MINIMOA *to* 13,000 FEET

by WERNER BLECH

translated by Walter Setz

Just before the take-off —*W. Setz*

EDITOR'S NOTE: In this account of the best altitude flight of the Eighteenth Rhoen Contest, Herr Blech modestly describes his experiences and makes no more than a casual allusion to the great amount of practice and careful training that made it possible. This figure of 13,400 feet, although not an international record, is more than twice our own national record, and it behooves us to get busy and do something about it.

In the 1937 Rhoen Soaring Contest I flew a Goeppingen III "Minimoa" sailplane. I picked this type, not only for its large "payload" capacity (275 lbs.), but also for its outstanding airworthiness, with which I was already familiar. The soundness of my choice was verified when, on the second day of the contest, in a high altitude flight, I encountered icing conditions far more serious than anything I had ever before experienced during my many altitude flights.

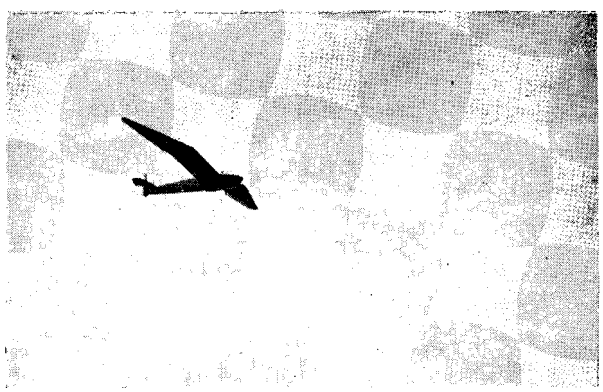
Standing at the take-off site, I notice a promising cloud formation joining a higher cumulus cloud mass. I planned to spiral up into the lower cloud and then cross over to the higher one, where I would encounter stronger upcurrents when I had attained sufficient altitude. Not far from the Wasserkuppe, I caught the thermal upcurrent producing the first cloud and, spiralling up in it, entered the cloud base at 4,000 feet.

Flying by instruments, I continued steadily upward in a spiral for another 4,000 feet. At this altitude of 8,000, I estimated that I was high enough to cross over to the larger and higher cumulus cloud. Straightening up, I turned slowly until my compass read "O" (not zero but O for Oest, which is German for East), and flew straight into the second cloud. From the cloud fringe on, I climbed at the rate of 10 to 13 ft./sec. in regular spirals, as the rate increased to 20 ft./sec. The air was so smooth I could let the "Minimoa" fly itself for four or five minutes at a time. Once she was put in a bank, she would hold it without further use of the controls.

At 8,200 feet, water began to condense in the venturi and tube connections and put the airspeed indicator out of order. The entire ship was very wet as if in a heavy rain. It was very evident to me that, if I flew higher, I would have to contend with heavy icing conditions. As I expected, the wing slowly began to take on a glassy coating at 10,000 feet. The cockpit cover turned white from ice and became opaque. Soon it was impossible to open the windows of the cockpit cover, as they were frozen shut. Then the turn indicator packed up. I turned on the electric turn indicator. Naturally, it wouldn't work when I most needed it. The air was so turbulent that I couldn't hold the ship in the updraft without the electric turn indicator running.

The altimeter registered a little over 13,400 feet (above the take-off) when I pulled out of the thermal. I had to fly straight for ten minutes before I came out of the cloud in which I had spent more than 1½ hours. While descending, the ice thawed off. From the window edges, finger-thick pieces of ice came loose; the leading edge of the wing had an ice coating 1.2 inches thick; the wings were entirely coated with ice. This tremendous ice loading, I estimate, was between 25 and 50 lbs. The "Minimoa", despite the great increase in weight, was not in the least affected as to control and balance. Naturally, the sinking speed was greater, due more to the change of airfoil section than the actual weight of the ice.

In other sailplanes I have had trying experiences of extreme nose heaviness and the rudder jamming, due to



Climbing in a thermal *Wolf Hirth*

ice, while diving to lower altitudes where the ice would melt. I experienced none of these difficulties with my "Mini", and, after a long, flat glide, landed in a clearing in the Thuringen Forest, over 65 miles from the Wasserkuppe.

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write our own ticket on new regulations and requirements for glider pilot licenses. However, we have yet to hear of these suggestions changing the existing regulations or of our two manuals of glider construction and operation being published by the Bureau and forming the basis of new regulations on licensing gliders. It is our sincere hope that these matters so all-important to us will not be overlooked due to changes going on within the B.A.C. For us to continue to grow and put gliding and soaring on a safe and sound basis we must have at least this cooperation from our Government.