14 chapels attached to convents and other religious institutions here.

Meanwhile, engineers were busy studying the slide area and the bishop asked for assistance from the federal and provincial governments.

Assistance from the Quebec government was expected to be announced today when the fourth session of the 24th legislature opens.

Provincial government engineers Tuesday dug stakes deep into the clay and sand soil to detect further earth movements. None was indicated.

Friends regret the illness of Mr. Charles Merrill at his home in the village and all hope for him a speedy recovery.

Messrs. Roger S. Burns and Dallas Reeves third year students at Prince of Wales College spent the past weekend in Freetown.

The W.M.S. of Freetown Presbyterian Church met for the October meeting at the home of Mrs. Calvin Reeves. L. Freetown was president, Mrs. Albert Campbell presiding. The meeting opened with the call to worship, Psalm 100. The 107 psalm was read responsively by the members. Roll call was answered with a verse containing the word Thanks. Fifteen members and one visitor were present.

The highlight of the meeting was the report of the annual meeting in New Glasgow, N.S. given by the two delegates, Mrs. George Jardine and Mrs. Trueman Paynter. Sentence prayers were offered by Mrs. Roy Lidstone and Mrs. G. Jardine and a Bible quiz was presented by Mrs. Donald Bernard, assisted by Mrs. John Andrews. Meeting closed with the Mizpah benediction in unison.

Mr. Ralph R. Burns returned on Saturday evening from a business trip to Halifax, N.S.

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LOCKE ROAD

Mr. and Mrs. Joseph T. Gallant of Forest View were in O'Leary on Thursday November 10th. Mrs. Gallant spent the day visiting at the home of her son and daughter-in-law, Mr. and Mrs. Vincent Gallant and Junior.

Mr. and Mrs. Alban Arsenault of Howland were in O'Leary on Thursday November 10th.

Fred Arsenault of Howland was in Forest View on Thursday Nov. 10. Mr. and Mrs. Trueman Harris of the Locke Road were in O'Leary on Saturday November 12th.

Mr. and Mrs. Joseph T. Gallant of Forest View and Mr. and Mrs. Alban Arsenault of Howland were visitors on Saturday night Nov. 12th at the home of Mr. and Mrs. John Arsenault of Howland.

Mr. and Mrs. Jerry Gallant of Howland were visitors on Saturday night at the home of Mr. and Mrs. Cora Gallant, Howland. —AN

CARLETON MISSION BAND

The Happy Sunbeams Mission Band Carleton Branch of Cape Traverse United Church met at the home of Harley Harper on Oct. 24 at 4 o'clock.

In the absence of the president Joyce Lord, who was attending a C.G.I.T. Rally in Charlottetown, the first vice-president, Darryl Robertson presided.

Meeting opened by repeating the mission band purpose, followed by singing the mission band hymn. Offering was taken by Garth Harper, during that time the members sang Hear the Pennies Dropping.

Roll call was taken with 24 members and five visitors present. Minutes of the September meeting were read by the secretary, Earl MacWilliams and approved. It was reported that used Christmas cards had been sent to the United Church Port Worker, at Halifax, also a box of used cards to our missionary Miss Elma Inman in Trinidad.

As we are now selling Christmas cards in the band, reports were given from the members who are selling. Edith MacCaull had a birthday in October, as she came to the center of the room the members sang Happy Birthday to her.

A vote of thanks was extended by Pauline MacCallum to Harley's mother and grandmother for entertaining the group during the afternoon, and was seconded by Jeanne Campbell. Mrs. John Myers read and explained the last chapter from the study book, "Chad of India."

Dianna Sturdy had charge of the devotional period. "The Wise Men bring their Learning", was sung. Scripture reading by Elva Howitt. The Lord's Prayer was repeated in unison. A solo, "Praise Him, Praise Him" was sung by Gerald Somers. "Jesus Bids us Shine" was sung.

Francis.

Mrs. Park Francis invited the members to meet at her home for the next meeting when the lunch committee will be Miss Elsie Francis and Miss Phyllis Cairns. On motion the meeting adjourned and lunch was served by the hostess, assisted by Grace Francis and Phyllis Cairns.

FREETOWN

The Birch Grove Womens Institute met for its annual meeting on November 3rd at the home of Mrs. Hubert MacNeil with a good attendance. The president, Mrs. Ernest Taylor, presided. The minutes of the last meeting and the past annual meeting were read by the secretary, Mrs. MacEachern who also gave the financial report.

After the various committees had given their reports new committees were appointed and the following officers were elected for the ensuing year: president, Mrs. Walter Campbell; vice-pres., Mrs. MacNeil; secretary—Mrs. Lidstone; treasurer Mrs. G. Jardine; organist, Mrs. Dammarell; directors, Mrs. R. Jardine, Mrs. Dammarell and Mrs. B. Taylor; auditors, Mrs. Scates and Mrs. Lewis. A guessing contest put on by Mrs. A. Campbell was enjoyed. Next meeting to be held at Mrs. Fred Paynter's. Lunch was served by the hostess and committee in charge.

Mrs. John Charlton of Dartmouth N.S. is visiting with her parents, Mr. and Mrs. John Lewis. She is accompanied by her daughters, Janet and Anne.

Miss Winnifred Burns of Halifax, N.S. spent the Remembrance day weekend guest of her parents, Mr. and Mrs. J. Roy Burns, L. Freetown.

On Monday evening Nov. 7th a number of people gathered at Mr. Eldon Drummond's in outh. Freetown to start a farm forum/group.

Mrs. Ralph MacCaull explained to the members the meaning of the Mizpah benediction.

Meeting closed by repeating the Mizpah benediction. Mrs. Hedley Lowther provided a treat to the children.

LADY FANE W.I.

The 25th annual meeting of the Lady Fane W.I. was held at the home of Mrs. Stanley Mayhew on Thursday evening, Nov. 3. With the president presiding, the meeting opened by repeating the ode and creed in unison. Roll call was responded to by seven members paying their dues.

Minutes of last annual and regular meetings were read, approved and signed by the president. Secretary reported \$302.00 on hand. New officers for the following year are as follows: President, Miss Phyllis Cairns; vice-pres. Miss Elsie Francis; sec'y-treas. Mrs. Stanley Mayhew (re-elected); directors, Mrs. Lewis Francis, Mrs. Park Francis, Mrs. Art Craig, auditors, Mrs. Kenneth Robblee and Mrs. Chester Wilson.

Roll call for the next meeting to be answered by an exchange of gifts, the gift not to exceed 25 cents. It was moved and seconded that a bill of \$8.00 for cups bought at Parker Canada's be paid.

New committees for the next three months are School, Mrs. John Francis; Prog., Phyllis Cairns; and Elsie Francis; Sick, Elsie

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By J. R. Williams

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