

I Learned About Flying From That!

No. 16

by
Cloyd Clevenger

A whip-stall landing was fun and gave the crowds a thrill, but one too many spelled a crash which taught this barnstormer a lesson.



Cloyd Clevenger, former flying circus aerobat, as he is today.

IN the years immediately following the World War we ex-military pilots were a wee bit inclined towards wild aerobatic flying. The public at the fairs and exhibitions used to demand it and anyway we all enjoyed being "hot". A very few of the pilots, mostly Frank Clarke and myself, consistently did whip stall landings in our barnstorming exhibitions. I remember that we were accused many times of causing younger pilots to crack-up because they would go out and imitate us.

To do the stunt we would come tearing in wide open toward the airport. Then we would touch the wheels or just miss the ground at the edge of the field and throttle the motor simultaneously pulling the ship straight up into a dead pan stall 150 to 200 feet off the ground. Now came the breathtaking moment—with all flying sounds gone and the motor just barely ticking over. Next the nose would drop straight down and we would gain flying speed just in time to level out and land.

Aviation people really got a bigger kick out of the stunt than did the gen-

eral public because they realized that if you didn't zoom high enough in the stall you were just out of luck and could not regain flying speed to level out and land. It was quite a sight to see a ship completely stalled and out of control at 200 feet altitude.

During the six years following the war I flew in different flying circuses covering most of the states west of the Mississippi. Passenger hops, fair dates, aerobatics of all kinds, plane changes, wing walking, night exhibitions, etc., and now and then a whip stall landing.

In 1924 I was with the Gates Flying Circus and we were putting on an extra complete show over St. Louis. We had a Texaco sign under the wings of all the Gates ships for which we were given free gas and oil. As we were going into a new district handled by the St. Louis office of the gasoline company it was important to put on a good show.

Three pilots took off from Lambert Field each carrying a wing walker. The show lasted about an hour with wing-walking, plane changing, and aerobatics all over and in downtown St. Louis. I say "in" because most of the aerobatics were finished down in between the high buildings and the wing-walkers

could almost reach the handkerchiefs that the girls were waving from all the office windows. We really stopped traffic that day in downtown St. Louis. Of course, there was no Civil Aeronautics Authority then and the days of the true old flying circus now are gone forever. The Locklear Circus used to do the same sort of flying but you would be shot at sunrise if you tried it today.

I had been ill with an intestinal infection and was getting steadily worse day by day. Before the flight I was "dog tired" and felt so bad I would rather have gone over to a shade tree and flopped down. However the show must go on—so I flew.

Each minute of the hour of circus flying was like an age. The precision aerobatics between the buildings and the extra heavy work and pressures on the controls to balance the ship with the wing-walker hanging from all extremities of the wings and tail was always hard work physically. Now I was ill to such an extent that I should have been in a hospital instead of in an airplane. I was more than thankful when the show work was over and we could head back to Lambert Field, a distance of 20 or 25 miles.

It was a comfort to take on some altitude where I could cool off and relax. I just kept thinking all the way back that I would fly straight into the airport without even turning, land, get out of the ship and stretch out on the ground, but such was not to be the case. As we approached the airport with plenty of altitude to lose, the wing-walker

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Ill with an intestinal infection, Clevenger stunted at St. Louis and two whip stalls before landing had this effect on his plane.



HAVE you planned what kind of pictures you are going to take on your vacation this year? Have you considered what you might do to make those pictures the best you ever took? Remember, a little thought and planning before you leave on your vacation, plus active consideration of certain rules, points the way to better pictures. Whether you are going on a week-end drive or a long tour . . . the suggestions offered on page 28 of the August POPULAR PHOTOGRAPHY will improve your vacation pictures and add pleasure to your trip!

★ **PHOTOGRAPHING THE RODEO**—Watching the bronco-busters is exciting. But when you take your camera with you and bring home the story in pictures it's an experience you won't forget. Let Frank Reeves, noted rodeo photographer of Fort Worth, Texas, show you exactly how to capture the thrills and spills of rodeo events . . . bucking horses, ill-tempered steers, nimble-footed calves, cowboys riding and roping. Turn to page 32.

★ **MAKE YOUR VACATION PAY**—If you want to travel during your vacation this summer—if you want to have a lot of fun and be paid well for having it—then don't fail to read *Travel Pictures Pay Your Way* by H. Donald Spatz. This industrious amateur photographer of Reading, Pennsylvania, tells how you, too, can take fascinating travel pictures—yes, pictures that sell! You'll find this timely article on page 34 of your August POPULAR PHOTOGRAPHY!

★ **POPULAR PHOTOGRAPHY** can help you get the most out of your camera this summer. The August issue is bubbling over with vacation talk . . . helpful hints that will make your shutter finger twitch! Expert photographers tell you how to plan your camera vacation; avoid common mistakes; take dramatic urban shots; film the youngsters; capture garden, marine and desert pictures. Yes, camera fans, you're missing too much if you miss the big, colorful

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I Learned About . . .

(Continued from page 39)

shouted to me, "Come on, Clev, do a few stunts on the way down. It's lots of fun!" The wing-walkers only flew during a show and Gates always kept them working hard on the ground loading on gas and oil or working on the motors or selling passenger tickets and handling the crowds. It was like a vacation to them to get up in the air and walk the wings and ride along during the aerobatics and they always enjoyed it.

We pilots always strive to please so we did a flock of loops, Immelmans, rolls, reverses and falling leaves on the way down to the approach for the landing. That stirred me all up again and by now I had such a tired, sick feeling that I hardly knew or cared whether I was in an airplane or a row boat.

As we were gliding in at about 50 feet, the wing-walker again shouted, "Aw, come on, Clev, show the boys at the field how to do a whip stall landing." I should not have done it, but I guess it was best in the long run that I did for I learned a valuable lesson.

I "poured on the coal" and dove at the ground to put on speed. I had done hundreds of whip stall landings and always with precision. Besides that I had flown six years as an exhibition stunt pilot without ever cracking up and I just didn't think it could happen to me. In those days we used to watch generations of pilots come and go to the ultimate job of pushing up daisies and we pilots, who through ability and luck had survived, got the false notion that we had charmed lives.

As I touched the wheels I throttled the motor as usual and zoomed the ship straight up into a stall. I hardly looked out at the peak of the stall and as the ship swooped down I rounded out the dive, coming out at about 15 feet. All this time my reactions were slow and groggy although I did not realize it at the time. I looked out and saw I had a lot of room ahead of me.

I noticed the wing-walker clapping his hands as he was thoroughly enjoying himself. Then I made a fool misjudgment without second thought. I decided to make another whip stall before landing. Two in a row never had been done.

Without realizing that I was mentally and physically groggy in my reactions and unable to judge flying speed with my usual touch, forgetting that I was not in a position to dive and pick up extra speed, I "poured on the coal" again for a minute and yanked her up in a stall. I didn't even look out as the ship lost all speed straight up and started to whip over towards the ground. As it headed straight for the ground I looked out expecting to be up 150 feet or so—but I was only about 100 feet up coming like blazes. That snapped me out of my lethargy—but too late.

I popped on the motor and tried to level out and catch it, but I lacked about



15 or 20 feet of altitude to get away with it. The plane just mushed and squashed right on into the ground in three-point position with the motor wide open. Luckily it didn't catch on fire.

The sudden stop was quite a jolt but luck was with us and neither one of us were hurt much. The wing-walker had the foresight to draw his feet up away from the floor, saving them from being crushed under the gas tank. The ship just spread out like an old hen sitting on her eggs. The wings settled down to each side, the tail bent down to the rear and the motor mount snapped off leaving the engine resting nose down on the broken prop.

I was indeed one surprised boy! I just sat there and thought: "Well, I finally cracked up an airplane for myself!" We rebuilt the airplane and it flew many more miles as an honorable work horse. I found a good doctor and recovered from my illness, but I have never forgotten the lesson I learned in St. Louis.

An experienced pilot gets into the habit of flying various maneuvers on the "ragged edge" of losing flying speed and then picking it up just in the nick of time; all very safe and very pretty if done in accordance with his particular touch and feel of flying. However, if he is ill in any way, his sense of touch and flying feel is not as accurate.

Since then, I have seen many cases of experienced pilots "signing off" by way of an accident caused by flying with customary gusto after a siege of illness when their precision was not tops due to poor physical condition.

The moral is that if you are not "up to snuff" physically and mentally, take it into consideration and tone down your flying or don't fly at all. Be an "old lady" until you feel better.

END

Long Range Repairs

IT'S a long way from New Guinea to Cheyenne, Wyo., but propellers on airplanes which operate between the "down under" island and Adelaide, Australia, for the Bulolo Gold Dredging Corporation will be repaired at United Air Lines base at Cheyenne. Superior workmanship in America was cited by the New Guinea company for shipping its propellers 10,000 miles for repairs. The airline is the only contact between the almost inaccessible mines and civilization.

New Post Office

TINY Canton Island, 4,316 miles from San Francisco in the South Pacific Ocean, has the latest U. S. post office. Canton, 1,912 miles southwest of Honolulu and just below the equator, will be the first stop on the planned air mail route from Honolulu to Auckland, N. Z. Another stop also will be made at Noumea, New Caledonia, about 1,200 miles southeast of Canton Island. The new service will connect San Francisco and Auckland via the San Francisco-Honolulu leg now in regular operation.

Plotting Ace

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most famous flights—from Earhart to Cochran.

This was his job, as he explains it today: "We 'map-fly' a dangerous route months before an expedition's takeoff, to reduce guesswork to the vanishing point." Commander Williams' system can best be described by outlining a hypothetical case.

Take Madagascar. Here's a French island just off the coast of East Africa to which nobody, probably, ever would care to voyage by air. Between Los Angeles (where the commander lives) and Madagascar lie about 15,000 miles of unpopulated Pacific Ocean, myriad little atolls, the Philippines, India, the shark-ridden Indian Ocean through which infrequent Calcutta-Capetown steamers ply. But Commander Williams will direct you thither. He might even accompany you—if he deemed your aircraft suitable for the grueling flight...

"Madagascar?" he asked, thinking hard, his eyes staring at a non-existent globe. "Certainly." Then he ruminated aloud. "Would take a pretty good plane. Say a Consolidated PBY with a 3,000 mile range. Probably best to head west over Pan American's route to Manila. At least," he said, "we have that much already charted for us."

Roughly, the commander sketches-in the course. He blocks in the skyway to the Philippines, down through the South China Sea to Singapore, then in a brisk semicircle west to Ceylon. Till now the process has been as simple as opening your pre-Munich atlas. Then the going gets tougher. After he establishes his main ports-of-call along definite air-routes where gasoline and repairs are available, Commander Williams sets about the actual map-making.

Outside of the United States Hydrographic Office, he said, three sources exist where detailed maps of the world and all its outlandish components can be purchased. These, assembled like a motorist's set of "strip-maps" for a drive from New York to Kansas City, provide the basis for the eventual flight charts.

First of all, the commander considers his overwater hops. Take, for example, a portion of the journey over which no radio facilities help the pilot: the jaunt from Honolulu to Manila. Pretending that the earth is a round, red apple, the chartmaker slices a line between these two cities, thus dividing the fruit into equal parts—or hemispheres. This line represents the Great Circle, because it is the circumference-course cut by the knife passing through the apple's (earth's) center.

On the surface of the world, the Great Circle is a straight line; on the charts which eventually result, it is shown by a curved line. Yet it is the shortest distance between the two points—Honolulu and Manila.


Naturally, even the smartest pilot couldn't fly this curved chart course. Thus when the line has been drawn on

the map, Commander Williams must locate the points along the chosen route where the airplane's flight-direction must be altered.

So the pilot's true course approximates the Great Circle with a series of short, straight flight-segments called "rhumb lines." At the end of each, the airman resets his compass to head his ship in a slightly different direction. Accurate Great Circle flying is quite a trick; course-changes must be made on the dot. For this reason, Dick Merrill and Harry Richman carried an alarm clock on their 'round-trip to England. When it rang, Merrill shifted the compass needle. At 150 m.p.h. over a 75-mile segment, for example, they changed precisely on the 30-minute signal.

Commander Williams charts the whole course in this fashion. He makes one master map of the whole flight, then splits the course-as-a-whole into sections that may represent a day's run or a simple hop from one airport to another. Some are reproduced photostatically on easily-handled cards for cockpit use. Each "strip" contains invaluable information about prevailing winds, weather and landmarks which can be used.

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