



break through the top of the cloud after three or four thousand feet. After a while I found that the stalling and diving was annoying, but that it was bearable. A glance at the altimeter showed 9000 feet. I was getting high!

I then thought of the possibility of jumping out and using the parachute, but this was offset by the fact that it would mean the loss of the machine and instruments. As we had already seriously damaged the two seater we could not afford to lose another machine, nor could afford to pay for a new *Grunau*. So I decided to stay in it at least until it broke up.

Hailstones started coming in from the left and at a downward angle of about 45 degrees. All the hail I encountered on this flight came from this side. One explanation is that the machine was slipping most of the time to the left. The hail only lasted a short while and it was during this period that I saw a flash of lightning. Then I struck a bad spot. I was diving at 85 mph, so I hauled back on the stick, finding that it took both hands to do so. Then I felt some G's and was pressed firmly down in the seat. My head went down on my chest and my mouth dropped open. I felt as though the blood was draining from my face. As it was later shown on the metrograph accelerometer record, this pull-out was in the vicinity of two G's. After pulling out I was pressed into the seat for some time and then hung out over the front of the cockpit. This was repeated several times. It is possible that I did several loops in a row. The only time I

knew where I was was when I was hanging over the front of the cockpit. I knew I was inverted. Then 12,000 feet and a further worry, lack of oxygen. There was a chance of jumping, but nothing could be done about lack of oxygen. At this stage I was beginning to look for an excuse to jump and would have been quite pleased to see a wing peel off, providing it did not wrap itself around the cockpit. But no such luck. Just ever upward and more hail. This time the hailstones were really solid, averaging $\frac{3}{8}$ to $\frac{1}{2}$ inch in diameter. As I had 60 to 65 mph air speed these struck with great force. This was proven later by the fact that the metal strip between the wings was covered with dents. The hail was hitting my face and hurting my eyes, so I pulled my goggles down, but they were fogged. Wiping would not clear them. The fog was on the inside. Some particles of snow flew in. The only thing to do was to put my hands over my face and peer through my fingers.

Although there was nothing I could do, I still wanted to watch the airspeed. By this time I was tired of trying to counteract the stalling and diving act so I pulled the stick back and kept it there. No matter what happened, there it would stay. I looked at my watch. It had stopped! Frozen? The *Grunau* was now diving at 55 mph, then stalling off. My left hand which was in the air stream (as I was hanging on to the side of the cockpit) had gone numb. I banged it on the panel to restore circulation, but this did no good. Thirteen thousand feet!! I had stopped thinking and was just waiting for something to happen.

The altimeter slowly moved back to 12,000 feet! I was on my way down. Then I noticed that I had been in the same position for some time. One wing appeared to be down and I was pressed tightly in the seat! I was in a tight spiral dive or spin. I do not know which. But as I was on the way down I just sat there, stick back. A glance at the altimeter. The needle was passing over the graduations at the rate of about one a second, this being at least 200 feet per second down. Airspeed was 60 to 65 mph. So I still just sat there; 9000, 7000, 4000, and I started to consider the possibility of being in a spin, although the *Grunau* is supposed to be almost incapable of spinning except with very light pilots. My heels were on the floor with my toes on the rudder pedals. I tried to lift my foot on to the pedal but could not move it due to the forces of the spiral. One thousand feet! Then a glimpse of the ground and I was able to see that my rate of rotation was about four seconds. That explains the centrifugal force which prevented me from getting the use of the rudder. Eight hundred feet! I broke through the cloud. Opposite aileron and spiral stopped. I cannot remember whether the stick was still back and I pulled it out or whether it came out of the dive on its own. A later check on the metrograph showed a pull-out of approximately two and a half G's.

Heavy rain was falling. I glanced around the paddocks, saw a gap, sideslipped through and landed. I had not the slightest idea where I was, so my first reaction was to get a message to the Benalla drome. I clambered out, pushed the chute up into the nose to keep it out of the rain, and started to move off. I found I could not keep my eyes open, so I would take a look, then stagger off with my eyes closed. Then I became aware that my face felt queer and by feeling it with my fingers found that the left side was