

THE HOMEBUILDER'S

Corner

by PAUL H. POBEREZNY



HOW DOES ONE approach a touchy subject; yet not be an alarmist, a finger pointer or discredit a fellow aviation enthusiast. Yet, be truthful and straight forward to insure the best interests of all who are served —

You tell it like it is. For the past 20 years, our homebuilt movement has been very successful. Its safety and its cooperation with both individuals and government alike is well known. Men and women involved in building, restoring, designing and flying — all seeking higher goals and standards. I am sure most of us realize that if we defy motion or gravity, it can have disastrous results. However, in our efforts to enjoy the pleasures of flight, we must continue to improve our skills and knowledge.

With the growing number of amateur-built aircraft taking to the air, the problems of insuring the best possible standards of design, maintenance and pilot skills become apparent. How do you reach all of the people involved?

All are not members of EAA or avail themselves to the pages of *SPORT AVIATION*, the many other EAA publications or the help of the over 465 chapters and 350 Designee Inspectors. Nor is there any requirement that they should — for we all must choose what is best for us. However, we should also consider that one's errors can be quite costly to the other's freedoms.

With the growing number of aircraft of like type, weakness in the designs soon appear. This holds true for the factory built as well as the homebuilt. The factory built has a system of keeping owners and licensed mechanics aware of problem areas, but how about the homebuilt. Who is watching the store, the builder? the Designer? Some yes, but not all.

Recognizing this, we called a meeting here at EAA Headquarters during the middle of June. Our EAA/FAA Washington Representative, Charlie Schuck was on the spot with three of his helpers — Bob Blacker, Chief of General Aviation in the Great Lakes Region; Keith Anderson, Chief of Engineering and Manufacturing of the Great Lakes Region; and Buddy Adamson of Oklahoma City who is presently overhauling the civil registry.

After much discussion, a program was planned to screen all past accidents by type of aircraft and causes. Ben Owen of EAA Headquarters has put in several weeks of screening, reviewing and organizing these reports. With the cooperation of FAA, EAA will develop a program that will point out design weaknesses so that the designer and builder can insure a safe and sturdy aircraft.

Some may say, What is EAA doing getting us involved in a lot of red tape? Not so — for if we don't lead the way on a voluntary basis, we can expect greater restrictions and less freedoms. This is a way of life — whether we like it or not. As I said earlier — tell it like it is. From past factual information as reported to EAA Headquarters either by individuals who experienced it, or through reports received from FAA investigations of accidents.

We must be careful in our evaluations — and comments should not be taken as personal criticisms of individuals or designers. One must also realize that there can be a great difference in the finished airplanes than called for by the drawings.

The following are a few items that have shown up during the years —

*Smith Miniplane landing gear failures at a point just below the weld at the rear strut to front lower landing gear strut.

*Failures of Jeanie's Teenie nose gears.

*Failure of Smith Miniplane horizontal leading edge at the fuselage attach bolt hole.

*Four control column failures at the control stick attach area on Pitts biplanes. (Mr. Pitts issued a notice on this.)

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Pictured above is Miss Cindy Shearer, Washington, D. C., with one of the six trophies to be given at the Miss and Mrs. EAA Contest. The sixth annual Miss and Mrs. EAA Contest will be held Thursday night, August 2, following Mr. Paul Harvey.

Bruce Hutton will be signing up contestants at 1:00 P.M. each day at the EAA booth in the Commercial Display Building. For further information contact Bruce at 311 Ottawa St., S. E., Washington, D. C. 22021.

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*Stits Playboy stabilizer leading edge to fuselage attach fittings. Some years back, FAA issued an airworthiness directive on this, but a week ago a failure in this area occurred on an unmodified stabilizer with fatal results.

This week, four lives were lost from wing failures. Two in a Turner T-40A, when the wing separated in flight. Investigators reported that the landing gear had been moved outward from the original holes, the original holes filled with wooden dowels and new ones drilled nearby, greatly reducing design integrity.

A Piel Emeraude shed its wings with a father and son. It was reported that the main spar separated at the center of the cockpit and at the time of this writing, the reason has not been established.

A Pietenpol (2-place) lost a wing, as reported, because of the lack of jury struts causing wing strut failure at the mid point — with two fatal results.

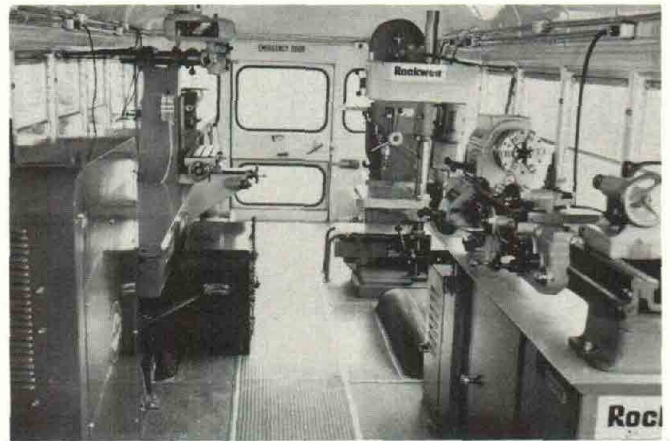
MILLICAN MOBILE MACHINE SHOP AT OSHKOSH

A unique traveling machine shop will be at Oshkosh this year and will be available for use by aircraft owners in case any repairs are necessary.

The Mobile Machine Shop is the creation of Howard Millican of Indianapolis and is normally seen at USAC Championship auto races and at trade and high schools around the country. A veteran race car builder and designer, Millican got the idea of the Mobile Machine Shop, bought a school bus and obtained sponsorship from Rockwell International, who filled the bus with their machine shop equipment. He has used the Mobile Shop to assist race mechanics in making on-the-track repairs of failures that otherwise would have kept a car out of a race, and for interesting high school students in taking shop classes. Both programs have been highly successful.

Millican's Mobile Machine Shop is equipped with Rockwell International lathe, milling machine, drill press, metal cutting band saw, grinders, finishers, electric and heli-arc welding equipment and non-destructive test gear, including Magna-flux and Zygllo. The equipment is capable of turning out work ranging from fabrication of a small screw or bolt to polishing crankshafts or cutting engine blocks.

Look for it at Oshkosh '73.



(Rockwell International Photo)

Interior of the Mobile Machine Shop showing some of the Rockwell International equipment which will be available to aircraft owners at Oshkosh, in case repairs are needed.

Information on failures must be accumulated and available to all and though it has and will be an added burden to EAA Headquarters in its day to day tasks, it is a responsibility that must be faced and accepted. With the cooperation of FAA, designers and builders, it can lead to safer aircraft for all.

From my close observation and activities with the entire amateur built movement, it would be my opinion that improved pilot technique and skill would reduce the mishap potential.

Relative to design failures — good design practices are well established and available in a number of accepted publications.

If you have had any particular problems with your aircraft, how about letting us know — as well as the aircraft's designer. This way all of us will benefit.

See you soon at Oshkosh — It will be the greatest one yet. Remember — Keep the grounds clean — No Smoking on the flight line — Snuff's OK — Wing Walkers — A qualified person in the cockpit when propping.

See you there.