

On Blind-Flying Blindly

(Continued from page 6)

capabilities as a pilot. Most pilots have on occasion flown for considerable periods in smooth cloud without getting into trouble, though they will probably admit that on those occasions the machine has really been left to fly itself.

The basic need for training is easily shown by putting blindfolded pilots in a revolving chair and spinning it to and fro, and getting them to describe their sensations. The victim will soon come to realize the positively misleading ideas which his remaining senses give under these conditions.

Even birds are unable to fly blind; pigeons have been blindfolded and released from aeroplanes, and in every case have proved helpless, doing spins and spiral dives.

The average training time of 30 power pilots of over 1,000 hours' experience was 5 hours 54 minutes. Whilst this included blind take-offs and landings, the glider pilot will always be flying blind in the most difficult conditions (i.e., unstable cloud), and will be required to do one of the most difficult evolutions, a constant and fairly steep turn. He must also be capable of getting out of a high-speed spiral dive, which will develop far more quickly than in an aeroplane, due to the cleaner lines of his machine. So his training must probably be to a fairly advanced standard. Also he will be unlikely to have so comprehensive a range of instruments. The artificial horizon, e.g., is a valuable saver of mental energy, but extremely expensive, and requires a high airspeed to operate.

All this may sound like an attempt to put people off; in fact, however, the thing appears to be to abolish the pilot's erroneous confidence in his senses, and then build up an instinctive confidence in his instruments. Blind flying is a state of mind.

IV

The moral of all this will no doubt be drawn by everyone according to his own taste. Some will say (some do say) the moral is "DON'T." Yet the subject has enormous possibilities for enhanced technique, enjoyment and beauty.

What is definitely wrong is to go on happily flying into clouds and mist without adequate equipment and without a full knowledge of what is involved. For the deductions are:

(1) That no machine built is strong enough to stand up to what may be inflicted upon it in clouds; although the chances of a break-up may no doubt be reduced to a minimum, the risk is unavoidable. (Moral: parachute.)

(2) That no human pilot can fly blind for long without instruments, although one may get away with it the first few times. (Moral: lessons?)

When, however, someone comes down and airily confesses to having flown the club's ten-year-old moth-eaten WOBLING intentionally into a cloud, he should be at once sent off to choose his site in the local cemetery.

I think most pilots will agree that the reaction to this cloud-flying business must be "Go ahead, but first realize fully what it involves, and take the necessary precautions."

"RIDGE SOARING"

A few distant comments,

By Jay Buxton

The following account from "Man and Weather" (McAdie) gives a little information on the subject of air currents:

"Dr. John Jeffries with his aeronaut Blanchard left Dover on January 7, 1785 at 1 o'clock in the afternoon. In one hour they had lost sight of the Castle at Dover. The balloon did not rise very high, for the wind was light and from the northwest. As the balloon failed to rise more than 200 meters, it became necessary to throw out all the ballast. Still settling, they threw out pamphlets, apples, biscuits, then the oars and the wings. Still failing to rise they cut away the moulinet, then the one and only bottle (l'eau de vie) and finally their overcoats, jackets and trousers. They were three-quarters of the distance across the Channel and had put on cork life-preservers and climbed into the slings expecting to be immersed, when suddenly the balloon began to rise. They were 5 miles from the French Coast when an up-draught caught them and carried them rapidly toward and over the French cliffs near Cape Blanez. At 4 o'clock they landed in the Forest of Guines . . . there seems to be little doubt that the balloon glided up and over the cliffs as it came within the influence of the air current due to the up-sloping of the surface wind blowing from the north and meeting a barrier in the high hills along the coast."

Many pilots while ridge soaring are inclined toward grass cutting or tree clipping under the impression that the lift does not extend very far out from the ridge. If many ships are in the air this habit leans toward congestion and away from safety. If it is a fact the greatest lift is close to the hill top it is equally true that the lift extends some distance up wind. If good thermal terrain is up wind from the slope there is always a chance for the inquisitive pilot to venture out and pick off some thermal lift for a change. For instance, this first free balloon to cross the English Channel mentioned above when 5 miles from shore reached a state of almost equilibrium by tossing overboard every thing movable or removable including the pilot's pants. Now thermals are not supposed to be roaming around over a very large body of water so the lift given the balloon must have been from the cliffs 5 miles down wind. That is quite a stretch for the lift especially in the evident light wind. In the future let's not hug the ridge too closely.

A GOOD MAN IS NEEDED to head the state-wide glider program for Minnesota. He should be thoroughly conversant with all phases of gliding and soaring. A good pilot, able to instruct in both flight and construction, executive ability and a good personality are all essentials. If you feel competent to do this work, please write to—

Mr. Stanley E. Hubbard,
Minnesota Aeronautics Commission,
323 State Capitol,
St. Paul, Minn.