N E W S L E T T E R

EAA Chapter 245

Experimental Aircraft Association of Canada

Ottawa - June 1982

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Meetings - 3rd Friday at the National Research Council, 100 Sussex Drive, 8 pm

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(Opinions expressed in this newsletter are those of the contributors and not necessarily those of the Experimental Aircraft Association of Canada.)

EAA CHAPTER 245 MEETING OF 14 MAY 1982 AT U-100 UPLANDS

The Chapter members were given the Grand Tour of the new facilities of the Aviation Safety Bureau of Transport Canada at Uplands. Our hosts gave us a very good overview of their involvement in accident investigation as well as a little known facet of their operation: testing failed components in other transport related areas such as automobiles. An example of a non aircraft investigation was the recent investigation to discover the cause of the fire on the ice breaker Louis St. Laurent. The Aviation Safety Bureau also does contract work for foreign governments not having state of the art testing facilities.

Charlie Schuck, EAA lobbyist in Washington, was at the May meeting. Charlie mentioned that the US government has decided, because of budgetary constraints, to relax regulations for the recreational flyer. If mayhem does not result, the intent is to let the "puddle jumping" fraternity assume more responsibility for their actions. Let us hope that this idea gains popularity in Canadian regulatory agencies.

Laurent Ruel

SUGGESTION OF THE MONTH - from Transport Canada Aviation Safety Letter Issue 3/83

"A weather-conscious pilot recently told us that he flies frequently - but takes his car when the weather's doubtful. Having spent many futile hours at airports waiting for weather to improve, he's found it better to make the 'drive decision' early."

"When driving because of weather he's made it a habit to drop in at airports enroute to see if anybody could use a lift. Sounds like a good alternative to a dangerous flying decision. This kind of thoughtful mutual help could avoid a lot of grief."

F. Hill – test flying company -2-

PRESIDENT'S CORNER

Several events over the past couple of months have led me to the conclusion that perhaps we are taking the wrong fork in the road so far as providing you, the Chapter members, with the type of activities you really may prefer to see happen and, as members, have every right to expect.

Since the bottom line to a successful Chapter is membership participation, let me cite a few examples of the type of thing which has prompted my opening comment.

- A dinner/dance evening was planned in February for the Sports-plex with membership response -- you got it -- zero!

- A trip to the Smithsonian Institute in Washington was planned for May. This involved a good deal of effort on the part of your Vice-President to plan and coordinate travel and accommodation arrangements. Unfortunately, the response was such that this trip was cancelled.

- The annual Crippled Children's Fly Day in May was well publicized in both the Chapter newsletter and at the April meeting. Once again the request for helping hands to man the booth, and for examples of members projects for display purposes was -- right again -- nil!

- Finally, the Hangar Committee have made continuous pleas for help to finish the lounge area of this project so that greater use of this facility can be made. Although hands have been available, perhaps not to the level expected or, indeed, needed.

While each of these appeared to be worthwhile attempts to foster perticipation and continue to raise and maintain the common interests we all share, none seemed to have sufficient membership appeal to succeed.

So O.K.! Where are we going wrong? What type of planned activities would you prefer or do you prefer any extra activities at all?

The June meeting will be held at the hangar, and I would ask you come prepared to pass along your suggestions/comments on this aspect of the Chapter's operation. Believe me, all will be welcomed and appreciated.

Speaking about the hangar, this has been a fairly costly undertaking to which a number of members have already contributed a substantial sum of money, others a fair amount of time and effort, and others a combination of both to bring this project to its present state. Further funds and work will be needed to finish it fully, and without a continuous input of funds through rentals, etc. (i.e., use of these facilities), there is a real possibility and concern that this project may fail and everything will be lost. I am certain we don't want this to happen, but the only way to prevent it is to make full use of the project so taxes, insurance and our share of airport maintenance cost can be met.

Once again, your suggestions and ideas as to how we should handle this will be sought and appreciated. Please consider fully and come along prepared to participate in the decisions to be made.

Keith

Aug 15 – noon onward
JIM BRADLEY'S

ORC – tomorrow – Sunday } open house

NEXT CHAPTER MEETING

Time: Friday, June 18, 1982
Place: Chapter Hangar at Carp Airport
How to get there: West on highway 417 to Carp Road (Exit 144). North-west on Carp Road (toward Carp) 5.5 km (4 miles). Turn left at Bradley Air Service sign. Park in Bradley's parking area (do NOT drive across taxiway). When walking to hangar across taxiway, keep an eye out for aircraft.
Program: Ted Slack will be describing his proposal for a Flight Test Symposium to be held at Carp next spring sponsored by EAA Chapter 245.
Fred Lucas, Regional Airworthiness Inspector, was scheduled to talk to the Chapter but Fred phoned to say he would be out of the country on the 18th. Fred has a standing invitation to our meetings so we hope that he will find time from his busy schedule to visit us.
Tentative plans for the evening are to have some Ultra(Micro)lighters to bring us up to date on their fast growing activity in the Ottawa area. We even hope that at least one ultralight will be at the meeting.
Bring: Mosquito repellent (a MUST). A chair. We haven't acquired a stock of chairs so play it safe and put that folding lawn chair in the car now; don't forget it.
Chapter Activities for the Summer: The next regular Chapter meeting is scheduled for 17 September at the NRC on Sussex Drive.
This doesn't mean that the Chapter will be inactive during the summer months. One event we all look forward to is the Jim Bradley Corn Tasting Convention (we don't call them Fly-Ins any more) at Jim's strip. The date is not set because it depends on how the corn is ripening and will be the second or third Sunday in August (we'll phone).
There are plans to have a host at the hangar to receive guests during the week-ends this summer. If you can spare a couple of hours during a summer week-end or several week-ends, please indicate this by putting your name on the duty roster that will be posted at the hangar in time for the meeting on the 18th. If you have some expertise that might be valuable to another member, please indicate so on the roster, for example, Eric Taada (composites), Frank Cianfaglione (electrics), Keith Gillespie (model aircraft), John Doe (lawyer), etc.
Canadian Tire Money: The hangar "little tin box" that has appeared at our regular monthly meetings has been reprogrammed to accept Canadian Tire money. To some, it may appear as funny money but to an organization such as ours who use the services of CTC, it's hard cash.

NEW MEMBERS - The Chapter welcomes the following new members;

Denis Calnan, 3 Rigel Road, Ottawa, K1K 0A1, (613) 749-7975
Edwin R. Chambers, 594 Laverendrye Dr., Ottawa, K1J 7B8, (613) 749-0269
Leonard J. H. Curling, 1014-2450 Southvale Cres., Ottawa, K1B 4L9, (613) 521-2434
Tom Roddy, Room 4125, K. W. Neatby Bldg., C.E.F. Carling Ave, Ottawa, K1A 0C6
Olav Peterson, 7 Dickson St., Nepean, K2H 7H6
Thomas Van Tuyl, R R 1, Dunrobin, K0A 1T0

FROM THE EDITOR'S TYPEWRITER

Nothing earthshaking from the old typewriter this month; only a few short items, what 364 call quickies.

For those who missed the last meeting, the tour of the Accident Investigation Laboratory, you really missed an eyeful. It was a coincident that Ted Slack had invitited the EAA/EAA Technical Committee to Ottawa for one of their meeting on the same day; that's why we were fortunate to have Charlie Schuck at the Chapter meeting. This group toured the Laboratory in the morning and I'm sure they were very impressed. Believe it or not, they, the US, don't have such a facility. Having this laboratory is like having insurance, your glad it's there but you hope that you never have to use it.

On this reviewer's first cross country of the year, to Windsor, being a good boy I went out and bought the latest sectional and the latest Toronto VTA. All went well until I got to Toronto. Called Toronto terminal on the frequency given on the VTA but got no answer. Finally I had to get the Toronto FSS to get the correct frequency; so much for an up to date VTA. Upon my approach to London, I dialled in the frequency given on the sectional, no answer. Some other poor soul was also trying to raise London, no success. Since I was well above the FCZ I just overflew it. After landing, I checked the VFR Supp. and found the correct numbers. Since I was landing at Windsor, I had all the Windsor numbers from the VFR Supp. Out of curiosity, I checked the tower frequency on the sectional; you guessed it, it was wrong. So much for "up to date" charts; I wonder how much other information was missing, obsolete, incorrect, etc. From now on, I plan to use the US sectionals where they cover the Canadian airspace; they at least give a "next edition schedule" date.

There have been rumblings from one of our most hard working members. The words go something like this, "this isn't fun anymore, I'm sure I can find another hobby that isn't so demanding". It scares you at times to hear this and it indicates that the members of the group are not pulling their load as a group and that, like too many other groups, a few are doing all the work for the majority. This reminded me of the story of FOUR PEOPLE in a recent Chapter 30 newsletter. "This is a story about four people named: Everybody, Somebody, Anybody And Nobody. There was an important job to be done and Everybody was sure that Somebody would do it, Anybody could have done it, but Nobody did it. Somebody got angry about that because it was Everybody's job. Everybody thought Anybody could do it, and Nobody realized that Everybody wouldn't do it. It ended up that Everybody blamed Somebody, when actually Nobody accused Anybody."

SMITHSONIAN AIR AND SPACE MUSEUM TRIP - As we say in aviation, it didn't get off the ground. The response from the Chapter was practically nil; five or six, with a similar number from the aviation historical group. Ray Perkins and his wife spent a lot of time organizing the trip and for them and those planning to go on the trip, the result must have been disappointing.

CRIPPLED CHILDREN'S FLYDAY - Our President spent quite a bit of time getting things together to set a display in the Ottawa Flying Club hangar. Unfortunately, no other material was forthcoming from the membership and very few people showed up to man the display. Thanks Keith for a good try.

AUTOMOBILE GAS - The Civil Aviation Authority in England has recently changed regulations to allow the use of automobile gas for non commercial applications in a large number of light aircraft engine models - from the A65 to the O-200. When auto gas is used, the pressure altitude may not exceed 6000 feet, and the gas must be obtained at designated airport pumps (to maintain some quality control). The problem with using car gas is that when bulk supplies are low, refineries are known to relax their standards in order to meet the demand. Since the average automobile engine operates at about 20% of the rated horsepower, there may not be a noticeable defference in using poor gas. The aircraft engine, on the other hand, normally operates at 65 to 75% of its rated power - so a diet of quality fuel is very desirable. An engine gasping and chocking on take-off because of malnourishment can be disquieting.

Laurent Ruel

Homebuilders of composite aircraft who install the radio antennas under the seats may get an unexpected charge out it. According to one of the cognoscenti in aircraft antennas, Jim Weir, head of Radio Systems Technology, the high-powered microwave energy from the transponder or DME antennas might fry somebody's genetic hash, so to speak, unless protection is provided.

As he characterizes it, "It may be a little like sticking your fanny into a microwave oven." RST, it seems, has been designing hidden antennas for homebuilt plastic aircraft using the nonconductive structure of the aircraft to enclose the antenna radiating rods. And some builders have been concealing the antennas directly under the passenger or pilot seats.

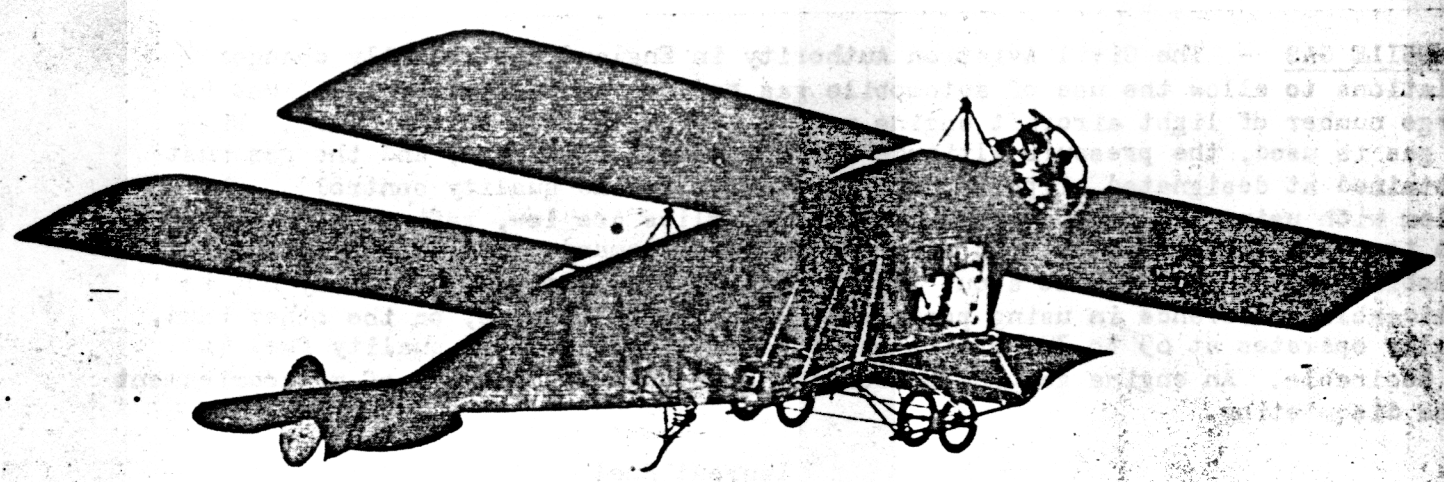
Weir recommends placing a radiation shield like aluminum foil into the seat structure to protect the pilot from possible harm.

Aviation Consumer, March 15, 1982

PSALM TO BOND - The following was written in the US, the Bond is Langhorn Bond, but it applies here in Canada as well.

DOT is my shepherd I shall not want.
He maketh me to fly down under his TCA's.
He reinforces my doubt in the ATC system.
He guideth me in the path of great airliners for regulations sake.
Yea, though I fly in the valleys of cloulds, I am still unsafe.
I do fear evil, for the administrator art against me.
Thou anointed my aircraft with required equipment
and its fuel with taxes, so I flyeth through thy airspace less.
Surely his policies shall follow with more airline privileges
and I shall tieth down my bird forever.

(Stolen from EAA 305 newsletter who stole it from the Stinson Club newsletter that stole it from some other newsletter.)



Does this configuration look familiar? It looks a lot like the "new revolutionary" design that appeared in all the aviation magazine a couple months back. See page 8 for answer.

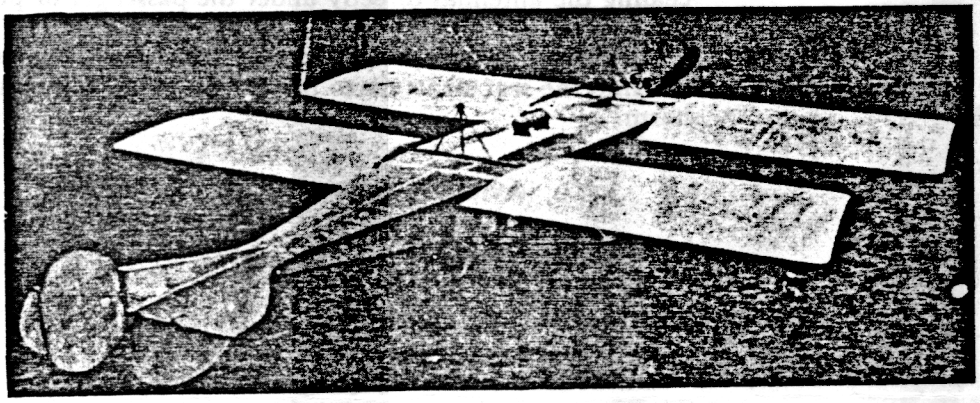
Albessard aerobus

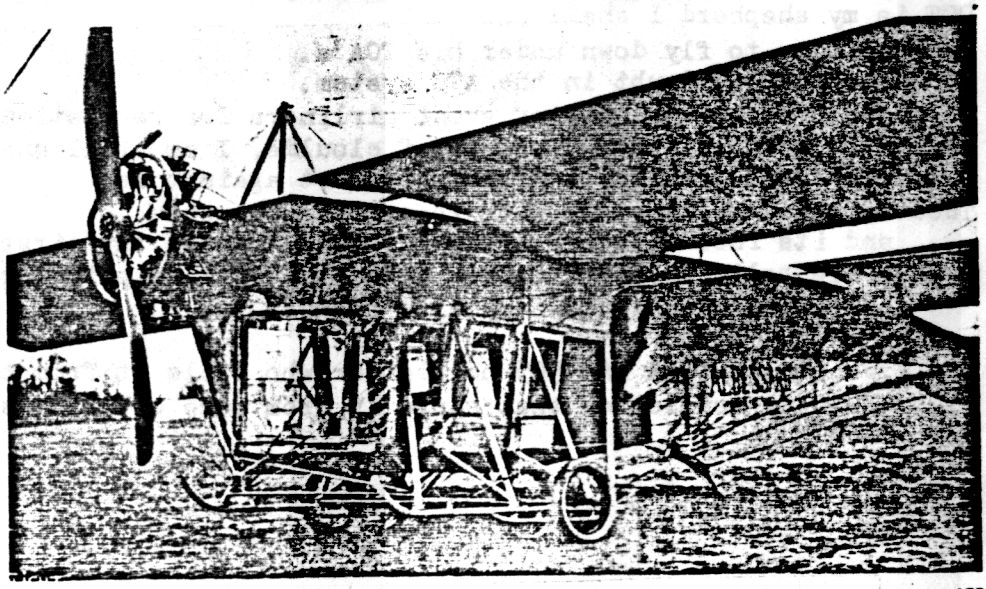
It won't surprise readers to learn that this inelegant French machine received only casual attention in the British aeronautical press when it made its debut in March 1914. Even then it looked like a throwback to less enlightened years, an impression enhanced by the tandem-wing layout which recalled the unfortunate Langley Aerodrome, catapulted from a houseboat on the Potomac River in 1903 with structurally disastrous results.

Nor was the Albessard's enclosed accommodation for three particularly *avant garde*. Louis Blériot had carried up to nine passengers in his open "Aerobus" monoplane of 1911, and he followed this with enclosed seating for seven passengers in the Limousine, built for M Deutsch de la Meurthe the same year.

With a span of 36ft, a length in excess of 39ft and an empty weight of 1,653lb, the ungainly Albessard was fitted with a pendulum device to provide automatic stability. A 100 h.p. Anzani radial engine drove a massive two-bladed propeller, and the lifting surface was supplemented by flat extensions to the fuselage top-decking, which spread out at the rear into a strangely conventional tailplane. Oil and petrol tanks were positioned above this top-decking on the fuselage centreline.

The flying career of the Albessard aerobus is poorly recorded, but early in April 1914 it was reported to be performing "audacious" evolutions and "marvellous" landings at La Vidamée, piloted by one Louis Noel. After that it faded into obscurity. **PJ**





NEWSLETTER REVIEW

EAA Chapter 142 Victoria, B. C. April 1982

- Designees: Electronics, Composite, Sheet Metal, Power Plants, Wood, Welding. These are the designees that Chapter 142 have. This is to emphasis my request in the last newsletter. We don't need designees in the EAA context just interested parties that are willing to collect, sort and disseminate information. Pencil in some names for suggestions at the June meeting at Carp. This reviewer will suggest some names;

Electronics:	Laurent Ruel
Composite:	Eric Taada
Sheet Metal:	Don Kernohan
Power Plants:	Parr Tate
Wood:	George Reid
Welding;	Garry Fancy
Ultralights:	Ray Perkins
Glider:	Jack Dods

- One of the items brought up at the last 142 Chapter meeting was for the executive to look into the suggestion that coffee and donuts be available after monthly meetings. This reviewer wonders how many members 245 would get out if we didn't have coffee and donuts.
- Projects:

Paul Lisson	- half-scale SeaFury
Bob Noren	- 3/4-scale Spitfire
Frances Benton	- Quickie
Basil and Leslie Bowman	- CUBy

EAA CHAPTER 144 Orillia, Ontario April 1982

- Projects:

Tom Wood	- Chrysalis (folding wing biplane)
John Seed	- Tri-Z
Al Van Hoye	- Original design seaplane
Harold Wood	- KR2

EAA CHAPTER 305 Dartmouth, N. S. April 1982

- "At our monthly meeting of April 6th a motion to raise our annual dues from the present twenty dollars to forty dollars, with the twenty dollar increase going to support E.A.A.C. was defeated by our members." This reviewer notes that the additional twenty dollars was to support E.A.A.C. not for membership in E.A.AC As I have pointed out in the past, the best support for E.A.A.C. and especially the Technical Committe, is E.A.A.C. members.
  305 points out several other facts which have and are tending to discourage people from joining E.A.A.C.. They mention that no response has been received to date from their donation of $100 last October; no reply to membership mailed in December; E.A.A.C. refusal of E.A.A. financial and magazine space support.
  305 feels these are some of the questions that need answering.
- 305 is close to closing a deal on a club aircraft. All that has to be done is find an aircraft, collect the money promised and set up the operating rules. The work has just begun.
- Projects:

Scott Rudolph	- Maranda (CF-ZTB)
Joe Frizzle and Marshall Jones	- Osprey 2
Walter Sloan	- BD5B
Pat Phelan	- Davis DA2A (C-GGLB) (for sale)

- Debbie Burleson of Chapter 305 has the painting scheme for making your propeller conspicuous. This reviewer has had it on his Cherokee since the fall of '79 and boy does it ever get the attention a propeller deserves; that's what it's for. The colour scheme given by Debbie and on my Cherokee comes from an AGARD Advisory Report No. 56 entitled Markings for Propeller Conspicuity by Group Captain T. C. D. Whiteside, RAF Institute of Aviation Medicine, Farnborough, Hampshire, United Kingdom. Colin Keppel, President of EAA Chapter 199, Sarnia Ontario, is trying to get all their aircraft propellers painted with the stripes.

2.09 60 mph.

BOOK REVIEW - Unfortunately, as you will see, this reviewer doesn't finish too many books. As I have mentioned in the past, I first look to see if the author of the book knows anything about aerodynamics or is he (or she) just using big words to impress or confuse the reader. If it is the latter, I don't read further since I never know whether the author is just fooling me in areas I don't know but trying to learn. Unfortunately, as I said at the start, I didn't get very far this time; page 12 of Positive Flying by Richard L Taylor and William M Guinther. The sentence that caused this sudden termination was, ".... by inducing a phugoid oscillation. .... but it really refers to the oscillations of an aircraft as it attempts to remain, or return to, straight and level flight." What the author is referring to is the "short-period oscillation" not the phugoid.
One textbook describes the resulting motions after a control stick or wheel displacement as, "The first result of such a disturbance is a rapid angle of attack adjustment (short period) but when the angle of attack adjustment is completed the motion may still be unsteady. The remaining motion is of the kind called by Lanchester a phugoid." This phugoid motion is a long-period oscillation in which the angle of attack remains constant, hence the lift coefficient, and the net drag (drag minus thrust) is assumed to be zero. Thus the total mechanical energy of the aircraft is constant or

$$m(g.h + \tfrac{1}{2}V^2) = \text{total energy} = \text{constant}.$$

Dividing by m.g we get

$$h + \tfrac{1}{2}V^2/g = \text{constant} = \text{energy height}.$$

For constant energy height, we can trade height (h) for velocity (V) and still keep the energy height constant. (g is the acceleration due to gravity and m is the mass of the aircraft.) Therefore, the phugoid is simply a slow motion up and down at constant angle of attack where height and velocity are changed, that is, as height increases, velocity decreases and when height decreases, velocity increaees. This phugoid motion may have a period of about 2 minutes and may be lightly damped or may be undamped. This means that it will go on for a long time if not controlled. Since the height and velocity changes are small, it normally does not interfere with the piloting and in normal flying with light turbulence, the average pilot won't even know its there.
On page 16, there's another statement that cannot be left unchallenged. It is, "Additional thrust will cause the elevator to command a new pitch attitude, and of course that change will result in a climb." Additional thrust will result in a climb alright but its got nothing to do with the elevator. Unless the throttle is connected to the elevator, the throttle cannot command the elevator to do anything.
It's really a shame that a book such as Positive Flying is not reviewed for such incorrect statements for a couple of reasons. Firstly, it puts forward such false information rather than the true picture which is no more difficult to understand . Secondly, it causes readers like yours truly to stop reader further and depriving me from gaining information that could be valuable in flying. But, I don't know how accurate this information is since some doubt has been cast on other information. Too bad!

QUICKIE BUILDERS UNITE - "The Quickie Builders Association would like to hear from you if you are constructing a Quickie or Q2. Not affiliated with Quickie Aircraft, QBA is an independent organization intended to offer safety information, builders tips and project locations to Quickie customers. The association can be contacted through Robert Herd, 2306 9th Street, Lubbock, Texas 79401."

ANSWER - The Rutan Grizzly. Both are biplanes with zero gap and a lot of stagger; an unusual configuration but one, as we see, that is not new.