VOL. 4

RCAF Station Comox, B.C., Thursday, October 10, 1963

# NORAD-The North American Air Defence Commaud

NORAD was formed in September, 1957 following an agreement between the governments of Canada and the United States which, in effect, was official cognizance of the fact that air defence of the two countries is indivisible

The mission of NORAD, simply stated, is: "Defend the North American Continent against aerospace attack." This is one-half the formula for deterrence against aggression - i.e.: Skilled, ready offensive forces plus skilled, ready defensive forces equal Deterrence.

Under the agreement NORAD tinuous radar tracking of apopposed to administrative conof Canada and the U.S. These forces are provided by NORAD RCAF ADC component commands: RCAF Air Defence Command, U.S. Army Air Defense Command, U.S. Naval forces in NORAD, and USAF Air Defense Command, Operational control is defined as the power of direct-ing, co-ordinating, and controlling the operational activities of available forces.

FORCES MAKING UP NORAD The component commands that make up NORAD (USAF ADC, U.S. Army ADC, U.S. Naval Forces in NORAD, and RCAF ADC) are responsible equipped forces to the Commander in Chief of NORAD (CINCNORAD) for his operational control. Each has a different contribution consistent with its location and historic role.

USAF ADC

The bulk of NORAD'S fightradar squadrons and early warning airborne radars. USAF ADC is also active in space with Ballistic Missile Early Warning System (BMEWS) and Space Detection and Tracking System (SPADATS) providing important information to NORAD in respect to ballistic missiles and orbiting space objects. The Air National Guard also provides interceptor squadrons and aircraft control and warning squadrons on full-time assignment to NORAD via the USAF ADC. USARADCOM

The U.S. Army Air Defence Command contribution to NORAD is in the field of surface-to-air missiles of the Nike family. Now equipped entirely with the Nike Hercules, the Regular Army is supported in its role by the National Guard with the Ajax.

NAVFORNORAD The U.S. Naval Forces in NORAD. Navy ships and aircraft contribute significantly by U.S. and Canadian personto the off-shore radar cover- nel. The size of one sector may age that supplements the differ greatly from another. shore-based radar in provid- In general, the size depends on the atmosphere. For this it present structure of the PMQ can leave to others to do for

has operational control (as proaching aircraft. Also active in space, the U.S. Navy's Space trol) of the air defence forces Surveillance System is tied into NORAD through SPADATS.

> In the weapons field the provides fighter interceptor Eglin Gulf test range. squadrons equipped with CF101B "Voodoo" aircraft and
> two surface-to-air Bomarc
> missile squadrons, They also
> contribute heavily in the area of surveillance, and in the detection and identification Starts Oct. 12 on CBC-TV functions, i.e. radars and the GObC.

The commanders of NORAD component commands also serve as principal advisers to for providing trained and C IN C NORAD on matters casts of the games this season pertaining to the services they begin at 5:30 p.m. represent.

U.S. unified command with a twofold mission. The first part is the ground defence of the State of Alaska, and the sec-State of Alaska, and the second part is air defence. For that part of his mission which home games on an alternating party plan their new term ded. "Every effort must be er-interceptor squadrons come deals with air defence, the from the U.S. Air Force Air commander in chief of Alas-Defence Command. This or- kan Command is responsible ganization, by far the largest to C IN C UORAD. Thus all casts from Oct. 12 to the end in NORAD, also contributes the forces engaged in the the surface-to-air Bomarc misaerospace defence of North Oct. 12 - New York at Montreal sile and a large number of America are under the operational control of a single commander.

AREA OF OPERATION

Geographical division: Currently, the North American Nov. 30 - Boston at Montreal. continent is divided into eight Dec. 7 - Chicago at Toronto. regional areas of air defence responsibility. Six of these are numbered regions taking in Dec. 28 - Detroit at Montreal. some of the southern portions of Canada and all of the continental United States, excluding Alaska. The Northern NORAD Region encompasses the rest of Canada, including highly populated industrial areas of Ontario and Quebec. Alaskan NORAD Region completes the picture. Each region commander is responsible to C IN C NORAD for all aerospace defence activity within his designated area.

Each of these NORAD regions is further subdivided into areas called SECTORS. Sectors that cross the international boundary are jointly manned ing early warning and con- the amount of air traffic and

## **Bomarc Units Train Under** New 'Follow-On' Program

TYNDALL AFB, Fla. (NNS) — The 4751st Air Defense Squadron (Missile) has been under the direction of the 73rd Air Defense here only since July 1, but already its new Bomarc training program is well under way.

The 4751st is a USAF Air Defence Command unit and Air 4751st personnel. Each unit Defence Command is the USAF will bring its own guidance component of North American team which will work at Mont-Air Defence Command, which gomery NORAD Sector headis responsible for continental quarters and be evaluated by aero-space defence.

Bomarc missiles, designed to the 4751st. destroy attacking aircraft, are deployed at eight U.S. and two

Canadian sites. Under the new "follow-on"

program, a team from each of the 10 tactical sites will deploy to Hurlburt Field, Fla., once each year. Each team will bring a tactical missile, which it will process at Santa Rosa RCAF Air Defense Command Island and launch down the

Canada

Saturday night NHL hockey games will again be seen coast-to-coast on CBC television starting October 12, when Hockey Night in Canada returns for its 12th season. Tele-

epresent.

The Alaskan Command is a from Maple Leaf Gardens, Tor-

As in the past, most viewers see Toronto and Montreal

Following is the schedule of Hockey Night in Canada tele-

Oct. 26 - Chicago at Montreal.

Nov. 2 - Chicago at Toronto. Nov. 9 - New York at Montreal.

Nov. 16 - Chicago at Montreal. Nov. 23 - Boston at Toronto.

Dec. 14 - Boston at Montreal. Dec. 21 - Detroit at Toronto.

portion of the season will be issued later.

number of vital target areas located within the sector. METHOD OF OPERATION

The NORAD mission has been broken down into four basic actions - detect, identify, intercept and destroy. DETECTION

Today, NORAD'S mission has grown from simply air defence to that of aerospace defence. against manned bomber attack, but also against a bal-(Continued on page 3)

Teams will be evaluated by members of Detachment 1 of

In addition to the deployment program, the 4751st trains Bomarc instructors and tests Bomarc missiles.

These are ground-to-air interceptor weapons, with ranges of 200-250 miles for the Bomarc A and 400 miles for the more advanced Bomarc B.

They are guided from the ground by radar signals generated by NORAD's Semi-Automatic Ground Environment System from radar tracks of the target arrerart.

Each missile's own target seeker takes over in the immediate vicinity of the quarry, pinpoints the enemy and detonates the warhead at the closest point of intercept or collision.

First team to complete its deployment was the 46th Air Defence Squadron (Missile), Mc-Guire AFB, N.J.

As Premier Bennett and his policy on B.C. power on the made to reduce that loss." provincial front . . . here at

The councillors for the new term will be as follows . . Ward One: Cpls Wood and Zacher; Ward Two: Cpl. J. W. O'Connell and FS Zaleski; Ward Three: Cpl Westfall and Sgt Kendall; Ward Four: F/Ls Mayne and McLeod; Ward Six: A schedule covering the 1964 F/Ls Mason and MacKay; Ward Seven: Sgts Carragher and Campbell; Ward Eight: Cpl Lueszler; Ward Nine: F/L Riggs and FS Gridley.

Following the formal handover of the council from S/L Rushton to S/L Crossfield, the new council reviewed some of last year's operation and assessed the events and possibilities of the coming year.

Among the perennial problems that face the council each It must be on guard not only year is money . . . there will be no doubt many occasions this term when the professionlistic missile and space threat, al knowledge of the new mayor Literally, it must watch the in this field may prove very whole area over the North valuable. There has also been council body.

## Fire Prevention Drive Asked

A step-up in fire prevention efforts to hold down the nation's gigantic fire toll was urged by W. W. Owen, general manager of the Canadian Underwriter's Association.

Mr. Owen said that Fire Prevention Week — October 6 to 12 - is a logical starting point.

Commenting on the nation's human fire toll — 620 persons lost their lives from fire last year and hundreds more were injured-Mr. Owen said: "The loss of a single life is a tragedy and the loss of over 600 lives gives emphasis to the need for everyone to be constantly alert to this ever present threat. The loss of life can and must be reduced. There can be no relaxation in the efforts to eliminate uncontrolled fire."

"A point to be remembered" he continued, "is that each one of those persons who died or was injured was an inditics show large numbers, the individual suffering and the grief of friends and relatives underline the need for thinking not only in terms of large numbers but more importantly of the individual."

### THE MEASURES OF LOSS

In relation to property destroyed and the number of fire losses which occur are the usual measures of the fire loss, Mr. Owen said.

"The fire loss for 1962 measured in dollars, which amounted to \$126 million, is an enormous drain on the economy of this country," he ad-

"We must remember that home, Mayor Crossfield and the fire loss is made up of a party planned this year's stra- large number of fires, any one tegy for the local range war of which could have involved on stray dogs and stuffed loss of life, and brought phystorm sewers in the PMQ area sical suffering to individuals as well as loss of their property."

On the bright side, Mr. Owen reported that fire prevention is paying off.

"It is clear that fire prevention efforts and fire protection facilities have in effect reduced the annual toll from fire," Mr. Owen said. "The ratio of loss of life from fire to the population of the country has dropped as the population has increased. And studies show that fire losses as compared with the amount of property and value of property subject to fire loss have actually been reduced steadily over the past 60 years, and these reductions are continuing during the present decade. In fact, it is a matter of record that had it not been for fire prevention and fire protection measures, the annual fire loss would probably be three times as great as it is."

We must recognize that fire can be controlled, but it is up American continent from just some suggestion by the new to the individual to do his above the ground to beyond regime of streamlining the part. It is not something we

(Continued on Page 12)



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F L W. R. Johnson (310) FO E. J. Newman (384) . S. Rec. of Staff Outdoors Editor F/O R. Burke (235)

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## Keep Safe from Fire

Advertising Manager

This is Fire Prevention Week, and it is a good time for all of us to pause in what we are doing and give a thought to care with fire.

Too many fires need never have happened, and a little care on the part of all of us can reduce our tragic fire toll in lives and property destroyed.

On the average, about 170 fires start in homes in Canada day. Last year 620 persons lost their lives in fires and hundreds more received bad burns.

And last year, dollar fire losses in Canada totalled \$126,000,000.

The tragic thing about all these fires is that threefourths of them were the result of carelessness, according to the Canadian Underwirters' Association.

With a little care, lives can be saved and needless burning of property prevented.

Here are a few suggestions that may keep your home

1-Never leave small children alone. Even if you are leaving for only a few moments, get a responsible person to stay with them. When going out for an extended period of time, em-

2-Small children and elderly people are the more frequent fire victims. If there are elderly persons in your houshold, plans should be made to get them out of the house quickly in case of fire.

3-Use care with cigarettes. Never discard a cigarette or drop a match without being sure it has been extinguished. It's a good plan to break a match after using just to be sure it is out. Keep matches out of reach of children. And never smoke in bed.

4-Keep a flashlight handy for use in dark places. Never 5—Keep your electrical appliances in safe condition. Take them to a qualified repairman if they have loose connections are given a fina brushing with tions. strike matches or carry lighted candles into closets or attics. or frayed or worn cords.

6-Throw out old newspapers, magazines and other waste combustibles regularly, rather than let them accumulate in the basement or attic. These are the things which feed fires. 7-Impress upon everyone in your household that in case of fire, first get everyone out of the house, and then call the fire department. Call the department from your neighbour's house, if need be, but never re-enter a burning house.

These suggestion could save your life, or the lives of members of your family.

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DAY TRIPPERS Three of our stalwarts have pointment. been busy lately on TD to the Nursery: In the Parish Hall cities of Vancouver and Vic- for the 10 a.m. mass only. toria. LAC Bob Morrick, Ed Dunsford and Ed Duggan, tenay 9 a.m. and 5 p.m. Keep up the good show.

FIRE PREVENTION . . FO McGimpsey (409) . . . F/L L. Caron (409) two in a store

A TRAFFIC DITTY Thrills on hills and swerves the Parish Hall. Please urge on curves

# Chapel Chimes

ROMAN CATHOLIC CHAPEL Father H. Thomas, F/L SUNDAY MASSES in the go to MSE technician Tom Station Chapel: 8 a.m., 10 a.m. hrs-DIVINE WORSHIP. 1200

Tuesday, Thursday and Friday Annex. at 4:05 p.m. Wednesday 8 p.m., FIRST FRIDAY in the month

-mass at 4:05 p.m. Confessions: Before masses and Saturday, 7 to 8 p.m. Baptism: Sundays by ap-

Masses in the vicinity Cour-Cumberland 11 a.m., Comox

8:30 and 10 a.m. LAC Fred Nesbitt returned | CATECHISM commences the to the garage last Friday and third week in September. Four

YCS meetings: Second and fourth Sunday at 6:30 p.m. in your youngsters of high school Cause tragic spills and shat- age to attend these discussion periods.

WHAT ARE YOU?

Rowboat people need to be

Sailboat people move only

Steamboat people move

pushed along constantly.

# Try This Recipe

Probably the creative, artis- | Cover with a tea towel. Let tic side of bread baking has rise in a warm place, free from often been emphasized because draft, until doubled in bulkit gives a cook a definite feel- about 1 hour. ing of accomplishment to take Brush tops with soft butter her own sweet-smelling loaves or margarine and sprinkle with a mixture of the remaining 2 fresh from the oven.

This is why it would be a pity tablespoons sugar and ground f any cooks have been scared cinnamon. Bake in a hot oven off bread baking from hearing 400 deg. F., 20 to 25 minutes. t referred to as an art unto

It's true that at first glance yeast recipes look a little long, but this is generally because the method in the method in the method in the method is seen to be a seen to be the method is spelt out care- people, sailboat people and fully, and in many ways is like steamboat people. a check-list of the steps to

The recipe for Speedy Buns is a detailed yeast recipe which when a favorable wind is results in moist and delicately blowing. textured rolls.

spicy cinnamon and sugar mixture before being popped into the oven. A treat that can be produced with little cost and effort, they are well worth featuring at meals and snack-

SPEEDY BUNS

Yield - 1 dozen buns cup milk

4 tablespoons gran, sugar 12 teaspoon salt

cup butter or margarine cup lukewarm water 1 teaspoon gran, sugar

1 envelope fast rising active dry yeast

2% cups (about) pre-sifted all purpose flour

Soft butter or margarine teaspoon ground cinnamon Scald milk: stir in 2 tablespoons of the sugar, salt and the 14 cup butter or margarine. Cool to lukewarm. Meantime. measure lukewarm water into a large bowl; stir in the 1 teaspoon sugar. Sprinkle with yeast. Let stand 10 minutes, then stir well.

Stir in lukewarm mixture and 11 cups of the flour. Beat until smooth and elastic. Stir in sufficient additional flour to make a soft dough (about 1 to 14 cups). Turn out on lightly-floured board or canvas and knead until smooth

and elastic. Shape dough into a roll 12 inches long and cut into 12 equal-sized pieces. Shape each piece into a smooth ball. Place in a greased baking dish (about 7 x 10 inches, top inches, side measure). Grease tops.

PROTESTANT CHAPEL S/L S. M. Parkhouse SUNDAY SERVICES: 1100 hrs - HOLY COMMUNION Weekday Masses: Monday, 1100 hrs — Nursery — Chapel

> SUNDAY SCHOOL AND JUNIOR CHURCH

These activities will commence at the end of September. In the meantime teachers and other helpers are required CHOIR REHEARSALS

1800 hrs Thursday, Junior Choir. 2000 hrs Thursday, Senior Choir.

LADIES' GUILD

2000 hrs the third Tuesday of the month.





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# Thursday, October 10, 1963

SURVEILLANCE

(Continued from page 1) the approach of a missile attack. Such warning is transidentification.

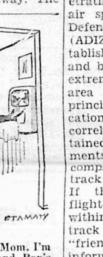
identification.

interest and interest are identification.

INTERCEPTION lance systems operating, all of which feed information into mitted automatically and displayed in NORAD's combat with somewhat more than as directed, send guidance inthe Combat Operations Centre in Colorado Springs. MANNED BOMBER

First is the manned bomber SPACE DETECTION surveillance network. The populated areas of Canada and AND TRACKIING SYSTEM

WARNING ingdales Moor, England. The continent at all times. huge radars at the BMEWS Stringent rules have been



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"Situation's normal, Mom. I'm doing my homework and Pop's

to miss.

eously, BMEWS data is trans- place within NORAD airspace

DEW Line crosses Alaska and SPADATS has the job of de- by the interceptor crew. is extended to Midway Island tecting, tracking and cata- In all, there are more than by the Navy, and on the east loguing all man-made objects 40 regular fighter-interceptor it crosses Greenland and is in space. Other sensors around squadrons in the NORAD sysagain extended by the Navy the world are also being used tem. In an emergency, these all the way to Great Britain. to augment the system. IDENTIFICATION

into operation shortly at Fly- craft over or approaching the ment.

ompared with an actual radar of the Nike family. track of an airborne object. The MB-1 Genie nuclear air-

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system will provide a warning the flight is categorized as un- | SAGE added high-speed digi- NORAD combat operations time of about 15 minutes of known and interceptors may tal computers to the control centre in Colorado Springs, the approach of a missile at- be scrambled to make visual process. It is able to receive, where information from the

the United States are covered The third part of the NOR- erage number of unknown in site. by a massive network of ra- AD detection and warning sys- the system has steadily de- COMBAT OPERATIONS dars. This is extended out to tem is SPADATS - The Space clined over the years until now CENTRE sea off both coasts by Air Detection and Tracking Sys- the number is less than ten Force radar aircraft and Navy tem. With headquarters ad- per day. Of these it is common of the whole system is the Defence Headquarters. picket ships. North of this jacent to the NORAD combat to find two or three instances populated area is the Mid- operations centre in Colorado where interceptors are scram-Canada Line and some 600 Springs and receiving infor- bled but recalled before inmiles farther north, on the mation from two main courses, tercept due to further comedge of the arctic circle, is the U.S. Air Force Spacetrack munications checks. The rethe Distant Early Warning System and the U.S. Navy maining unknowns are inter-(DEW) Line. On the west, the Space Surveillance System, cepted and visually identified

forces would be augmented by available fighter aircraft o Detection of aircraft must the U.S. Marine Corps, U.S. A second NORAD detection be followed by rapid and ac- Air Forces, the Air National system is the Ballistic Missile curate identification. Because Guard, and interceptor train-Early Warning System (BM- the enemy can choose the time ing units of the RCAF Air De-EWS). Two sites are now op- and place of an attack and fence Command. All these erating. These are located at might use the normal friendly forces are highly mebile and Thule, Greenland, and Clear, air traffic as a screen, NORAD constantly practice dispersal Alaska, with a third coming must know the identity of air- and "forward base" deploy-

DESTRUCTION

The NORAD concept of wagsites can detect a missile as imposed on all air traffic pen- ing aerial warfare is that of a far as 3,000 miles away. The etrating or operating within "family of weapons," or deair space designated as Air fence in depth. The aim is to Defence Identification Zones subject an invading force to (ADIZ). These zones are es- continuous attack from as far tablished around the coasts out as possible as it approachand borders and the northern es a target area. An enemy extremities of the NORAD bomber would first be attacked area of responsibility. The by long-range manned interprincipal method of identifi- ceptors, next by pilot-less ineation is based on flight plan terceptors of the Bomare type, correlation. Information ob- and finally, if it still survived ained from inflight amend- the bomber would come withments and position reports is in the range of the missiles

If the information on the to-air rocket and the GAR-11 flight and the track correlate Falcon nuclear guided missiles within established criteria, the tremendously increase the kill track may be identified as capability of the fighter in-"friendly." If the flight plan terceptor. Detonated in a forinformation and track do not mation of enemy bombers, match, or if there is any doubt, either weapon would wreak havoc on the attacking aircraft. Not only would be bomber be destroyed, but its load of nuclear weapons would be neutralized, literally "cooked," thereby minimizing the likelihood of explosion of the nuclear bomb with its subsequent lethal fallout.

Both the medium-range and surface-to-air Bomarc missile (approx. 400 miles range) and the shorter range Nike-Hercules (about 75 miles range) are nuclear capable.

COMMUNICATIONS IND CONTROL

Tying the whole detection, tracking and weapons system of NORAD together is a vast communications network. Information from the detection system is transmitted rapidly to control centres located all over the continent where it is assessed and evaluated. Instructions are passed quickly to the interceptor pilots and missile crews. This information is processed and displayed rapidly and accurately so that the commander can make continuous estimates of the situation and, if his area is attacked, direct the air battle.

Elaborate duplication is found within the system to allow for survivability after battle damage. Command control can be passed from region to region and sector to sector as the situation demands. Arrangements have also been made to provide alternate command posts should the combat operations centre at Colorado Springs be knocked

Since July, 1958, NORAD has moved into the electronic dataprocessing field. This is the Semi-Automatic Ground Environment (SAGE) system.

weapons.

The nerve centre and hub and the Canadian National

process and display aerospace entire network is received and surveillance information and, evaluated. This centre is linked operations centre. Simultan- 200,000 aircraft flights taking structions or information to tem to all NORAD subordinate commands, command posts, mitted to Headquarters SAC, in any given 24-hour period, SAGE will become operation- and key agencies throughout the Pentagon and National it is a rare day when none of al in Canada in the northern the continent. From here an Defence Headquarters, Ottawa. these shows at the NORAD NORAD region during 1963, attack warning would be given combat operations centre as North Bay, Ontario, has been to the air defence system, to "unknown." However, the av- selected for Canada's SAGE Ottawa and Washington, to the Strategic Air Command, the civil defence agencies of both countries, the Pentagon





her car him hudbareh aliend cook? THIS WAS THE AERONAUTICAL NAME GIVEN TO THE FIRST CHILD IN THE WORLD TO BE BORN IN AN AEROPLANE. IT HAPPENED ABOARD AN R.C.A.F. FC 2L FAIRCHILD ON MARCH 29th, 1931. PILOT A.L. MORFEE WAS EVACUATING THE INDIAN MOTHER FROM MILE 214 ON THE HUDSON BAY RAL ROAD TO THE HOSPITAL AT THE PAS, MAN. WHEN THE STORK ARRIVED, ASSISTED BY CREWMAN, LAC BALEY. BELEASED BY THE R CAPA ALL TRANSPORT COMMAND

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## Underground Chambers For Air Defence

Since World War II, Canada has entered into certain military alliances whose purpose is to deter aggession by joint defence action.

One of these defence agreements is primarily concerned with the air defence of North America and the organization established to implement this obligation is NORAD. A part of the equipment required for the effective operations of NORAD comprises the extension, into Canada, of a Semi-Automatic Ground Environment system of Detection and control. This program is known as Continental Air Defence Integration North, or CADIN.

In the late fall of 1958, the Construction Engineering Subdivision of the Royal Canadian Air Force was instructed to prepare estimates for the construction of SAGE facility in the general area of North Bay, Ontario. Concurrently, studies were being conducted within the United States to determine the feasibility of constructing a system which would be capable of surviving nuclear attack. Preliminary design studies included comparison of the costs of constructing "unprotected" installations from standard plans, with the costs of a facility, based on new plans incorporating protective

R.C.A.F. STATION COMOX, TOTEM TIMES NO SIR, I DON'T SUPPOSE SPINNING . OUT ON THE CORNER, DRIVING ON THE GRASS; CHETTING STACK IN THE DITCH AND SETTING FIRE TO THE TRUCK IS TOO DAMN FINE A START FOR FIRE PREVENTION of plans and specifications for anical and Catalytic Construc- USAG has provided us with By source, last year's pay-

engaged by DCL to assist in of the work of two additional the electrical installation. its development. The group specialized consultants — HH This team of engineers has comprises AD Margison and Angus and Associates for the worked under the direction of Associates who have been re- development of the mechani- the RCAF Construction Ensponsible for the production cal installation of the mech- gineering design staff. Close

co-operation and flexibility have been most necessary as

sign information in the field able. The main sources of such



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the development of the project has involved new fields of engineering and because deof thermonuclear effects has not always been readily availinformation are primarily within the United States. The

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pension were: sales tax, \$302.2 million; personal income, \$273.6 million; corporation income, \$115.3 million.

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# HOUSEHOLD FINANCE

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USEFUL HINTS

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2 tsps. baking powder

1 tsp. soda

tsp. salt

Favourite Recipe from

24 cups sifted Swans Down

(Calumet preferred)

Mrs. Ireland

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Thursday, October 10, 1963

If you have a brilliant idea | Poaching Eggs-Add vinegar be \$1.00 for the most appro-

DATES TO REMEMBER

On October 23, from 3 p.m. to which has been added a cup to 5 p.m., the members of the of vinegar. Officers' Wives Club will be RAINBOW CAKE hostesses to a tea in honour of Mrs. G. Pearkes, wife of the Lieut.-Gov. of British Columbia. Get busy girls and make your hats. See you at the tea. OVERTURE CONCERT

Season tickets for the Overture Concert series held in Courtenay during the winter months, will go on sale the week beginning October 14. Anyone interested please contact Mrs. G. M. Adamson, PMQ 96, phone 339-2693.

PROTESTANT CHAPEL GUILD (Rummage Sale)

The RCAF Protestant Chape Guild is holding a rummage sale in the Elk Hall, Courtenay, Saturday, October 19 from 10 a.m. to 12 a.m. Any contributions of clothing, etc., will be appreciated. Please contact Mrs. G. Adamson. PMQ 96.

COMOX ALTAR SOCIETY (Card Party)

On October 17, the Altar Society of Comox is holding a Card Party at 8 p.m. in the Catholic Rectory, Comox. Admission is 50c and lunch will be served. Everyone welcome.

A reminder to ladies of PMQ and Tyee Park is in order There is a clothing drive on for the Indian Reservation, Duncan, B.C. There is a desperate need for clothing for children and adults. The thanks of Father Rossitier to all of you who have helped in this worthy cause. Clothing can be left at the Catholic Chappl Annex before or after Mass, or with any member of the CWL.

SOCIAL NEWS

A farewell party was held at the home of Mrs. W. Meronyk for Mrs. C. Finlay, mother of Mrs. Joe Hamilton. Mrs. Finlay who comes from Scotland has been visiting her daughter and family for the past few months. The guests included Mrs. D. Donaldson, Mrs Joe Hamilton, Mrs. P. Bremner Mrs. J. Savill and mother, Mrs. E. Dunnett and Mrs. W. Johnson. A delicious lunch was served, and all wished Mrs. Finlay a safe journey home. We will miss her.

On October 2, a baby shower was held for Mrs. Denise Zacher, at the home of Mrs. Norma McPhee. A pleasant evening lowed by a buffet lunch. Mrs. Zacher received a lovely assortment of gifts. The guests included: Mrs. M. O'Shea, Mrs. M. Lewis, Mrs. F. Senwick, Mrs. R. Ray, Mrs. L. Hasink, rs. P. Bonnet and rs. P. Bailey. CONGRATULATIONS

On October 3, a farewell party was held for Mrs Marg Meloche at the home of Mrs J. Rozon. Fourteen guests gathered to bid Marg a fond farewell. The Meloche family are leaving for Halifax on October 10. We all hope you have

a safe trip, and lots of luck. Wedding congratulations go out to Mr. and Mrs. Ray Riege who just arrived from Winnipeg. Best wishes from us all. HOUSEHOLD TIPS

White keys of piano - Ap ply a paste of whiting and lemon juice, allow to dry before wiping off. Whiting may be purchased at any drug store. Glassware - If you haven'

a plastic or mache bowl, always place a soft thick towel in the bottom of the sink before washing valuable glass ware. Use a brush on cut glass to remove the dust from the crevices, plus warm water and detergent. A little touch of the blue-bag in the rinsing lard, use 1 cup milk.

feet, soak them in warm water beating well.

11 inches deep, which have been lined on bottoms with paper. Bake in moderate oven (375 deg. F.), 25 - 30 minutes.

eup sugar 1 pkg. Jell-O (Raspherry, 2 cup very hot water Strawberry.) 2 eggs, unbeaten

Milk (see below for amount) | With butter, margarine or

representative. The prize will too much vinegar or they will Cream shortening, add sugar constantly with rotary egg BEAUTY TIPS and Jell-O gradually and beater (or high speed electric Olive Oil - When hair is out To soothe tired and aching cream together until light and mixer) and cook about seven of condition and feels like hay, fluffy. Add eggs one at a time, minutes or until frosting, will a series of hot oil shampoos Add flour alternately with diately transfer frosting to that are kept hidden from view milk, a small amount at a another bowl and beat about should have an olive oil bath. time, beating after each addi- one minute, or until thick Heat some oil in basin over a tion until smooth. Turn into enough to spread. two round 9-inch layer pans, CHARITY

JELL-O SEVEN MINUTE

14 cups granulated sugar

2 egg whites unbeaten Dash of salt Dissolve Jell-O in water in June Bremner With vegetable or any other top of double boiler. Add shortening, use 1 cup plus 2 sugar, egg whites and salt. Beat Bea Johnson for a name for this column, to boiling water to keep white soda, salt and baking powder well mixed. Their place over Dorrie Estline please phone your nearest and yolk intact. Don't use and sift together 3 times. rapidly boiling water. Beat Mary Cando

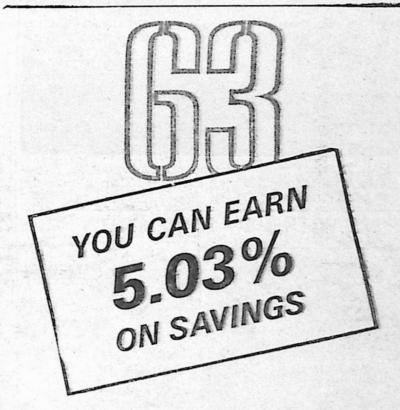
in the best of us,

of us Kay Rushton

the worst of us,

339 - 2620 Tyee Park 339 - 2427 Tyee Park 339 - 2592 Tyee Park 339 - 3125 Tyee Park

stand in high peaks. Imme- are very beneficial. Hands as hot as you can stand it. There is so much that is bad Massage the hands well, then wrap them in a towel which And so much that is good in has been wrung out in boiling That it doesn't behoove any towel cools. If nails are brittle and cuticles cracked, wrap To talk about the rest of us, each nail in cotton wool soak-3½ tbsps. Jell-O (any flavor) NEWS NEEDED - CONTACT ed in oil before enveloping 339 - 2156 them in a towel. Dry hands (Continued on Page 7)



## EASY TO BUY

You can buy Canada Savings Bonds for cash or on instalments. Buy them on the Payroll Savings Plan at work-or at banks, authorized investment dealers, stockbrokers, trust or loan companies. They come in denominations of \$50, \$100, \$500, \$1,000 and \$5,000 up to a limit of \$10,000 per person. They fit every pocket book!

## SIMPLE TO CASH

You can cash Canada Savings Bonds anytime at their full face value plus earned interest. When ready money is required all you have to do is complete the redemption form on the Bond, and present it to your Bank. You will receive your money immediately. Canada Savings Bonds are better than cash!

### **GOOD TO KEEP**

You get interest on Canada Savings Bonds on November 1st each year -41% for each of the first 2 years; 5% for each of the next 6 years and 51/16 for each of the remaining 4 years-giving an average return of 5.03% a year when held to maturity. In 12 years with accumulated interest every \$100 Bond will be worth \$161.00.

# CANADA SAVINGS BONDS/63

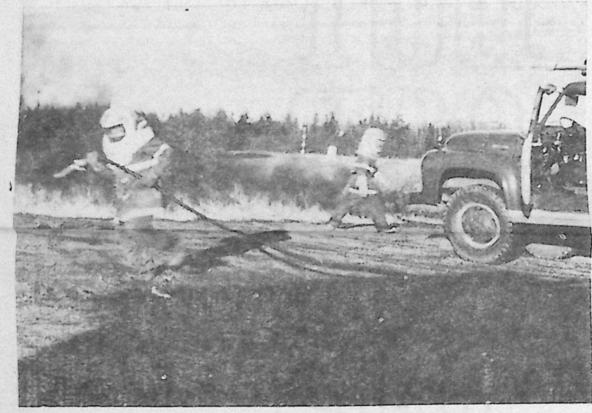
CSB-6

## ADMINISTRATOR AND FIREFIGHTER



As administrator as well as a firefighter, Sergeant Bob Jardine, 44, of Alta Lake, B.C., catches up on his paper work as part of his regular duties as a firefighter at RCAF Station Comox. Sgt. Jardine. a veteran of 22 years as an RCAF firefighter, is the son of Mrs. L. Neiland, 3439 West 7th Ave., Vancouver, B.C., and has been stationed at PCAF Comov for the past five years. stationed at RCAF Comox for the past five years.

### AIRFORCE FIREMEN PRACTICE

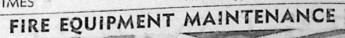


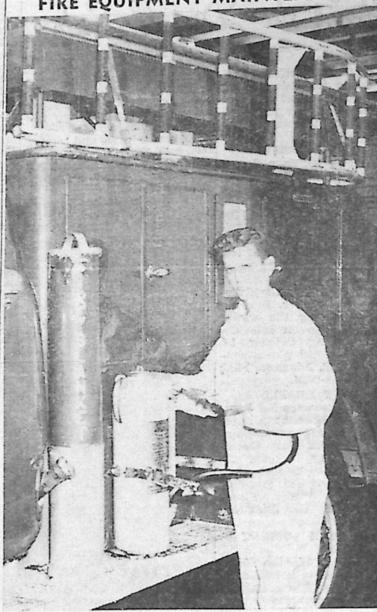
Routine fire practice keeps RCAF Station Comox firemen and equipment in top form. Here, airmen firefighters have an afternoon work-out in the Comox airfield practice area with a simulated gasoline fire.

## FIREFIGHTERS WITH NEW EQUIPMENT



Learning is a never ending process with the firefighters at RCAF Station Comox Firehall. Leading Aircraftman M. V. "Tex" Ireland, 31, of Melville, Sask., right, is briefed on the portable radio by Deputy RCAF Fire Chief, Flight Sergeant Al Slakat, 35, of Montreal, P.Q. Flight Sergeant Slakat, a veteran of 17 years in the RCAF has been stationed at Comox for two years. LAC Ireland, son of Mr. W. Ireland, Willemar Ave., Courtenay, has been an RCAF firefighter for nine years.





Daily checking and maintenance of fire equipment is a must at RCAF Station Comox. Checking one of the auxilicry extinguishers on a Comox based fire truck, Leading Aircraftman Joseph Riverin, 21, of Kenogami, Quebec, performs just one of the daily checks which are done on all the fire equipment at RCAF Station Comox.

LAC Riverin, a member of the firefighting trade in the RCAF for 20 months, is the son of Mr. B. Riverin, 21 St. Josephs St., Kenogami, Quebec, and has been stationed at RCAF Station Comex for the past nine months.

## ALL READY TO GO



RCAF Firefighter, Andrew "Kaz" Kazimer, 31, of Vernon, B.C., takes his station on the rear of a RCAF fire truck at RCAF Station Comox.

Dressed in his heat protection suit, LAC Kazimer is one of the crew of airforce firefighters who are on round the clock readiness at RCAF Station Comox. A member of the firefighting trade in the RCAF for ten years, LAC Kazimer is the son of Mr. J. Kazimerchuk, 2650 27th Street, Vernon, B.C.

# **National Fire** Prevention Week

The week of the 6 to 12 of October is Fire Prevention Week across North America, and in keeping with this, the RCAF Fire Hall and staff at RCAF Station Comox are engaged in a large scale public education and information program, aimed at the RCAF personnel and their families in and around the air base at Comox.

Posters and pamphlets, housing inspection, and an open house at the Fire Hall on the Station are just a few of the activities planned for the week.

This is an annual event at all RCAF Stations across Canada and overseas, and it is partially due to this never ending education program that RCAF Station Comox can point with pride to the fact that there has not been a major fire at the Station for the past ten years.

WILL YOU DIE NEEDLESSLY?

Thursday, October 10, 1963

## Simple care with fire will save many hundred lives

are doing and give a thought are the things on which fire to care with fire.

It could save your life. Too many fires need never help keep your home safe from have happened, and a little fire. care on the part of all of us can reduce our tragic fire toll in lives and property destroy-

fires start in homes in Cana- news and scouting views from da every day. Last year 620 2nd Comox troop. persons lost their lives in fires and hundreds more received bad burns.

Last time we said there would be more on the "Island Gathering" held at Parksville.

The tragic thing about all these fires is that about three-fourths of them were the result of carelless about three-fourths of them were the re-sult of carelless about all the local "Green Sheet."

For those who may have missed it, our Nighthawk Patrol was one of the 52 manual or the same o

With a little care, lives can from our troop.

The following boys were all

of property prevented.

employ a baby sitter. Small children and elderly Monday, and troop night people are the more frequent again. The meeting opened fire victims. If there are eld- with flag break, followed by erly persons in your household, the registration of six addiplans should be made to get tional scouts. The remaining them out of the house quickly portion of the evening was

sure it has been extinguished. experiencing never smoke in bed.

use in dark places. Never strike turn in an alarm. matches or carry lit matches On the 19th October, a scout

them to a qualified repairman if they have loose connections or frayed or worn Distaff

Throw out old newspapers,



"Just a room - I'll manage

Fire Prevention Week, or combustibles regularly, rather any week, is a good time for than let them accumulate in all of us to pause in what we the basement or attic. These

You are the one who car

On the average, about 170 Eack again with a little more

And last year, dollar fire This we find though has been losses in Canada totalled \$126,- quite well taken care of by an article in the local "Green

sult of carelessness, according to the Canadian Underwriters, Association.

be saved and needless burning members of the Nighthawks. of property prevented.

Here are a few suggestions patrol second Ken McRae, Ron that may keep your home fire Raiwet, Don Bishop and Leonard Bonnett. For a personal Never leave small children account it is suggested you alone. Even if you are leaved contact any of the above ing for only a few moments, scouts. From all we hear, it get a responsible person to stay was a most enjoyable campwith them. When going out oree, with badge and neckerfor an extended period of time, chief swopping being the greatest feature of the last day.

spent at the station fire hall. Use care with cigarettes. Here the scouts were kept in-Never discard a cigarette or terested and busy doing such drop a match without being things as trying on equipment, It's a good plan to break a ing a high pressure hose, match after using just to be climbing on, and looking into sure it is out. Keep matches the different types of fire out of reach of children. And trucks. All were shown what happens when an alarm is Keep a flashlight handy for turned in, and how to properly

or candles into closets or at-ties patrol leaders conference will be held at Comox. So we'll have something of this when ances in safe condition. Take we next appear. Till then,

# (Continued from Page 5)

magazines and other waste carefully and work in hand cream. Have your neighbor handy to help you with this

### DEFINITION

— Something Imagination that sits up with a woman when her husband comes home What makes the average

man think he can run the business better than his boss. HATCHERY DEPARTMENT

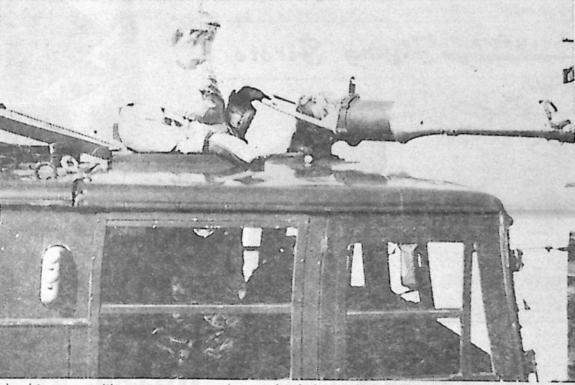
Congratulations Alice Hynes — a boy. Joyce Geneau - a girl Mrs. Doucette - a girl. Mothers are doing fine.

## GIANT CRASH-RESCUE VEHICLE



Looking more like a "moon vehicle" than a crash-rescue truck, this giant G19 foam delivering, Rolls-Royce powered monster sits poised at the RCAF Station Comox Firehall, ready to respond to any aircraft emergency. Capable of delivering 5,000 gallons of foam per minute from its huge "gun" atop the cab, the G19 has been used on occasion to lay down a carpet of foam for aircraft landing with their wheels jammed in the "up" position. Built in England by the Elvis Company, and powered by a Rolls-Royce engine, the G19, which weighs 13 tons, carries a crew of six, and can operate over almost any terrain. The automatic-drive vehicle can be operated entirely from the cab by the driver, who sits in the middle of the very

### "OUT OF THIS WORLD" LOOK FOR FIREFIGHTERS



Looking more like an astronaut than a firefighter, Corporal Jerry Baginski, 28, of Hamilton, Ontario, mans the foam "gun" on a giant G19 crash-rescue truck, clad in his protective clothing at RCAF Station Comox. Cpl. Baginski, a member of the RCAF for 10 years, is the son of Mr. and Mrs. J. Baginski, RR2, Linwell Road, St. Catherines, Ont., and has been stationed at RCAF Station Comox for three years.

## CHIEF EXPLAINS FIRE ALARM SYSTEM



"At the "heart" of the network of fire alarm boxes and fire telephones scattered around RCAF Station Comox, is this "tape punch" signal board which gives the location of the alarm as scon as it is turned in. Explaining the workings of the complicated board is the RCAF Fire Chief in Comox, Warrant Officer Second Class Walter Yeomans, 42, of Saint John, New Brunswick. Warrant Officer Yeomans, a veteran of 21 years service in the RCAF, is the man responsible for maintaining the Fire Section's equipment and its men in a high state of readiness at all times, on a 24 hour, round the clock basis.

The New Bomarc

# **Tractors Rate High** In Farm Accidents

Tractors are involved in any other type of equipment. more farm accidents than A farm worker must repeatedother farm equipment, accord- ly climb on and off his equiping to the National Safety ment. He works in all kinds of League of Canada. The League weather. Frozen or wet ground adds, however, this is because makes slipping easy. Oil or they get more use than other grease on a tractor step, loose

Week being observed in the pensive accidents if unnoticed United States and most of or ignored. Canada from July 21 to 27. | Nor is the farm home ex-

P. G. McLaren, the league's empt. About two-thirds of the general manager, pointed out nation's fatal falls occur in the that a farmer is responsible home and the farm home is no for safety in his home as well different in this concern than as his industry. He may use the town home. Falls happen as many as 35 different types because of too much hurry, too of machinery during the year, little attention to surround-The variety and complexity of ings, using equipment unsuited this machinery may make his to the job, and putting off the work faster and easier but not removal of obvious hazards. pecessarily safer.

ports, is rarely responsible for accidents involving modern of falls, said the League. farm equipment. "Nearly every | Keep stairs and pasages clear mechanical equipment.

more sustaining injuries than the ladder-don't reach.

or cracked rung on a ladder, NSL supports Farm Safety can lead to painful and ex-

Positive steps requiring only Mechanicai iailure, NSL re- a moment, if taken immediate-

such accident", Mr McLaren of clothing, tools and toys. said, "results from the opera- Protect outdoor steps and tor's mistake". He cautioned porches from weather damage. that common sense, care and and rotting. Fasten floor rugs undivided attention must be securely and avoid loose scatexercised in the operation of ter rugs. Use ladders in good repair instead of makeshifts On the farm, falls are the pre- and see they are on firm footdominant killer and produce ing and at a safe angle. Move

CANADIAN Flying Firsts



nerlo's first gerial beveale ceases enarged at the Beards







the missile fallows a vertical path, then levels out in the general direction of its target, guided by commands from SAGE. When its own integral radar finds the target, it locks in and homes in for the kill. 446 Surface To Air Missile Squadron

tional at the same time as the concrete and steel launching HIGH COST new underground SAGE in- shelters which operate auto- OF SOCIAL SECURITY stallation at North Bay, 446 matically when a command State spending on social sec-Surface to Air Missile Squad- from SAGE is received. When urity and welfare now averron, also of North Bay, is the this happens, the shelter roof ages about \$900 per year per first Bomarc base in Canada. opens, and the missile is rais- family in Canada. Of the total,

R.C.A.F. STATION COMOX, TOTEM TIMES

Station North Bay, 446 SAM launched. unit is located a few miles After launching, SAGE again remainder by the provincial north of the air base. Their takes over control of the rocket and municipal governments charges, the Pomare missiles boosted, ram-jet powered mis- combined.

Destined to become opera- themselves, are housed in 28 Administratively, a part of ed to a vertical position and about two-thirds is spent by

**EXPLOSIVES** 

BOMARC B INTERCEPTOR missiles in use with the RCAF's 446 Surface to Air Mis-

siles (SAM) Squadron at North Bay can be launched singly or in salvos. Initially

sile and guides it to the immediate target area.

The Bemare missile has a range of more than 400 miles, a supersonic speed, and a "kill capability" from sea level to more than 70,000 feet.

the federal government, the

The difference between hoping ... and having is a

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# Beaton

Thanksgiving ~ 1963

ganizing and re-forming into would YOUR life be like withwhat we hope will develop in- out MUSIC? flourish or attain any degree accept watching a parade, Breathing missiles.

Thursday, October 10, 1963

have to admit that the latter be an awfully dull life with- States. has happened at some time out it.

onment would be without any that you have found an in- could not work fast enough. music? People listen to music, teresting and worthwhile hobadvertise to music, study to by. How about you — giving music, learn to music, eat to the band a hand? music, work to music, dance, walk, march, and even sleep the amount of money spent Ontario.

| annually on records and sheet The Station Band is re-or- music alone in Canada. What

a dance floor, or heard the doesn't sound half bad." We North Bay, Ont. quiet strains of a symphony are open to constructive cri- "Ground Environment" o orchestra, or the loud rythmic ticism, good or bad (we've got SAGE refers to the overall cal instrument. I am positive sounds bad or puts on a bad are high-speed digital compr

The Yukon and Northwest was master of all it surveyed, to music. It is, whether we Territories occupy 39 per cent admit it or not, a very im- of the surface of Canada, about this was less than the range portant element of our daily equal to the combined areas of aircraft, control had to be and even more important our of British Columbia, Alberta, social life. It is unimaginable Saskatchewan, Manitoba and manually and by voice, from



Environment)

The continental electronic air defence system known as to a well trained and profic- You could always take your SAGE . . . (Semi-Automatic ient organization, but this takes time and patience on wife or girl friend to a party modern aircraft control and the part of everyone. Without and sit and talk all evening — warning system developed for the support of personnel in- that should prove interesting. the North American Air Deterested enough to play in the I guess in time we could train fence Command. In case of band as well as the support ourselves to enjoy nothing but attack, SAGE would provide of each and every person on a person talking every time the control for directling the a unit, the band or any or- we turned on the radio or TV. North American Defence batganization cannot hope to You would no coupt in time tle against aircraft or Air-

of proficiency. Instead these seeing and hearing nothing For Air Defence, the United organizations remain at a low but a few colorful uniforms States and Canada are sub-level, hampered by poor morale and the steady purr of the divided into sectors, with each and contributing little to the engines pulling the floats. In sector responsible for the air time you might even enjoy situation within its boundaries. Have you ever stopped to Christmas with nothing but The nerve centre of each sectthink how much music plays speech to remind us of the or is called a Direction Centre. a part in your daily life? Or joyous occasion, but this can- It ties together the network have your emotions ever been not replace the warm togeth- of radars within its sector and moved or thrilled by the ef- erness feeling a soft carol can also receives early warning fects of music? Even the most bring into our homes. Yes, you information from the radar avid of music haters, when have to admit, music good or "walls" to the north, east, and they stop to think about it, bad is here to stay. It would west of continental United

Combat centres monitor and in their lives. It may not have been today or yesterday, or group of individuals who, while Centres. The Combat Centre last week or last month, or not professionals yet, are at- is normally located jointly even last year, but at some tempting to form a band that with one of its subordinate Ditime music has stirred them. will be acceptable musically to rection Centres. This is the It might have been a catchy the ear. A band that in time case with Northern NORAD Pop tune heard on the radio; not only the members will be Region whose Combat Centre it may have been the first proud of, but also that you is co-located with the Ottawa time they moved to music on will be able to say "That band Sector Direction Centre at

pulse of the drums, or the ex- broad shoulders), but don't guidance supplied to aircraft, citing splendor of a big march- just tell us we sound bad or from the total complex of diing band, or the first time good - tell us WHY you have rection and control centres and their little Johnny or Mary this opinion, in this way we communications networks. played a sour scale on a musi- can improve. When a band Housed in the direction centre if you think about it MUSIC performance, the bandsmen ters, communications, and dis has thrilled you or played a are aware of this before you. play equipment. In its display definite part in your daily We welcome your comments. room, day and night, Air Force We have a few positions technicians monitor the blue-Have you ever stopped to open in the station band that lighted tubes and electronic think how dull this world possibly you could help us fill. ally-charted aircraft tracks would be, or more directly I am sure you would in time SAGE was born and developed connected to you, your envir- enjoy it and be rewarded in out of necessity-because men

In the "olden days"-before 1953-there were 148 radar sites in the United States and Canada. Each of these sites within its limited range. Since "handed over" or transferred one radar site to the next.

But when the speed of planes outdistanced the speed of sounds, and went up to unheard-of altitudes, and more and more aircraft crowded the sky, making it more difficult to tell friend from foe, the sum total of data got out of hand. Men could not cope with the myriad instantaneous caluculations necessary to defeat massed flights of supersonic aircraft.

The answer was found in automatic computers. Man was forced to do his thinking in

of computers.

SAGE computers receive, Man sets the decision into tore and compare flight data SAGE. .. Air Base and Missile Loca-

and, quite important, meteorological conditions. Performing mathematical functions at speeds measured in terms of microseceonds (one half- mil-

Here is why SAGE is semisonnel will make key decisions. higher headquarters. ARC? Manned Arcraft? A U.S. skies.

advance, in the programming Army intercept by NIKE mis-

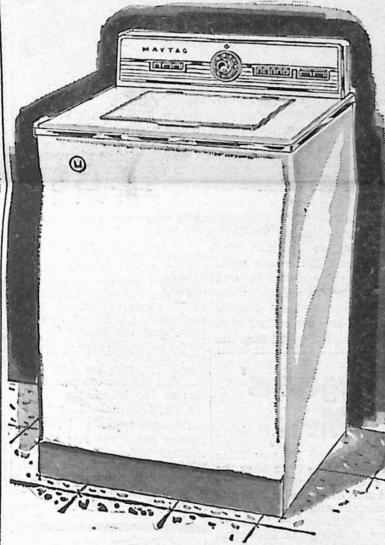
Automation again takes over, tions . . . readiness, types and with SAGE directing the actnumbers of interceptors . . . ions of the air battle. It solves intercept equations-course of

SAGE computers automaticlionths of a second) the com- ally alert adjacent Direction puters present this informa- Centres, which in turn alert tion and identify courses of Combat Centres, when the air action available to the com- action moves to a new areaor would take over if adjacent sectors were knocked out-as automatic. At this stage there well as send summaries to is a middleman; Air Force per- similar computers at the next

A technician can make push- Now, as the last sector of button demands:—give me all SAGE becomes operational an information on RCAF "Voo- interlocking chain provides doos". Where would be the surveillance and protection for intercent point for a BOM- our spacious but saturated

Automatic Washer

that gives years and years and years of trouble-free service



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THE MODEL A500 PICTURED ABOVE FEATURES 2-speed operation - Automatic water level control -Metered fill - Not affected by fluctuating water pressure - 3-selection water temperature control - Perforated lint remover wash basket - Full cycle safety lid and tub brake - Guaranteed against rust.

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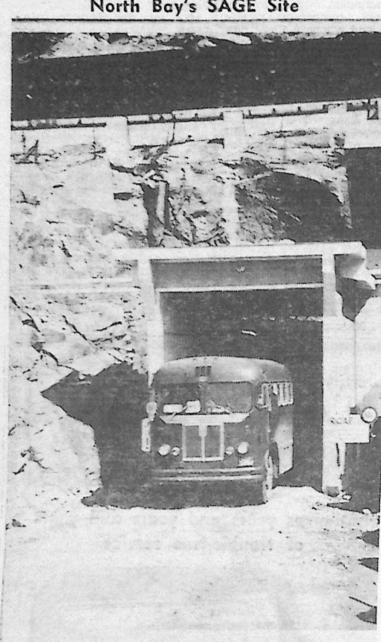
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## North Bay's SAGE Site



The North Bay SAGE complex consists of a tunnel, running from Trout Lake on the south to RCAF Station North Bay approximately two miles to the north, plus five caverns that have been mined adjacent to it.

The caverns housing the site are 45 feet wide and average 54 feet in height, and contain a free-standing, threestorey building with a total floor area of 142,000 sq. ft.

medical facilities, kitchen and

dining facilities for both nor-

mal and combat conditions are

A self-contained power

plant, and water and fuel oil

storage areas are also located

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The Garden Patch

\* The time has arrived for

All Varieties of

Shrubs and Roses

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outside planting

also in the building.

provides normal base s

The building itself is 32 feet housed the electronic equipwide with wings varying in ment and administrative suplength from 230 to 430 feet. port facilities. The clearance between the The facility is equipped with building and the cavern walls two command posts, one for the Commander of Northern NORAD Region, the other for piping, allowing enough room the Commander of the Ottawa for essential periodic inspec- Air Defence Sector. A comtions and scaling of the rock munications terminal, a comwalls. Inside the buildings are puter and the associated dis-play units, support offices,

# Sergeants'

The PMC and his committee underground. However, adhave been more than busy the ministrative facilities have last couple of weeks, planning been kept to a minimum, since mess activities and entertainiting dignitaries - plus, of course, running the best mess in Canada.

FS Wilf Hetman was the big drive behind the forming of a Sgts. Mess Crib Team, that is presently playing in the Comox Valley Cribbage League, ably captained by Sgt. Willy Fisher (414) and secretary WO2 Jock Smythe. The best of luck, team!

Our welcome and also sincere congratulations to three new members that have been promoted into our Mess: Sergenats Norm Osland, Art Gallant and Ken Bayer.

A small farewell get-together was held for FS Jim Craig last Friday. A silver tray was presented by W/C Adamson, on behalf of the Mess. Jim is retiring over on the Mainland. The best of luck, Jim, in your new endeavours.

Don't forget the Bottle Bingo in the Mess on Saturday 19 October. Bingo starts at 8:30 p.m. with good prizes and in some cases even a consolation that you won't want to miss. Dancing following the bingo with some of WO "Red" Costain's special food at mid-

## LAKE and STREAM

been neglected for a fairly rally of a good size and are 3. In 1947 the average weekly lengthy period and I just know surprisingly active when hookthat it has been badly missed ed.

past week or so, the rivers are favourite pool, near the power rence, which is eastern Canshowing signs of increased station. It was dull and rainy ada's longest river?

What with leave, TD, exer- casions. The run of cutthroats of a member of the House of ises, etc., this column has presently in the river are gene- Commons?

With the decline in popular- game on Saturday afternoon rent figure? ity of chuck fishing during the and took to the river to my 4. Apart from the St. Lawactivity. I have heard of good and the hike was not too pleascatches, both trout and grilse, ant; however, the trout were and television stations, how from the Oyster and Puntledge in evidence from the start and many are government owned? rivers and I have enjoyed three when I left the pool two hours profitable outings on the later I had landed three good

iting moments at the Marina including a coho and a grilse, manufacturing wage was \$79. luring the rising tide, and I was also treated to a display 1. Newfoundland, which inwhile my "netting average" by salmon that obviously be- cludes the coast of Labrador. has not been too high I have lieved they were Polaris mis- 4. The Ottawa River, just short enjoyed the sight of the trout siles. It was a lovely afternoon of 700 miles in length. 2, \$18,rising to the fly on many oc- in spite of the dreary weather. 000.

Thursday, October 10, 1963 QUICK QUIZ

1. Which province of Canada has the most miles of sea-

2. What is the yearly pay

wage in Canadian manufacturing was \$37.19. In 1957 it I forsook the World Series was \$64.96. What is the cur-

5. Of the 299 Canadian radio Courtenay and Puntledge rivers.

I have experienced a few exlater 1 had landed three good
sized cutthroat, lost a good one
after about 10 minutes and
had raised several more fish
March, 1963, average weekly



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NIKE-HERCULES

Type: Surface-to-air missile; weight: approximately five tons; length: 39 feet; altitude: from 1,000 feet to more than 150,000 feet; nuclear workead; range; more

# Third Radar Station Joins Missile Warning Network COLORADO SPRINGS - (NNS) A \$1 billion project; the site to assist in the pro-

launched nearly six years ago to build an electronic fence vision of data to North Ameracross the top of the world to give warning of missile attack ican Air Defense Command has been completed. The third station in the Ballistic Missile Early Warning

System, at Flyingdales Moor in Yorkshire, England, was started in 1958. The concept commissioned and began sending out cerospace-surveillance called for three bases to be

Flyingdales joins two other NORAD, has people of its 9th radar beams over the top of BMEWS installations - at Aerospace Defense Division at the world and detect imme-Thule, Greenland, and Clear, Alaska - in extending an electronic umbrella 3,000 miles

launched. Data from all three is now flowing into the North American Air Defense command combat operations center here for display on electronic maps and simultaneous relay to the Strategic Air Command, the Pentagon and the Royal Air Force. RAF Fighter Command gets a direct readout from the

or more over all of the Eur-

asian land mass from which

ballistic missiles might be

Yorkshire site. Warning of imminent attack also would go to RCAF headquarters in Ottawa and to Supreme Headquarters, Allied Powers in Europe.

The value of the system's contribution to deterrence lies in its ability to alert aerospa defense and counter-strike forces so they may be used with maximum effectiveness and not be destroyed on the ground by surprise attack.

The commissioning ceremony was climaxed with a telephone conversation between Air Marshal Sir Douglas Morris, air officer commander in chief of the RAF Fighter Command, and Gen. John K. Gerhart, commander in chief of NORAD.

General Gerhart reported he was observing the readout of the Flyingdales informational inputs on the BMEWS display board in the combat operations center here.

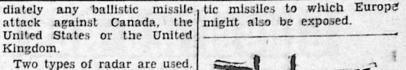
"We have also confirmed that your transmission are being received in the national military command center in Washington and in the Strategic Air Command command post," he told Air Marshall Morris.

Operational control of the Flyingdales site will be jointly exercised by RAF Fighter Command for the United Kingdom and by NORAD for North America. Air Defense Command, a USAF member of

United States or the United

Two types of radar are used The detection radar has a fixed antenna, 400 feet long and 165 feet high. The tracking radar has a rotating antenna, 84 feet in diameter and housed in a 140-foot radome.

Site I at Thule, which began operating in 1960, has four detection radars and one tracking radar. Site II. on operational status since 1961, has three detection radars, while Site III uses three tracking radars. The latter can detect and track not only ICBM's, but intermediate range ballis-





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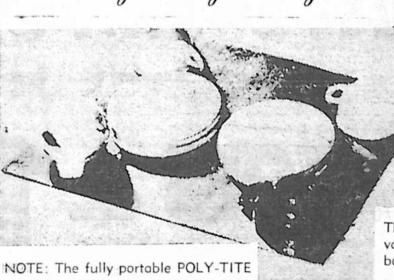
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THURSDAY, OCTOBER 17 SATURDAY, OCTOBER 19

HATARI

John Wayne Elsa Martinelli Red Buttons

SATURDAY MATINEE

THE SAD HORSE

David Ladd

SUNDAY, OCTOBER 20

BLUE HAWAII

Elvis Presley Joan Blackmore

VERENEES BEESELEER FREEDE BEESELEER BE

1. What two ocean currents dominate the climate in Canada's Atlantic provinces?

2. Last year Canada sold \$3.6 billion worth of goods to the U.S. What was the value of U.S. sales in Canada?

3. Which of Canada's principal cities was originally named after the British army engineer, Colonel John By?

4. What proportion of Canadian workers are labor union

members? 5. In 1939 federal taxation was \$45 per capita, in 1944 \$234 per capita. What is the current figure?

ANSWERS: 5. About \$380 per at \$17.50 and up. Treadle capita. 3. Ottawa, originally called Bytown. 1. The Gulf and portable electric. Rent Stream and the Labrador Cur-\$2 weekly. See or phone Dave rent. 4. About 22 per cent of the labor force. 2. U.S. sales to Canada totalled \$4.3 billion in 1962.

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