

THE HATZ HERALD

THE OFFICIAL NEWZLETTER OF THE HATZ BIPLANE
ASSOCIATION

VOL. 23; ISSUE 2

President's Corner

Jeff Orear



How can it be that the Holiday Season is already upon us? Seems it was just recently I was loading up the SUV, preparing to head to Brodhead and Oshkosh. Funny how conversely, it feels like ages ago that I started building my Hatz. That might be because it WAS ages ago!

The holidays give us all a chance to step back and see how fortunate we are. There are various reasons to be thankful, and feel peace in our lives, but our common interest in aviation, and specifically Hatz biplanes, is a shared treasure for HBA members. Many have the joy of sharing aviation with family and loved ones, ranging from attending the Brodhead and EAA fly-ins, flying, or even building a Hatz together. The camaraderie among fellow Hatz enthusiasts also provides a wealth of pleasure. Other than perhaps being a bit less “airplane poor”, think of the void we would have in our lives if we had not been smitten by these little homebuilt biplanes.

With the coming New Year, we have the opportunity to make resolutions. What a great time to include those pertaining to our common aviation and Hatz interest. Resolutions such as buying those Hatz plans for the version you’ve wanted to build. Getting started on your project. Making a specific goal for the year toward completion of your Hatz. For some of us, completion, DAR inspection, and test flights for our projects that are now looking more like airplanes. Flying your Hatz to Brodhead and Airventure. Whatever your aviation ambitions, make this new year the year you make progress toward attaining them.

I wish all of you Hatzy Holidays, and a Hatzy New Year!

From Jeff Moore, or as we know him “\$ Jeff” because he is the HBA Treasurer

Each year we all attend our favorite fly-ins. Some are known by only one name. AirVenture is simply "Oshkosh". The Antique Airplane Association is "Blakesburg". Another favorite of mine is the Midwest Antique Airplane Club or "Brodhead".

My season trips start with the annual pilgrimage to Oshkosh stopping at Brodhead Airport for the Hatz - Pietenpol fly-in. We also hold our annual Association meeting during this weekend. This stop started many years ago at Poplar Grove airport and was known as the Midwest Regional Hatz Fly-in or MR Hatz. There was also a regional fly-in in at Cottage Grove, Oregon, at that time. We have the business meeting to update members on the state of the Association, social gathering, ride hopping and this year a luncheon to commemorate the 55th anniversary of the design. The local EAA Chapter has been an excellent host for us and is greatly appreciated. A good time was had by all so it's off to Oshkosh.

My next adventure was Blakesburg during the Labor Day weekend. It is a members-only event for the Antique Airplane Association and this year the Hatz designs were the featured homebuilts. A friend in a Taylorcraft DCO-65 and I set off for Iowa. There were several Hatzers in attendance: Lyman, Clifford and Wyatt Hatz; Luke Weist; Ron Sieck; Kevin and Cindi Conner and Jeff Cain to name a few. Lyman moderates a Hatz Club meeting on Saturday to update those on the current state of things in Hatzdom.



Kevin Conner's "Radio Flyer," a CB-1, at Blakesburg

This year was special to me. Both of our daughters braved the drive from Indiana to Iowa for the event. Jennifer, who's been to Blakesburg before has her pilot's license and Jessica, her first time here, hinted she is interested in lessons. On their way to the show, they decided to construct an award. They shopped around and found the necessary items for the project and presented it to me on Saturday! Thanks girls.



And yours truly in old reliable - hard to believe it's been 23 years since its first flight.

The last of my big adventures is Brodhead. Brodhead is a members-only event held the second weekend in September at Brodhead Airport (C37) in southern Wisconsin - the same airport we hold our annual get together earlier in the year. This year's event was held under clear blue skies and very pleasant temperatures: getting there, however, was a struggle. We headed to breakfast at Fulton County (KRCR) and then off to Morris-Washburn (C09). We ran into some showers that turned into low ceilings and visibility near the Indiana-Illinois line and had to set down in Lowell (C97) and wait it out. Eventually we were able to poke through and continue. I've made the trip through this area many times and it seems if weather is going to be an issue it's always right below Chicago. Any-who, we made it and had a glorious time. Several other Hatz-Nutz were in attendance enjoying the weekend.

Brodhead usually ends my trips for the year but there are still many \$50 hamburgers and \$25 pancakes to be eaten before the weather turns too cold.

Stay Hatzy,
Jeff Moore

Around the Corner: From the Editor

Rob Lynn



Season's Greetings and Happy Hatzy-days! This is the Holiday Newsletter Edition. I have attempted to resurrect some of Michel Pallier's cartoons from older newsletters that were printed on that ancient substance called "paper." Or maybe papyrus, not quite sure what Lorin was using at the time. So my apologies for the poor quality in the digital version of the newsletter. I have great news: Michel has rejoined the Gaggle and is creating new Hatz cartoons for our enjoyment! I will include them in coming issues.

I continue to experiment with the Hatz Herald. This issue will begin the "Hatz Nutz and Boltz" column, presenting technical information for our members. I am hoping that members will contribute ideas to this section as they create unique solutions to build and flight challenges so that the information can assist other members, builders or flyers of the Hatz aircraft family. Please read "The Disclaimer" in the back of every issue: I have no way to evaluate the information I receive, so all members need to evaluate each idea presented and make their own informed decisions regarding its value. The Message: Please do not sue me!!!

The next Hatz Herald will be dedicated to those Hatzers NOT living within the United States. You know, the International component of our organization. And yes, that does include Canada, because one needs to look the stern-faced border guard in the eye when you enter/exit the country. I already have submissions from Michel Pallier and Phillipe Cadeo from France, so I am requesting stories and updates from any member building and/or flying a Hatz biplane variant anywhere in the non-US world. And to some of us in the states, YES there is another world out there somewhere! Photos appreciated, as they take up space and mean less I have to write!

Before I close, I would like to note the recent passing of a friend to aviation and a friend to me. Robert Szego was the heart and soul of the Bellanca-Champion Club, of which I have been a member since its inception decades ago. The aviation community lost a staunch advocate with Bob's passing. May he fly his beloved red and white Citabria "Sparky" into eternity, without the need for fuel, oil, annuals, or cleaning off the squashed bugs! Rest in airborne peace, Bob.

From me and my family to you and yours, a very happy holiday season and a healthy and rewarding New Year. May everyone make much progress on their project and/or rack up many hours flying their Hatz. And although I know it doesn't look very promising at the moment, let us hope for a little more peace in the world. Without hope, we have nothing.

Cheers!

A Free Hatz Project

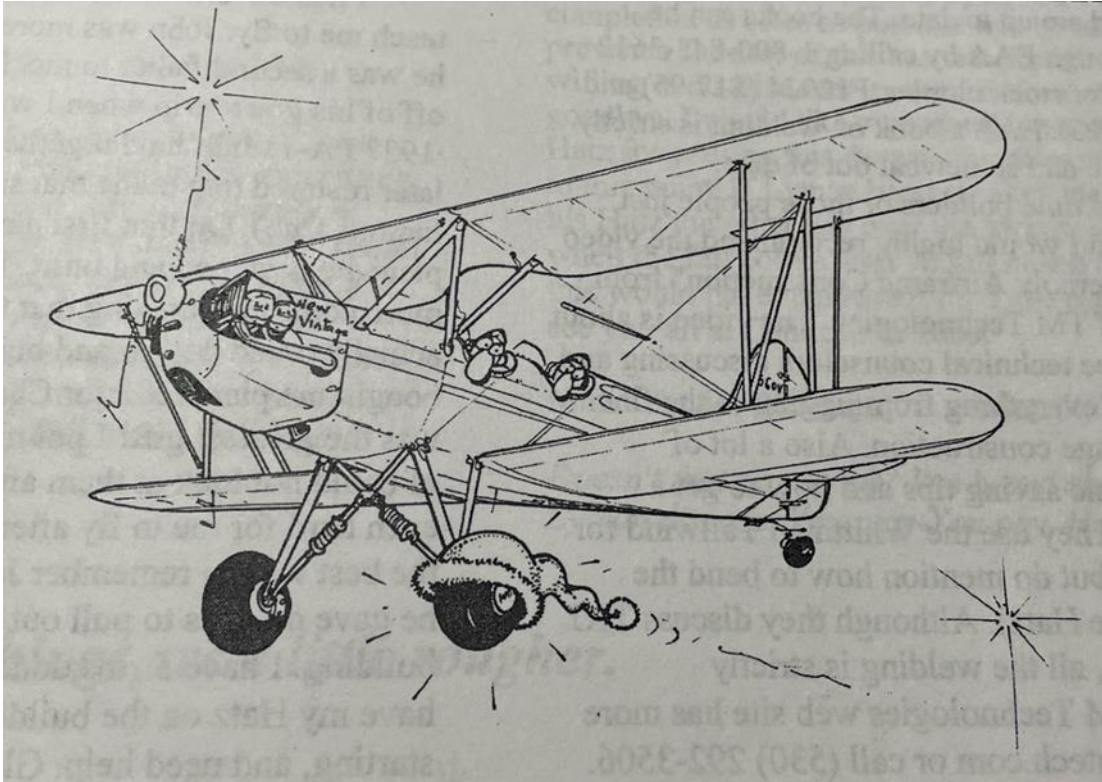
HBA Member Royson Parsons has contacted the HBA with a very generous offer:

I purchased this project in the early 2000's from a seller in Boise, ID. He had purchased the partially done project hoping to convert it to a radial engine, and then decided it was too big of a project to tackle. The seller explained that the original builder was a master woodworker, and as a result all the wood parts had been built to a high standard. As I recall I paid about \$3,500 for the project, at the time I calculated it was about \$10K worth of parts, and seemed to be too good to pass up. What I didn't factor in was that I was way too busy in life to build a plane, and I have never worked on the project. I turned 65 this year, and one of my big goals is to reduce the clutter in my hangar, so I'd be happy to donate the Hatz to someone who would appreciate it.

The fuselage is all welded up, the spars built, both sets of wing ribs complete, the turtle deck and seat pans done. I have a set of plans for the CB-1, and a set for the Hatz Classic. I also have two sets of the aluminum ribbing that I believe is used for the ailerons. I've attached a few pictures.

The project is in my Hangar at Paso Robles, CA
Feel free to give my cell phone# to any interested parties
805-591-9696





From Michel Pallier

Hatz Nutz and Boltz

There is always a lot of discussion on how to rig our biplanes but little hard data to support the process. We have all fallen in love with a rather antiquated design, hence the rigging data must be sought in antiquated books. I am going to begin this column with reproductions from a book used by the US Navy, among others, during the Second World War to train aviation mechanics. It was written by Daniel J. Brimm and H. Edward Boggess, and my copyright is 1940. This book is currently considered "Public Domain," and therefore may be reproduced for educational purposes. I have found the complete book online at www.hathitrust.org. You will need to put the authors and title in the search box and then work down the results until you find the book. You can then view each page and print with better quality than what I can do here using photos of the pages. Depends on how particular you may be about the appearance of the information. Anyway, I will try this and present information on center section rigging first, then wing attachment and wing rigging in subsequent newsletter issues. I would also suggest that any member interested in this topic contact EAA for a copy of two articles written by Bob Whittier in the February and March, 1963 issues of Sport Aviation entitled "The Fine Old Art of Rigging a Biplane." The author references Brimm and Boggess, among others, and the two-part article is excellent, in my humble opinion.

Aircraft Maintenance

by

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and

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RIGGING
(continued)

should be equal, or (c), (d), (e), and (f) must all be the same.

A less accurate but more rapid method of testing wheels to see if they are parallel to each other, is to jack up each wheel and spin it. As the wheel is rotating, mark a line around the circumference of the tire by holding a pencil steadily against it. Mark both wheels in this fashion. Remove the jacks and measure the distance from the pencil line on one wheel to the corresponding pencil line on the other wheel, at both the front and rear. The distances, of course, should be the same.

If twin floats are installed on the ship, the rigging specifications furnished by the manufacturer should be followed. If no such directions are furnished they can be obtained from the manufacturer of the floats for a small sum. The manufacturer will have to know the serial number of the floats and the type of airplane on which they are to be installed. In general, floats are to be parallel to each other and also parallel to and equidistant from the centerline of the airplane. However, the exact specifications should be consulted, for if not properly rigged, floats may seriously affect the performance of the plane.

RIGGING CENTER SECTION

The tools and equipment needed to rig a center section consists of plumb bobs and lines, steel tape, trammel, spirit level, level protractor, straight-edges, and an assortment of wrenches, including tie-rod wrenches and any special wrenches that may be needed to adjust the struts. A set of rigging specifications should be obtained from the manufacturer of the ship. Where no specifications are available, the mechanic will have to exercise his judgment as to the proper alignment.

Many biplanes have center sections and, where such is the case, the center section should be rigged first. The first step in rigging a center section is to locate it so that the longitudinal centerline of the section is directly above the centerline of the ship. To do this, adjust the cross wires (a) and (b) in Fig. V until they trammel the same from pin to pin. If the length of wire (a) is greater than that of wire (b), loosen the wire (b) and

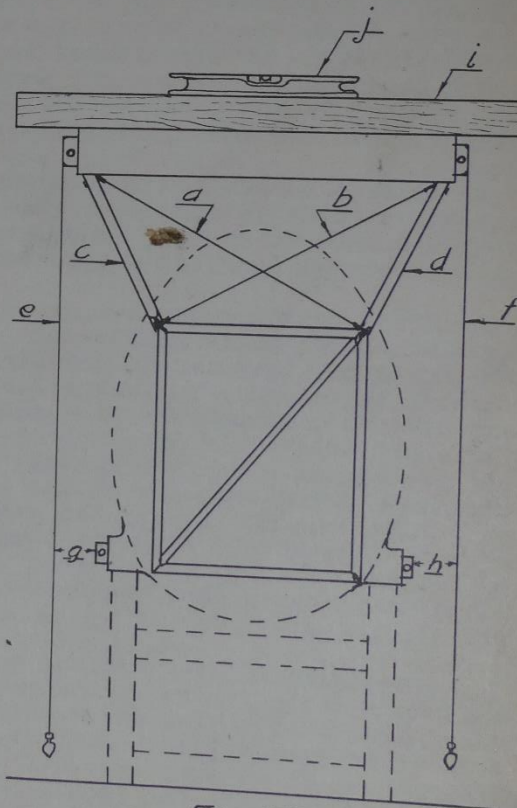


FIG. V

RIGGING
(continued)

tighten the wire (a). (Note: When adjusting wires that are in tension, always loosen one wire before tightening the opposing wire). When wires (a) and (b) are adjusted to equal length the center section is in the middle of the ship, if the struts (c) and (d) are not adjustable. If they are, they should be adjusted until they measure the same from bolt to bolt, before attempting to adjust the cross wires.

To check the accuracy of the work, drop plumb lines (e) and (f) from the upper hinge fittings and measure the horizontal distance from the lines to some structural part, such as the lower hinge fittings. Obviously, if the ship is level laterally and the center section is in the middle, the distances (g) and (h) will be the same.

Next, place a straight-edge (i) directly over the front spar in the center section and place a level (j) on it. If the center section is not level, the struts (c) and (d) should be readjusted. If they are of equal length and the center section is not level, the misalignment may be due to improper stagger. To check this, drop a plumb line (Fig. VI-a) over the leading edge of the center section near each end. The distance (b) from the plumb line to the front hinge fitting should be the same on both sides. If the lower wing is on, the measurement may be taken from the plumb line to the leading edge of the lower wing. The measurement thus obtained is called the "stagger." If the stagger is greater on one side than on the other, the stagger struts (c) should be adjusted. For example, if the stagger is too great on the left hand side, the strut (c) should be shortened; if too little, the strut should be lengthened.

It will be noticed that when the stagger is changed, strut (d) pivots on point (e) and describes an arc, shown by the dotted lines at the top of strut (d). Thus, any change in stagger will affect the horizontal level of the center section.

After locating the center section above the centerline of the fuselage, leveling it and adjusting the stagger on both sides, the next step is to make sure that it is not twisted in its horizontal plane. In other words, make sure that the chord line of the butt ribs on each side of the ship form the same angle with the line of flight. This operation is known as checking the "angle of wing setting."

The angle of wing setting is the acute angle formed by the chord line of the wing and a horizontal reference line. However, inasmuch as it is sometimes difficult to determine the exact chord line, for purposes of

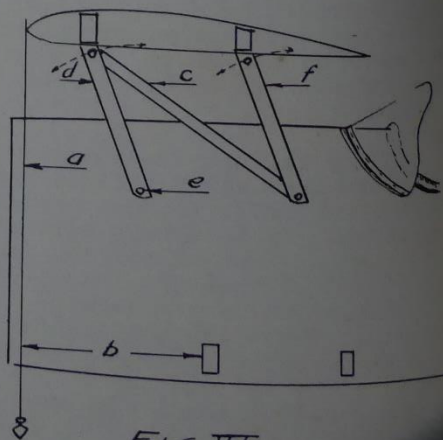


FIG. VI

RIGGING
(continued)

rigging the angle of wing setting is usually accepted to be the acute angle formed by the base line of the airfoil and a horizontal reference line. To determine this angle, make sure the airplane is level longitudinally and place a straight-edge which is longer than the chord along the bottom surface of the airfoil, as shown in Fig. VII-(a). Make sure the straight-edge is on a rib, then hold a level protractor (b) in the position shown. Adjust the inner, movable portion of the protractor until the spirit level, which it contains, reads level. Lock the protractor in this position and read the angle, thus measured, directly from the graduations marked around the circumference of the instrument. In the same manner, take a reading from the other end of the center section, and if the two angles are not the same it shows that the section is twisted in its horizontal plane.

If the angle of wing setting of the left side of the center section is greater than that of the opposite side, and as the front struts were previously adjusted to equal length, the difference should be corrected by lengthening strut (f), or by shortening the opposite rear strut.

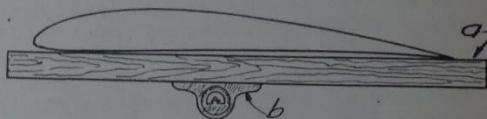


FIG. VII

If rigging specifications are available, exact information will be given as to where and how the angle should be measured and what the measurement should be. Otherwise, it may be assumed that the angle of wing setting for the center section is to be the same as for the bottom wing. By taking a measurement of this angle from the bottom wing close to the hinge fittings, a reasonably accurate result may be obtained.

Frequently, the mechanic is not concerned with what the angle of wing setting is as long as it is the same on both sides of the center section. A method of checking the equality of the angles without the use of a protractor is to construct an "incidence board", as shown in Fig. VIII. A straight-edge (a) is placed on the airfoil, and a level placed in the position shown in (b). A block (c) is placed directly over the rear spar and clamped to the straight-edge after the rear of the straight-edge has been raised until the level (b) shows level. A position mark (d) is made on the straight-edge so that it can be placed in a similar position each time a reading is taken. By placing the incidence board and level at various

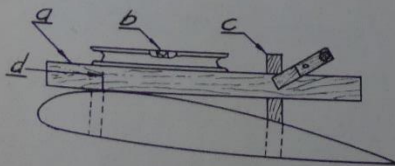


FIG. VIII

points along the center section or wing, it can be determined whether the angles of wing setting of the points thus measured are greater or less than at the original point.

After the above points have been checked, and all struts and tie-rods have been locked and

RIGGING (continued)

safetied, the rigging of the center section can be regarded as complete. Many center sections do not require as much rigging as has been described, for they may have non-adjustable struts, making it impossible to adjust each angle. In this case the rigging is limited to adjusting the tie-rods so that they are the same length from pin to pin. Nevertheless, the importance of the alignment of the center section cannot be over-emphasized, for if this alignment is not correct, it will be impossible to rig the wings correctly, and the flight characteristics of the ship may be impaired.

RIGGING WINGS

When rigging the wings on a biplane all of the flying wires should be slacked and the lower wings rigged first, for dihedral. Dihedral is commonly understood to be the acute angle formed by a transverse reference line in the wings and a horizontal reference line, and is measured in the vertical plane. On the conventional biplane the front spar of the wing is usually accepted as being the wing reference line. Therefore, the angle of dihedral can be measured by placing a straight-edge along the front spar, holding a level protractor on top of this and adjusting and reading the instrument, as illustrated in Fig. IX. Tightening the landing wires increases the dihedral and conversely, loosening the landing wires decreases dihedral.

Many biplanes have from 1° to 4° dihedral in the lower wings and 0° dihedral in the upper wings. When such is the case the simplest procedure is to rig the top wing straight, or level transversely. To do this, place two blocks (Fig. IX-a) on the front spar, directly over the last full sized rib, and stretch a string (b), as shown. Adjust the landing wires so that the distances from the string to any corresponding portions of the wings or center section are the same. As a check, sight along the leading edge to see if that is straight also.

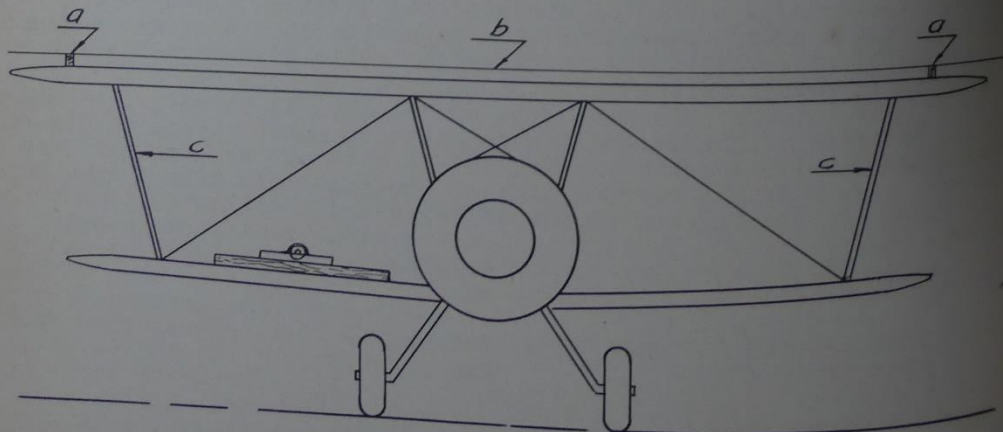


FIG. IX

A Flight Before Christmas

T'was the night before Christmas, and out on the ramp
Not an airplane was stirring, not even a Champ
The aircraft were fastened to tie-downs with care
In hopes that come morning, all would be there

The fuel trucks were nestled, all snug in their spots
While peak gusts from two-zero reached thirty-nine knots
And I at the fuel desk, now finally caught up
Had just settled down with my favorite cup

When over the radio there arose such a clatter
I turned up the scanner to see what's the matter

A voice clearly heard over static and snow
Asked clearance to land at the airport below
He barked his transmission so lively and quick
And I swear that his call sign rang out "St. Nick"

Away to the window I flew like a flash
Sure it was only the late Delta Express Dash
He called his position, there was no denial
"St. Nicholas One turning on final!"

Then what to my wondering eyes should appear
A Dick Rutan sleigh and eight Rotec deer

He flew the approach, down glide slope he came
As he passed all the fixes he called them by name
Now Rengo, now Tolga, now Trina and Bacun
On Comet, on Cupid what pills was *HE* takin'?

Those last couple of fixes left the controllers confused
They called to my office to give me the news
The message they sent was both urgent and dour
"When Santa Claus lands he best call the tower!"

He landed like silk, the sled runners sparkling
I heard "Exit Charlie" then "Taxi to Parking"
Up to the office the courasers they flew
With loud airplane noises and St. Nicholas too

He was dressed all in fur which was covered in frost
His beard was all blackened from reindeer exhaust
His breath smelled like peppermint, slightly gone stale
And he sucked on his pipe, but didn't inhale

He was chubby and plump, a right jolly old fool
He kindly informed me that he needed some fuel
The squint of his eyes and the curl of his toes
Let me know he was desperate to powder his nose

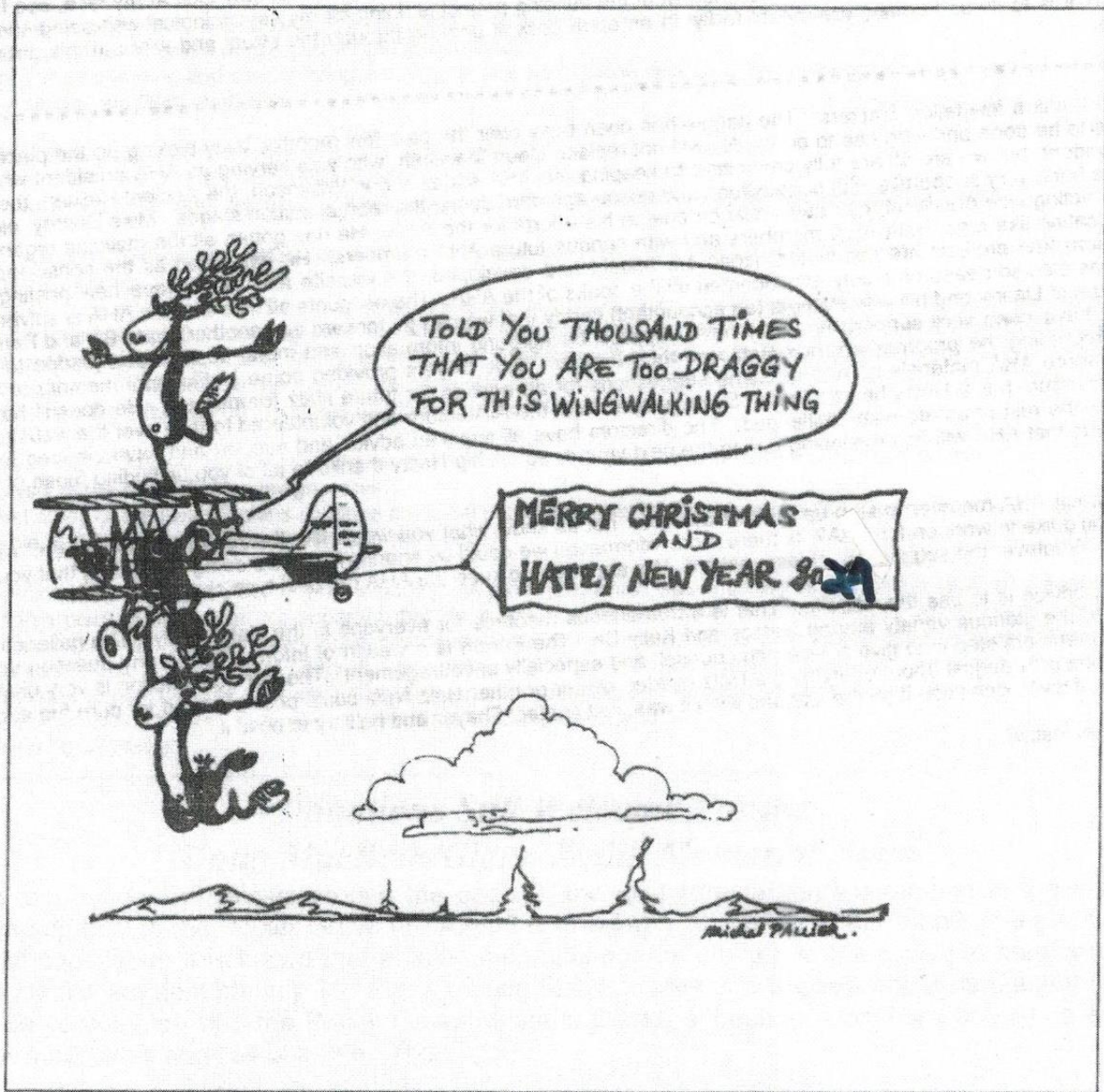
He had a round face that jiggled like jelly
His boots were as black as a cropduster's belly
I spoke not a word but went straight to my work
Over filling the tank and it spilled, What a Jerk!

He came out of the restroom with a sigh of relief
Then consulted his iphone for a real time weather brief
And I thought as he silently scribed in his log
With Rudolph he could land in a quarter-mile fog!

He completed his preflight from front to the rear
Put on his headset and I heard him yell "CLEAR!"
And laying a finger on his push-to-talk
He called the tower for his clearance and squawk

"Straight out on two-zero" the tower called forth
"And watch for the Cessna straight in from the North"
I heard him exclaim as he climbed in the night

Merry Christmas To All and the traffic's in sight!



A "Recycled" Holiday Greeting from Michel Pallier
Yes, I updated the year in a very clumsy way – ed.

THE DISCLAIMER

Notice: The Hatz Biplane Association (HBA) is a non-profit volunteer organization dedicated to the support and enjoyment of the Hatz CB-1, Classic, Kelly D and Bantam biplane designs. The HBA Newsletter (The Hatz Herald,) and the Hatz Website are the official HBA forums for the exchange of information between its membership, builders, or enthusiasts of the designs. The Hatz Biplane Association, Hatz Herald Newsletter and the Hatz website disclaim all warranties with regard to this information, including all implied warranties of merchantability and fitness. In no event shall the Hatz Biplane Association, Hatz Herald Newsletter, or the Hatz website be liable for any special, indirect or consequential damages or any damages whatsoever resulting from loss of use, data or profits, whether in an action of contract, negligence or any other action, arising out of or in connection with the use or performance of this information.

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Please update information and return promptly! Also put any news or project information for the newsletter on the back.

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The Association's newsletter is paperless. Please look for future issues in your email inbox.

Membership Locator: Do you wish to have your information added to our online member locator? YES NO

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Hatz Project/Aircraft or Other Aircraft Owned:

Year:	Model Name:	Serial #:	N#:	Flying	Project
_____	_____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>
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Due January of each year

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**To pay by check or cash please
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**Hatz Biplane Association
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Pendleton, IN 46064
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Thank you in advance for your cooperation and support.***