

8. Possible future meeting topics proposed include;
- The Care and Feeding of Magnetos
 - A Tour of Ottawa Tour
 - A Technical Session on Fabric Covering.
9. Bayshore Shopping Center has offered the chapter a display space during their aviation week of Monday, June 13 to Saturday, June 18 1977. Other exhibits include: - Gatineau Soaring Club
- Ottawa Sky-Diving Center
- Bradley Air Service.

We have been offered an area 35 ~~xxxx~~ feet square with fence and security guard.

10. Business was completed and the group discussions of club priorities commenced.

(Eric Taada)

PRESIDENT'S CORNER

This month we start out with some bad news and some good news. When I called Ken Martin last night he told me he had just broken his knee falling over his colour television set. That's the bad news! The good news is that he was kidding about his knee - I'm not sure about the TV though. The "even better" news is that Ken has consented to become out chapter historian and I can't think of a better choice. Ken was around the chapter even before Joe Collins made his first non-stop flight across the Ottawa River and he has many memories of early happenings that he will be able to track down and record with the help of many of the other early birds like Ken Cavers, Jim Bradley, Ted Slack, Parr Tate and others whose names I should list but can't because I am a relative newcomer to the chapter.

Another reward for clean living is that Jean Marc Bastien, our cheerful treasurer, has agreed to become our cheerful chapter photographer and I'm sure his efforts in this area will be a big help to Ken in recording current and future activities. Soon we hope to be able to schedule a few open-house visits to members' projects at which time Jean Marc will be able to capture a permanent record of projects and members alike.

Last month's meeting was rather unusual in that everyone had a chance to become a speaker for a short while. Because of Bill's deadlines on getting copy to him, this note is being written even before I have had a chance to sift through all the comments. This will be done over the weekend so that your executive can chew them over later in the week. Many thanks for the effort and thought which you all put forth. Now the committee knows where we should be heading.

Based on the more vigorous comments made on the subject, we have confirmed our chapter participation in ~~xx~~ the Bayshore Sport Aviation Week, 13th - 18th June. Now we need some volunteers who would like to participate in the display preparations as well the big show. Anyone interested? Please call me -- 749-0792 -- and we will try to get a display committee organized and running.

(George Reid)

COMING EVENTS - 1977

- March 18 - Ottawa - EAA Chapter 245 Meeting, War Museum,
7:45pm - Guest Speaker : Paul Hartman
- Subject - Flight Testing Your
Homebuilt
- April 13 - Ottawa - Seminar, "Enroute Navigation", Dr. Alan
Frosst, Skyline Hotel, 7:30pm, Reg. \$5.00
- April 15 - Ottawa - EAA Chapter 245 Meeting
- April 16-17 - Ottawa - Ninety-Nines All-Canada Meeting
- June 4-5 - London, Ontario - Third Annual London
International Air Show
- June 5 - Stanhope, Ontario - Spring Fly-In and Limited
Air Show, Haliburton Highlands (Stanhope)
Airport (see VFR Chart Supplement)
- June 19 - Winchester, Ontario - Circle V Fly-In
- July 18-27 - Hawkesbury, Ontario - 1977 Annual Soaring
Contest, Soaring Association of Canada
- July 30 - August 6 - Oshkosh, Wis. - Oshkosh '77, 25th Annual Fly-In
and Convention
- August 7-13 - Edmonton, Alberta - International Cessna 170
Association Annual Meeting

HAVE YOU SEEN?

- 'Erikson on Lert on Rutan', Air Progress, February 1977
- 'The Great Paint Job Puzzle', Air Progress, February 1977
- 'A Plane Owner's Guide to Used Avionics', Plane & Pilot, March '77
- 'Comparing Costs: Factory Versus Homebuilt: Saving a Few Bucks can
Mean More Flying', Private Pilot, August 1976
- 'Tail-First Kitplane: VariEze Combines Unique Design with Composite
Structure', Private Pilot, November 1976

FAMOUS LAST WORDS - "Just show me a bird that could get inside these
cowlings."

DESIGN COST FORMULA - For the conventional aircraft, the cost of
development, certification and initial tooling runs about \$1000 per
pound of gross weight. This applies for a Boeing 747 as well as a
Cessna 150.

NOTHING NEW - If one looks back through the history of aviation, one
will see that anything that appears to be new today was tried years
ago. COPA reports that in a recent study the Canadian Armed Forces
found that a yellow aircraft provides the most visible image for
search and rescue. For years in the 30's and 40's Piper painted their
aircraft yellow and what was the colour of all RCAF training aircraft
in Canada; you guessed it, yellow. So if you plan to be forced down
and require rescuing or wish to be seen on final by some hotshot doing
a short circuit, paint your wagon, your aircraft yellow, that is,
No. CGSB1-GP-12 Yellow 505-101.

SIGN ON THE WALL - "A Superior pilot is one who stays out of trouble
by using his Superior judgement to avoid situations which might
require the use of his Superior skill." (MOT-Aviation Safety Bureau)

VIVE LA DIFFERENCE - In Richard Bach's book entitled A Gift of Wings, he states that there is a tremendous difference between "Aviation" and "Flying". "Aviation" comprises the airplane and airmen who have interests beyond themselves: to compress a very large distance into a very small one. "Flying" isn't concerned with ~~distance~~ distant places off over the horizon, but with the sky itself. The "Flyer" moves not through distance but through the ranges of satisfaction that comes from knowing himself and his airplane. Maybe the EAAC's publication Canadian Sport Aviation News should be Canadian Sport Flying News.

WELCOME - The chapter welcomes two new members to the fold:

Gerry Flucke	and	Colin Archer
Box 318		27 Kidgrove Gardens
Winchester, Ontario		Ottawa, Ontario
K0C 2K0		K2G 3W5
774-2648 home		225-9622 home
998-9456 bus.		729-2561 ext 37 bus.

FAMOUS LAST WORDS - "Tower to Taylor monoplane GWR. Watch for bird strikes. It's their mating season."

REMEMBER - A most interesting meeting on the 18th with Paul Hartman. Named a Member of Canada's Aviation Hall of Fame in 1973 with the following citation: "His record can be matched only by those airmen of high endeavor and professional calling, who have devoted their lives and skills to the benefit of the free world, despite adversity, and whose contributions have substantially benefitted Canadian aviation."

DON'T FORGET - Bring your design for the chapter crest or logo to the March meeting for display. Ballotting for the winning design will take place at the April meeting.

DON'T MISS IT - Newsletters will be mailed only to members (chapter) after April. So see Jean Marc at the next meeting.

FAMOUS LAST WORDS - "Soon as we get airborne the ice will melt off."

SPECIAL REQUEST - Your president would like all those with homebuilt aircraft to bring to the next meeting photographs and negatives for future display material.

"It is not the air that is crowded; it is the system."

Frank Kingston Smith

Your editor would like to thank the following for their contribution to this newsletter: Transport Canada, COPA and Father John MacGillivray.

IV. Regulations Governing the Installation of Shoulder Harnesses in Existing Aircraft.

Shoulder harnesses or equivalent means of protection from head injury are required by the Federal Aviation Regulations to be installed in normal, utility, and acrobatic category airplanes manufactured under Approved Type Certificates applied for after September 14, 1969. Amendment 23-7 to Part 23, Airworthiness Standards: Normal, Utility, and Acrobatic Category Airplanes (effective: September 14, 1969) specifies:

23.785 Seats and berths

(g) Each occupant must be protected from head injury by—

(1) A safety belt and shoulder harness that will prevent the head from contacting any injurious object:

(2) A safety belt plus the elimination of any injurious object within striking radius of the head; or

(3) A safety belt plus an energy absorbing rest that will support the arms, shoulder, head and spine.

For those aircraft owners who would like to install shoulder harnesses in their own aircraft, FAA Advisory Circular No. 43, 13-2, Chapter 9, Shoulder Harness Installations, contains the information necessary for an acceptable method of installation. The following general conditions must be met to provide a satisfactory restraint:

1. Utilize the original seat-belt attachments and either the original or a new belt provided with shoulder-restraint fittings.

2. Use webbing approved per TSO-C22e for standard seat belts.

3. Use hardware approved per TSO-C22e for use on seat belts.

4. Secure the lower end of the shoulder restraint to one side of the original seat belt or belt anchorage.

5. Secure the upper end of the shoulder restraint to an aft or ceiling mount attached to primary structure independent of the seat.

6. Test the added mount by applying a load of 500 pounds forward at the shoulder point.

7. Have the completed and tested installation approved by a General Aviation Maintenance

V. Certain Problems with Shoulder Harnesses

One of the most serious problems with shoulder-harness and other restraint systems is the difficulty in properly fitting all members of the flying population. Injuries as a consequence of wearing lap belts¹⁶ can be attributed either to improper wearing of the lap belt by the occupant or to improper fit (lap-belt angle is not between 45°-55° from the horizontal and firmly positioned over the pelvis). When the single upper-torso belt rides along the side of the neck, pressure or chafing can cause distinct discomfort during normal flight operations and can create pressure upon the nerves and blood vessels of the neck which can be quite annoying to the user. A belt resting against the neck can be directly responsible for injury in a crash as demonstrated experimentally by Snyder, et al.¹⁷ If the upper-torso belt is positioned off the shoulder because the upper belt attachment is too low or too far forward relative to the seated occupant, the occupant may flex over it during a crash sequence and slip out of it completely. He can also be subjected to a simultaneous rotational torquing motion which may be particularly injurious. The optimum angle for the upper-torso belt relative to the shoulder is -5° to +30° from the horizontal.

Even when wearing a harness that is properly fitted, the user may have difficulty reaching certain cockpit controls unless the restraint system incorporates an inertia reel or it is worn loosely while in cruising flight.

The above-mentioned problems can be solved if attention is given in the design of the re-

straint system to incorporate the maximum in features for comfort, neatness of appearance, ease for storage, and ease of donning and escape. People will use shoulder harnesses if these criteria are met. Swearingen demonstrated this in a study¹⁸ where over 90% of the test subjects were motivated to utilize shoulder harnesses in automobiles throughout a 2-year test period. This rate contrasts with an estimated 3-5% utilization of factory-installed shoulder harnesses in over 10 million automobiles manufactured since January 1, 1968.

TOOL BIN - The following list of tools have been ordered and should be available by the middle of March. For the time being, Frank Cianfaglione will be the custodian of these tools and arrangements for their loan should be made to him.

- Rivet Cutter
- Cleco Fastener - 65 assorted
- Cleco Tool
- Shock Cord Tool
- Nicopress Tool
- Hand Seamer
- Metal Crimper
- Tube Bender - 1/8", 1/4" and 3/8"
- Flaring Tool

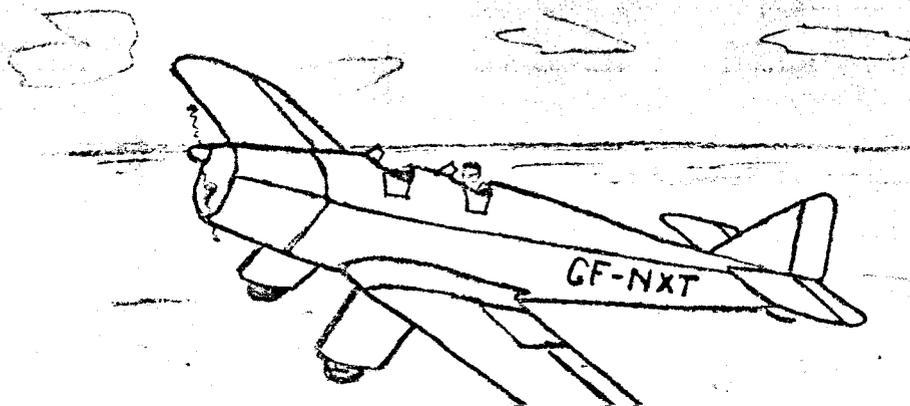
MISCELLANEOUS - The portion of the FAA report on shoulder harness may prove useful when you are installing this hardware in your aircraft, factory built or homebuilt.

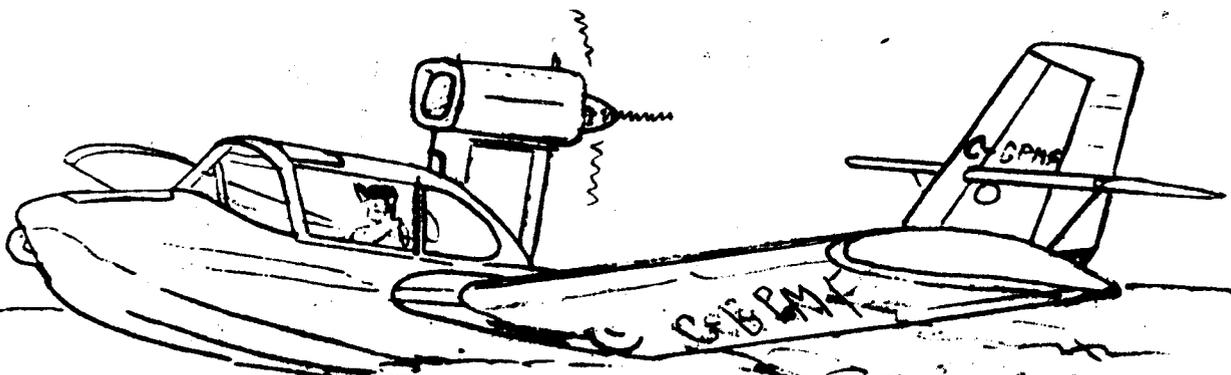
- Thanks to Father John, we have another fine article on a very popular homebuilt, the Coot. In the near future, I hope to have Father John's Miles Hawk CF-NXT (constructed 23 Nov. 1935) as the plane of the month. Of the 4 Miles M.2W Hawk Trainers that were built, CF-NXT is the only one still flying. CF-AUX owned by C. W. Glenister of Weston, Ontario, is a Miles M.2H Hawk Major (constructed 20 Dec. 1934) although listed in most Canadian references as an M.2W.

- Father John has also provided this month's newsletter with an additional article on the 50th anniversary of Lindbergh's flight to Ottawa in 1927. We will certainly be hearing more about the Spirit of St. Louis replica's tour as the date for the big event approaches; let's hope it can get to Ottawa.

- From Transport Canada I have obtained a number of copies of "Requirements for Ultra-Light (Amateur Built) Aircraft". If you have any questions about these requirements, pass them onto me. If enough questions are raised, we could have a chapter meeting or a part of one devoted to answering the enquires and explaining the why and wherefore of the set of rules. I will entertain questions from all those receiving this newsletter; not just the Ottawa Chapter.

- Chapter 266, Montreal, has invited Chapter 245 members to attend their meetings which are held at Beaconsfield High School on the last Thursday of the month at 7:30 pm. Ottawa members are also invited to fly-in to Chapter 266 home airport (Cooper Aviation, St. Lazare) any week-end; some day maybe we will be able to return such an invitation. Our chapter meetings at the War Museum are open to all.





PLANE OF THE MONTH NO. 4 COOT-C-GPMF

Over 20 Coot amphibians have already been completed in the US and Canada and the latest one to achieve this status was constructed by our affable displaced Cape Bretoner and genial V/P Frank Cianfaglione. The completion of construction was underlined by a special ceremony on 28 October when Frank's parish priest aided and abetted by your ex newsletter editor blessed the new born aerodyne. The plane was moved to Uplands with the intention of carrying out the first flight before the bad weather set in, but old man winter forestalled this idea. As another Coot builder in Hull, Albert Pellerin, with about 60 hours experience on type, Frank has wisely decided to delegate the honour of the first flight to a test pilot who will then check Frank out in C-GPMF.

Frank managed to get a registration that included all the members of the family (including the pup). C for Cianfaglione, G for son Greg, P for wife Pat, son Peter and the pooch Pal, M for son Mark and last but not least F for Frank (also fast fun and fishing). At the suggestion of the Coot builder from Hull the plane has been primed for painting, but the final colour has been deferred 'till after test-flight-adjustments have been made. Mike Foxtrot will be creme with chocolate brown trim and day-glo orange wing tips and tail.

Frank has stuck to the plans structurally in building the Coot, but has incorporated some modifications. The tankage has been increased from 26 to 32 gals for greater range and larger wheels have been fitted (600X6 rather than 500X5) to make the plane more compatible with rough strips. Since the buoyancy of the wheels resists their being lowered in the water the mechanism has been beefed up and the suggested electrical system replaced with hydraulics plus a back-up system.

Frank's Coot has a Lycoming 10-320 CIA of 160 HP, the type of engine used on the twin Commanche. The prop is a three bladed wood job made by Warnke in Arizona and is ground adjustable. This may sound like a lot of power but the design is quite heavy and Molt Taylor, the designer,



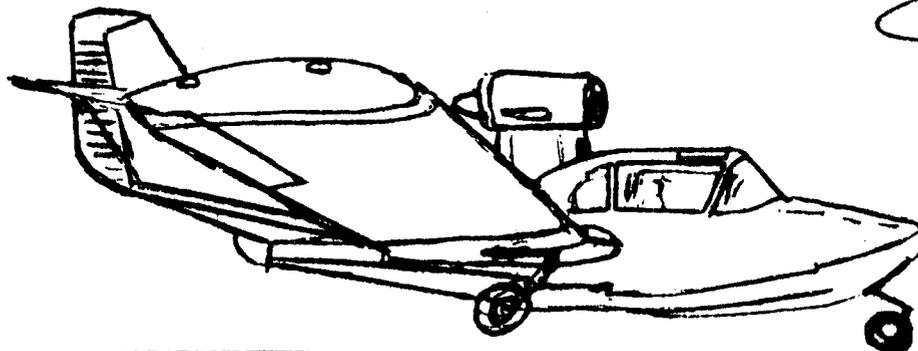
suggests using up to 180 HP for optimum performance. The plans were ordered back in 1970 and a few wing ribs and parts were made but in 1971 Frank attended the EAA Fly-in and saw the original Coot and was so impressed he really got going. Frank has kept a detailed log during construction and contrary to the usual assumption, the best building progress is made not during the long winter months, but from April through October. All boats leak a little and one interesting gadget is a micro switch that sounds a horn and activates a bilge pump when the water reaches a certain level. Frank hasn't said so but the same system might be used to evacuate the pilot relief tube plenum chamber. This of course would have to be checked out with the Department of Environment. Some pertinent statistics on the Coot are as follows:

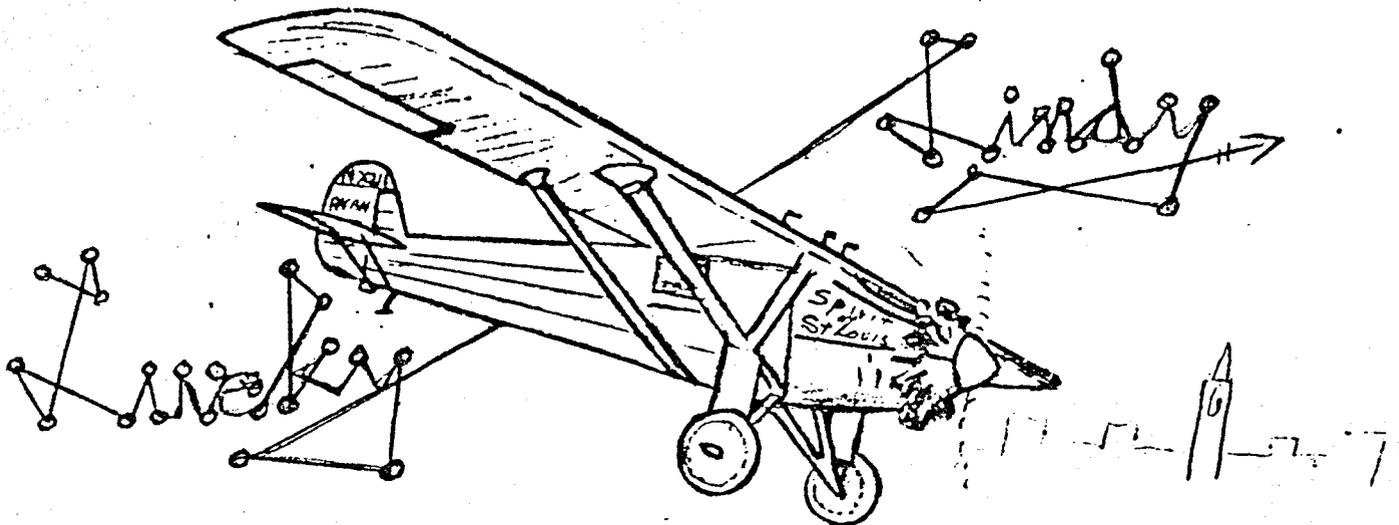
Span - 36'
Height - 8'
Empty - 1250
Range - 500 + mi
Stall - 50 MPH

Length - 21'
Gross Weight - 1950 lbs
Cruise - 125 MPH
Cost - \$6000.00

(Frank adds a personal note of comment)

The Coot also has capability for wing tanks which could be made to hold 26 gallons. This would extend the range further and might make the above mentioned plenum chamber a mandatory item. Since a pusher type aircraft is very noisy a noise abatement program is used such as a muffler for each two cylinders, reduced diameter prop, the use of 3 blades, the geometry of the pylon and cabin insulation. Even then it will probably make a lot of noise. However I hope it will also make a lot of speed and provide a lot of pleasure.





EAA will be commemorating the 50th anniversary of Lindberg's famous New York to Paris flight 20/21 May 1927 in 33 hours and 30 minutes by building a replica of the Ryan NYP "Spirit of St Louis" and using it to recreate a tour of the 48 states carried out by the world's most famous pilot that same summer and fall of 1927.

In response to an invitation from the Canadian Prime Minister W.L. MacKenzie King, Lindberg flew his famous Ryan NX-211 to Ottawa about two weeks after it was returned to Washington from Europe on the US Cruiser "Memphis". On June 16 Lindberg flew the Spirit from Washington back to Roosevelt Field in New York and then on to Mitchell Field five minutes away. The plane then returned to St Louis, Missouri after which it had been named and on July 1 Lindberg flew to Selfridge Field, Michigan where the Base CO Major Lanphier did a ten minute circuit in the "Spirit".

The trip to Ottawa on 2 July took 4 + 10 (The Hawk made it from Ottawa to Michigan in 3 + 30 last July, but of course it's eight years younger than NX-211!). Lindberg was escorted by 12 US Army pursuit planes from Selfridge to Uplands airport. An unfortunate mid-air collision took the life of Lt Johnson and the following day Lindberg flew a 1 + 10 trip over the funeral.

The following day, 4 July, the Spirit of St Louis and it's famous pilot departed for Teterboro, New Jersey after spending 35 minutes of the 3 + 50 trip circling over the city before heading due south. It was during the early part of July that plans were finalized for a trip around the States that EAA will be commemorating this year beginning in mid-June. Back in 1927 NX-211 remained at Teterboro following the trip from Ottawa until 19 July when it returned to Mitchell Field and the following day July 20 departed for Hartford Connecticut, Providence on the 21st, and Boston on the 22nd to launch a trip that covered 22,350 miles before it was finished.

This was not the only time Lindberg flew into Ottawa, but his trip here in the ocean spanning Spirit of St Louis on 2 July 1927 was one that should be recalled. Your ex-editor dropped a note to Jack Cox suggesting that it would be nice if EAA's replica could include Ottawa on its commemorative flight this summer, ideally on 2 July which falls on our Dominion Day long weekend. We might even muster an escort of 12 Homebuilt or Antiques for the occasion. An aviation banquet for the members of all area aviation groups some evening that weekend would be an idea. Whether or not the

245 NOTICEBOARD

FOR RENT

Instrument practice on ATC 510G simulator is available.
Contact: Steve Forgarasi
568-4586

FOR SALE

Narco Mark 12 VHF Navcom from CF-SOW.
Contact: Major Lang
Director of Flight Operations
Ottawa Flying Club

WANTED

Exhaust heater muff for 1941 Taylorcraft BC-65 with Continental A65.
Contact: Father MacGillivray
998-3041

FOR SALE

Osprey 1 Amphibian 90% complete, controls in, signed off by DOT for covering. Excellent workmanship. With O-time 75 hp Franklin. \$2300.00
Contact: Conrad Sitter
Box 122
Deep River KOJ 1P0
613-584-3702

WANTED

Aircraft radio headset and microphone.
Contact: Frank Cianfaglione
731-5001

FOR SALE

Narco Mark V transceiver - \$250.00
Contact: Ron Bolton
737-4222

WANTED

Heavy case Franklin for Stinson Voyager.
Contact: Gordon Emberley
c/o Box 99
Station C
Winnipeg Manitoba R3M 3S6

FOR SALE

Plans for Cavalier 105 also basic frames built. Both \$150.00
Contact: George Samson
663-2658

Canadian Airparts Trader

155a GEORGE ST. TORONTO M5A 2M8

C.A.T., published bi-monthly and distributed across Canada, is a BUY & SELL paper for homebuilders. With the growing cost of aircraft parts bargains are hard to find. C.A.T. gives builders a chance to directly exchange with each other, whether you have a few feet of 4130 collecting dust, or you are looking for an O-200.

20 words or less...2.00

Next 20 words.....1.00

FOR SALE

Classic 1949 Piper Clipper PA-16, four place taildragger. Restored to "mint" condition, Stits process cover and finish. 115 Lycoming - 750 since major. O since "as new" top. Narco Mk8 with VOR, new ELT, extra instruments, \$8000.00 (Winnipeg)

Contact: Terry Algeo
183 Larchdale Crescent
Winnipeg Manitoba R2G 3A0