AN URGE TO FLY

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Foreword

These are the recollections of Alan Menere (1915 – 2001). Alan grew up in Moonee Ponds, Victoria, and moved to Bendigo while in his early 20s. There he met some like-minded young men who enjoyed challenges and matters mechanical. Flying was the adventure of the time, and they decided to give it a go.

There was no intention to be on the leading edge of gliding technology. The challenge was to fly, and by their own efforts. They were aided in this by the embryonic regulatory arrangements covering light aircraft construction and flying, a sense of optimistic can-do, and the cavalier estimation of risks that goes with being in your early 20s.

The events described here took place against a darkening political background. Alan and his mates were politically aware, very left wing, and viewed the gathering storm in Europe with apprehension. They could see from early on that war was coming, and it would change everything.

Prevented from joining the Air Force by his red-green colour blindness, Alan joined the Army the day after the Pearl Harbour attack. He served in an Armoured Reconnaissance Unit in Western Australia, then with the Army Education Service in New Britain.

After the War he joined the Commonwealth Public Service. He moved to Canberra, but his Bendigo habits stayed with him, as he built sailboards and carved propellers, to the admiration of his sons.

Alan developed macular degeneration in his mid-60s. He retired to Port Stephens, fishing and socializing when he wasn't tinkering with wingsails for his catamaran. As he could touch-type, he quickly learned to use a computer.

Very aware that he was the last member of the Bendigo group still alive, he resolved to set down his flying experiences. The following chapters are exactly as he wrote them, apart from some minor changes to fix typos or missing words. The images he selected are included, but there are many more from the Bendigo days. These are included separately on the cd.

Feel free to contact his sons, David and Roderick if you have, or seek, any additional information.

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1. THE BENDIGO GLIDING CLUB

The Bendigo Gliding Club had a very hurried birth. Ron Barker came back from Melbourne one day. He was excited. He had found a primary glider hanging from the roof of a garage and we could buy it for what seemed a bargain price. It had been built by Percy Pratt of Geelong, who at that time had built and flown more gliders than anyone else in Australia. It was a bit the worse for wear, we were told, but nothing that we couldn't fix. For some time a group of us, nine or ten chaps not long out of their teens, had talked about the possibility of building or some how getting hold of a glider. We were almost totally ignorant of gliders and flying but it was a challenge that would not go away.

It took us about forty-eight hours to form a club, make Ron the President and me the Secretary, and raise enough cash to acquire the glider, sight unseen by all but Ron. It was now up to him to find an excuse to take the firm's truck to Melbourne again and we'd be in business. That was no problem and it was only three or four days later that we welcomed the arrival of truck and glider. "I had to cut the wires going through the wings to get it on the truck", he explained. " I think they worked the ailerons", he explained.

It was just about that time that we heard of Hain Friswell. He was not one of our crowd. He worked as a jobbing carpenter but he turned out to know more about aircraft, including gliders, than the rest of us put together. And, what was more, he had started to build a glider of his own. He was not over-impressed with our bargain. One wing was warped, the fabric was loose and some of the struts had been broken and repaired, instead of being replaced. But he agreed it would do for a start.

Someone had heard that there was a large shed that had served as a hangar when Bendigo had an Aero Club back in the 1920's. We located it and the farmer who owned the paddock that had been used as an airstrip agreed to let us use it. After removing the evidence of the cattle that had used it for the past ten years we agreed it was just what we needed. Hain did most of the work that was needed to restore the glider to a condition that would at least enable it to take to the air again. We were all keen to help, of course, but most times we just got in his way. It turned out that his father had been something of a fundamentalist religious fanatic and that Hain had revolted against this. He had left school at fourteen and had become an avid reader of everything to do with aircraft. To find himself suddenly having an aircraft to work on, and to have his skill and knowledge recognised and respected by a group the like of which he had not previously known soon brought him out of

his shell. It was not long before he joined us for an occasional beer.

It was almost two months following the glider's arrival that it was ready to be taken out of its hanger. The buckle had been taken out of its port wing, the fabric no longer had any loose patches, the rudder had been replaced, it glistened with fresh paint and had been rigged to Hain's satisfaction. We had all spent lots of time sitting in, or rather on, the seat coordinating rudder bar and control column movements, watching the controls respond to our actions and listening to the drumming noise as the fabric covered controls reached their stops. The stage was set, we had reached first base. That none of us, except Earnie, had ever sat behind controls before, just seemed to add to the magnitude of the challenge that was awaiting us.

We had lots of supporters and many offers to help but the membership of our club remained at nine. With the possible exception of one member, with whom I have lost touch, the others are now all dead. Three paid with their lives for their love of flying. These notes would be incomplete without a roll of those nine mates -

Ron Barker (President)
Alan Menere (Secretary)
Hain Friswell
Lloyd Williams
Earnie Sayer
Johny Gill
Bob Grant
Arthur Syer
Bill Cook

The big day was heralded in by the local newspaper. One of their reporters had been following our progress, mainly because of his personal interest. He wanted a contribution to augment his news item. I remember the start, "From time immemorial man has yearned to emulate the flight of the eagle … “. Our request that he make it clear that there would be no flying and that the display of the glider would be firmly on the ground was not entirely adhered to. He didn't say it would fly, nor did he say it wouldn't. The result was a line of cars along the fence as we proudly dragged the machine out of its shed.

We had earlier drawn straws for the privilege of being first to get dragged along the paddock. It was Earnie who drew the long straw. We joked about guardian angels and his limited previous experience. No matter, before that Saturday was over we would all have experienced the thri11 of being dragged over the paddock, hopefully with some measure of aileron control. Our program for that day, and the days to

follow, had been discussed at length. We all understood something of the principles but it was something like knowing how a bicycle worked without knowing how to ride one. The general idea was that we would be towed up and down the paddock until we were confident that we could bounce it a foot or two in the air. Beyond that stage we left to our fertile imagination. Deep inside I wished it had been someone other than Ernie who had picked the long straw.

As we slid the machine out of the shed every one of our nine members had a hand on some part of it. It looked good, glistening with fresh paint it looked every inch a thing of the air. This was our day. No sooner had we dragged it over to the starting point than Ernie was squatting on the small square of plywood that served as a seat.

Somehow we had acquired about 150 feet of rope. Hain wanted to cut it in half, saying it was too long for practice tows, but its owner objected. He confessed it was the anchor rope off his father's boat. So the rope was stretched out and tied to the nose of the glider and the back bumper of the car. There were four or five cars that had been offered for the tow and we had chosen an old Terraplane. It had plenty of power and that was what we would be looking for, not now, but in the future. Also, its driver was a club member and had some idea of what was involved. Back at the glider someone had produced another six feet of rope, pointing out that Ernie was not wearing a safety belt. There was laughter when he suggested that Ernie might slip off the seat. He then proceeded to put a couple of turns of rope around Ernie's waist, lashing him to the upright strut behind the seat.

The stage was now set. The breeze was only coming in at four or five knots and the wingtips were supported by two of the boys who would walk or trot alongside until there was enough airspeed to enable the ailerons to maintain balance. Hain had stationed himself on the running board of the car. He could watch the glider and talk to the driver. The towline tightened and the glider moved off, slowly. It hesitated momentarily after about twenty feet as the car went from lows to second gear. I jumped into my open sports car and took up a position about six feet from the starboard wingtip. Ernie was moving the control column from side to side rocking the wings. The speed, as arranged, was no more than ten miles an hour and the glider was still bouncing quite heavily across the ground.

What happened next will never be known. Almost certainly there must have been a sudden gust of wind. Maybe the glider hit a larger bump that tilted the wing up. Ernie could have pulled the stick back just to feel if there was any pressure on the elevator. It must have been a combination of at least two of those factors, maybe all three. Regardless of the cause the effect was instantaneous. The glider just seemed to stand on its tail and next moment was hanging on the end

of the rope about forty feet above the ground. It was not flying in the real sense, it was suspended at an angle of about 45 degrees, like a huge kite. It was hard to see but Ernie seemed to be clutching the control column right back. "Shove that stick forward … forward … forward", I yelled. Hain tried to get him down by reducing speed. But as the car slowed down the glider just seemed to wallow in the air and then the right wing dropped and it headed sideways towards the ground. It was behaving just like a kid's kite when the wind dropped. I heard Hain yell "speed up" to the driver. The glider hesitated with the wing about ten feet off the ground and shot up in the air again, it seemed even higher than before.

In desperation I kept yelling to him, trying to work out what would be the effect of reversing the elevators — did he have enough air speed for the elevators to take effect. Hain tried again to fly him down, but again it just dropped one wing. He tried this tactic four, perhaps five, times as we headed down the paddock. I learned afterwards that our audience thought it was part of the show and were most impressed with our ski11 and daring. At the end of the paddock was a wire fence and beyond that a creek. We thought afterwards that perhaps we could have driven round in a large circle. Against that there was the problem of towing into a side wind and then raising speed to go downwind.

The car slowed down as it approached the fence. Hain had already jumped off the running-board. The wing dropped and the glider headed towards the ground. The wingtip and nose seemed to hit simultaneously just a few feet from where my car had stopped.

I jumped out, the frightening sound of torn fabric and splintered wood ringing in my ears. We pulled the wreckage away. Ernie was unconscious. There was blood on his face and as we watched a swelling came up on his forehead. Our hands shook as we untied the rope that still held him to the strut — the piece of rope that we had all joked about only five minutes before. The others soon joined us, including a medical student. He assured us that Ernie's pulse was O.K. but we should not move him, but get an ambulance. Several of us followed the ambulance back to the hospital. The others unceremoniously dragged the wreckage back to the shed and shut the door.

The first news was good. Concussion, lacerations and shock was the first report and within a week he was out of hospital. Then came the bad news. There was a crack in one of the vertebrae joints in his neck. He was fitted with a huge plaster cast that came down to his shoulders and left only his face exposed. We all wrote our names on it and joked about how he would have to go about drinking his beer. Despite this he became very depressed. Then he was told that the break in his spine had become infected with

tuberculosis. Three months later he died. He rolled his car, a soft-top D.K.W at the foot of a steep hill on the outskirts of Bendigo. We were not surprised.

2. JENNY

It was no more than four or five weeks after the crash when Hain and I sat in his workshop looking at the bits of the glider he had started building some months before. The Civil Aviation Authority had started out to investigate the crash but then found it had no jurisdiction over motorless aircraft; a situation which it set out to remedy. Generally we were regarded as foolish and irresponsible and parental influence had relegated some of our now defunct club to the ground staff. Earnie was still walking around encased in his great plaster cast and this did not serve to improve our image. Hain and I decided we would proceed, very quietly, to complete his project.

The old glider had been damaged beyond repair. We were able to salvage some of the metal fittings. The rest of it we burned. The new machine was going to be much lighter. It was based on a German machine, the Rhone Ranger, which was used to train military pilots when the Treaty of Versailles did not allow Germany to have an airforce. One problem was that the original plan, taken from an overseas magazine, specified a wingspan that was too big for Hain's workshop. No problem. We just scaled everything down about ten percent, leaving us with a wingspan of about 30 feet. The port and starboard wings were built separately and fitted neatly into the workshop. Slowly the tangle of timber, plywood, wire and calico started to take shape. The smell of casein glue used to build the seemingly innumerable number of wing-ribs gave way to the odour of the dope used to shrink the fabric on the wings and tail assembly.

It was a big day when we finally rigged it up behind the fruit trees. It looked small and fragile compared to the previous one. It weighed just 120 pounds. The inevitable first impression was the wires. There were landing wires running out from the skid to the main and rear spars. The wings were hinged to a pylon mounted between them and rising a foot or so high. From the top of the pylon landing wires went out to take the load when the wings were no longer supported by the moving air. Then, of course, there were the control wires, some going up and inside the wings to operate the ailerons. Others ran along the outside of the skid connected to the elevator and rudder.

Hain was as scrupulously careful with the wiring as he had been with the carpentry. "All right, all right", I would hear him say on checking some of my carpentry, "You're not building a bloody billy-cart". Not a mark or scratch was allowed on the flying wires for fear it would reduce the load they would take. It was at this stage that the glider acquired the name of "Jenny". Hain said that was the name of the Wright Brothers' original plane, which appeared to be festooned with almost as many wires. One of our few visitors, I think it was Ron, looked at the tangle of wires

and suggested we release a sparrow behind the pilot's seat. If it got out, he said, we would know that some of the wires were slack.

We had already chosen the site for our field testing. It was on the Ravenswood estate about ten miles south of Bendigo. The attraction was Big Hill a local landmark. At the western end of the hill, near the railway line, there was a gradual slope flattening out onto a clear area. It provided a total runway of about 300 yards. Later on, we agreed, we would be bale to move further up the hill where the slope grew steeper. But that could wait. First we had to learn how to fly.

Early one Sunday morning we stacked the glider on a trailer and headed for Big Hill. To cross the railway line we had to go through a large drainage tunnel but this was no great problem and soon we had "Jenny" rigged up in the shelter of a small clump of trees. This was to be her home for the next few weeks. It was on that same day that we got our first taste of what flying would be like.

The wind was coming up the slope at about ten knots. We balanced the glider on a log about a foot in diameter and tethered the nose to a stump a fe3w paces in front. She stirred, like a horse anticipating the hunt. She seemed to recognise her element and suddenly came to life. We restrained her and took it in turn to sit at the controls. While the wind was not strong enough to provide lift it did enable us to exercise lateral and longitudinal control.

The controls were the same as any other conventional aircraft. The rudder bar on which the feet rested, operated the rudder. Pushed forward with the right foot it turned the aircraft to the right. Movement with the left foot, turned it to the left. The control column, or "stick”, had two functions. Moved forward it tilted the elevator down which would cause the aircraft to dive while pulling it back would cause it to climb. We could rock the wings and lift or drop the nose. And we could lift our eyes above the horizon and dream. There could be no stopping us now. This was ours, we had made it, and we were going to fly it. Ah! the ecstasy of those moments. Wine, women, and song and the sound of squealing tyres suddenly became less significant in the light of this newfound experience.

The next weekend dawned calm and clear. Its beauty was lost on us because there was not enough wind to continue our balancing on the log. All right we agreed, we would move on to the next stage. Fifty feet of rope and the glider was hitched onto the back of a car ready for a slow run down the gentle slope. This way we could choose our own wind speed, about twelve miles per hour. No one mentioned the crash of the first glider when this maneuver was performed several months before. Earnie had since died but that fateful day

remained a vivid memory with all of us. It was our first experience of someone like us suddenly being killed. Before long, for many of us, the loss of friends on jungle trails and in aircraft wreckage would become a fact of life.

We were careful that first day. The speed of the car was controlled and we were ready to release the towline if we had any doubts or fears. Hain and I both did about five runs that day. The glider bounced along, well under control, and feeling lighter on the ground as with each successive run we raised the speed a little higher. With each run down the slope our confidence grew. And with each slow walk back to the starting point we would discuss how things had gone, the "feel" and response of the controls, the reaction of the glider and, most of all, the feeling as it became lighter and skimmed along the ground.

It was only two or three days later that I contacted Hain. The sun was shining and a good steady southerly breeze had sprung up. A day like this was not meant for work. Within the hour we were on the site. My little sports car was somewhat underpowered for this job but the wind was steady and, we estimated, blowing at about ten knots. Driving down we had talked of mounting the glider on the log again but when we arrived and looked at "Jenny", tethered in the small clump of trees, the temptation was too much. Hain settled onto the seat. There was enough wind to give him aileron control of the wings. I got in the car. He waved and, going downhill, it responded well as I let the clutch in. I could feel the car jerking as the strain on the towline varied. The first fifty yards or so were covered at little more than walking pace. Hain waved me a little faster. I obliged and the bumping of the glider became less, then it stopped. My first thought was that he had released the towline. I looked over my shoulder and there he was, six feet off the ground and seemingly under perfect control. I held the same speed and he continued for a hundred yards before easing the glider back on the ground still with the towline attached. I rushed back, questions pouring out. His face was aglow, "I did it, I did it" seemed all he could say. I pulled him off the seat and swung the glider round. "Come on, let's get back", I urged him.

Ten minutes later we were back on the hill and I had the car lined up for the start. The glider was getting impatient, with its nose pegged to the ground and I wanted to fly. Hain got in the car, looking down at his feet. He pressed the pedals and said "that’s the clutch on the left, isn’t it?" I assured him it was and confirmed that his right foot was on the throttle. "Well which is low gear?”, he asked, "I haven’t driven a car before, but I did drive an old Harley with a foot clutch". A little thing like this was not going to stand in my way.

Driving a car was the exception rather than the rule in those days but Hain had enough commonsense and mechanical knowledge not to need any tuition. "Just throw the clutch, move the gearstick forward to the left and give it half throttle before you let the clutch in", I shouted over my shoulder as I headed for the glider. He got away with scarcely a jerk. I repeated what he had done, bounced along until I felt the time was right then eased the stick back. The bouncing stopped and I was flying. Admittedly it was only three or four feet above the ground but that did not matter, I could move in three dimensions. I moved the controls just enough to feel the response. That flight lasted maybe twenty seconds but it seemed an eternity. I landed, as Hain had landed, without releasing the towline. Hain managed to find the brake and for the next five minutes had to listen to my ecstatic outpourings of the sensation the response the potential. He too had found a new interest, "You go straight back into second gear, don’t you?", he asked. He drove the car back to town that afternoon.

Keen to demonstrate out achievement we had a small audience next weekend. The weather was right and before long we were going up twenty feet or more. Then came free flying, releasing the towline while in the air. Three or four weeks of this and our three hundred yard runway started to become restrictive. We needed a new challenge.

3. THE CATAPULT

While using the lower end of the hill, near the railway line, our eyes frequently drifted to the steeper section, about 200 meters to the east;. This was the challenge for which we were preparing. Our brief experiment with the shockcord had demonstrated that it was capable of accelerating the glider to flying speed on near-level ground. How much easier it would be, we thought, when the launch site was downhill.

The chosen site for our new venture was not ideal. The launch area near the brow of the hill was clear and 500 meters away, at the foot of the hill was a flat grassy plain~ The problem was that between these two sites the hillside had numerous obstructions — small rocky outcrops, a number of stumps, and several dead trees. We concealed our apprehension. After all it was the ai9' that was our domain. Optimum speed, stalling point, gliding angle and rate of descent were still shrouded in mystery, but even the cautious Hain could not conceal his excitement. we might still be a long way off joining the wedgetailed eagles that soared overhead but to maintain flight in the air rising up the face of the hill now seemed within our grasp.

The day for our first test flight could have been made to order. The sky was clear and there was a gentle breeze from the south, just where we wanted it. There was no shortage of friends and helpers and we soon had the glider in position. Our rubber shockcord was about 50 feet long and as thick as a garden hose. We had been told it was a relic from the first World War where a rubber binding was used to lash the axle of the undercarriage to the fuselage as a cheap and light means of suspension. We bound a metal ring to the centre and a length of rope was fixed to each end. The central ring fitted over an open hook set in the nose of the glider skid. All we needed were six volunteers, three for each length of rope.

Wrong. We needed seven. One to sit on the ground behind the glider and hold it back with a rope through the rear of the fuselage. The idea was that the six volunteers would run out in V formation and when it became apparent that they had stretched the shockcord to its limit the pilot would yell and the anchorman would let go one end of his retaining rope. We had heard about catapult launchings, of course, but had no details of how others went about it. We were, however, satisfied with our arrangement.

There remained only the big decision — who was going first. We tossed for it and the honour fell to Hain. We ignored suggestions that he got the job because he had lost the toss.

We had calculated, I am not sure how, that the glider would reach a speed of between 50 and 60 miles an hour. in a distance of about 50 feet or so and this would enable it to gain a little altitude at the start and this might be useful further down the track. Hain took up his position on the foot-square plywood seat and fastened the old leather belt around his waist. The six hefty volunteers had been briefed on their duties. I took up the position of anchorman at the back of the glider. Looking back I guess there was some tension in the air. But the general feeling was more one of excitement rather than apprehension.

I gave the word and the six volunteers took-off. I tightened my grip on the restraining rope. But the tension increased. The friction between my back-side and the ground was not up to the task. Grimly I held on. The glider was moving forward and was going with it. Vainly I tried to dig my heels into the stony ground. As it turned out later I had slid along for less than a yard. It just seemed so much longer as there flashed through my mind the possibility that he might get off with not enough altitude to clear the obstructions. Should I hang on regardless hoping that this would keep him on the ground. Then I heard the shout" Go". Hain had realised what was happening but as the shock-cord was nearly stretched to its limit he decided to go. I let go one end of the rope, relieved that the decision had been made for me. I sat in the dust, a short length of rope still held in one hand, and held my breath as the glider accelerated away. Hain held it on a fairly level course but was soon at least thirty feet above the sloping ground. He headed straight for the landing area, gaining altitude as the ground fell away He was level with the tops of the dead trees but the course ahead was clear and he was flying beautifully. I felt very earthbound, sitting there in the dirt.

Half an hour later we had the glider back on the launching pad. Hain had described his flight in detail. He had realised what had happened and correctly judged he still had enough power to get off. What had surprised him, however, was the force imposed on him by the rapid acceleration. He said it flattened him against the strut that formed a backrest and for a couple of seconds he could not move. His level take-off, he said, was more due to the direction imposed by the catapult than anything of his doing. We agreed that the arrangements in front seemed OK but we needed a bit more weight at the back. Two of the heftiest volunteers were given the job. One to sit behind the other, holding the front man around the chest and both of them with their feet firmly implanted in holes six inches deep.

Hain joked about the tail assembly being pulled off. Preparing to strap myself onto the seat I refused to consider such a possibility. Mostly I thought about the acceleration forces and what would be the effect of an increased take-off speed. Strangely, the question of flight

control just did not arise although at that stage our actual flying time would have been no more that two or three minutes.

The stage was set. The signal for the catapult stalwarts was "Right". I don't think it sounded over-confident the way it carne out but it was all that was needed to send them stampeding off in their divergent directions. As the shock-cord stretched I could feel the glider sharing my mounting tenseness. My eyes flicked from one team to the other. They could go no further. They were stationary and leaning forward at an angle of about forty-five degrees. This was it. "Go" I yelled.

It was an experience that was totally new. It seemed that there was some invisible force pushing me back and yet I was going forward. The feeling of being paralysed, unable to move did not last long, maybe no more than a couple of seconds. The feeling disappeared as quickly as it had come on. I was not very high, not much above the trees, but everything on the ground looked smaller. I decided to try the aileron control. It reacted suddenly. One wing dropped, probably no more than a foot but that was enough. I hastily pulled it back and coasted towards the grassy flat some distance further along from where Hain had landed. Landing was easy. There was plenty of space and it just flew along a couple of feet from the ground until like a tired bird it settled on the grass, its speed reduced to not much more than 30 miles an hour. I drew a deep breath and looked up at the sky. There was now a part of me that belonged up there.

Two more flights that day and two the following week. This was all just too easy. The catapult men were getting better at their job and we braced ourselves to get more altitude at the start. We also started to exercise more flight control, weaving gently from side to side getting the feel of the elevator control. Then it happened. With three catapult flights behind me confidence was at a high level. The glider's behavior was impeccable and flying was so easy. We had achieved what we had set out to do with a few sticks of wood, some piano wire and a roll of cotton fabric only a few months ago.

This was to be my catapult flight number four. By now the launching procedure was well rehearsed. We had the feeling that nothing could go wrong. The wind had come up a little but it was no more than ten knots, steady and in the right direction. The catapult men were lined up with the rope over their shoulders. Given the signal they leapt into action. I was watching the group on the right and they had just reached the critical point. I opened my mouth but I am not whether I shouted "Go" or "Jesus". It was then the rubber shockcord broke, just near where it was tied onto the rope.

So much happened in just one or two seconds. The three men who had been straining on the end of the shockcord pitched forward in a tangled heap of arms, legs and curses. The broken rubber came hurtling back, too fast to be seen but with a loud threatening twang. It hit the plywood side of the skid and went straight through, appearing on the other side in a shower of splinters. The anchorman, whether responding to my shouts or the general confusion, let go the rope. The glider responded by swinging to the left and obediently moving off, at a reduced pace, in the direction dictated by the remaining shockcord. The three men on the end of the rope, facing away from the action and with their heads bowed against the strain, were the last to realise that something was amiss. It was near the end of the two-second panic that they turned and saw the glider bearing down on them at an altitude of about two feet. No soldier under fire ever hit the ground faster.

The glider was now headed out over the rough ground. The wind was not whistling the way it should and the control column felt loose and sloppy. These were all the ingredients for a stall. But the hillside was starting to fall away. If only I could keep going, following the contour of the ground for another 50 yards or so I should, hopefully, have room to manoeuvre. Then I looked down between my legs. The broken rubber was still jammed hard where it had smashed through the skid, and as if I did not have enough worries, the other half of the shockcord, complete with knotted rope, was trailing out behind. What if it got caught up on a rock? The possibilities seemed unlimited. I envisaged suddenly finding myself flying backwards. But no! The luck that had accompanied our venture to date returned.

The sloping ground now gave me enough altitude and speed that I could hear the wires singing and feel the wind on my face. Gently I tried the rudder-bar. The nose swung round, slowly, towards our landing patch. Two or three bumps and the ground stopped moving. Fifty feet of shockcord and rope trailed out in the grass behind, like a dead snake.

We inspected the shockcord carefully. It had broken cleanly, six inches away from where it was joined to the rope. There was more evidence of splits or other faults on the surface and we debated whether or not we should continue to use it. The decision to abandon it was finally concluded by comment from another perspective. Ron, a valued member of the team and who had been number three on the rope when the accident happened, joined in our deliberations. "What if that rubber had broken down at the glider end", he said "it would have chopped my bloody head off."

4. THE FIRST CIRCUIT

On the way out to the field that morning I knew this was to be the day we had been working towards, the day when the glider would soar up beyond the point where we could land without completing a circuit. By now weaving along in a series of "S" curves had become automatic. There was no longer any skidding or side-slipping. We had no instruments, of course, but we could pick these departures from what was right by feeling the wind blowing harder on one side of the face. And, of course, we had plenty of critics on the ground.

Preparing for this big day we had earlier purchased a 1500 foot coil of new fencing wire. Ron was standing by when we called in to pick it up, waiting to see our reaction when we went to move it. He was not disappointed. We could hardly lift it. Up to that time we had just added extra lengths to extend the towline without ever thinking of the total weight. From our original calculations we knew that the glider, complete with pilot, had a wing loading of about 2 pounds to the square foot. This compared, according to our reading, with about 4 pounds per square foot of the average light biplane. Taking the weight of the wire into consideration our wing loading was almost doubled. We had been aware of the wings flexing under load but had assured ourselves that the spar was just taking up the load, which we argued, was just what it should do.

We consoled ourselves that it only represented about a 50 per cent increase in weight. Denied any more scientific approach we envisaged the glider upside down with two hefty helpers sitting on the wing tips. Without resorting to this test we were confident that it would hold together. Our confidence was not misplaced, particularly when a couple of months later, Ron reported that on one tow the glider had lifted the back of his car a foot off the ground. As nothing had given way we assumed that our calculations were flawed or that wing loading figures had a big built-in safety factor.

But all that was in the future. Today was going to be a special day. Best of all, Hain and I took it in turns to fly and this was my turn. Our full 1500 feet of wire was stretched out. The towcar looked a long way away. The sun was shining and the wind was coming straight down the field at about ten miles an hour. That was enough to give aileron control so no helpers were needed to hold up the wingtips until the glider got under way.

The safety belt was tightened, the usual signals given, the towline took up the slack and the glider started to move forward. The usual drill was followed, take-off when the first pulse on the towline indicated the car had moved into

second gear, wait for the next pulse meaning top gear had been engaged and that was the signal to ease back the stick and experience again the thrill of seeing the horizon dip down as the blue sky beckoned you up. This time there was to be no slackening off half way. It was up and up and up. Because of the angle at which the glider was climbing it was not easy to look straight down but between my legs I could see the tow car heading towards the far corner of the paddock. We had calculated on gaining an altitude of about 1000 feet. This was three times as high as we had reached before. As the car approached the end of the run I eased the stick forward, tugged the release, and drew a deep breath. Now I was truly in a third dimension.

I had planned to make a gentle turn to the left over an adjoining paddock covered in scrubby trees known locally as "whipsticks". I extended my left foot on the rudderbar, no more than two inches, and held the stick over to the left. Obediently the nose started to swing round and the view of the horizon changed. Then the movement stopped, with the glider pointing about 45 degrees off the original line. This was not what it was supposed to do. I kicked the rudder hard left and heard it bang against the stop. I looked over my shoulder and there it was, hard over to the left. I don’t know why but my eyes also took in a tuft of grass jammed on the end of the skid. They also took in the emptiness behind and below. Then I heard a voice. It was not one of the guardian angels we joked about. It came up from the ground 900 feet below, "Christ he’s going slow", it said. For the first time I heard the silence. The wires that should have been singing were almost silent. There was no wind on my face. I had lost airspeed. This was a stall condition.

The couplet that had saved the necks of many pioneer flyers less than thirty years earlier may have flashed through my mind. "When in danger or in doubt, nose her down and pull her out." I did just that. The horizon flipped up and I was looking down on the scrub. I held the stick forward until the wind was literally howling. Then I kicked the rudder again to the left and pushed the stick about four inches in the same direction. The effect was instantaneous. The earth spun around and the horizon tilted madly. I had just made a “U” turn and the field lay ahead.

My worry now was just how far ahead. I had lost a lot of altitude in the past thirty seconds and looked for a more favourable landing ground than those whipsticks, some fire-blackened and vertical like an army of spears. My luck still held. I cleared the fence with the wind still howling in my ears. I was travelling half down wind and cutting across the track we had used for take-off. Straight ahead was a large patch of Scotch thistles. I thought I could reduce speed by touching down but on touching the ground the glider promptly bounced up twenty feet. Down again and this time into the thistles. They took my mind off worrying about crosswind landings, dragging me to a stop within fifty feet.

The ground crew arrived within minutes. Ignoring my immediate predicament in the thistles they stood on the edge of the patch and wanted to know what had gone wrong and why I had to attempt a near vertical bank on that first turn. I did not fly again that day. Hain made a couple of straight flights but mostly we just talked about what had occurred on that first circuit. We agreed that I was on the point of stalling and it heartened us that the glider had behaved so well with no sign of the vices manifest by so many of the more primitive aircraft. We also agreed that the rudder had been ineffective because of a near stall condition and that for the same reason, and because of the comparatively large area of the vertical fin in front of the rudder it just refused to come out of wind. Hain said he had read something about this sort of thing. He said it was called "weathercocking".

It was not long before all of our flights were circuits. No more trouble was experienced in turning out of wind. And we listened to the voice of the wind rather than those that came up from the ground. Our confidence was high, and now, unlike the days at Big Hill, it was based on experience. That there was an element of luck in our exploits we would not deny. Nor would we deny the shortcomings of our theoretical knowledge and our reliance on a pragmatic learn as you go approach. In the weeks ahead there was more satisfaction, fun and experience to be had. There were also moments to be remembered. Like the day when, after landing I noticed that the pulley that held the elevator wire in place had been badly damaged and allowed the wire to come away in my hand. This pulley was mounted on the skid and had obviously hit a rock. Whether that had occurred on take-off or landing will never be known. Then there was the day that Hain landed in another nearby paddock in the middle of a flock of sheep. Fortunately, they all ran in his direction as he came down and, like a well trained sheep dog he put down on their backs. They bounced in all directions but all were able to walk away. The glider suffered no more damage than strained landing wires. It was at this stage that we felt our urge to fly had finally been realised.

5. THE AERIAL TOW

The One Tree Hill Hotel was a favourite rendezvous for our gang, especially on a Saturday night. In those days drinking was illegal after 6 p.m. but the "One Tree" had a special arrangement. It was about six miles out of Bendigo but there was a small police station about halfway back to town. The sergeant in charge of this establishment had his suspicions about the “One Tree" but had never been able to conduct a successful raid. The explanation was simple. His only mode of transport was a push-bike and it took him a good fifteen minutes to pedal out to the pub. As soon as he left, announcing his objective, his junior, who enjoyed a drink or two on the house, would ring up and say "look-out". This was the signal for everyone to take off up the road or into the surrounding scrub.

This particular Saturday was much like any other, the talk was mostly about cars, politics, the war that had not yet started and, of course, the glider, which by this time had established itself as part of the local scene. It was while the latter topic was under discussion that we were joined by Arthur. He explained that he came from Melbourne, belonged to the Aero Club and earlier that year had got his solo ticket. He'd never flown a glider but demonstrated both an interest and understanding of what it was all about. The talk then concentrated on flying — with and without power.

I am not sure which of us first mentioned towing a glider up behind a plane but as the evening wore on the concept became more and more feasible. I was glad Hain was not there that night. Ie was the careful one and was getting worried about all the glued joints, especially the ribs and the main wing spar. It had now been parked out in the open for more than twelve months. As the night wore on we built on each others enthusiasm. Sure there were problems, lots of them, but one by one we solved them or brushed them aside. He was going to fly a Moth up from Melbourne, but not a word to anyone. He thought the Club would not like him using one of their planes for that sort of thing. We all agreed, as solemnly as our high spirits would allow. It was now late. "Let' s have one for the road", someone suggested. "No, make it one for the air. " Arthur's toast was taken up enthusiastically.

Next morning I phoned him. He was still keen as ever. I think that somehow I had hoped that he would have cooled off a bit. Now I would have to have a talk with Hain. He tried to discourage the idea, his commonsense battling with the unexpected opportunity to meet yet another challenge. I told him that Arthur was going to bring the plane up the weekend after next. He said he would see if he could find anything about aerial towing in his magazines.

The pre-arranged day dawned fine and we were out at the paddock early. Our first job was to tell the farmer that a plane was coming up from Melbourne. His eyes lit up. Not everyone had a plane landing in one of their paddocks. We got back just in time to hear the drone of the Moth's Gipsy motor and to throw a few more leaves on the fire to show him the wind direction. And that wind was just right, nice and steady and coming straight down the paddock from the nor-west. Arthur landed very smoothly and taxied back to where we were waiting. We talked for a while and he took the farmer for a circuit over the property. That ensured the paddock was ours for life.

Now for the big event. Hain had by now become as enthusiastic as anyone about the venture, but did not enhance my enthusiasm by adding occasionally "But I'm glad it's you and not me this time". He had not been able to learn much about towing. The main requirements seemed to be that you used not less than 250 feet of rope and that you kept the glider above the aircraft's slipstream.

We had worked out well in advance how we would go about the job. We did not have the necessary length of rope so we would use about thirty yards to make the connection to the plane and then add another eighty yards or so to hook up the glider. Connection at the glider end was easy. Our normal towing hook with its release pin was all that was needed. What we had worked out for the Moth without knowing quite where things were also seemed to be just what was needed. We took one turn of the rope around the tail skid than another turn around the undercarriage axle. The end was then taken up to the front cockpit where the passenger held onto it We thought the friction of the two turns would be sufficient to enable the passenger to hold the rope. There were no knots so that if he let go the rope would pull clear of the plane. Arthur did not contribute much to this discussion other than mention, several times, that he would be in trouble if anything happened to the plane. A demonstration of how the rope would pull clear of the plane helped restore his enthusiasm.

The stage was now set. We had a good long runway, almost 1100 yards, and the weather was just right. Our final arrangement was simple. If either of us could see trouble we would release so that neither had any responsibility for the other. If Arthur wanted to get rid of the glider he would just bang his passenger on the head and that would be the signal for him to let go the rope, with no questions asked. Because of my lower flying speed I would take off first and fly just above his slipstream, at about thirty feet.

There were waves all round in final confirmation that all was set. The Moth taxied forward and the tow-line took up its load. The Moth slowed temporarily but slowly gained momentum. The air was filled with grass and dust but already

I had aileron central and soon I would be able to lift off. Within two hundred yards I was up and out of the slipstream. This was what we had been waiting for. The familiar sound of the wind in the flying wires now merged with the noise of the motor. We used to call powered air craft "stinkwings" but this one was different. Halfway down the field the Moth's tail was well off the ground and I thought he must surely have flying speed. He gained more speed but still did not lift off. I thought he was just making sure that there would be no danger of stalling, with the extra load, when he took-off.

We were three parts down the field now and still he was stuck on the ground. I looked at the line of gum-trees lining the far end of the field. He must have been no more than a hundred yards from the trees when lots of things seemed to happen at once. The line of trees gave way to clear blue sky as the glider's nose shot up, not because it was being towed up but because the downward pull of the towline had ceased. I pushed the stick forward and as the nose came down I could see the Moth, just clearing the trees. I saw the top branches waving as he cleared them. Then the realisation hit me that I too was headed for the same treetops, and I had no motor. With a little residual speed from the tow the glider was responsive. The first thing to do was to get rid of the towline now trailing out behind. I tugged the release wire and heard a reassuring click as the line pulled away. Then I turned steeply to the right. With an open fuselage the glider was prone to sideslip and the ground was too close for that. The wing came up with the ground no more than twenty feet away. There was nothing for it but to land cross wind, along the line of trees. Crosswind landing on a skid is a somewhat hazardous operation especially at that critical point where the forward speed reduces to a point where there is little or no aileron control. I was fortunate; when the glider stopped I let my feet slip off the rudder bar and rest on the firm earth.

Within a few minutes Arthur had completed a very tight circuit. He landed with one or two nervous bumps and taxied over to the glider. "y'all right?', he yelled as he cut the motor. Reassured, he leapt out and ran over. We met half-way, both talking. I don't know what he said but I voiced the questions that had excluded all other thoughts, "What happened, you had enough speed, why didn't …?" He anticipated everything else I was about to say. "I couldn't get the bloody thing unstuck. And do you know why?". It started to sound like it was not all his fault. "You got up too high. You had my tail about six feet off the ground so I had no lift. I thought that if I bounced her a bit I might get the wings up, but it didn't work out so I banged Lloyd on the head and he let you go, hoping to Christ that the rope would not tangle on the tail-skid". That possibility

had occurred to me too. There was not much more to say. We laughed and gripped each other’s hands.

That night out at the "One Tree” we relived every moment of the afternoon's experience. We told each other, step by step, what we had done, what we should have done and what we might have done. Everyone joined in. Observations, advice and speculation went on into the night. But somehow neither of us got around to suggesting we have another go at it. If anyone else did then we did not hear them.

6. SHE'LL FLY NO MORE

By now Jenny had spent more than eighteen months in the open, exposed to the rains and frosts of winter and the ultra-violet glare of two summers. Her only protection has been the shelter of a few trees, surrounded by a rope to keep the cattle away. We were becoming increasingly concerned about the structural condition of the wings, both the glued joints and the covering fabric. Hain swore he saw a bull-ant walking along the upper surface of the wing and its feet were going through the fabric

Since the failed aerial tow we had continued to fly but our confidence was waning. Reluctantly we decided the time had come for a major overhaul. The fabric came away ail too easily and what it revealed we did not like the look of. The main wing spar seemed intact but the casein glue was proud where the plywood joined the top and bottom lengths of timber. This, according to the experts, was due to glue being attacked by mould. Worse still was the state of the ribs. T hey were constructed of slender pieces of timber shaped to form the aerofoil section of the wing and held together by light plywood gussets. They were in a bad state, some of them being completely separated. When we were making the ribs I had wanted to nail as well as gluing the gussets. Hain had objected, saying that if the glue failed it was better that we should know rather than have it concealed by a few tacks. As usual, he was right.

For a couple of weeks we did nothing but look at the bits and prod the weak spots with screwdrivers. Finally we decided to patch it up, arguing that if it held together in the air the way it was then it would at least be a lot safer if we patched it up and recovered the wings. The tailplane assembly and the rudder also had to be stripped. We joked as we removed the dress-material patch from the aileron*. It had stood up to the weather well and was probably the strongest part of the wing.

The restoration work proceeded without hitch but the atmosphere was different from the enthusiasm that marked the original assembly work. More than once we stopped and asked ourselves whether to scrap Jenny and build something more advanced. The main deterrent to this was that we both had the feeling that time was running out. War, we knew, was inevitable. We did not know how or when it would come or the form it would assume. But we did know that the time for playing with gliders would come to an end. So we proceeded to patch up Jenny, our confidence slowly returning.

*So as not to interrupt flying one Saturday, damage to the aileron had been patched 'in the field' with fabric donated from a girlfriend's dress. Dad kept that patch for the rest of his life.

It took us about three months to complete the restoration work. Jenny looked good as new when we rigged her up outside the workshop. Her paint glistened and her wings, sprayed with silver dope looked fit to do battle with anything the elements might pit against her.

Then we had to decide where the action was to take place. The field we had been using was a long way out of town and it had no sheltering trees where Jenny could be parked. We were having a little trouble getting reliable owners of larger carts to commit themselves to spend a day driving over open paddocks. These factors added up to a decision to try the hitherto unused Bendigo airfield. To call it an airfield was a gross exaggeration. It was a project undertaken as a relief-work project, the purpose of which was to provide work for men unemployed during the economic depression of a few years earlier. It had involved leveling out a strip of waste land using picks, shovels and wheelbarrows. The result was a more or less usable runway about 3000 feet long. The surrounding area was quite unsuited for emergency landings and the strip was located at about 45 degrees to the prevailing wind. A large ordnance factory was being built along one side. It had been used once, when the then Minister for Air made a hazardous landing in an old biplane to declare it open. Somewhat reluctantly we decided to make it Jenny's new home.

All of our flights were now made as circuits. This required an initial altitude of not less than about 500 feet and preferably nearer to double that. There was a very large element of guesswork in all the assumptions we made about our flying. Self-taught and isolated, we had learned to fly the way kids learn to ride a bicycle, with little or no real knowledge of the complex physics involved. We estimated that our rate of decline was between three and four feet a second, that our normal flying speed was about 40 miles per hour and that to reach a given altitude we needed about one and a half that length of towline. Any lift we might occasionally get from thermal or terrain air currents was a bonus.

Our first few flights from the new strip were a bit hairy. We had become used to having a wide range of options about where we would land and being confined to one narrow strip was uncomfortable. Another problem was that the far end of the strip was almost unusable and we unable to use the full length of towline. The prospect of doing a little roadwork on the far end of the strip daunted us, and even more, the rest of the team. We turned our attention to the end where we started. Here there was a barbed-wire fence, then a little-used gravel road on the other side of which was another barbed-wire fence enclosing a paddock of about four acres in which grazed a cow. And running along the road, on the airfield side, were powerlines, the lowest of which was about 20 feet above the ground.

Hain and I stood in the middle of the road surveying the scene. It was Ron who broke the silence. He sensed what we were thinking and expressed very forcibly his views on the impracticability of the concept. "You've only got a gap of about 14 feet between the fence and the wires. And what if someone comes driving down the road?". Hain pretended innocence, "Gee Ron that's not a bad idea. Reckon we could make it?", he said, turning to me. I kept up the pretence. Sure, no problem. Good idea Ron.

We worked out that we could extend the towline by about 30 feet. This would enable us to take off when the tow-car was winding up in second gear, wait for the car to get into top gear by which time we would have enough speed to sharpen the controls and, as soon as we had cleared the second fence we could kite up and away. The driver was briefed carefully and as an added precaution Hain travelled with him to keep him posted on what was happening a thousand feet or so to the rear.

To ensure that we did not decapitate any motorcyclist who may have had the misfortune to use the road we posted a couple of lookouts on the roadway. As it turned out it was they who were in greatest danger of decapitation. The stage was set. The usual wave signals were given and acknowledged and the glider started to move forward. Inside a hundred feet it was in the air. Another hundred feet and the temporary slackening of the towline indicated that top gear had been engaged. Things were going fine except that, not flying straight into wind, the glider on leaving the ground had swung across to the left. This was its usual predictable behavior but this time it dragged the wire hard against one of the rather aged fence posts where an obstruction would not allow the wire to come up. One of the lookout men saw this predicament and with great presence of mind levered the wire over the post with a stick he was carrying. The other lookout heading towards the trouble had his hat whipped off by the unleashed wire as it took up its new position. This drama was largely lost on me. By now I had sufficient speed to give good rudder control, the direction was stabilized, and I was concentrating on the gap between the fence and the wires. It all seemed so easy. The two obstructions fell away to the rear and the view ahead was clear blue sky as Jenny climbed away.

Hain and I must have made twenty or more flights using that technique, the only improvement being that the two lookouts were both armed with stout sticks to keep the towline clear of the post tops and were warned to stand clear when the wire was freed. It was on the last of these flights that we had the only mishap that we had a minor accident. Hain overshot the runway and tried to put down cross-wind near a wire fence. He touched the ground fifty or sixty feet away from the fence and his speed was probably down to about fifteen miles an hour when he hit. At the last minute he

took his feet off the rudder bar and held them out to take the impact. He didn’t even suffer a scratch.

Not so the glider, however. One wing had taken most of the load. The plywood leading edge was crushed for about three feet back from the tip and there were signs of some internal damage. We never did like flying on that makeshift airstrip anyhow. But for now it was back to the workshop. As we speculated on what might need doing it did not occur to either of us that Jenny had flown her last f1ight.

7. ENTER THE FLEA

Jenny the glider reached the end of her flying life still admired and respected. Hain and I had both known through her the ecstasy of free flight With her we had enjoyed a range of experiences that could have been achieved no other way. We built her from wood and wire and calico and not once did she fail us. But our sadness at her passing did not last long.

"I know where we can get a Pou d'Cei1," an excited Hain announced one Saturday morning. "A what?", I queried, displaying an ignorance that was soon to be dissipated. "A Pou, a Flea". Hain's explanation made little impact. I had heard of Henri Mignet's strange little flying machine with its reputation for uncontrollable nose dives but did not even know that there was one in Australia.

So Hain explained. There was this chap on a station about thirty miles out of Bendigo who had bought a Flying Flea that had been built by two brothers in Melbourne. On his first flight he found it had a mind of its own. From a height of about ten feet it dived in, flipped over on its back and smashed the main wing spar and the propeller. We went out and had a look at it. The motor, a three cylinder radial Blackburn Thrush, rated at 58 h.p. was not damaged . The owner's wife wanted to give it away free and the owner himself offered it to us for only slightly more. We had become the owners of a Flea. Our prejudice against powered aircraft, "stink-wings" we used to call them, dissipated rapidly.

Hain had a copy of Mignet's famous book on how to build your own Flea. It was an amazing publication giving details on how to build and fly your own plane. It was published about 1935. The Flea was a funny little aircraft defying almost every feature of design that had been developed. A Flea is difficult to describe. It is difficult even to start to describe. But here goes. It is really a highly staggered biplane, with the front wing overlapping the rear wing by about six inches. It has a wing span of about 18 feet. There are no ailerons but the wings are curbed up with a very pronounced dihederal. The front wing is hinged at about the centre of pressure and is tilted by the control column. It has no elevator or tail plane but it does have a large rudder, controlled by lateral movement of the control column . The fuselage is a squarish box section, with limited room for the pilot. The wheels are mounted level with the base of the fuselage and for springing the axle is bound to a crossmember of the fuselage with rubber shockcord, much the same as World War I fighters.

Our first move on taking Pou (that is all we ever called it) home was to make a propeller. We laminated two slabs of

hardwood between two pieces of oregon, shaped the outline, using Ron Barker's bandsaw, then cut the angles so that all the relevant sections of the blades would travel four feet six inches on one rotation of the prop. It was a big day when we fitted the propeller to the wingless fuselage and swung it over. After about half an hour it started. With the back of the fuselage tied to the garage door we ran it up until it peaked at 2000 r.p.m., filling the backyard with dust. The next task was to build a complete new front wing and make good various minor alterations.

While we worked away on the new wing, built around an eighteen foot box spar with plywood ribs, I borrowed some of Hain's old aviation magazines to read up the numerous articles on the Flying Flea as it was generally known. It was not encouraging. By 1940, when we were engaged on the project, the Fleas had been banned almost everywhere. There had been a lot of accidents with aircraft constructed by home-builders; whose experience was limited to reading Mignet's book. It was an intriguing publication, written more like a cookery book than a technical work. I remember one line "Don't use aluminium, it is only hardened earth. Use a thin piece of steel rather than a thick piece of aluminium."

Some of the crashes were due to faulty amateur workmanship and lack or limited flying experience, but there was one common and disturbing factor. Quite a few Fleas, well-built and flown by experienced pilots, got into uncontrollable dives and crashed almost vertically. One general observation on this peculiarity was that if the machine was put into a controlled dive the centre of pressure on the main plane mover back, as always occurs, but the effect on the Flea was that the load became so great that the pilot was unable physically to pull the stick back to get out of the dive. This was widely accepted but as Fleas did not carry black boxes or even radio it must still remain a mystery. Undeterred we pressed on.

By now the war had taken a more serious turn but both Hain and I were not disposed, unlike so many of our mates, to become involved. These were not decisions made lightly. They were based on serious political considerations. I knew the time would come but not when or where or even how. So we pressed on with our ask, stopping for a break now and then to wheel out the fuselage and start up the motor. There were lots of little jobs to be done apart from the wing. The airspeed indicator pitot tube had been damaged when the wing was smashed, When fixing it up we found that the diaphragm in the instrument was also damaged so we had to fix that too, then take it up the highway at speeds up to 80 mph so that we could calibrate it with reasonable accuracy. It took us the best part of four months to make the Flea look as much like an aircraft as ever it would.

The task was complicated by the fact that Hain had got job with the Commonwealth Aircraft Factory in Melbourne, only coming back to Bendigo for weekends. But eventually the job was finished. The fabric had been stretched and sewn through onto the ribs (using a long needle that we had made from a bicycle wheel spoke). Our final act was to paint a big red star on the rudder.

8. EXIT THE FLEA

Right from the beginning the Flea did not generate the affection we had felt for Jenny the glider. Possibly this was because we knew of the history of these machines or possibly we knew that we had lost the feeling of flying a thousand feet up with no noise except the wind in our ears. This was the noise that we had come to recognise instinctively a telling us whether we were flying at the right speed.

During our initial tests of running up the motor we had some doubts as to whether the tachometer was showing a correct reading. The most we could get out of it was 2200 rpm. Compression in the three cylinders was not bad but it continued to blow quite a bit of blue smoke. There was nowhere on the back of the motor where we could check the revs so we tied the Flea by its tail to a tree, allowing it to go within about two feet of another tree. Hain then tied me to the second tree, started the motor and took it up to full bore. I had a tachometer, borrowed from the local technical school, and with this measured the revs from the propeller boss. It confirmed that the cockpit reading was right, 2200 was all the motor would run up to. We had expected at least another 300 revs.

Came the big day. We had towed it out to the paddock on its own wheels, with the main plane swung around parallel with the fuselage. This was what Mignet had recommended. There was an audience of a dozen or so as I taxied out to the starting point. My announced intention was to taxi up and down the field a few times to get the feel of things before taking it up. Near flying speed, the plane lifted the tail-wheel off the ground and rudder control seemed to be adequate. More ground trials and our initial burst of enthusiasm began to waver. The motor blew hot engine oil back into one's face and after running a short time the pipes leading to the inlet manifold started to get covered with white frost, like a refrigerator. The motor had only a single carburettor for the three cylinders and this meant long pipes, especially to the two lower cylinders. The big worry was that the whiter they got the more the motor seemed to falter. We made an intake lead from near the exhaust port of the top cylinder but this did not seem to improve things.

By now I had learned that on full throttle Flea was sti11 reluctant to leave the ground. It seemed to need an extra gust of headwind to get off the ground. Once in the air it would hold its altitude, a few feet off the ground, but with just nothing to spare. Then as the frost gathered on the inlet manifold the revs would drop and it would get back to earth, still on full throttle.

Even more disconcerting, however was the way it behaved when it got off the ground. Having no ailerons it maintained some sort of lateral stability by a continual correcting process, giving it a sort of pendulum action. This was bad enough but much more disconcerting was its reaction to forward and rearward action of the control column. We attributed this to the interaction of the airflow between the front and rear planes. The worst effect was when the stick was pushed forward the front plane would be tilted upwards and this seemed to break the slot effect between it and the rear plane. The effect of this seemed to be to stall the rear plane with the result the nose would point up instead of down, giving a view of blue sky instead of solid earth. The overall effect, however, was for the machine to descend. Having grown accustomed to the controls on the glider, where every aspect of its flying could be felt through the control column and the rudder-bar, the behaviour of Flea was both frustrating and disconcerting. The stick would alternatively go stiff and slack, for no apparent reason. Sometimes it gave the feeling that you were holding the entire weight of the machine in the air, then it would feel like all the control wires had broken. This was not the sort of thing to lead to a happy relationship. And all the time it blew hot engine oil in one's face and smeared the goggles that had to be worn.

We tried changing the relative positions of the front and fear planes, with no noticeable effect. We fiddled about with the motor, trying to get more revs out of it, but to no avai1. Neither of us ever took the machine more than a few feet off the ground. We had a total lack of confidence on what it would do next and there was no reserve of power that could be used in an emergency We didn't ever really hate Flea, we had put too much work into it for that, but nor did we ever come to love it. There seemed to be some malevolent gremlin somewhere inside it. Hain maintained that part of our trouble, especially the lack of power, was due to my shortcomings as a maker of propellers. He could have been right.

Perhaps the nastiest trick that the little gremlin had was at the point of touching down or, sometimes, just taxiing at moderate speed. At a speed of somewhere around 30 mph one had to make a decision if one wing started to drop. Say you felt the port wing going down, if you moved the stick to the right, turning thee machine to starboard and thus speeding up the airflow on the port wing and giving it more lift, everything would be fine, provided that the lift it acquired was greater than the centrifugal force generated by the curved path, which would tend to push the wing even lower. This situation was not helped by having a tailwheel that turned with the rudder. If the airspeed was lower than one had estimated and the centrifugal force dominated the wing-tip would make contact with the ground, resulting in a spectacular cartwheel effect, throwing it from one wingtip

to the other and leaving it sitting on one wingtip and one wheel. We were lucky that although this happened quite a few times it never occurred at a speed that caused the plane to somersault.

It was an interesting interlude, playing with that Flea but it was to end with Flea being towed back without the glory that had marked the glider's final homecoming. I do not know what happened to Flea after Hain's death, but more than fifty years later, while visiting the Wangaratta Aircraft Museum, I noticed stuck in a corner a rusty Blackburn Thrush three cylinder radial motor. I could not find out where it came from.

The time had now come for me to think of different aircraft. An RAAF recruiting officer stationed in Bendigo who had been taking a close interest in out aerial exploits said he would give me a letter to take to the recruiting depot to facilitate my selection for aircrew. Before that he arranged for me to see the local RAAF medical officer to check my colour vision, about I which I had some vague doubts. It turned out that I was about 95 per cent red-green colour blind. I borrowed the Ishihara test book and learned the pages off by rote. But alas I got caught out. The fellow in charge of the depot, in Melbourne, was as disappointed as I was, but he drove me down in a RAAF staff car to Victoria Barracks, to make sure I would get a tank if I joined the Army.

Years later I did some sailplane flying out of Cooma, but by then my vision had deteriorated to a degree that I could never again fly alone, so I resigned myself to my memories of Jenny, the glider that flew on fencing wire.

SOME TECHNICAL DATA

FIRST GLIDER. This machine was built by Percy Pratt who operated a glider service — for want of a better description, from a couple of old aircraft hangers on the Belmont Common, Geelong, Victoria. Percy lived for gliding and made a living mainly from providing five shilling flights at weekends. He also made a few gliders for sale. I later got to know him fairly well, as we shared similar political views.

He had built the glider we acquired sometime in the early 1930s. It had flown extensively at Geelong and by a glider club at other sites around Melbourne. It had been damaged and patched on many occasions. Notwithstanding its scars, which had caused it to be retired from club use it was still capable of flight, but I would hesitate to say air-worthy. It would, however, have been adequate for our initial purpose of just getting off the ground.

The machine itself was of typical Percy Pratt construction. It was big and it was heavy, especially by comparison with "Jenny". It was a typical primary glider of the period. It had an open fuselage the main features of which were the keel or

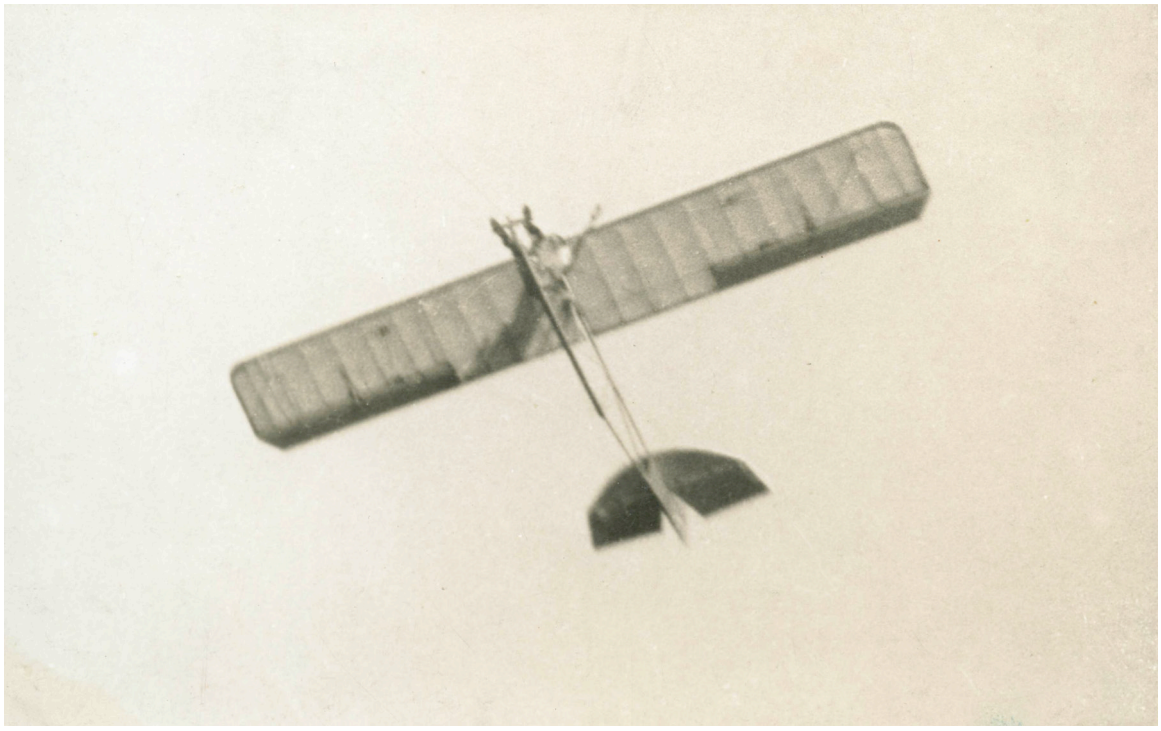
The wings were hinged on the top of the open fuselage to permit the movement necessary for accurate rigging, including setting the diahedra1 angle. Each wing had two flying wires, one from the keel to the mainspar and the other to the rear spar. From a pylon about eighteen inches high two more wires — landing wires — went out to points on the main and rear spars directly above where the flying wires were attached. A couple more bracing wires ran from the wings back to the top of the fuselage to steady the wings in the event of a hard landing.

The tail assembly, or empennage as it used to be called, consisted of a horizontal plane to which the elevators were attached and a vertical fin to which the rudder was attached. This was the standard type of assembly found on most aircraft at that time. Conventional type ailerons were fitted to the wings.

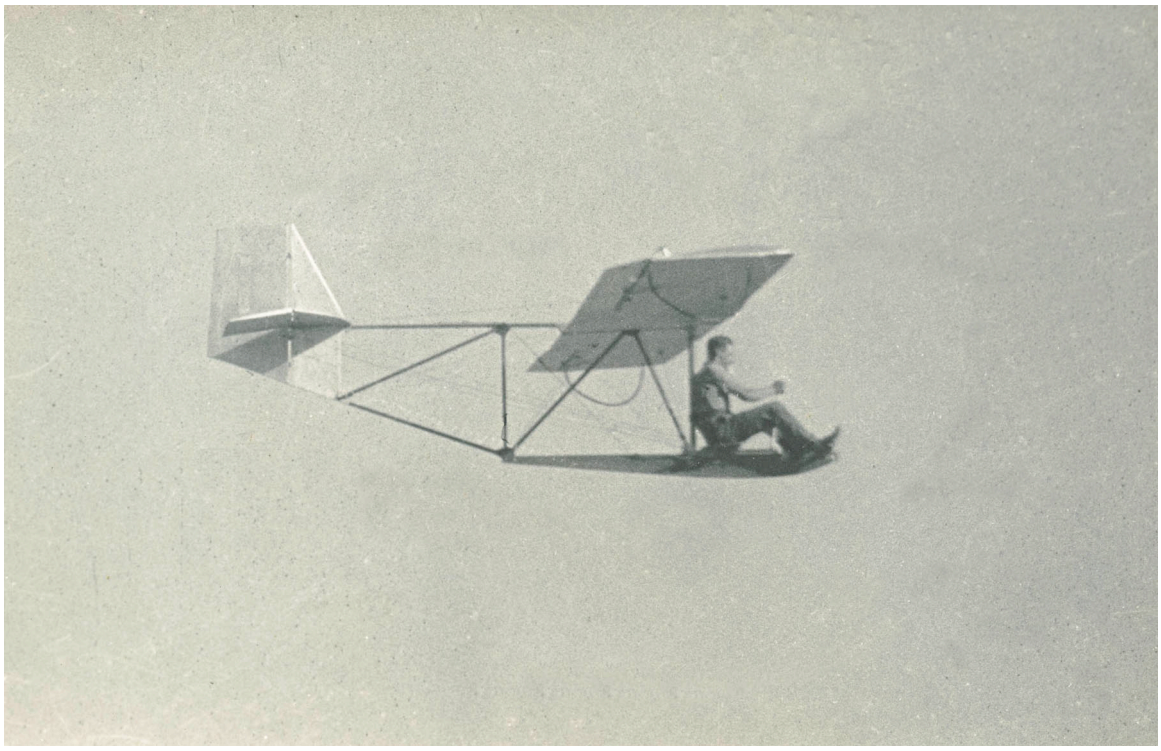
Controls were also standard, consisting of a control column or joy-stick. Moving this from side to side operated the ailerons which tilted the plane from side to side. Forward or backward movement of the control column operated the elevators. Pushed forward it caused the craft to dive while pulled back it would cause the craft to climb. The rudder was operated by a foot controlled rudder-bar. Moving the right foot forward would cause the machine to turn to the right.

IMAGES

Balanced on a log with enough wind to give us lateral and longitudinal control. Two or three hours of this and we were ready for a tow down the slope. 1938.



"Kiting" up on the towline, with a wave to the photographer. Taken a few months later when we had moved out to Marong.



Free flight, coming in to land. By now we regarded ourselves as experienced pilots. Sometimes, if we got a "lift", we would go out over the trees and land in another paddock.

"Pou the Flea" with me in the seat. We never trusted this thing the way we did "Jenny" the glider. But there was never a dull moment once it was bounced off the ground. May 1941.