

*The Robbins & Porter Monoplane of 1913*  
*Statement of significance*



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Dirk HR Spennemann

The aircraft built in the first half of 1913 by the Albury mechanics Azor Robbins and Alexander Porter is of high cultural significance as it was the first Australian-designed and Australian-built monoplane, fitted with the first Australian-built air-cooled aircraft engine, that actually became airborne and flew.

The decade before the outbreak of World War I saw modern transportation systems, such as the motorcar and aircraft, being introduced to Australia, with flying in particular attracting the attention of the press of the day.<sup>[1]</sup> The motorcar business was thriving in metropolitan as well as country Victoria,<sup>[2]</sup> and fast cars and flying became the aspirations of many young and technically minded men. Among these were Azor Robbins<sup>[3]</sup> and Alexander Porter,<sup>[4]</sup> two Melbourne mechanics,<sup>[5]</sup> who in July 1911 decided to set up on their own, establishing a motor garage in Albury, NSW.<sup>[6]</sup> Of the two, Robbins was the businessman with a sharp engineering mind,<sup>[8]</sup> while Porter was a motor enthusiast-cum-mechanic.<sup>[9]</sup>

During the late nineteenth century people across the globe engaged in experiments to develop heavier-than-air flying machines. In Australia, trials by Lawrence Hargrave from 1885 onwards proved by 1893 that double box kites gave enough lift to provide a stable aerial platform. The first powered flight with a petrol engine was achieved in 1903 when the Wright brothers flew their design at Kitty Hawk.<sup>[25]</sup> Truly controlled powered flight occurred with Santos Dumont in 1906. By 1909 aircraft design had improved that long distance flights became possible. On 25 July 1909 Louis Blériot crossed the English Channel. His aircraft, the Blériot XI became the most successful design prior to World War I,<sup>[16]</sup> influencing a raft of other monoplane designs.

Australians inventors and mechanics sprung into action when the Australian government in September 1909 pledged a £5,000 prize (equivalent to \$630,400 in 2012) for an Australian design for the construction of an aircraft suitable for military purposes. The first Australian-designed and -built aircraft to fly (in October 1910) was a pusher bi-plane designed by John Duigan.

Well-publicised public flight demonstrations in Australia in 1909 to 1911, using imported planes such as Wright A, Voison Biplanes and Bristol Box-Kites, stirred the imagination of many young mechanics.<sup>[22]</sup> By 1912 the first flying school in Australia, stirring further interest, was opened by William E Hart in Richmond, NSW.<sup>[20]</sup> Hart built a number of aircraft, among them Australia's first locally designed monoplane.<sup>[24]</sup>

In 1911 Melbourne mechanic Azor Robbins, collaborating with Aubrey Locke, developed a flat-four, lightweight air-cooled aircraft engine to power a biplane by local designer Lawrence Marshall.<sup>[14]</sup> As the engine, Australia's first air-cooled aircraft engine only delivered 40hp, it was underpowered for the heavy bi-plane and thus was not used. When Azor Robbins and his

business partner Alexander Porter opened their motor garage in Albury they decided to use that engine for a monoplane they planned on building<sup>[15]</sup> drawing on the design of the Bleriot XI<sup>[16]</sup> and especially of the Bristol P-1.<sup>[17]</sup>

Their aircraft was complete in March 1913 when aviator W.E. Hart visited Albury,<sup>[20]</sup> and was ground tested from May 1913 onwards at Bungowannah. In late July 1913 the plane flew for a short distance (~ 180m) in a straight line,<sup>[11]</sup> which however does not qualify for 'controlled powered flight.'<sup>[23]</sup> Even though Robbins and Porter had foreshadowed ongoing development, this never eventuated, probably due to demands by business and families.

In February 1914 Robbins and Porter sold their business to the local competitor F.C. Blacklock<sup>[6]</sup> and moved back to Melbourne. Azor Robbins eventually moved to the U.S.A. where he continued his engineering career as a prolific inventor (with a string of patents) working for Mack Trucks.<sup>[8]</sup> At the outbreak of World War I, Alexander Porter joined the AIF in 1914 and the Royal Flying Corps in 1916. After the war he became a farmer in country Victoria.<sup>[9]</sup> While the airframe of the Robbins & Porter plane was destroyed,<sup>[21]</sup> the engine survives, currently held by Museum Victoria.

## EXPLANATORY NOTES

This section provides the underpinning of the statement of significance, providing fully referenced background research on various aspects of the history of the plane and the people associated with it.

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#### Abbreviations

Abbreviations of newspaper titles: AB—*Albury Banner and Wodonga Express*; ADN—*Albury Daily News*; BMM—*Border Morning Mail* (Albury); SMH—*Sydney Morning Herald*; UMMH—*Upper Murray and Mitta Herald* (Tallangatta, Vic.); WWE—*Wagga Wagga Express*

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## [1] Local Reporting of Aviation Events

Of the three local papers, the *Border Morning Mail* was the most 'aviation mad.' During the period 1912 to 1914 the paper is full of aviation news, particularly items on airplane crashes and killed airmen.<sup>1</sup> By comparison, the *Albury Daily News* and the more rural oriented *Albury Banner* has only very few items on flying.

The reporting of the construction of the plane, the ground- and the air-trials is very uneven. None of the three papers of the day, the *Border Morning Mail* and the *Albury Daily News*, both daily papers, and the weekly paper, the *Albury Banner*, consistently reported on the progress.

## [2] Motor car businesses in country Victoria before World War I

Twenty-five businesses dealing with motorcars and motorcycles were listed for country Victoria in 1909.<sup>2</sup> By 1912 there were thirty,<sup>3</sup> by 1913 forty-three<sup>4</sup> by 1914 fifty-one,<sup>5</sup> and by 1915 forty-five.<sup>6</sup>

The numbers for motorcar garages in North-Eastern Victoria and the Border area fluctuated, with many businesses starting up but several lasting for a short time only. In the Border area there were five motor car businesses in 1908,<sup>7</sup> four in 1909,<sup>8</sup> three in 1912,<sup>9</sup> five in 1913,<sup>10</sup> seven 1914,<sup>11</sup> and three in 1915.<sup>12</sup>

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- <sup>1</sup>. cf. 'Monoplane Disaster.' *BMM* 16 Jun 1913, p.2 col. 6.—'Perils of the air.' *BMM* 21 Jun 1913, p.2 col. 6.—'Another aviator drowned.' *BMM* 25 Jun 1913, p. 2 col. 6.—'Airmans's awful death. Body smashed into pulp.' *BMM* 27 Aug 1913, p. 3. col. 1.—'An Aeroplane Fatality.' *BMM* 9 Sep 1913, p. 2 col. 6.
  - <sup>2</sup>. Sands & McDougall (1909) *Melbourne, Suburban and Country Directory for 1909*. Fifty-Third edition. Melbourne: Sands & McDougall. P.2232.—Down from 34 listings in 1908: Sands & McDougall (1908) *Melbourne, Suburban and Country Directory for 1908*. Fifty-Second edition. Melbourne: Sands & McDougall. P. 2112.
  - <sup>3</sup>. Sands & McDougall (1912) *Melbourne, Suburban and Country Directory for 1912*. Fifty-Sixth edition. Melbourne: Sands & McDougall. P. 2659.
  - <sup>4</sup>. Sands & McDougall (1913) *Melbourne, Suburban and Country Directory for 1913*. Fifty-Seventh edition. Melbourne: Sands & McDougall. P. 2738.
  - <sup>5</sup>. Sands & McDougall (1914) *Melbourne, Suburban and Country Directory for 1914*. Fifty-Eighth edition. Melbourne: Sands & McDougall. P. 2741.
  - <sup>6</sup>. Sands & McDougall (1915) *Melbourne, Suburban and Country Directory for 1915*. Fifty-Ninth edition. Melbourne: Sands & McDougall. P. 2763.
  - <sup>7</sup>. Chiltern (J.W.H. Dunn), Shepparton (Advance Cycle and Motor Works [T.W.H. Whittington, prop]), Tatura (Tatura Cycle and Motor Works [C.E. Hurren, prop.]); Wangaratta (R. Buck; Northeastern Motors and Cycles [B. Manley, prop.]): Sands & McDougall (1908) *Melbourne, Suburban and Country Directory for 1908*. Fifty-Second edition. Melbourne: Sands & McDougall. P. 2112.
  - <sup>8</sup>. Albury (Fred C Blacklock), Chiltern (J.W.H. Dunn), Shepparton (T.W.H. Whittington) and Wangaratta (R. Buck): Sands & McDougall 1909, p. 2232.
  - <sup>9</sup>. Albury (Robbins and Porter), Corowa (Jas S. Downey), Rutherglen (Bufford & Co): Sands & McDougall 1912, p. 2659.
  - <sup>10</sup>. Beechworth (Harry J Dodd), Corowa (Jas S. Downey), Rutherglen (Bufford & Co), Shepparton (Concord Motor and Import Co, R Shave Manager), Wangaratta (two businesses: J Hickey and McAllece Brothers), Sands & McDougall 1913, p. 2738..
  - <sup>11</sup>. Corowa (two businesses: Bufford & Co and Jas S. Downey), Rutherglen (Bufford & Co), Bright (Bright District Motor Pty), Yarrowonga (Buck & Angel), Wangaratta (A.V. McAllece & Co. ): Sands & McDougall 1914, p. 2741.—Not listed is J Hickey (Wangaratta), but the business is listed for 1915: Sands & McDougall 1914, p. 2763.
  - <sup>12</sup>. Wangaratta (three businesses: J Hickey; A.V. McAllece & Co and Willima J.T. Wilson & Co), Sands & McDougall 1914, p. 2763.

### [3] Azor Dyer Robbins

Azor Dyer Robbins was born in 1885<sup>13</sup> as the thirteenth and final child<sup>14</sup> of George Robbins<sup>15</sup> and Ann Hatwell.<sup>16</sup> The Robbins' had frequently moved in central Victoria<sup>17</sup> and lived at the time of Azor's birth in Tylden, near Gisbourne.

Aged 20, Azor first appears in the public record, acting as a witness in a 1906 court case relating to incident between a wagonette and two cars in the Healesville area.<sup>18</sup> Azor first appears on the electoral roll for 1909, living with his parents at 15 Derby Avenue, Northcote.<sup>19</sup>

While living in Albury,<sup>[6]</sup> Azor married Grace Pedlow of Tylden in 1912.<sup>20</sup>

### [4] Alexander William Porter

Alexander William Porter was born 1890 in Ballarat, as a third child of John William Porter and Jane Ross.<sup>21</sup> He had married Phyllis Mary Wiffen in 1911 at Ballarat.<sup>22</sup> Alexander William Porter does not appear in any public record before his arrival in Albury.

<sup>13</sup>. Born on 13 Sep 1885 at Tylden, Victoria (reg n° 29455/1885). In the databases his given names are sometimes mis-transcribed as 'Ayor' and as 'Dier.'—He died 1963 in Pinellas, Florida, USA.

<sup>14</sup>. Mark and Sarah (twins, 1862, m° 2261 and 2262); John Arthur 1864 (reg n° 21887); Hannah 1866 (reg n° 19977); Samuel 1868 (n° 21978); Rebecca 1871 (n° 1170), Elijah 1872 (n° 21827); Simeon 1874 (n° 1014); Rachel 1876 (n° 914), John Hatwell 1877 (n° 21927); Muriel Mary 1881 (n° 6088); and Thomas Eber 1883 (n° 5959).

<sup>15</sup>. George Robbins is described as a bricklayer in the probate for Ann Robbins (see endnote 4). He was English-born (Entry for Azor Robbins, Fifteenth Census of the United States, 1930. Enumeration District 12-51, New Brunswick City Ward 4, Middlesex County, New Jersey. Sheet Number 7A. NARA RG 29T626 Population Schedules for the 1930 Census, compiled 1930 – 1930. Roll 1367)

<sup>16</sup>. Ann Robbins née Hatwell (occasionally transcribed in databases as 'Hattwell'), was an Australian-born woman. She died at Northcote on 21 Oct 1908, probate 28 Jul 1911 (file 120/527) (via Wills and Probate Index, Public Record Office Victoria.).

<sup>17</sup>. No systematic examination of the residences was made as this is peripheral to the study at hand. The birth places of the children indicate residence periods in Geelong (~1866), Buninyong (~1868-1876), Echuca (~1877-?1880), Tylden (~1881–after 1885), Northcote (~1906? onwards).

<sup>18</sup>. It was a court case establishing road rules between horse-drawn carriages ('a wagonette and four' [horses]) and two cars, where the driver of the wagonette wilfully swerved and obstructed the road. It seems that Azor Robbins was a passenger in one of the cars (*Healesville and Yarra Glen Guardian* 12 May 1906, p. 2 col. 3).

<sup>19</sup>. Electoral Roll District Bourke, Sub-District Northcote, 1909, p. 106 (entry 6331). Also resident are his mother Ann (home duties), father George ('caretaker') and sister Muriel Mary ('milliner'). His brother Thomas Eber, listed in the 1906 electoral roll as living at the same address, had moved out by then.—No electoral rolls for 1907 and 1908 were accessible at the NLA.

<sup>20</sup>. Reg n° 7613/1912.—Grace was born in 1890. Her parents were (Northern) Irish ( Entry Grace Robbins. Fifteenth Census of the United States, 1930. Enumeration District 12-51, New Brunswick City Ward 4, Middlesex County, New Jersey. Sheet Number 7A. NARA RG 29T626 Population Schedules for the 1930 Census, compiled 1930 – 1930. Roll 1367)

<sup>21</sup>. Reg n°590/1890 (based on search in Digger - Federation Index. Victoria 1889-1901).— Siblings: John Alfred \* Ballarat 1891 (reg n° 29587/1891); Vivian \* East Ballarat 1894 (eg n° 658/1894); Ella Gwendoline \* Brighton 1897 (reg n° 8971/1897); Enid \*Carlton 1901 (reg n° 1585/1901).

<sup>22</sup>. Reg n° 9108/1911 (based on search in Digger - Edwardian Index. Victoria 1902-1913).—Phyllis Mary died at Elwood in 1944 (Reg n° 10661/1944; based on search in Digger - Death Index. Victoria 1921-1985).—They had three children Laurie, Jean & Isobel (Death Notice Alex William Porter *Argus* (Melbourne) 29 September 1921 p. 1 col. 1). The latter was born at Nullawil (*Argus* (Melbourne) 8 Nov 1919, p. 13 col. 1).

## [5] Robbins and Porter as Melbourne Mechanics

Robbins and Porter had learned their trade as motor mechanics at Dalgety's<sup>23</sup> Motor Garage then at 458-466 Bourke Street, Melbourne,<sup>24</sup> where Robbins rose to a position of foreman, while Porter was a specialist mechanic (Figure 1).<sup>25</sup>

## [6] Robbins and Porter and their Motor Garage in Albury

### *Setting up Shop*

Robbins and Porter established an 'up to date Engineering and Repair Shop' in Dean Street in late June 1911 and advertised for business on 5 July 1911 (Figure 1). At the time the motorcar, motorcycle and bicycle market was dominated by Blacklock's, then located in the southern section of Kiewa Street.<sup>26</sup>

In August of that year Robbins and Porter placed a new advertisement in the *Border Morning Mail*, being one of the earliest to make use of cartoons (figure 2). The advertisement shows two cars jumping over a fence like sheep.<sup>27</sup> By that time they had acquired a 'vulcanising plant' that allowed them to repair blown tubes and tyre walls. In addition, they had branched out into the rental car business, starting off with one car. The rental car business must have thrived, little mishaps such as lost tail-lights notwithstanding.<sup>28</sup>

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<sup>23</sup> Dalgety's were a company of wool exporters and stock and station agents who then expanded into importing farming supplies and machinery. Branching out into the emerging market of motor cars was an obvious move. They appear to have built their new motor garage in Bourke Street in 1908 (Invitation to tender, *The Argus* [Melbourne] 8 January 1908, p. 2 col. 5; 18 January, p. 3 col. 7). In the same year they expanded the range of automobile makes for which they acted as agents: 'Motor Cars' *Yea Chronicle* 13 February 1908, p.3 col. 4; 'Motor Cars' *The Horsham Times* 18 February 1908 p 1 col. 2; *Alexandra & Yea Standard* 21 February 1908 p 2 col. 3.— The 1907 directory makes no mention of Dalgety's being involved in the motor car business (It lists Dalgety as merchants, importers, financial, stock, station and shipping agents: Sands & McDougall [1907] *Melbourne, Suburban and Country Directory for 1907*. Fifty-First edition. Melbourne: Sands & McDougall. P. 1928).

<sup>24</sup> Dalgety's Motor Garage at 458-466 Bourke Street first appears in the 1908 Sands & McDougall *Melbourne, Suburban and Country Directory*. (Sands & McDougall [1908] *Melbourne, Suburban and Country Directory for 1908*. Fifty-Second edition. Melbourne: Sands & McDougall. P. 1896.—Sands & McDougall [1909] *Melbourne, Suburban and Country Directory for 1909*. Fifty-Third edition. Melbourne: Sands & McDougall. P. 2030).— The garage was operational probably in late April or early May 1908 as it is listed as new telephone number 'City 978 Dalgety & Co, motor depot, Burke street.' (Postmaster General's Department, Additions and Alterations to Telephone Service up to 21<sup>st</sup> May 1908. *The Argus* (Melbourne) 23 May 1908, p. 9 col. 2.

<sup>25</sup> Robbins & Porter advertisement *BMM* 5 Jul 1911 p. 6 cols 6–7.—See also J.V. Meldrum (1980) Those magnificent men in their flying machines. *Parade* April 1990, p. 47.

<sup>26</sup> Fred C Blacklock is listed in Melbourne's Country Directory for 1909, but not in subsequent years, while he is listed Sydney Country Commercial Directory for the years 1912, 1913, 1914, and 1915.— **Melbourne's Country Directory**: Listed with premises in Dean Street. Sands & McDougall (1909) *Melbourne, Suburban and Country Directory for 1909*. Fifty-Third edition. Melbourne: Sands & McDougall. P. 2232.— **Sydney Country Commercial Directory**. Sands (1912) *Sands' Sydney, Suburban and Country Commercial Directory for 1912*. Fifty-second edition. Sydney: John Sands. P. 5A.— Sands (1913) *Sands' Sydney, Suburban and Country Commercial Directory for 1913*. Fifty-third edition. Sydney: John Sands. P. 4A.— Sands (1914) *Sands' Sydney, Suburban and Country Commercial Directory for 1914*. Fifty-fourth edition. Sydney: John Sands. P. 3A.— Sands (1915) *Sands' Sydney, Suburban and Country Commercial Directory for 1914*. Fifty-fourth edition. Sydney: John Sands. P. 3A.

<sup>27</sup> Advertisement *BMM* 5 Aug 1911, p. 1 cols 6–7.

<sup>28</sup> "Lost. Motor Car Tail Lamp on Howlong Road or Albury Streets. Please return to Robbins & Porter, Albury." Advertisement. *BMM* 25 Jan 1913, p. 5 col. 3

Figure 1 Advertisement in the Border Morning Mail of July 1911<sup>29</sup>

DEAN STREET, ALBURY.

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## To Motor Car Owners.

We have established an up to date ENGINEERING AND REPAIR SHOP IN DEAN STREET, ALBURY, next Nathan's New Emporium. We are able to effect Repairs of every sort. Motor Cars are thoroughly overhauled, adjusted, and repaired. All work is done promptly and without delay. Our charges are extremely reasonable, and as all work is done on the spot the delay inseparable from sending parts away for repair is obviated. We are able to supply the following cars:—

AUSTIN, DAIMLER,  
DE LAUNAY BELVILLE, and STANDARD.  
PETROL, OIL, and LUBRICANTS OF ALL SORTS STOCKED.

**ROBBINS and PORTER, Proprietors.**

(Late Foreman and Expert at Dalgety's Motor Garage, Melbourne).

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Figure 2 Front page advertisement in the Border Morning Mail August 1911–June 1912<sup>30</sup>



We wish to draw the attention of Motor Car Owners to the fact that we have OPENED an UP TO DATE REPAIR SHOP IN ALBURY. Having had years of experience in leading Melbourne Motor Shops, we are in the position to efficiently repair any make of car at shortest notice.

PETROL, OIL, AND ACCESSORIES STOCKED.

**ROBBINS and PORTER,**  
(late foreman and expert with Dalgety's Motor Depot, Melbourne),  
DEAN STREET (next to Abe Nathan's). Phone 165.

We have just installed an UP TO DATE VULCANISING PLANT, and will execute with PROMPTNESS REPAIRS to tubes and covers at the most reasonable rates.

FIRST CLASS HIRING CAR FOR HIRE.

Determined to make their mark, Robbins and Porter secured a prominent two-column, two-inch advertising spot on the front page of the *Border Morning Mail*, which they retained until January 1913 (Figure 1). To further increase exposure, they also secured a spot at the Albury Show in September 1911, exhibiting 'the chassis of a 15 hp Austin motor car with Rudge–Whitworth detachable tyres.'<sup>31</sup>

### Expansion

The premises in Dean Street, were not suitable for expansion, presumably as they lacked sufficient covered workshop space. The commercial centre of light industry and transportation companies at this time was the section of Kiewa Street directly north of Dean Street. The Sydney Road wound its way from the bridge through Townsend and Dean Street and then north via Kiewa Street. Located in that section of Kiewa Street were the stables and coach terminal of Crawford & Co., then still a major force in regional transport along all routes not covered by the railways. In addition, there was the Globe Hotel, the central hotel in Albury, situated at the corner of Dean

<sup>29</sup> Advertisement *BMM* 5 Jul 1911 p. 6 cols 6–7.—Last advertisement: 4 Aug 1911, p. 1 cols 6–7.

<sup>30</sup> Advertisement *BMM* 5 Aug 1911, p. 1 cols 6–7.—Last advertisement: 20 Jun 1912, p. 1 cols 5–6.

<sup>31</sup> 'The Albury Show. The Second Day.' *BMM* 14 Sep 1911, p.2 cols 3–4.—Robbins and Porter exhibited: *The Albury Banner* just mentions that Robbins and Porter had an exhibit. 'Albury and Border Pastoral, Agricultural and Horticultural Society Annual Exhibit.' *AB* 15 Sep 1911, pp. 21–25; 28; 45–47; reference to exhibit p. 23.

and Kiewa Street, as well as the less expensive Kiewa Boarding House a few houses up the street. While the former was frequented by the more affluent, the latter was favoured by the less well-to-do coach travellers. A motor garage at such a location was not only located centrally in terms of Albury businesses, but also provided for the passing traffic of motorists staying in the Globe Hotel, who may need their cars serviced nearby.<sup>32</sup>

Most of the, then undeveloped, eastern side of Kiewa Street was owned by Dr. William Cleaver Woods, a wealthy physician, who also ran a private hospital. Negotiations with him proved successful, for on 27 March 1912 Woods applied to the Albury Borough Council for a building permit to erect a garage in Kiewa Street.<sup>33</sup> The *Albury Banner* of 24 May 1912 reports that Dr. Cleaver Woods was in the process of “erecting for Messrs Robbins [sic] and Porter a very large motor garage and repair shop.”<sup>34</sup>



*Figure 3 A.D.Robbins' and A.W. Porter's Motor Garage at 532 Kiewa Street photographed in 1913.*<sup>35</sup>

The building was erected as a 128' long and 40' wide hall (39 m x 12m) with double brick walls set in English bond. The roof was supported by thirteen trusses set on the end walls and eleven pairs of brick piers. Between each truss a pair of skylights had been inserted making the building well lit during the day. The Kiewa Street façade was asymmetrical, which

<sup>32</sup> E.g. Spennemann, Dirk H.R. (2003) N° 532 Kiewa Street, Albury, NSW. An Historical Analysis of the Site and an Assessment of Heritage Values. *Johnstone Centre Report* n° 190. Albury, N.S.W.: The Johnstone Centre, Charles Sturt University.

<sup>33</sup> 'Albury Municipal Council.' *BMM* 28 March 1912, p. 3 col. 6-7.— 'Albury Municipal Council.' *ADN* 28 March 1912, p. 4 cols. 3-4.

<sup>34</sup> *AB* 24 May 1912, p. 27 col. 3.

<sup>35</sup> Source: Albury Regional Museum.

was very unusual for the times. It was fronted by a plain, straight-sloping verandah which was supported by four cast iron posts and extended to the edge of the foot path (Figure 3).<sup>36</sup>

By mid-June 1912 the building at 532 Kiewa Street was ready for occupation and the removal of the garage to the new premises was advertised accordingly (Figure 4).<sup>37</sup>

**R E M O V A L.**

**ROBBINS and PORTER**

HAVE REMOVED TO THEIR  
**New Motor Garage.**

The Largest in the Riverina.

NEXT CRAWFORD'S STABLES

**KIEWA STREET, ALBURY.**

TELEPHONE 165.

Figure 4  
Front page advertisement in the  
Border Morning Mail  
June–November 1912<sup>38</sup>

**ROBBINS AND PORTER.**

**MOTOR EXPERTS**

ALBURY.

Call and see the 16/20 h.p.

**HUPMOBILE CAR.**

Now on view at our GARAGE in KIEWA  
STREET.

Our knowledge and the experience of  
owners, shows that this car is undoubtedly  
the greatest value for money of any car  
retailed in Australia.

**PRICE £235 COMPLETE**

**REPAIRS** to any make of Car. GEARS,  
etc., made on the premises.

Figure 5  
Front page advertisement in the  
Border Morning Mail  
November 1912–January 1913<sup>39</sup>

<sup>36</sup> While the intended use as a garage necessitated a wide drive way for the vehicles, it would have been possible to design the building symmetrically. It can be speculated that Cleaver Woods wished to ensure that building could be converted to other uses, should the Robbins and Porter' business fail. To this end, then, the front façade contains two show windows, one wide and large one, taking up half the façade, on the northern side, and a narrower one on the southern side. The building could easily have been converted into differently sized shops, provided a second fire place was added

<sup>37</sup> Advertisement *BMM* 21 Jun 1912, p. 1 cols 6–7.

<sup>38</sup> Advertisement *BMM* 21 Jun 1912, p. 1 cols 6–7.— Last advertisement run on 7 Nov 1912, p. 1 cols 5–6.

<sup>39</sup> Advertisement *BMM* 8 Nov 1912, p. 1 col. 6–7.— Last advertisement run on 6 Jan 1913, p. 1 cols 5–6.

A photograph shows the newly erected building (Figure 3).<sup>40</sup> The car in the drive way is probably either a Hupmobile Model 20 Tourer or an Austin, while the car parked in the road may well be an Austin Filette.<sup>41</sup> The lettering on the windows demonstrates that Robbins and Porter not only conducted a repair shop and garage, but that they also ran a rental car business. In other advertisement (Figure 5) they claimed to make gears on the premises. The interior of the garage was in essence a huge open space with a weatherboard office section on the northern side (Figure 6). From the unfortunately slightly fuzzy image it would appear that the building had a rear exit towards Wood's Lane and a rear driveway exit as well.



Robbins and Porter paid for a half-page presentation in a commercial pictorial publication produced in 1913. In this they advertise their rental car business as well as their repair shop. The accompanying promotional text mentions that the garage

*Figure 6 Interior of the premises at 532 Kiewa Street in 1913. Alexander Porter is standing in the doorway. Arrayed in the rear are six cars and a motor cycle.<sup>42</sup>*

<sup>40</sup>. The same image is also reproduced in Robertson, 'The progress of Albury and District...' *op. cit.* p. 10.

<sup>41</sup>. More identification on these cars needs to be carried out. In the interior view of the garage (Figure 6) these two cars are to the left of the array.

<sup>42</sup>. Robertson, J. Edward (1913) *The progress of Albury and District. Vine-clad portal of the Eastern States*. Melbourne: Wilke, Mitchell & Co printed for J.E. Robertson. P.

“is capable of accommodating some 40 cars at one time. The latest and most up-to-date machinery was installed for all classes of repairing work”<sup>43</sup>

The inside photograph, however, only shows an array of six cars, two of which were presumably their own as they are the same as those seen in figure 5, as well as one motor cycle (Figure 6).



Figure 7  
Detail of Figure 3 showing  
advertisement in the windows.

### *The end of the business*

Robbins & Porter are listed in Melbourne's Country Directory for 1912,<sup>44</sup> but not for 1913<sup>45</sup> or 1914. They can be found, however, in the Sydney Country Commercial Directory for the years 1912,<sup>46</sup> 1913,<sup>47</sup> and 1914.<sup>48</sup>

They advertised their business on the front page of the *Border Morning Mail* until 6 January 1913 (Figure 5). Sometime between late January and

<sup>43</sup> Robertson, 'The progress of Albury and District...' *op. cit.*

<sup>44</sup> Sands & McDougall (1912) *Melbourne, Suburban and Country Directory for 1912*. Fifty-Sixth edition. Melbourne: Sands & McDougall. P. 2659.

<sup>45</sup> Sands & McDougall (1913) *Melbourne, Suburban and Country Directory for 1913*. Fifty-Seventh edition. Melbourne: Sands & McDougall. P. 2738.

<sup>46</sup> Sands (1912) *Sands' Sydney, Suburban and Country Commercial Directory for 1912*. Fifty-second edition. Sydney: John Sands. P. 5A.

<sup>47</sup> Sands (1913) *Sands' Sydney, Suburban and Country Commercial Directory for 1913*. Fifty-third edition. Sydney: John Sands. P. 5A.

<sup>48</sup> Sands (1914) *Sands' Sydney, Suburban and Country Commercial Directory for 1914*. Fifty-fourth edition. Sydney: John Sands. P. 3A.

mid-February 1914 Robbins and Porter decided to shut down their mechanics shop and leave Albury. The business had not been going well and financial pressures were overwhelming. Presumably, the tinkering with the aircraft had also taken its toll on time and thus finances.

One wonders what to make of the fact that on January 21<sup>st</sup> 1914, when returning from Beechworth, they managed to set their own car alight at Wodonga while attempting to change a punctured tyre by the light of an oil lamp. Allegedly fuel had leaked from the engine and wetted the under carriage which was set ablaze. They had to abandon any attempts of putting out the fire for fear of explosion of the fuel tank.<sup>49</sup> The fact that car was ensured to the value of £300 would have been a helpful contribution to the state of their finances.

On February 25<sup>th</sup> 1914 Cleaver Woods advertised that the 'complete and up-to-date motor garage at present occupied by Robbins and Porter who are relinquishing business' was available for lease as of Monday 2 March.<sup>50</sup> The lease of the premises as well as the entire business was taken over by F.C. Blacklock more or less on that date.<sup>51</sup> Blacklock had outgrown the premises of his motorcycle and car business in southern Kiewa Street. The acquisition of Robbins' and Porters' business not only provided him with a large and new garage from which he could carry out his business while he had a new garage of his own constructed on the old site,<sup>52</sup> but it also removed the only serious, albeit impecuniary competitor.

On 4 March Robbins and Porter formally notified the public that they had sold their business to Blacklock.<sup>53</sup> By coincidence, the Sopwith 'Tabloid,' which Harry Hawker brought to Albury for his flight demonstration,<sup>[26]</sup> was stored and displayed in that same garage from 5 March 1914.<sup>54</sup> One wonders whether Robbins and Porter stayed on to witness Hawker's air show. Given their interest in aviation, one assumes that they did so.

## [7] Representation of Robbins and Porter in photographs

There is a set of six images (originals of four of which survive), that were probably commissioned by Robbins and Porter. A set of images that show their Motor Garage from the outside (Figure 3) and the inside (Figure 6) and four images that show the plane (Figure 12–Figure 15). All were produced by "Courtney's Thelma Studios, Wangaratta & Beechworth.'

The few photographs that we have in hand of Robbins and Porter during their Albury period show Porter standing by, dressed in a dark suit with watch fob and chain (Figure 6). Robbins is depicted seated in the

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<sup>49</sup> 'Motor Car burnt. Accident near Wodonga. The Mystery explained.' *BMM* 23 Jan 1914, p. 2 col. 5.

<sup>50</sup> 'Items of news.' *BMM* 25 Feb 1914, p.2 col. 4.—Advertisement *BMM* 25 Feb 1914, p.5 col. 4.—Same advertisement *BMM* 26 Feb 1914, p.3 col. 4; *BMM* 27 Feb 1914, p.3 col. 4; *BMM* 28 Feb 1914, p.5 col. 5

<sup>51</sup> 'Items of news.' *BMM* 4 Mar 1914, p. 2 col. 4.

<sup>52</sup> New garage opened: *AB* 11 December 1914.

<sup>53</sup> Advertisement. *BMM* 4 Mar 1914, p.3 col. 8.

<sup>54</sup> 'Flying in Albury. Happy arrangements for cadets. Saturday's compulsory drill at racecourse. Boys will see Hawker's flight.' *BMM* 5 Mar 1914, p. 3 col. 1–3.—'Flying in Albury. Interesting Notes on Arrangements.' *BMM* 6 March 1914, p. 3 cols 1-2.

vehicle wearing a fashionable balloon cap (Figure 8) or standing next to the monoplane, with Alexander Porter at the stick (Figure 12, Figure 15). The third individual in the plane shot, a stocky young man wearing a dark suit but without a balloon cap, is either one of Alexander Porter's brothers or the photographer. If we look at the two aviators as they wanted themselves depicted with their machine (Figure 12; Figure 15) we note that both are wearing balloon caps set backwards, in the fashion of Harry Hawker, Maurice Guillaux and other aviators of the day.<sup>55</sup>

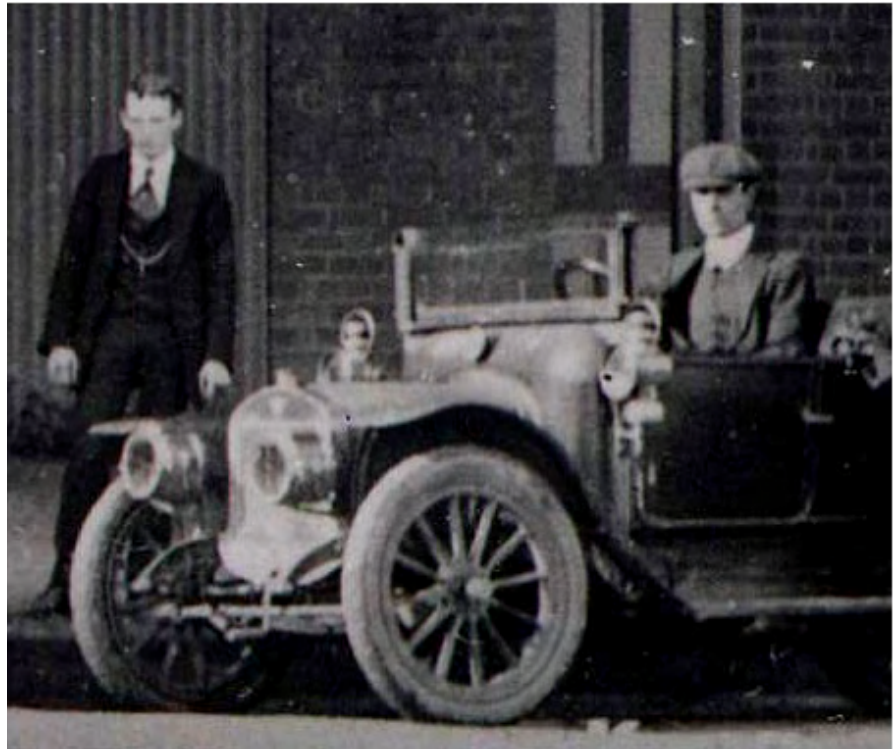


Figure 8  
A.W. Porter (left) and  
A.D. Robbins (right) in 1911  
(detail of figure 5).



Figure 9  
The protagonists.  
Left: Azor Dyer Robbins  
Right: Alexander W Porter

<sup>55</sup> cf. Portrait of Maurice Guillaux in: Sissons, R. (1914) Official Programme. Looping the Loop. A scientific Phenomenon simply explained. Souvenir of the first public performance in Melbourne by M. Guillaux, Saturday, May 30<sup>th</sup>, 1914. Melbourne: G.A. Green



Figure 10  
The Robbins family in the early 1900s. Back row: Azor, Mary, Eger; front row: George and Ann.<sup>56</sup>



Figure 11  
Azor Robbins in the early 1900s.<sup>57</sup>

<sup>56</sup> Source: Ancestry.com.

<sup>57</sup> Source: Geoff Robbins, Melbourne.

## [8] Azor Robbins' Career after Albury

From Albury the Robbins' seem to have moved back to Melbourne. When that occurred is not altogether clear, but their daughter Marjorie was born in East Melbourne in 1913.<sup>58</sup> The 1914 to 1916 Electoral Rolls show him as a 'motor engineer' resident at 1225 Hoddle Street, East Melbourne.<sup>59</sup> He is no longer listed for 1917.<sup>60</sup> Based on these data he could have left Melbourne in late 1915 or early 1916.<sup>61</sup> Azor immigrated to the U.S.A. in 1918, and his wife and daughter followed the year after.<sup>62</sup> By 1921 the Robbins' were living in New York, where their twin sons Robert Dyer and Alexander G were born.<sup>63</sup>

Azor Robbins seems to have found employment with the International Motor Company (then a Division of the truck maker Mack Manufacturing).<sup>64</sup> In the 1930s they were living in New Brunswick, New Jersey, where he worked for Mack International Motors as a mechanical engineer.<sup>65</sup> Little is known about him, but seems to have been in a prolific engineer in life-long employment with the company. Azor Robbins held thirty-six U.S. and two Canadian patents, mainly relating to automotive transmissions and gear trains (Table 1).<sup>66</sup> Later in life Robbins also held patents for collimating optical sights, humidity control units, and a body support unit for people with spinal injuries.

The Robbins retired to Florida.<sup>67</sup> Azor Robbins died in 1963 in Pinellas, Florida, USA.

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<sup>58</sup>. Born in Melbourne East in 1913 (reg n° 14428). A check of the Victorian and New South Wales birth, death and marriage registers failed to locate any other children.

<sup>59</sup>. Electoral Roll District Melbourne, Sub-District East Melbourne, 1914, p. 69 (entry n° 4116; Grace Robbins entry n° 4117); 1915, p. 54 (entries 3172 and 3173); 1916, p. 53 (entries 3120 and 3121).

<sup>60</sup>. He is no longer listed in the 1917 and subsequent rolls (checked were 1917, 1918 and 1919).

<sup>61</sup>. A check of the Australian Archives Records suggests that he did not enlist in the War.

<sup>62</sup>. Fifteenth Census of the United States, 1930. Enumeration District 12-51, New Brunswick City Ward 4, Middlesex County, New Jersey. Sheet Number 7A. NARA RG 29T626 Population Schedules for the 1930 Census, compiled 1930 – 1930. Roll 1367.

<sup>62</sup>. Fifteenth Census of the United States, 1930. Enumeration District 12-51, New Brunswick City Ward 4, Middlesex County, New Jersey. Sheet Number 7A. NARA RG 29T626 Population Schedules for the 1930 Census, compiled 1930 – 1930. Roll 1367

<sup>63</sup>. Fifteenth Census of the United States, 1930. Enumeration District 12-51, New Brunswick City Ward 4, Middlesex County, New Jersey. Sheet Number 7A. NARA RG 29T626 Population Schedules for the 1930 Census, compiled 1930 – 1930. Roll 1367

<sup>64</sup>. The claims that he was a founding partner in the business could not be substantiated.

<sup>65</sup>. In 1930 they lived in rented accommodation at 349 Livingstone Avenue, New Brunswick, New Jersey. Intriguingly, both Grace Robbins and their daughter Marjorie had been naturalized, but Azor Robbins' naturalization status was still 'PA', implying that naturalization had been applied for but not (yet) granted. (Fifteenth Census of the United States, 1930. Enumeration District 12-51, New Brunswick City Ward 4, Middlesex County, New Jersey. Sheet Number 7A. NARA RG 29T626 Population Schedules for the 1930 Census, compiled 1930 – 1930. Roll 1367).—In 1942 Azor is on record as resident at 709 2nd Avenue, Highland Park, Middlesex, New Jersey and working for Mack Manufacturing Copr in New Brunswick (Serial U 2943. Selective Service Registration Cards, World War II: Fourth Registration. New Jersey. NARA RG 147).

<sup>66</sup>. See also: Robbins, Azor D. (1952) Side-Worm Gearing. *Machine Design* vol.24 n° 9, pp. 163-167.

<sup>67</sup>. Meldrum 1980.

The Robbins & Porter Monoplane of 1913—Statement of significance

Table 1. Patents held by Azor D Robbins (sorted by filing date)

Title	Patent n <sup>o</sup>	Date Filed	Date Granted	Assignee(s)
Torque-rod connection for dual rear axles <sup>68</sup>	CA239068		1-Apr-24	International Motor Co
Spring suspension	CA246583A		3-Feb-25	International Motor Co
Torque-rod connection for dual rear axles <sup>69</sup>	US1555613	24-Sep-23	29-Sep-25	International Motor Co
Dual-rear-axle drive	US1711128	19-Nov-23	30-Apr-29	International Motor Co
Spring suspension	US1607307	14-Aug-24	16-Nov-26	International Motor Co
Torque arm for dual axles	US1545067	3-Feb-25	7-Jul-25	International Motor Co
Drive for motor vehicles	US1572903	6-Aug-25	16-Feb-26	International Motor Co
Drive for motor vehicles	US1695296	11-Feb-25	18-Dec-28	International Motor Co
Stub-axle mount	US1654142	20-Dec-26	27-Dec-27	International Motor Co
High pressure lubricating apparatus	US1881096	25-Oct-27	4-Oct-32	Lubrication Corp
Friction disk	US1808511	14-Jul-28	2-Jun-31	Mechanical Dev Corp
Wheel and brake for motor vehicles	US1898313	14-Jul-28	21-Feb-33	Bendix Aviation Corp
Actuating means for friction disks	US2015729	14-Jul-28	1-Oct-35	Bendix Aviation Corp
Bearing support for driving axles	US1835525	26-Apr-30	8-Dec-31	International Motor Co
Self-locking differential	US1836684	26-Apr-30	15-Dec-31	International Motor Co
Locking mechanism for power apportioning devices	US1886837	2-Dec-31	8-Nov-32	International Motor Co
Steering gear	US1906720	18-Apr-31	2-May-33	International Motor Co
Power apportioning means	US1857978	9-Jun-31	10-May-32	International Motor Co
Clutch	US1972602	21-Jun-32	4-Sep-34	International Motor Co
Clutch synchronizing device <sup>70</sup>	US1984618	23-Mar-33	18-Dec-34	International Motor Co
Multispeed transmission	US2010161	26-Jul-33	6-Aug-35	International Motor Co
Steering gear	US2086780	1-Oct-34	13-Jul-37	Robbins Azor D
Gear Shift Lock <sup>71</sup>	US2056367	25-May-34	6-Oct-36	International Motor Co
Synchronizing mechanism	US2035507	26-Jul-34	31-Mar-36	International Motor Co
Torque converter	US2186556	25-Mar-36	9-Jan-40	Robbins Azor D
Gear Shifting and Locking Device <sup>72</sup>	US2188090	4-Apr-36	24-May-38	International Motor Co
Power assisted steering gear	US2362930	15-Sep-43	14-Nov-44	Mack Manufacturing Corp
Directional power divider	US2369075	10-Sep-43	6-Feb-45	Mack Manufacturing Corp
Balanced fluid clutch	US2531744	18-Nov-43	28-Nov-50	Robbins Azor D
Power dividing device	US2440975	1-Jun-44	4-May-48	Robbins Azor D
Collimating optical sight	US2492888	26-Nov-46	27-Dec-49	Specialties Inc
Driving differential	US2560779	6-Oct-48	17-Jul-51	Robbins Azor D
Humidity control unit	US2569537	15-Mar-50	2-Oct-51	Specialties Inc
Collimating optical sight	US2645150	15-Feb-51	14-Jul-53	Robbins Azor D
Multiple speed transmission mechanism	US2771793	10-Jul-53	27-Nov-56	W L Maxson Corp
Optical sights having horizon indicating means	US2953960	7-Jul-55	27-Sep-60	W L Maxson Corp
Desiccator	US2830671	28-Sep-55	15-Apr-58	W L Maxson Corp
Body supports	US2886031	10-Jan-56	12-May-59	Robbins Azor D

<sup>68</sup>. Patent held jointly by Azor D Robbins and Charles Christian Reinke.

<sup>69</sup>. Patent held jointly by Azor D Robbins and Charles Christian Reinke.

<sup>70</sup>. Patent held jointly by Wirrer Gottfried and Azor D Robbins.

<sup>71</sup>. Patent held jointly by Azor D Robbins and Alan G Little.

<sup>72</sup>. Patent held jointly by Aladar Kurti, and Azor D Robbins

### [9] Alexander Porter's Career after Albury

Like Robbins,<sup>[8]</sup> Alexander Porter left Albury for Melbourne. In late 1914 he is on record as living at 16 Elm Grove, Windsor.<sup>73</sup> Alexander's brother Vivian died in 1914 in South Melbourne.<sup>74</sup>

Soon after the outbreak of World War I, Alexander Porter enlisted to join the A.I.F. At his enlistment in Ballarat on 17 September 1914, he stated his profession as 'turner & fitter' while his military medical record, filled out aboard the transport HMAT *Ceramic en route* to Great Britain sees him as a 'motor mechanic.'<sup>75</sup> Assigned to the Divisional Supply Column Motor Transport he arrived in Rouen, France in mid July 1915.<sup>76</sup>

On 6 November 1916 he was attached to the Royal Flying Corps (R.F.C.) as cadet.<sup>77</sup> Having completed his training, he was formally discharged from A.I.F on 16 March 1917<sup>78</sup> and commissioned as 2<sup>nd</sup> Lieutenant in the R.F.C.<sup>79</sup> On April 20th 1917 Porter was issued with his pilot's licence, the Royal Aero Club Certificate n° 4592. He reputedly served in the 194<sup>th</sup> squadron R.F.C.<sup>80</sup>

On return to Australia, Porter did not chose to continue any association with flying or mechanics. Instead he took up a standard soldier settlement block at Nullawil in Central Victoria.<sup>81</sup> Alexander William Porter died on 28 September 1921 at Nullawil, aged 32.<sup>82</sup>

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<sup>73</sup>. Military service record Alexander William Porter; Service Number 2107; AA Series B2455 Item barcode 8018342.

<sup>74</sup>. Reg n° 15124/1914 (based on search in Digger - Great War Index. Victoria 1914-1920).

<sup>75</sup>. Military service record *op. cit.*

<sup>76</sup>. 300 (Mechanical Transport) ASC 17 Divisional Supply Column (9 ASC); embarked at Melbourne on HMAT *Ceramic* bound for the UK on 22 December 1914 (Embarkation Nominal Roll. AWM); promoted to Corporal 9t ASC on 1 Jan 1915; shipped to France aboard SS *Golden Eagle* 9 July 1915; promoted to acting Sergeant 17<sup>th</sup> D.S.C. 10 July 1915; confirmed 10 Dec 1915; promoted Merchant Staff Sergeant 16 June 1916; Sergeant 'in the Fields' 1<sup>st</sup> D.S.C. 10 July 1916 (Military service record *op. cit.*).

<sup>77</sup>. N° 1 Royal Flying Corps Officers Cadet Battalion; 26 Jan 1917 R.F.C. N° 3 School of Military Aeronautics (Military service record *op. cit.*).

<sup>78</sup>. Military service record *op. cit.*

<sup>79</sup>. *London Gazette* 30014 of 10 April 1917.

<sup>80</sup>. Annotation to a photograph held by the Albury Historical Society.

<sup>81</sup>. On 14 April 1919 he filed an application for the War Service Leave Gratuity (Military service record *op. cit.*).—The probate notice states his profession as 'farmer' (*Argus* 10 November 1921, p. 12 col. 6).

<sup>82</sup>. Death records show Whycheproof (Reg n° 12418/1921; based on search in Digger - Death Index. Victoria 1921-1985).—See also: Death Notice Alex William Porter *Argus* (Melbourne) 29 September 1921 p. 1 col. 1; and: Anniversary notice: *Argus* (Melbourne) 29 September 1922, p. 1, col. 2.—will dated 8 April 1921; probate notice *Argus* 10 November 1921, p. 12 col. 6; probate listed: *Argus* 14 November 1921, p6 col. 8; probate granted 30 November 1921 (Probate reg n° 180/780).—Total estate value £2,459.—Phyllis M Porter asserts her status of widow living in Nullawil (correspondence 24 Aug 1922; Military service record *op. cit.*) and acknowledges receipt of 1914-15 Star (correspondence 27 Nov 1922; Military service record *op. cit.*).

## [10] The Albury Monoplane

Robbins and Porter worked on the design of a plane and engine in their spare time, commencing soon after they arrived in Albury in 1911.<sup>83</sup> The *Border Morning Mail* commented:

“Ever since they came to the town, these two young and skilful mechanics have been at work on the ship of the air.”<sup>84</sup>

It appears that Robbins and Porter had commenced designing the plane in September 1912,<sup>85</sup> and begun with its construction by Christmas 1912,<sup>86</sup> but that general planning and in particular the development of the engine had preceded the development of the fuselage.

According to newspaper reports, the engine for the airplane was first exhibited at the Albury Show of 1911.<sup>87</sup> A perusal of the published accounts on the 1911 event shows that Robbins and Porter indeed had an exhibit, but no mention is made of an aircraft engine.<sup>88</sup> By March 1913 the construction of the plane had been completed and the engine mounted in the fuselage. Every part of the plane, including the propeller was made in Albury.<sup>89</sup> The *Border Morning Mail* was enthusiastic:

“At 11 o'clock last night 12 March 1913, what may be termed an epoch of Albury history took place. This was a successful trial in the frame of a monoplane constructed in Albury by Messrs Robbins and Porter, of the motor garage, Kiewa Street.”<sup>90</sup>

One assumes that this meant that the aircraft was started up with the engine mounted in the aircraft fuselage and idling. Open air trials were foreshadowed to occur within three to four weeks.<sup>91</sup> This news was repeated by regional papers such as the *Wagga Wagga Express*,<sup>92</sup> which also noted that the aviator William Ewart Hart inspected the plane at the time.

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<sup>83</sup>. The Albury Monoplane.' *AB* 18 April 1913, p. 27 col. 3.—The Robbins and Porter plane is discussed in Meggs, Keith (2009) *Australian-built aircraft and the Industry. Vol. 1 1884-1939. Book 1*. Seymour, Vic: Four Finger Publishing. Pp. 76-77. His section on the plane makes a number of claims, very few of which are verifiable due to a lack of citation. Moreover, the chronology of events stated by Meggs is riddled with mistakes both in fact and in dates, casting doubt on the accuracy of the other, hitherto non-verifiable statements. Unfortunately, Meggs' work has been drawn on by other others, repeating some of the unreferenced and thus unverified claims (e.g. Crotty, David [2010] *A flying life : John Duigan and the first Australian aeroplane*. Melbourne : Museum Victoria).

<sup>84</sup>. 'An Albury Monoplane.' *BMM* 13 March 1913, p.2 col 6.

<sup>85</sup>. 'The Albury Monoplane.' *AB* 18 April 1913, p. 27 col. 3.

<sup>86</sup>. 'Monoplane trials near Albury.' *BMM* 1 May 1913, p. 4 col. 4

<sup>87</sup>. 'An Albury Monoplane.' *BMM* 13 March 1913, p.2 col 6.

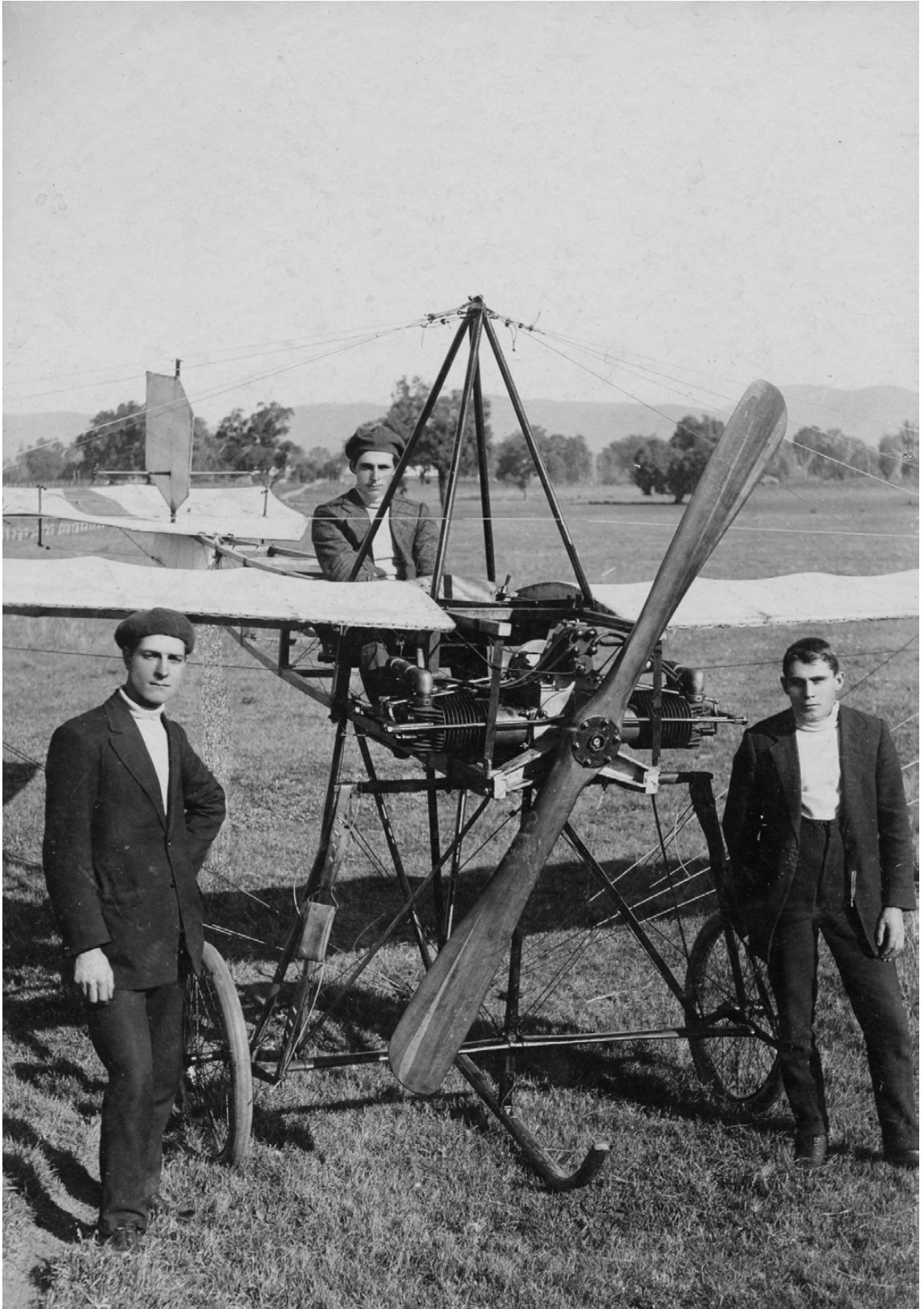
<sup>88</sup>. 'The Albury Show. The Second Day.' *BMM* 14 Sep 1911, p.2 cols 3-4.—Robbins and Porter exhibited 'the chassis of a 15 hp Austin motor car with Rudge -Whitworth detachable tyres.'—The *Albury Banner* just mentions that Robbins and Porter had an exhibit. 'Albury and Border Pastoral, Agricultural and Horticultural Society Annual Exhibit.' *AB* 15 Sep 1911, pp. 21-25; 28; 45-47; reference to exhibit p. 23.—The 1912 Show does not feature an exhibit by the two ('Albury and Border Pastoral, Agricultural and Horticultural Society Annual Exhibit.' *AB* 13 Sep 1912, pp. 21-25; 28; 45-47.—'Albury Show. Vice Regal Visit Today.' 11 Sep 1912, p. 2 cols 4-7; 'The Albury Show opened by Governor.' *BMM* 12 Sep 1912, p.2 cols 5-7).

<sup>89</sup>. 'An Albury Monoplane.' *BMM* 13 March 1913, p.2 col 6.

<sup>90</sup>. 'An Albury Monoplane.' *BMM* 13 March 1913, p.2 col 6.

<sup>91</sup>. 'An Albury Monoplane.' *BMM* 13 March 1913, p.2 col 6.

<sup>92</sup>. 'Albury Men's Monoplane.' *WWE* 18 Mar 1913, p.2 col. 6.



*Figure 12 The Robbins and Porter Monoplane during taxi trials at Bugnowannah in May 1913. From left: Azor D. Robbins, Alexander W Porter and unidentified.<sup>93</sup>*

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<sup>93</sup>. Image: Picture Collection Albury LibraryMuseum.



*Figure 13 Alexander W Porter in the cockpit of the Robbins and Porter Monoplane during taxi trials at Bungawannah in May 1913.<sup>94</sup>*

<sup>94</sup> Image: Picture Collection Albury LibraryMuseum

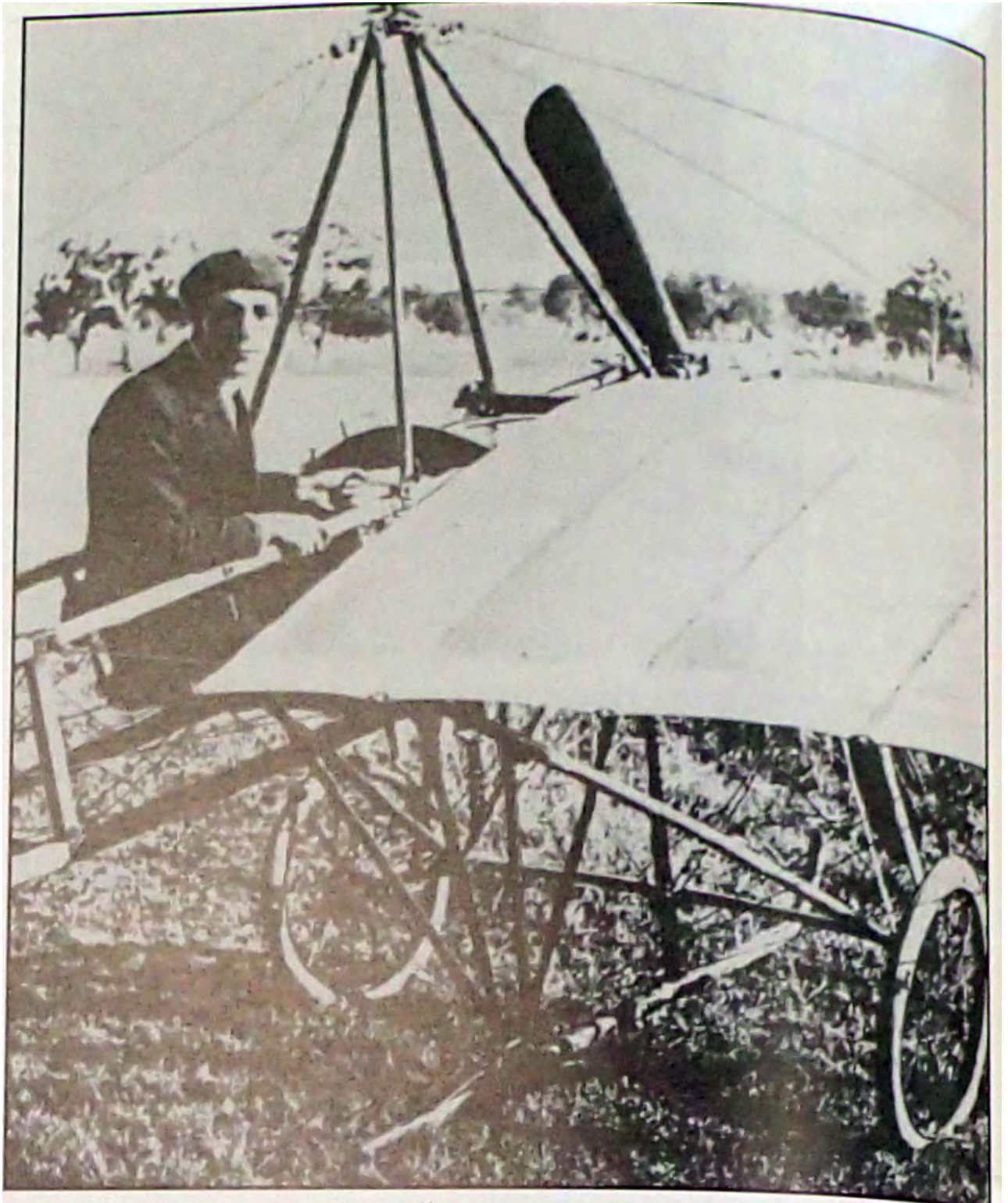


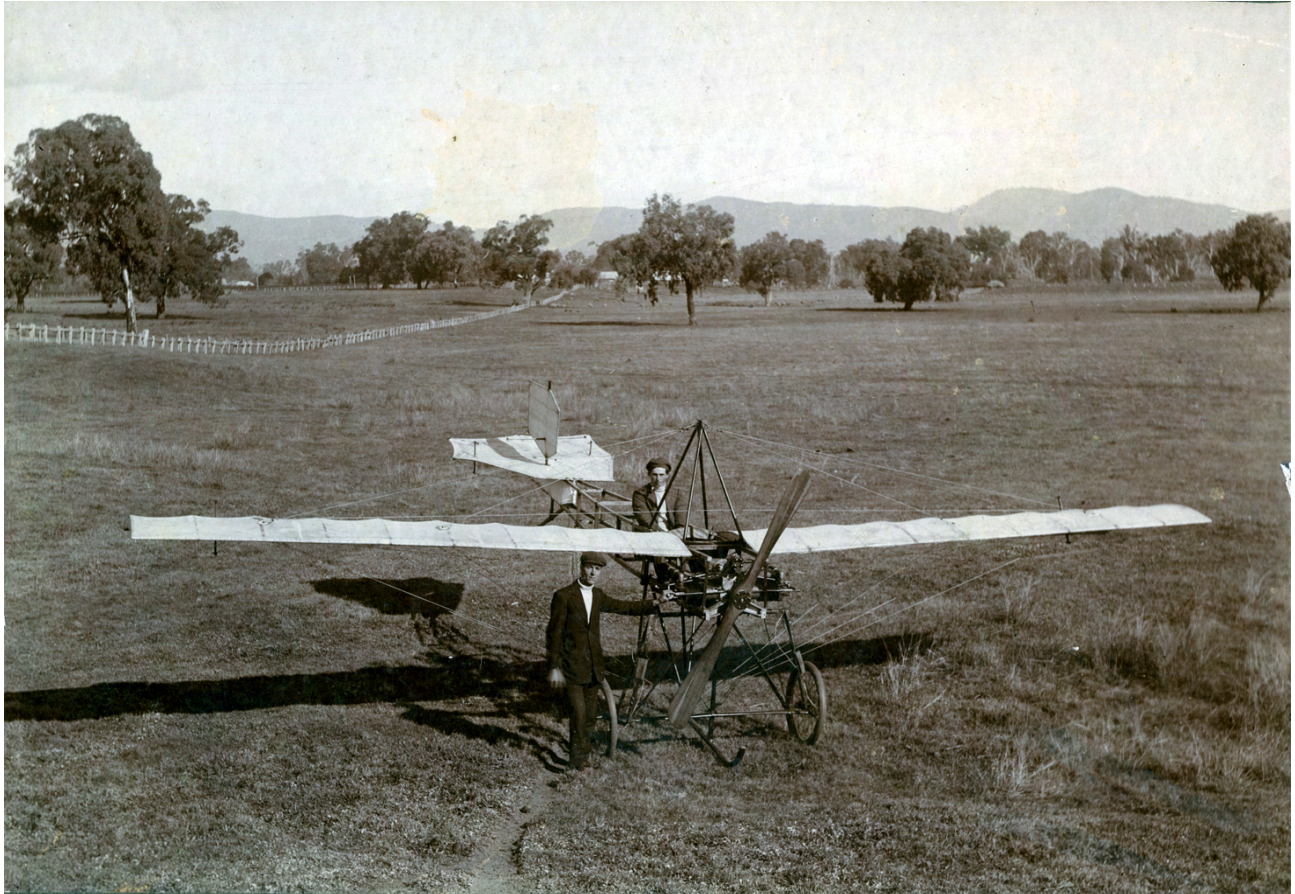
Figure 14 Azor D. Robbins in the cockpit of the Robbins and Porter Monoplane during taxi trials at Bungawannah in May 1913.<sup>95</sup>

<sup>95</sup>. Image reproduced in Meggs, 'Australian-built aircraft and the Industry ...' *op. cit.*—Original image apparently now lost.

Not surprisingly, the newspaper reporting as well as local talk of both the Robbins and Porter plane and the visit by Hart, created an air of expectation in town:

“Much local interest has been centred around the efforts of Messrs Robbins and Porter to conquer the air.”<sup>96</sup>

By mid April the plane had been sufficiently well completed that Robbins and Porter expected to test it in the air by the end of the month.<sup>97</sup> A week later the *Albury Banner* paper reported that the plane was completed and that tests would begin soon, “some distance from town.”<sup>98</sup>



The mechanics foreshadowed extensive ground tests before they would attempt to fly. It was anticipated that formal flight tests would be at the Albury racecourse, and Robbins and Porter expressed their hope that this would be conducted in front of friends and press, with the event captured on ‘cinematograph pictures.’<sup>99</sup>

*Figure 15 Azor Robbins (left) and Alexander Porter (in plane) ground-testing the monoplane at Bungowannah.<sup>100</sup> The tail of the plane was propped up with stick which has been retouched out.<sup>101</sup>*

<sup>96</sup>. ‘The Albury Monoplane.’ *AB* 18 April 1913, p. 27 col. 3.

<sup>97</sup>. ‘The Albury Monoplane.’ *AB* 18 April 1913, p. 27 col. 3.

<sup>98</sup>. ‘The Albury Monoplane.’ *AB* 25 April 1913, p. 27 col. 2.

<sup>99</sup>. ‘The Albury Monoplane.’ *AB* 25 April 1913, p. 27 col. 2.

<sup>100</sup>. Image: Picture Collection Albury LibraryMuseum. Image also in Robertson, ‘The progress of Albury and District...’ *op. cit.* p.4.

<sup>101</sup>. The trace of the stick can be seen in the blurry section of the image. The retouch is well visible in Figure 12 at Azor Robbins’ left shoulder. For the normal angle of the plane when on the ground see Figure 13 and Figure 14.

Even before the first ground tests were completed, the plane as built had already undergone several modifications, which Robbins and Porter planned to incorporate into the next plane model they were already designing.<sup>102</sup>

According to family history, both Alex Porter and Azor Robbins were insured with policies which prevented them from piloting their own aircraft. Robbins' younger brother Vivian, then 19,<sup>103</sup> was chosen as pilot as he, reputedly, was not limited by insurance stipulations, and because he was also unencumbered by family obligations.<sup>104</sup>

### *Taxi and Flight Trials*

Robbins and Porter were autodidacts. With no practical experience and little instruction other than that available through newspaper reports and books, they had to teach themselves the basics of aerodynamics and, later, flying. The aviator William Ewart Hart, when passing through Albury in order to plan for a Sydney-Melbourne flight which never eventuated,<sup>105</sup> stopped over and inspected the plane in March 1913.<sup>106</sup> He may have given Robbins and Porter some hints, but these would have fallen far short of anything that first-hand practical instruction would have offered.

However, by the beginning of May 1913 the papers could report that taxi trials had commenced:

“Aeroplaning has a special interest for Albury Townspeople now that Messrs Robbins and Porter are budding monoplaneists. Every evening these mechanics do a little ‘taxieing’ at Bungonwannah Park on the monoplane which they have built.”<sup>107</sup>

The taxi trials took place on a half-mile long paddock owned by R. Power of Bungonwannah Park Estate, some eight miles west of Albury.<sup>108</sup> According to the *Border Morning Mail* Porter stated

“We must first learn to run before we fly. It is like a man with a bicycle for the first time. Before he can ride he must learn. We are in the learning stage. We have only half a minute running on the monoplane when we have to turn off the engine as she goes so fast. The paddock is only half a mile long and we have not yet learned how to turn. The monoplane gets over this half a mile at the rate of 30 miles an hour,

<sup>102</sup>. ‘The Albury Monoplane.’ *AB* 25 April 1913, p. 27 col. 2.

<sup>103</sup>. Born East Ballarat 1894.—Reg n<sup>o</sup> 658/1894 (based on search in Digger - Federation Index. Victoria 1889-1901).

<sup>104</sup>. Meldrum 1980.

<sup>105</sup>. His preparations took him to Albury, but nothing came of the trip, nor does he seem to have travelled beyond Albury. *Wodonga and Towong Sentinel*, 14 March 1913, p 2.—*UMMH* 13 Mar 1913, p. 2 col. 4.—‘Aviator’s ambition.’ *Argus* (Melbourne) 25 Feb 1913, p. 8.—Aviator Hart in Goulburn. An interesting interview. *Goulburn Evening Penny Post* 25 February 1913, p 4.— From capital to capital. Hart to fly again. Goulburn. *Sydney Morning Herald*, 25 February 1913 p 10.—Aviator Hart is Goulburn. An interesting interview. *Cumberland Argus and Fruitgrowers Advocate* (Parramatta) 8 March 1913, p 11.— Airman’s flight. Sydney to Melbourne proposal. Albury. *Sydney Morning Herald* 8 March 1913, p 19.— Isaacs, Keith (1983) ‘Hart, William Ewart (1885–1943)’, *Australian Dictionary of Biography*, National Centre of Biography, Australian National University, <http://adb.anu.edu.au/biography/hart-william-ewart-6592/text11347>, accessed 22 February 2013.

<sup>106</sup>. ‘Albury Men’s Monoplane.’ *WWE* 18 Mar 1913, p.2 col. 6.

<sup>107</sup>. ‘Monoplane trials near Albury.’ *BMM* 1 May 1913, p. 4 col. 4.

<sup>108</sup>. One of the problems was to find a large tree-less landscape. R. Power’s Bungonwannah Estate had a 700 yards long tree-less paddock : ‘The Albury Monoplane.’ *AB* 1 Aug 1913, p. 27 col. 4–p.28 col. 1.—<sup>108</sup>

and this, mind you, is half speed. We cannot go any slower than that. The only difficulty we have is keeping the monoplane on the ground. We do not yet feel efficient enough to chance rising. We have yet to learn to turn on the ground, cut figure eights, and all sorts of things before we go into the air. When we do rise, then we shall have to do the same things in the air—make curves, and—well, we will not talk about that.”<sup>109</sup>

Both the *Border Morning Mail* and the *Albury Banner* continued to keep an eye on the developments.

### *First Flights*

From the newspaper records of the day it would appear that the first controlled flight occurred on Sunday 27 July 1913 in front of six witnesses.<sup>110</sup> The plane seems to have completed five flights<sup>111</sup> about 15 to 20 feet (4.5 to 6m) above the ground.<sup>112</sup> All flights, it seems, had been in straight lines. As the *Albury Banner* put it:

“It was not sought, owing to the limited space at command, to turn the machine in the air, but satisfactory straight flights were made in every direction.”<sup>113</sup>

This suggests that the plane was flying low and the pilot had not yet attempted to gain altitude. The take-off distance seems to have been 200 yards.<sup>114</sup> The flights were repeated on the following Tuesday “in the presence of a ‘Banner’ representative” when the “machine took to the air gracefully.” During these demonstrations an unspecified technical defect occurred that terminated the flight trials.

It seems that these were the only two occasions on which the plane was actually flown. It is unclear what terminated the flight experiments. Clearly Robbins and Porter were reluctant to take the risk and take to the air at Bungowannah, even though it should have been possible, given that the paddock was 700 yards long and the plane required a 200 yard take off.

Yet as the steering behaviour of the plane was unknown, Robbins and Porter were looking for a larger piece of level ground.<sup>115</sup> It seems that that never eventuated.

### *Exhibitions*

It seems that the plane was never flown again, but that Robbins and Porter intended to exhibit it at a number of country shows.<sup>116</sup> The first was the Albury Show in September 1913. While the *Border Morning Mail* and *Albury*

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<sup>109</sup>. ‘Monoplane trials near Albury.’ *BMM* 1 May 1913, p. 4 col. 4.

<sup>110</sup>. ‘The Albury Monoplane.’ *AB* 1 Aug 1913, p. 27 col. 4–p.28 col. 1.

<sup>111</sup>. ‘Items of News.’ *BMM* 29 July 1913, p. 2 col. 2-3.

<sup>112</sup>. ‘The Albury Monoplane.’ *AB* 1 Aug 1913, p. 27 col. 4–p.28 col. 1.

<sup>113</sup>. ‘The Albury Monoplane.’ *AB* 1 Aug 1913, p. 27 col. 4–p.28 col. 1.

<sup>114</sup>. ‘The Albury Monoplane.’ *AB* 1 Aug 1913, p. 27 col. 4–p.28 col. 1.

<sup>115</sup>. ‘Items of News.’ *BMM* 29 July 1913, p. 2 col. 2-3.

<sup>116</sup>. ‘The Albury Monoplane.’ *AB* 1 Aug 1913, p. 27 col. 4–p.28 col. 1.—A search of local papers for 1913 failed to find a mention of the plane for the Corowa Show (*Corowa Free Press* 30 Aug 1913, 5 cols 1–6) or the Tallangatta Show (*UMMH* 27 Mar 1913, p. 3 cols 1–4).

*Daily News* accounts of the 1913 Albury Show do not include a mention of the plane,<sup>117</sup> the *Albury Banner* commented that the

“locally made monoplane emitted ear-splitting sounds from the railway end and was inspected and admired by crowds of patrons who would not have begrudged an extra shilling or two to see the machine take the air—which it will do in another chapter.”<sup>118</sup>

Alas, that chapter never arose.

### [11] Photograph of the Flight

We have in hand one photograph that purportedly shows the plane in flight with two people looking on (Figure 16).<sup>119</sup> The oilcan between the two onlookers can be identified as a can of Gargoyle Mobiloil "B", which at the time was sold globally by the Vacuum Oil Company.<sup>120</sup> The outlines of the box-shaped object to the right of the man have heavily retouched rendering unclear what that exactly was.

The shadows thrown by the people and the items on the ground are correct in relation to their relative heights and are all in line with the lighting in the background. The background of the photograph is in keeping with the images taken by the photographer of Thelma Studios which confirms that the locale is in all probability Bungowannah Park. Yet, intriguingly, the image showing the plane in flight was not taken with the same camera that took the images the portrait shots of the aviators posing with their plane,<sup>121</sup> suggesting it was taken on a different day. This is also confirmed by the timing of the images.

Judging from the section of hill that shows at the right hand margin of Figure 16, the photograph with the airborne plane looks north. That is also supported by the background shown in other images, such as Figure 12, which is looking east towards the Bungawannah and Black Ranges. If that interpretation of the orientation is correct, then the fall of the shadows (from the east) suggests that the plane flew early to mid-morning. On the other hand, the images showing the stationary plane were taken early afternoon.

The oilcan and box are intriguing as they seem to suggest that the image was taken on the spot from which the airplane taxied to the start of its runway. If that were the case, one wonders who the two figures in the foreground might be, and, since Vivian Porter was flying the plane, why neither Azor Robbins nor Alexander Porter seem to be present. While the

<sup>117</sup> 'Albury Show. The Opening Day.' *BMM* 10 September 1913, p. 4.—'Albury Show. The Second Day.' *BMM* 11 September 1913, p. 2.—'Albury Show. Third Day.' *BMM* 12 September 1913, p. 3.—'Albury Show. Opens today.' *ADN* 9 September 1913, p.2 cols 6-7.—'Albury Show. Auspicious Opening. The Exhibits.' *ADN* 10 September 1913, p. 2 cols 5-8.—'Albury Show. The Awards.' *ADN* 10 September 1913, p. 3 cols 1-8.—'Albury Show. A brilliant success.' *ADN* 11 September 1913, p.2 cols 5-8; p.3 cols 1-3.—'Albury Show. Successful third day.' *ADN* 12 September 1913, p. 2 cols 5-8.

<sup>118</sup> 'Albury and Border Pastoral, Agricultural and Horticultural Society Annual Exhibition.' *AB* 12 September 1913, pp 21-25; 28, 45-47; quote on p. 21 col. 8.

<sup>119</sup> Image: Courtesy Geoff Robbins, Melbourne. The image was found among family papers. While the provenance is genuine and beyond doubt. It is not clear whether photo itself is genuine, i.e. whether Robbins himself was made believe by the photographer that the image shows their flight.

<sup>120</sup> See here for a version of the can with a Czech inscription:  
<http://www.flickr.com/photos/theadventrouseye/5778020107>

<sup>121</sup> . The photos by Thelma Studios were taken with a half-plate camera.

absence of one can be explained as being standing behind the camera, it does not explain the absence of the other, especially as neither would have worn a suit and bowler hat for the occasion. But if that was not the starting point, which could explain the absence of both Robbins and Porter, then why is there an oilcan? An explanation might be that the photograph is staged.



The overall composition of the photograph with the two figures in the left foreground, and the plane flying is very well done—indeed too well done. Given that this image was taken on the day of their first or most likely second flight, it would have been quite impossible for the pilot to control where he would become airborne in order to allow the photographer that near perfect composition. We can therefore assume that the image is a composite, with the foreground and setting carefully composed and the flying plane copied in from another glass plate negative.<sup>122</sup> Such sandwiching of glass plate negatives was not an uncommon practice.<sup>123</sup>

*Figure 16. Image purportedly showing the monoplane in flight at Bungowannah.<sup>124</sup>*

<sup>122</sup> . The dimensions of the image are 78mm x 101mm (or 3 x 4 inches) which corresponds with the quarter plate glass plate format (3 ¼ x 4 ¼ inches).

<sup>123</sup> . An indication that sandwiching occurred is that image overall is not nearly as crisp as the images taken of the plane and the aviators, which were essentially contact prints.

<sup>124</sup> . Image: Courtesy Geoff Robbins, Melbourne.

The question then arises whether the blurry plane in the photograph is the actual Robbins & Porter plane or an unrelated aircraft copied in (via a separate sandwiched glass plate negative) either from a photograph in a publication or even from a drawing. Figure 17 shows the plane in more detail.

The cabane on top of the wing, some the tail surfaces, some of the under-carriage, and much of the fuselage are well visible. It also appears that not only the head but also what seem to be the legs of the pilot can be recognised. What is striking in that image, however, is that neither of the two wheels can be seen which should have shown given the size and thickness of the tyres (see for ex. Figure 13) when compared to the thickness of the cabane and the fuselage.<sup>125</sup> Also, a bit more of the tailplane ought have been visible at the angle the plane is flying.<sup>126</sup>



Figure 17  
Enlargement of Figure 16 showing  
the plane.

Another concern is the relative fuzziness of the plane in the image. While at first sign that could be attributed to the movement of the plane in relation to the landscape, that argument is weak. Since the whole foreground is well lit, the light should have allowed for comparatively short exposure that should have brought the plane in better focus<sup>127</sup>—especially since the overall airspeed would have been low.

In summation, there are some concerns about the authenticity of the plane in the image.

## [12] Technical Details of the Albury Monoplane—The Engine

The published technical details are sketchy. The following has been compiled from the newspaper sources of the day, which are obviously based on information presented by Robbins and Porter in various interviews. The engine had 4 cylinders 'opposed' horizontal, air cooled, petrol powered,

<sup>125</sup> . A perusal of dozens of photographs showing pre World War I aircraft in flight shows that the wheels are always visible, unless the plane is flying straight towards the camera.

<sup>126</sup> . A perusal of dozens of photographs showing pre World War I aircraft in flight shows that the tailplane is always visible, unless the plane is flying straight towards the camera.

<sup>127</sup> . Compare a wide range of other likewise staged /composed, contemporary images of air planes in flight.

40hp,<sup>128</sup> expected airspeed between 50<sup>129</sup> and 60 miles/hour, running at 1200 rpm.<sup>130</sup> It was fitted with a 7'6" propeller made from Hickory wood.<sup>131</sup>

The engine is a flat four, with two sets of opposing cylinders.

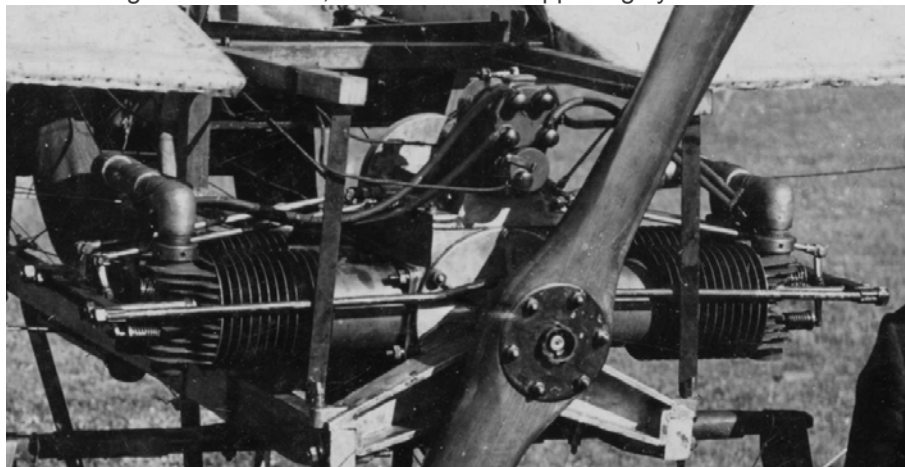


Figure 18  
Enlargement of Figure 13 showing  
details of the engine.

### [13] History of the Engine

The background to the development and subsequent fate of the engine is rather opaque. A number of sources exist that refer to the manufacture of the engine, but these are confusing and on occasion partially contradictory, even when written by the same author.<sup>132</sup>

#### *Origin of the Engine*

According to widely cited sources the engine was built by Aubry Locke<sup>[19]</sup> for Lawrence George Marshall of Ivanhoe (Vic), who needed a 50hp engine to power the bi-plane he had designed. According to Meggs, the engine was built first at Richmond and then at Dalgety's engineering shop in Bourke Street<sup>133</sup> as the latter had the required machining tools. Reputedly 40 cylinders were cast "by an outside firm before the necessary four without sand holes were found."<sup>134</sup>

Delivering only 40hp instead of the 50hp more customary to aircraft engines at the time (such as the Gnome), the flat-four engine was not powerful enough, or too unreliable, for Marshall's purposes. Either way, Marshall refused to accept the engine, at which point Robbins may have repossessed it.

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<sup>128</sup>. 'The Albury Monoplane.' *AB* 18 April 1913, p. 27 col. 3.

<sup>129</sup>. 'The Albury Monoplane.' *AB* 18 April 1913, p. 27 col. 3.

<sup>130</sup>. 'The Albury Monoplane.' *AB* 18 April 1913, p. 27 col. 3.

<sup>131</sup>. 'The Albury Monoplane.' *AB* 18 April 1913, p. 27 col. 3.

<sup>132</sup>. Meggs, 'Australian-built aircraft and the Industry ...' *op. cit.*—Meggs, Keith & Martin, Desmond (1994) Museums can be full of surprises. *AirSport* September/October 1994, p. 43.

<sup>133</sup>. Meggs ('Australian-built aircraft and the Industry ...' *op. cit.* p. 67) erroneously claims that the engineering shop was at the location of the Melbourne GPO. See p. 7 footnote 2 for correct location of Dalgety's Motor Garage.

<sup>134</sup>. Meggs 'Australian-built aircraft and the Industry ...' *op. cit.* p. 67

### *History of the Engine after 1913*

When Blacklock's Garage burnt down by fire on 5 April 1954,<sup>135</sup> the aircraft reputedly burnt but the engine was saved. This story appears rather doubtful as the engine does not exhibit any traces of fire. Moreover, newspaper reports of the fire suggest that Blacklock's staff had their hands full moving cars out of the repair shop, so that it is unlikely that they would have had time, or inclination, to salvage an old and, to them, irrelevant engine.

According to Meggs the engine was kept in Locke's garage until April or May 1966.<sup>136</sup> It then disappeared and reappeared in 1978 when it was donated by Donald Shanks to the then Melbourne Science Museum,<sup>137</sup> now Museum Victoria. Other information claims that was used in a pump shed 'somewhere down the Murray'<sup>138</sup> before it was donated.

### [14] Who designed and built the engine?

In the light of the above discussion,<sup>[13]</sup> it is worth to briefly examine some of the information on the actual designer of the engine. In the absence of hard and independently verifiable data, much of this section is, admittedly, informed speculation.

The widely circulated, but hitherto not independently verifiable claim appears to be that Locke was the primary designer. Meggs in his 2009 work '*Australian-built aircraft and the Industry 1884-1939*' claims that the 'aircooled engine [was] built by four local engineers (including Aubrey Lock & Robbins)<sup>139</sup> and later in the same book claimed it "had originally been built in Melbourne by Aubrey Lock & Robbins"<sup>140</sup> and that after a failed trial (and Marshall's refusal to accept the engine, "[i]t was completed by Aubrey Keith Lock and was then sent to Albury (NSW) for fitment to Robbins' and Porter's aircraft."<sup>141</sup> Let us examine this.

First there are some unresolved chronological issues. Robbins and Porter established their 'up to date Engineering and Repair Shop' in Dean Street, Albury in late June 1911.<sup>[6]</sup> Yet, according to Meggs,<sup>142</sup> Marshall's plane had not been completed by 29 June 1911, when he wrote to the Minister for Defense to ask for funding, stating that the plane was complete and he was waiting for the engine to be fitted. If Meggs' chronology is to be believed, this letter was written prior to the engine being bench tested (and found unsatisfactory). Thus the bench test would have occurred at a time when Robbins and Porter were in Albury setting up their new shop. While

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<sup>135</sup> For fire of the paint and trimming shop in Deans Street see 'Big spectacular fire at Albury. Danage is estimated at £10,000.' *BMM* 6 April 1954, p. 1, 8, 14.

For claim of aircraft being destroyed, see: Meggs & Martin, 'Museums can be full of surprises...' *op. cit.*— Meggs, *Australian Built Aircraft* *op. cit.* p. 77.

<sup>136</sup> Meggs & Martin, 'Museums can be full of surprises...' *op. cit.*— Meggs, *Australian Built Aircraft* *op. cit.* p. 77.

<sup>137</sup> Meggs & Martin, 'Museums can be full of surprises...' *op. cit.*

<sup>138</sup> Pers. comm. Des Martin, Shepparton, 2003, based on manuscript notes by his father Desmond Martin.

<sup>139</sup> Meggs, *Australian Built Aircraft* *op. cit.* p. 67.

<sup>140</sup> Meggs, *Australian Built Aircraft* *op. cit.* p. 77.

<sup>141</sup> Meggs, *Australian Built Aircraft* *op. cit.* p. 67.

<sup>142</sup> Meggs, 'Australian Built Aircraft...' *op. cit.* p. 67.

not impossible, it appears unlikely that Robbins would not have been present.

If Locke completed the engine, as claimed by Meggs, there is no explanation where Locke would have obtained the additional cylinder heads required,<sup>1</sup> unless cast by an outside casting shop. Irrespective, it is altogether unclear why Locke would have completed the engine for Robbins if the latter, together with Porter, were in fact competent mechanics who could have finished and adjusted it themselves.

At the time the engine was reputedly built for Marshall in 1911, Aubrey Locke was aged 25 working presumably at Herbert Thompson's Motor Works and Azor Robbins, then also aged 25, was a foreman at Dalgety's Motor Garage.<sup>2</sup> To put this into context, Robbins was essentially in charge of the workshop and its operations and would have been called in for any specialised or difficult problem. Locke had worked for Herbert Thompson's Motor Works, designers of steam-powered cars,<sup>[19]</sup> which at a later point in time also built petrol-powered cars.<sup>3</sup> To what degree Locke had actual engineering and design experience is not certain, although he would certainly have been exposed to such experience.

We have some additional indication. In the years after World War I Locke operated a motor garage maintaining vehicles.<sup>[19]</sup> There is no indication, however, that Locke ever made any subsequent invention and certainly no evidence that he ever applied for an Australian patent.<sup>4</sup> From the available evidence it appears that Locke was a competent mechanic, but not a technical designer. Robbins on the other hand, continued on to engineering and design career of inventions, with a total 38 patents to his name (Table 1).

### [15] Technical Details of the Albury Monoplane—The Fuselage

According to the *Albury Banner* the body of the plane was “fashioned upon ordinary and approved lines, but the engine was of a new pattern designed by the Albury craftsmen.”<sup>5</sup> We are uninformed about the sources that Robbins and Porter had at their disposal to design and develop their plane. There were certainly books<sup>6</sup> and journal articles<sup>1</sup> on aircraft design available

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1. As we are led to believe by Meggs description (*op.cit*) that 36 of the 40 cast heads were faulty.

2. Alexander Porter, Specialist Mechanic at Dalgety's, was aged 20.

3. Gilltrap and Gilltrap, 'Gilltraps' Australian cars from 1879' *op cit*.

4. Based on a search of the Australian Patent database Auspat (<http://pericles.ipaustralia.gov.au/ols/auspat>) as well as the European meta engine Espacenet (<http://worldwide.espacenet.com/>).—It would not have been financially prohibitive to do so: the filing fee was £8 in 1911 (An Act relating to Patents of Inventions [Cth] No. 21 of 1903. Schedule 2), which is equivalent to \$970 in 2012 terms (CIP corrected).

5. 'The Albury Monoplane.' *AB* 18 April 1913, p. 27 col. 3.

6. Cf. Maxim, Hiram S. (1908) *Artificial and Natural Flight*. London: Whittaker.—Petit, F. Robert (1910) *How to build an aeroplane*, by Robert Petit. Translated from the French by T. O'B. Hubbard and J. H. Ladeboer. With 93 illustrations. London: Williams & Norgate.—Second edition 1911.—See also: Mowbray, Jay Henry (1910) *Conquest of the air by airships and other flying machines. marvelous achievements of the bird men. how to build and sail an aeroplane*. Philadelphia, Pa., National Publishing Co.—Mowbray, Jay Henry (1911) *Thrilling Achievements of "Bird Men" with Flying Machines, Being a Comprehensive History of Aerial Navigation. How to Build and Sail an Aeroplane*. Philadelphia: George W. Bertron.—Loening, Grover Cleveland (1911) *Monoplanes and biplanes. Their design, construction and operation*. London: Sampson Low, Marston & Co

available by 1911. In addition, a magazine, *Flight* was published in the United Kingdom.<sup>2</sup>

The published technical details are sketchy and inconsistent between reports, but this most probably represents ongoing modifications. Indeed, even before the first ground tests were completed, the plane had already undergone several modifications, which Robbins and Porter planned to incorporate into the next plane model they were already designing.<sup>3</sup> The following data have been compiled from the newspaper sources of the day:<sup>4</sup>

- On 13 March 1913 the engine trials of the aircraft occurred in the workshop in Kiewa Street. At that time the aircraft was reported as measuring 38'8" with an overall length of 26'.<sup>5</sup>
- On 18 April 1913 the *Albury Banner* reported that plane, which was made from blocks of native timber, had an overall length of 24' and measured 30'8" in width, with each wing being 14'6" long and 6' wide. The propeller was stated to have been 7'6" long. The surfaces were covered with water-proof aviation canvas<sup>6</sup>
- On 1 May 1913 the *Border Morning Mail* reported that the plane seen taxiing at Bungowannah measured 24'6" with an overall width of 30'8" and a weight of 600lbs.<sup>7</sup>

Given the consistency with which the wing span was given as 30'8", we can assume that the *Border Morning Mail's* width of 38'8", as reported on 13 March 1913, was a type-setting error. The recorded fluctuations in length are either indicative of ongoing modifications to the tail section, or they are caused by different measuring points (with or without the skid).

From an inspection of the available set of three photographs it would appear that the aircraft was a hybrid incorporating elements of the monoplane designs of the Blériot XI,<sup>[16]</sup> the Bristol Tractor monoplane,<sup>[17]</sup> and the Bristol-Prier P-1.[18]

As was customary at the time, the airframe was made of wood, with only the wing surfaces covered with fabric. This style was especially common among the Blériot models, while the Bristols had fully skinned fuselage. The fuselage of the Robbins and Porter plane had a quadrangular cross-section copied from the Blériot, but the fuselage was supported by two motor-bike wheels and a single, central landing skid, a design copied from the Bristol Tractor.

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<sup>1</sup>. Prince, Laurence L. (1911) How to build a Blériot-type monoplane. *Aero* vol. 2, pp. 61-63, 89-00, 103, 117-118, 141 ff (not seen).

<sup>2</sup>. *Flight* : a journal devoted to the interests, practice, and progress of aerial locomotion and transport. Official organ of the Royal Aero Club of the United Kingdom.

<sup>3</sup>. 'The Albury Monoplane.' *AB* 25 April 1913, p. 27 col. 2.

<sup>4</sup>. Compiled from: 'An Albury Monoplane.' *BMM* 13 March 1913, p.2 col. 6.—'Monoplane trials near Albury.' *BMM* 1 May 1913, p. 4 col. 4.—'The Albury Monoplane.' *AB* 1 Aug 1913, p. 27 col. 4—p. 28 col. 1.

<sup>5</sup>. 'An Albury Monoplane.' *BMM* 13 March 1913, p.2 col. 6.—Measurements repeated in 'Albury Men's Monoplane.' *WWE* 18 Mar 1913, p.2 col. 6.

<sup>6</sup>. 'The Albury Monoplane.' *AB* 18 April 1913, p. 27 col. 3.

<sup>7</sup>. 'Monoplane trials near Albury.' *BMM* 1 May 1913, p. 4 col. 4.

The wing stays fasten to two cabanes of tubular steel, one the top of the plane and one on the bottom. There are eight stays for each wing surface (four on the top and four on the bottom), with what appears a single wire each on top and bottom to prevent the wing from flexing backwards. In this, the design of the Robbins and Porter plane followed the symmetrical arrangement of pyramidal cabanes espoused by the Bristol P-1, whereas the Blériot had a rectangular cabane on the top and a pyramidal one on the bottom and the Bristol Tractor had a pyramidal one on the top and a rectangular cabane at the bottom, integrated into the wheel supports.

One of the problems would have been that the horizontal stabilisers were too short, compared to the Blériot. The vertical stabilizer, acting in its entirety as a rudder, was also very small. That design seems to follow the Bristol-Prier P-1.

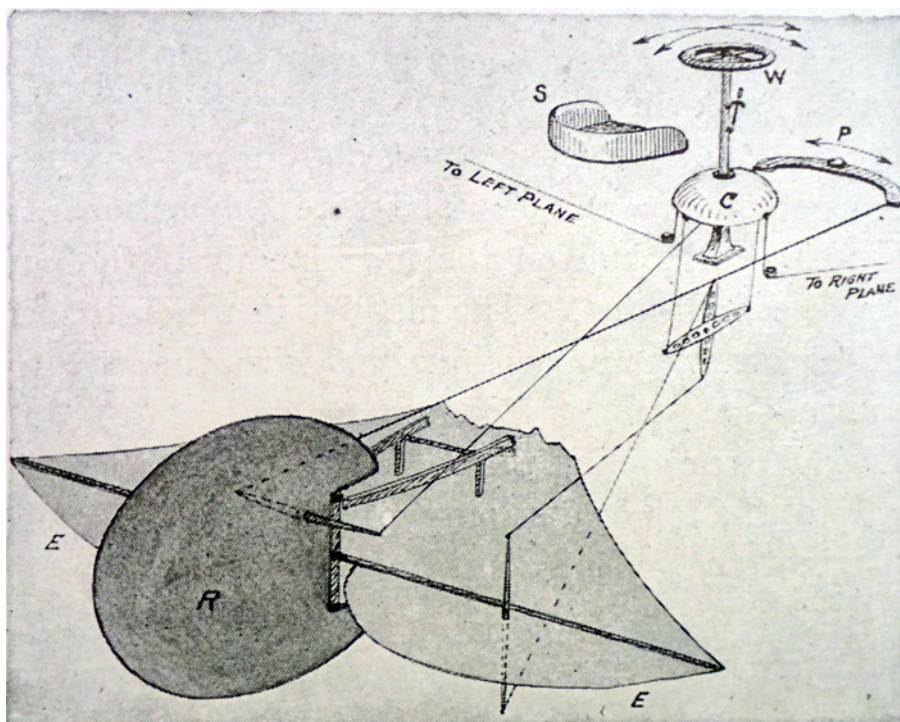


Figure 19.  
Controlling the tail surfaces in a  
Blériot XI<sup>1</sup>  
Note that the wheel is ornamental  
and the movements are controlled  
by the shaft ('stick').

Another major deviation from the Blériot and Bristol designs were the wing tips, which appear to have been squared off without any rounded edges, which would have been aerodynamically inefficient. It is possible that this design was drawn from the Antoinette V.<sup>2</sup>

Judging from the images in hand, especially the shadows cast, the Robbins and Porter monoplane did not have any ailerons,<sup>3</sup> which were patented by the Wright Brothers (and who viciously pursued any

<sup>1</sup>. Source: Loening, 'Monoplanes and biplanes...' *op cit.* p. 281.

<sup>2</sup>. See for example to contemporary postcard: [http://upload.wikimedia.org/wikipedia/commons/1/1a/Antoinette\\_V\\_-\\_001.jpg](http://upload.wikimedia.org/wikipedia/commons/1/1a/Antoinette_V_-_001.jpg).—That image also shows very well the horns needed for warping the wing tips for lateral control.

<sup>3</sup>. The ailerons of the aircraft of that vintage were separated surfaces protruding from the trailing edge of the wing. Examples of that type are the Levasseur Antoinette IV and V. See also Source: Loening, 'Monoplanes and biplanes...' *op cit.* p. 261 *passim*.

infringements), but in all probability relied on wing warping<sup>1</sup> for lateral (roll) control. In this it seems to have been a combination of the designs of the Bleriot (Figure 19) and especially of the Hanriot monoplane (Figure 20). Unlike the Hanriot with its exposed pulleys, the pulleys for the wing warp of the Robbins and Porter monoplane were inside the wing as evidenced by the orientation of the wire running from the cross arm on the starboard side (Figure 21).

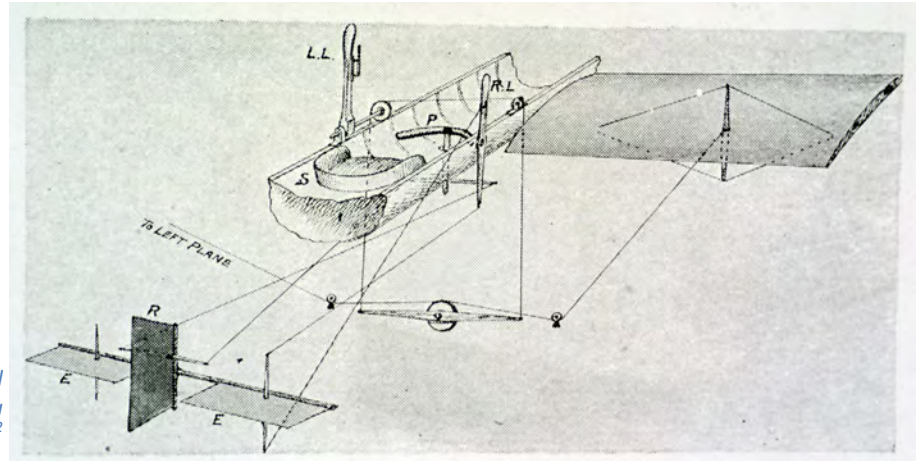


Figure 20. Controlling the tail surfaces and wing warping in a Hanriot monoplane<sup>2</sup>

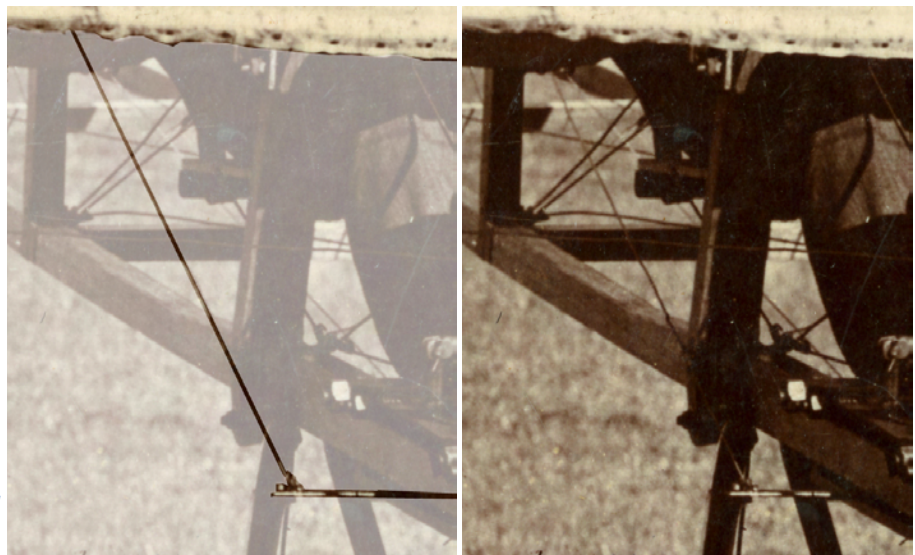


Figure 21. Cross arm controlling the wing warp (detail of Figure 13).

## [16] The Blériot XI

With over 800 aircraft manufactured, the Blériot XI was one of the most successful aircraft designs prior to World War I. It was the model used by Louis Blériot on 25 July 1909 to be the first to cross the English Channel.

<sup>1</sup> The Wright Brothers also patented wing warping, but for bi-planes and with hand pulleys.  
<sup>2</sup> Source: Loening, 'Monoplanes and biplanes...' *op cit* p. 287.



### [17] Bristol Tractor Monoplane (February 1911)

The first monoplane to be produced by the British & Colonial Aeroplane Co. Ltd. (Filton, Bristol) was the Tractor Monoplane, of which only two specimens were built.<sup>162</sup> The aircraft, with its 33'6" span and 31'6" length, modeled the warping wing feature of the Blériot and the triangular fuselage of the Levavasseur Antoinette. It was powered by a 50h Gnome engine.



Figure 23.  
Advertisement for the Bristol  
Monoplane (1911)<sup>163</sup>.

### [18] Bristol-Prier P-1 Monoplane (1911)

Another, more successful and reliable design was the created in 1911 by Pierre Prier, former Blériot factory pilot: the Bristol P-1 was a monoplane, again with Bleriot-type warping wings. It was normally fitted with a 50 h.p. Gnome engine but 40hp versions were also available for single-seater variants. The single-seater short-body version of the aircraft had a wing span of 30'2" and a length of 24'6", with an empty weight of 620lb and was capable of an airspeed of 58mph.<sup>164</sup> The P-1 had a balanced rudder and a single balanced elevator without an fixed surfaces.

<sup>162</sup>. Barnes, Christopher H. (1964) *Bristol Aircraft since 1910*. London: Putnam.

<sup>163</sup>. Source: <http://www.aviationancestry.com/Aircraft/Bristol/Bristol-MilitaryMonoplane-1911-2.jpg>

<sup>164</sup>. Barnes, Christopher H. (1964) *Bristol Aircraft since 1910*. London: Putnam. P.56— Lewis, Peter (1962) *British aircraft 1809-1914*. London : Putnam.

## [19] Aubrey Lock

Aubrey Keith Lock / Aubry Locke is something an enigma.

In his attestation paper, contained in his service record, he stated to have been born in Balmain (Sydney, NSW), and (on 20 March 1916) gave his age as 29 years 4 months, which means he was born sometime in December 1886.<sup>165</sup> His parents moved to Malvern, Victoria. As a 'boy' Aubrey Locke, got into trouble with the courts as had been caught painting with graffiti the Kooyong Road Baptist Church at Malvern (then being constructed), as well as a neighbouring premises.<sup>166</sup>

As a then reportedly 16 or 17 year old (according to the newspaper),<sup>167</sup> Aubrey Lock is on record in April 1905 when he was fined in absentia for 'having furiously driven a motor-car in Flinders street on April 26.'<sup>168</sup> Lock's (unsuccessful) defence to the Constable who stopped him was that "his car was driven by steam, and that he was blowing of steam which necessitated a run at high speed for a few yards."<sup>169</sup> Since Locke was reputedly an apprentice to Herbert Thompson's Motor Works,<sup>170</sup> the car in question would in all probability have been one of Herbert Thompson's steam cars,<sup>171</sup> which were then manufactured in Flinders Lane.<sup>172</sup> Intriguingly, Lock would have been 19 years and not "16 or 17 years of age"<sup>173</sup> suggesting that he obfuscated his age, presumably to be let off on a more lenient charge.

On 20 March 1916 Aubrey Lock enlisted in the AIF, stating that he was motor engineer.<sup>174</sup> He first served as a 'foreman artificer' with the 3<sup>rd</sup> Division Supply column and eventually rose to the rank of a Lieutenant and served with the 3<sup>rd</sup> Australian Auxiliary Mechanical Transport Company, and working at the 3<sup>rd</sup> Division Motor Ambulance Workshops in early 1919.<sup>175</sup> Aubrey Locke returned to Australia on 6 May 1919 to be discharged.

Prior to his enlistment he does not seem to have maintained his own residence in Melbourne.<sup>176</sup> Aubrey Lock is first listed in the Melbourne

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<sup>165</sup>. File NAA: B2455, Lock Aubrey Keith.—The NSW Births, Deaths and Marriages shows that he was born at Balmain as the fourth of five children of William G and Emma Lock (Birth reg n<sup>o</sup> 4649/1886).—Siblings: Hubert Stanley (reg n<sup>o</sup> 2788/1881); Daphne L (reg n<sup>o</sup> 4114/1883); Mabel E (reg n<sup>o</sup> 4153/1885), Ivy C (reg n<sup>o</sup> 3795/1889).

<sup>166</sup>. 'Desecrating a church.' *Caulfield and Elsternwick Leader* (North Brighton, Vic) 21 January 1899, p. 3

<sup>167</sup>. 'Motor Driver Fined.' *The Argus* (Melbourne) 9 May 1905, p.9.

<sup>168</sup>. *ibid.*

<sup>169</sup>. *ibid.*

<sup>170</sup>. Meggs, 'Australian-built aircraft and the Industry ...' *op. cit.*—see also Crotty, 'A flying life... *op. cit.* p. 36.

<sup>171</sup>. Downing, H. (1990) 'Thomson, Herbert (1870–1947)', *Australian Dictionary of Biography*, National Centre of Biography, Australian National University, <http://adb.anu.edu.au/biography/thomson-herbert-8795/text15423>, accessed 22 February 2013

<sup>172</sup>. *ibid.*— The company moved from Flinders Lane to Thomson's works at 835 High Street, Armadale. There it produced steam cars, petrol powered cars as well as electric cars. It went out of business in 1912. (cf. Gilltrap, Terry and Gilltrap, Maree (1981) *Gilltraps' Australian cars from 1879 : a history of cars built in Australia*. Sydney : Golden Press. Pp. 57–58).

<sup>173</sup>. 'Motor Driver Fined' *op. cit.*

<sup>174</sup>. File NAA: B2455, Lock Aubrey Keith.—He gave his brother Hubert Stanley as his next of kin, resident at 27 High Street, Malvern.

<sup>175</sup>. *ibid.*

<sup>176</sup>. Not listed on the relevant page of Sands & McDougall (1913) *Melbourne, Suburban and Country Directory for 1913*. Fifty-Seventh edition. Melbourne: Sands & McDougall. P.1835.

address books in 1921, the residing at 26 Lucan Street, Caulfield.<sup>177</sup> At the same time, he is listed among the motor engineers with premises at 837-9 High Street, Armadale. He was to retain these premises until the 1960s.<sup>178</sup> Intriguingly, these premises had been used by the Thomson Motor Car Works until 1912.<sup>179</sup> And then saw a frequent change in ownership, always associated with the motor trade: Voigt & King, Motor and Engineering Works in 1913;<sup>180</sup> Allen & Hall, Motor Engineers in 1919;<sup>181</sup> and Anderson & Kelly, Motor Engineers in 1920.<sup>182</sup>

#### [20] W E Heart in Albury, 7 March 1913

William Ewart Hart (1885-1943) was an Australian dentist with an interest in flying.<sup>183</sup> Hart opened a flying school in Penrith in January 1912. In mid 1912 Hart built a two-seat monoplane which he successfully tested in August at Wagga Wagga, but crashed a month later.

He came through Albury on 7 March 1913 to scout a route for a proposed Sydney to Melbourne flight, which never eventuated.<sup>184</sup>

#### [21] Fate of the Robbins and Porter plane

The fate of the Robbins and Porter plane is somewhat unclear. It can be assumed that the plane was part of Blacklock's acquisition of the entire business. That suggests that the plane was part of the business assets of Robbins and Porter, rather than private property. According to reminiscences by a local resident, the plane was seen suspended in the rafters of Blacklock's Garage in southern Kiewa Street in the 1930s.<sup>185</sup> There are other reports that the plane burnt in a fire that destroyed part of in

<sup>177</sup>. Sands & McDougall (1921) *Melbourne, Suburban and Country Directory for 1921*. Sixty-fifth edition. Melbourne: Sands & McDougall. P. 2017.—Resident at the same address in 1925 and 1939: Sands & McDougall (1925) *Melbourne, Suburban and Country Directory for 1925*. Sixty-Sixth edition. Melbourne: Sands & McDougall. P. 2194; Sands & McDougall (1939) *Melbourne, Suburban and Country Directory for 1939*. Melbourne: Sands & McDougall. P. 1574.—Not listed on the relevant page of 1920: Sands & McDougall (1920) *Melbourne, Suburban and Country Directory for 1920*. Sixty-First edition. Melbourne: Sands & McDougall. P. 1968.

<sup>178</sup>. Listed as 'Lock Bros Pty Ltd' in 1921: Sands & McDougall (1921) *Melbourne, Suburban and Country Directory for 1921*. Sixty-Second edition. Melbourne: Sands & McDougall. p. 2148; see also Sands & McDougall (1925) *Melbourne, Suburban and Country Directory for 1925*. Ninety-Sixth edition. Melbourne: Sands & McDougall. p. 2996 (but listed under 'motor garages'); as 'Lock, A.K. & Co. Pty Ltd' in Sands & McDougall (1939) *Melbourne, Suburban and Country Directory for 1939*. Melbourne: Sands & McDougall. P. 2124; and as 'Lock, Aubrey K. & Co.' in Sands & McDougall (1959) *Melbourne, Suburban and Country Directory for 1959*. Melbourne: Sands & McDougall. P. 83.

<sup>179</sup>. Sands & McDougall (1911) *Melbourne, Suburban and Country Directory for 1911*. Fifty-fifth edition. Melbourne: Sands & McDougall. P. 86.

<sup>180</sup>. Sands & McDougall (1913) *Melbourne, Suburban and Country Directory for 1913*. Fifty-Seventh edition. Melbourne: Sands & McDougall. P. 91.

<sup>181</sup>. Sands & McDougall (1919) *Melbourne, Suburban and Country Directory for 1919*. Sixty-Third edition. Melbourne: Sands & McDougall. P. 104.

<sup>182</sup>. Sands & McDougall (1920) *Melbourne, Suburban and Country Directory for 1920*. Sixty-Fourth edition. Melbourne: Sands & McDougall. P. 100.

<sup>183</sup>. Isaacs, Keith (1983) 'Hart, William Ewart (1885–1943)', Australian Dictionary of Biography, National Centre of Biography, Australian National University, <http://adb.anu.edu.au/biography/hart-william-ewart-6592/text11347>, accessed 22 February 2013.

<sup>184</sup>. Airman's Flight. Sydney to Melbourne. *SMH* 8 March 1913, p. 19.

<sup>185</sup>. Pers. comm. Gerry Curtis (Albury) 2003.—Frederick Charles Blacklock died on 20 April 1930 and the business was distributed.

Blacklock's Garage in April 1954.<sup>186</sup> The engine, however, was saved and is now held by Museum Victoria.<sup>[13]</sup> The engine block apparently shows no signs of having been in a fire.<sup>187</sup> It is surprising, given that if the plane indeed survived until the early 1950s, that there are apparently no images of the plane apart from those taken in 1913 (Figure 12–Figure 15).

## [22] Chronology of heavier-than-air aviation in Australia until 1914

Date	Aircraft	Engine	Aviator	Event
1909, Sep				Australian Government pledges £5,000 prize for design suitable for military aircraft
1909, Dec 9	Wright A	Wright	Colin Defries	First powered flight in Australia, 100 yards @2-15 feet
1910, Mar				Australian Government Prize expires unawarded
1910, Mar 18	Voison Biplane		Harry Houdini	First controlled powered flight in Australia
1910, Jul 23	Blériot		Lawrence Adamson	Flight attempt failed
1910, Oct 7	Duigan Pusher	Tilley 50hp	John Duigan	First successful flight of an Australian built (bi-)plane
1910, Dec 26	Bristol Box Kite	Gnome 50hp	J.J. Hammond	Box Kite n° 10 flown at Perth, WA
1911, Feb	Duigan Pusher	Tilley 50hp	John Duigan	Public demonstration flight at Bendigo
1911, Feb 20	Bristol Box Kite	Gnome 50hp	J.J. Hammond	Box Kite n° 10 flown at Geelong, Vic
1911, Sep	Bristol Box Kite	Gnome 50hp	William Ewart Hart	Box Kite n° 11 (bought by Hart) destroyed in storm
1911, Sep	Bristol Box Kite	Gnome 50hp	William Ewart Hart	plane rebuilt from Australian timber
1911, Sep	Bristol Box Kite	Gnome 50hp	William Ewart Hart	short flights at Belmore Park, Penrith
1911, Nov 4	Bristol Box Kite	Gnome 50hp	William Ewart Hart	solo flight Penrith to Parramatta
1911, Dec 11			William Ewart Hart	receives Australia's N° 1 Pilots Licence
1912, Jan 3			William Ewart Hart	Opens Hart's Aviation School at Belmore Park, Penrith
1912, Jun	Monoplane	Gnome 50hp	William Ewart Hart	Hart designed and built a monoplane, crashed on take-off
1912, Jul	Blériot XI <sup>188</sup>		Arthur B 'Wizard' Stone	Air race with WE Heart
1912, Jul	Biplane	Gnome 50hp	William Ewart Hart	Air race with Arthur B 'Wizard' Stone
1912, Jul ??	Monoplane	Gnome 50hp	William Ewart Hart	Hart designed and built a monoplane
1912, Sep 4	Monoplane	Gnome 50hp	William Ewart Hart	Crashed it on third test flight in Richmond, from a height of about 200 feet, incurring serious injuries
1913, Jul		Robbins flat four	Vivian Porter	Low level test flights at Albury
1914, Jan 27	Sopwith 'Tabloid'	Gnome Lambda	Harry Hawker	First flight with his a/c at Elsternwick/Melbourne
1914, Feb 7	Sopwith 'Tabloid'	Gnome Lambda	Harry Hawker	public flight demonstration at Caulfield (Melbourne) to a crowd of 25-30,000
1914, Mar 7	Sopwith 'Tabloid'	Gnome Lambda	Harry Hawker	public flight demonstration at Albury, upends aircraft in landing
1914, Apr 20	Blériot XI		Maurice Guilleaux	First flight with his Blériot XI in Australia
1914, May 2	Blériot XI		Maurice Guilleaux	First flying the loop performed in Australia
1914, May 25	Blériot XI		Maurice Guilleaux	public flight demonstration at Albury
1914, Jun 1			Arthur B 'Wizard' Stone	Crashes when trialling his plane prior to the first Melbourne to Sydney Air mail flight
1914, Jun	Blériot XI		Maurice Guilleaux	First Australian Air Mail, Bendigo to Ballarat
1914, Jul 16-18	Blériot XI		Maurice Guilleaux	First Melbourne to Sydney Air mail flight

## [23] Was Robbins and Porter's flight a 'Controlled Flight' ?

When evaluating whether the descriptions of the flight experiments by Robbins and Porter constitute 'flight', we need to consider what constituted of 'controlled flight.' It required that the pilot can i) get the plane into the air

<sup>186</sup>. Pers. comm. Des Martin, Shepparton.—See also Meggs, 'Australian Built Aircraft...' *op cit.* p. 77. For the fire see

<sup>187</sup>. Pers. comm. Michael Brown (Albury) 26 February 2013. Michael Brown inspected the engine in detail when drawing up the design specifications.

<sup>188</sup>. US license-built Meggs, 'Australian Built Aircraft...' *op cit.* p. 73

on its own power, ii) be able to maintain level flight, iii) be able to increase and decrease altitude as desired/required, iv) be able to turn the aircraft in flight and v) be able to land the plane, preferably without harm to aircraft or pilot.

Many inventors and constructors had claimed to have successfully built heavier than air aircraft that had demonstrated flight. Robbins and Porter were one of them. While there is no doubt that the plane these two built managed to get airborne, this cannot be called a controlled flight as they i) flew in a straight line, ii) low above the ground, and iii) were not able to steer the aircraft into a curve or turn. Practically, what Robbins and Porter carried out were 'hops.' When looking at the known three images of the plane it is very doubtful that the aircraft had control surfaces, such as ailerons. It most probably exercised lateral control by warping the wing, similar to the Hanriot design (Figure 20).

#### [24] Was the Robbins & Porter plane the first Australian-designed monoplane?

No. In August 1912 William Ewart Hart<sup>[20]</sup> constructed a two-seat monoplane which he successfully tested. It was wrecked in a serious accident at Richmond on 4 September, when he crashed from 200 feet. Hart was badly injured and never flew again.<sup>189</sup>

#### [25] The first powered flight

It is acknowledged that the Wright brothers were not the first to engage in powered heavier-than-air flight.<sup>190</sup> Others like the steam-driven device by Clément Ader of 1890 and Augustus Moore Herring's powered glider of 1898 both achieved flight of some sort. All of these, however, were technologically dead ends, while the Wright design, itself quite awkward and technologically limited with its hip-movement-controlled wingwarp and the need of catapults, gave rise to the aviation industry as we know it today. Samuel Pierpont Langley, on the other hand, managed to build an unmanned powered aircraft that flew before the Wright brothers, and could later show that his design was also capable of flying piloted.

#### [26] Harry Hawker in Albury

On the same weekend that Robbins and Porter closed shop at the end of February 1914, the impending air show of Harry Hawker was announced. The first heavier-than air aeronautical display occurred on 7 March 1914, when Harry Hawker displayed his Sopwith 'Tabloid' at the Albury Race Course. This air show is the focus of this section.

<sup>189</sup>. *Brisbane Courier* 10 September 1912, p. 7.—Isaacs, Keith (1983) 'Hart, William Ewart (1885–1943)', Australian Dictionary of Biography, National Centre of Biography, Australian National University, <http://adb.anu.edu.au/biography/hart-william-ewart-6592/text11347>, accessed 22 February 2013.

<sup>190</sup>. Schneider, David (2003) First in flight? *Scientific American* Nov-Dec 2003 <<http://www.americanscientist.org/issues/pub/first-in-flight>>.

### *Harry Hawker*

Born at South Brighton (Moorabbin), Victoria in 1889, Hawker was a trainee mechanic by 1901, and he set up his own mechanics business in 1907 in Caramut, Victoria. In 1911 he left for England where he worked for Sopwith, involved in both maintaining and designing planes. Hawker earned his pilot's license in October 1912. He set a number of British altitude and distance records, including an attempt at a circumnavigation of the British Isles. Though not fully successful, the *Daily Mail* gave him a trophy and cheque for £1,000. By November 1913 Hawker had designed the Sopwith 'Tabloid,' a very successful and maneuverable plane. It was this plane that he brought on a tour of Australia.<sup>191</sup>

### *Harry Hawker's Flight Demonstrations*

On 13 January 1914 Harry Hawker arrived back in Australia aboard RMS *Maloja*. Crated, the plane was shipped to Melbourne where it arrived on 19 January. Reassembled at Elsternwick, it was first flown on 27 January. On another test flight on 2 February he landed on the grounds of the Governor General's residence in Melbourne.<sup>192</sup>

Hawker flew his first public demonstration on 7 February at Caulfield racecourse in Melbourne to a crowd of 25-30,000.<sup>193</sup> On this day he took his first Australian passengers into the air, each paying £20 for a flight. Private flights followed on 11 February, the Federal Minister for Defence being a passenger. Under new management (see below), Hawker flew at Randwick (Sydney) on 19 February on a test flight and on 21 February to a crowd of 38,000.<sup>194</sup> He also offered to fly from Sydney to Melbourne, but could not find sponsors prepared to raise the £2,000 he demanded.<sup>195</sup>

### *Preparing for Harry Hawker's Flight Demonstration*

On 17 February 1914 Lionel C. Griffiths, a local pastoralist and aviation enthusiast, happened to be on the same train from Melbourne as Hawker.<sup>196</sup> Griffiths, who had seen Hawker fly at Melbourne, mooted the idea of having Hawker give a flight demonstration at Albury.<sup>197</sup> Given the catchment of the region, and Albury's claim at being 'the capital of the Riverina,' this was acceded to on 26 February subject to the availability of the racecourse.<sup>198</sup> After all, from a marketing perspective, Albury was central to a sizeable fee-

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<sup>191</sup>. Compiled from: Sheehy, Thomas (1983) Harry George Hawker. Australian Dictionary of Biography vol. 9. Melbourne: Melbourne University Press, pp. 233-234.—*Harry George Hawker. A Pioneer of Australian Aviation*. Canberra Commonwealth of Australia Department of Civil Aviation, 1953.

<sup>192</sup>. Parnell, Neville & Boughton, Trevor (1988) *Flypast. A Record of Aviation in Australia*. Canberra: AGPS. p. 21.

<sup>193</sup>. Parnell & Boughton 1988, p. 21.— in his reminiscences Hawker's promoter Kingston claims an attendance of 35,000: Kingston, Claude (1966) (as told to John Hetherington) Tales of a Theatre Man 2: Harry Hawker the birdman. *The Age* (Melbourne) 23 April 1966, p. 22.

<sup>194</sup>. Kingston, Tales of a Theatre Man... 'op cit' — Parnell & Boughton 1988, p. 21.

<sup>195</sup>. Parnell & Boughton 1988, p. 21.

<sup>196</sup>. 'Hawker, The Airman. Proposed visit.' *BMM* 19 Feb 1914, p. 2 col. 4.

<sup>197</sup>. 'Mr Harry Hawker. His Albury Flights. A Thrilling Exhibition. Record crowd at the race course.' *ADN* 9 Mar 1914, p. 3 col. 1.— 'Hawker the Hawk. Wonderful flight at Albury. Record altitude attained. Immense gathering on Albury race course.' *AB* 13 Mar 1914, p. 28 cols. 3-4.

<sup>198</sup>. 'Items of News.' *BMM* 26 Feb 1914, p. 2 col. 4

paying population. The air show was formally confirmed the next day and announced the day after with an article replete with photographs.<sup>199</sup>

Hawker and his entourage arrived by train on 3 March 1914, staying at the Globe Hotel.<sup>200</sup> On the 4<sup>th</sup> they were given a Mayoral reception and invited to attend various public functions and events.

Griffith, in conjunction with Hawker's management, persuaded the Railway Commissioners to put on special trains for the event, and to provide discounted holiday excursion fares. A train was put on running from Benalla to Albury and stopping at all stations along the way. The organizers managed to arrange that this train did not depart back to Benalla until 8:45 pm, thus ensuring that the Victorian visitors had time to shop in Albury.<sup>201</sup> It seems that no special train was arranged in the New South Wales side.<sup>202</sup> However, special trains were put on running between Albury Station and the racecourse, stopping at the 'Leger' (2<sup>nd</sup> class return 1/10) and at the grand stand (1<sup>st</sup> class return 3/6, 2<sup>nd</sup> class return 3/4).<sup>203</sup> In the event three special trains as well as the ordinary mail train were used to carry passengers to the racecourse.

Hawker's management also persuaded the Albury Chamber of Commerce to have all businesses agree on a part-holiday for the Saturday of the air show which ensured maximum attendance by Albury citizens.<sup>204</sup>

Despite some resentment among Albury Racing Club members at the commercial nature of the event, the Albury Race Course was made available at no charge, provided that the Hawker management paid for any damage caused.<sup>205</sup>

The sideshow was comprised of the Albury Town Band and the cadets of the Albury and Wodonga infantry and artillery companies. The cadets had a normal training scheduled on Saturday afternoon and it was decided that they should perform in front of the crowd, for which they would receive free admission.<sup>206</sup>

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<sup>199</sup>. 'Flying on Albury Racecourse. Mr Harry Hawker comes next Saturday,' *BMM* 28 Feb 1914, p. 5 cols.3-4.

<sup>200</sup>. 'Mr. Hawker in Albury. Arranging for the Flight. Children to be admitted for sixpence. Suggested Parade by cadets.' *BMM* 4 March 1914, p. 2 cols 4-8.

<sup>201</sup>. Even though the railways would have preferred to timetable the return trip two hours earlier. 'Flying in Albury...' *BMM* 5 Mar 1914, p. 3 col. 1-3.

<sup>202</sup>. The *Wagga Wagga Express* reports on the air show (*WWE* 10 Mar 1914, p. 3 col. 3) but does not carry any advertisements.

<sup>203</sup>. Advertisement. *AB* 6 Mar 1914, p. 48 cols 2-3.

<sup>204</sup>. The shops were closed from 2pm to 6pm on the day. The Albury Literary Institute also complied. T.H. Mate closed their stores from 1pm to allow staff to attend the air show, while Wodonga stores also closed on the day.—'Harry Hawker in Albury. Two thrilling flights. The Australian altitude record broken. Accident to the biplane.' *BMM* 8 Mar 1914, p. 2 cols 2-5.—'Flying in Albury. Mr. Hawker at Murray Valley Vineyard. Interesting notes of arrangements.' *BMM* 6 March 1914, p. 3 cols 1-2.

<sup>205</sup>. 'Mr. Hawker in Albury. Free use of the race course.' *BMM* 4 March 1914, p. 2 cols 4-5.

<sup>206</sup>. 'Flying in Albury. Happy arrangements for cadets. Saturday's compulsory drill at race course. Boys will see Hawker's flight.' *BMM* 5 Mar 1914, p. 3 col. 1-3.

Entrance fee charged was 2/6 for a seat on the grandstand and 1/- for a stand in the Leger.<sup>207</sup> Following complaints by the public regarding the high cost of entrance fees for children,<sup>208</sup> concessions were offered if purchased in advance through the Albury School's Parents and Citizens Association for children under fourteen years of age.<sup>209</sup>

Based on the takings, some 5,000 people attended the air show on the racecourse, the largest crowd in Albury's history, with 2,229 making use of the train services provided.<sup>210</sup> An estimated further 1,500 people watched from outside the racecourse.<sup>211</sup>

Hawker also offered to take passengers up, charging £20 per flight. Enquiries were limited, with the *Border Morning Mail* reporting that 16 or 17 made enquires with two serious takers. Even though agreeing to take them, Hawker had to renege when flight conditions were such that in the absence of a breeze, the cockpit became filled with petrol fumes from the engine.<sup>212</sup>

Hawker's management gave the rights of running refreshment booths to the hospital fund, generating a clear profit of just over £100.<sup>213</sup>



Figure 24 Harry Hawker<sup>214</sup>

### Media Management

It is worth commenting on Hawker's management of the media. Hawker's flight demonstrations were handled by manager Claude Kingston, a professional theatre manager with wide experience who had taken over Hawker's management after the first flight in Melbourne at Caulfield.<sup>215</sup>

Hawker's flight demonstration in Albury was indeed extremely professionally handled by Kingston and Hawker's secretary M.J. Bloomfield.<sup>216</sup> Not only did large-format advertisements appear in the three Albury papers *Albury Daily News*, *Border Morning Mail* and *Albury Banner* (figure 3),<sup>217</sup> but every move of Hawker in the lead up to the flight was announced and covered in the papers.<sup>218</sup> Some of these articles and

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<sup>207</sup>. Advertisement. *AB* 6 Mar 1914, p. 48 cols 2-3.

<sup>208</sup>. 'Teach the young how to fly.' Letter to the editor by 'A mother of Many.' *BMM* 3 Mar 1914, p. 2 col. 8.

<sup>209</sup>. Concession tickets had to be purchased before Friday 6pm: Advertisement, *BMM* 5 March 1914, p. 3 cols 1-8.

<sup>210</sup>. 'Harry Hawker in Albury...' *BMM* 8 Mar 1914, p. 2 cols 2-5.—'Mr Harry Hawker...' *ADN* 9 Mar 1914, p. 3 col. 1.

<sup>211</sup>. 'Hawker the Hawk...' *AB* 13 Mar 1914, p. 28 cols. 3-4.—These figures were, over time exaggerated. Kingston in his reminiscences claims 11,000 spectators (Kingston, *Tales of a Theatre Man...* *op cit.*)

<sup>212</sup>. 'Harry Hawker in Albury...' *BMM* 8 Mar 1914, p. 2 cols 2-5.—'Mr Harry Hawker...' *ADN* 9 Mar 1914, p. 3 col. 1.

<sup>213</sup>. 'Harry Hawker in Albury...' *BMM* 8 Mar 1914, p. 2 cols 2-5.—'Mr Harry Hawker...' *ADN* 9 Mar 1914, p. 3 col. 1.

<sup>214</sup>. Source: [http://localhistory.kingston.vic.gov.au/img/article/188\\_1.jpg](http://localhistory.kingston.vic.gov.au/img/article/188_1.jpg)

<sup>215</sup>. Kingston worked on a 33% gross-receipts share basis, with him paying for publicity and local expenses. These he managed to keep low by persuading the race course owners to provide the venues for free.—Kingston, *Tales of a Theatre Man...* (*op. cit.*)

<sup>216</sup>. Bloomfield had been manager of Irish comedian Allen Doome in Western Australia ('Flying in Albury...' *BMM* 5 Mar 1914, p. 3 col. 1-3).

<sup>217</sup>. Most of the advertisements were placed across all columns along the top of the page.

<sup>218</sup>. 'Mr. Hawker in Albury...' *BMM* 4 March 1914, p. 2 cols 4-8.—'Mr Harry Hawker.' Mayoral reception. *ADN* 4 Mar 1914, p. 2 cols 1-3.—'Mr Harry Hawker.' *ADN* 5 Mar 1914, p. 3 col. 1.—'Flying in

advertisements were accompanied by photographic images showing Hawker,<sup>219</sup> Hawker flying the 'Tabloid' at Randwick racecourse<sup>220</sup> and Hawker at Randwick with Lord Denman, Governor General, Sir Gerald Strickland, Governor of New South Wales, and Miss Strickland inspecting the plane on the ground.<sup>221</sup> The *Albury Daily News*, which used photographs if it could afford them, used these images very liberally in its reporting in the lead up to the event. The *Border Morning Mail* also carried a large format image from the Sydney event. It seems that the clichés for the photographs were provided by Kingston, who was careful in ensuring that both daily papers had different images. In addition, Hawker's secretary wrote letters to the editor showing Hawker in a patriotic light.<sup>222</sup>

**THE ALBURY BANNER AND WODONGA EXPRESS.**

# FLYING! FLYING!

Direct from Sydney,

## HARRY HAWKER,

THE  
Famous Australian Aviator,  
(WINNER OF £1000 "DAILY MAIL" PRIZE)  
WILL GIVE

## Flying Exhibitions,

ALBURY RACECOURSE,  
Saturday, 7th March.

Also, MILITARY DISPLAY BY CADETS.  
ALBURY TOWN BAND IN THEIR LATEST NUMBERS.

PROGRAMME

<p>3 p.m.—TRIAL FLIGHT.</p> <p>3.35—AERIAL MANOEUVRES, including Volplaning and Steeplechasing in the Air.</p>	<p>4.10—PASSENGER FLIGHTS.</p> <p>4.35—MORE AERIAL MANOEUVRES, Slow and Fast Flying, Figure 8's.</p> <p>5.5—PASSENGER FLIGHTS.</p>
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**Grandstand, 2s 6d. Leger, 1s.**

SPECIAL TRAIN FROM BENALLA departs 11.25 a.m., stopping all Stations; returning 8.45 p.m. Holiday Excursion Fares.

SPECIAL TRAINS FROM ALBURY DIRECT TO RACECOURSE.  
First Return to Grandstand, 3/6; Second Return to Grandstand, 3/4; Second Return to Leger, 1/10.

CLAUDE KINGSTON, Manager.

Figure 25 Advertisement in the *Albury Banner*.<sup>223</sup>

Albury...<sup>219</sup> *BMM* 5 March 1914, p. 3 cols 1-3.—'Mr Harry Hawker.' *ADN* 6 Mar 1914, p. 2 col. 7.—'Flying in Albury...'<sup>220</sup> *BMM* 6 March 1914, p. 3 cols 1-2.

<sup>219</sup>. *BMM* 28 Feb 1914, p. 5 cols.3-4; *BMM* 5 March 1914, p. 3 cols 1-8.

<sup>220</sup>. *BMM* 28 Feb 1914, p. 5 cols.3-4; *ADN* 4 Mar 1914, p. 4 cols. 4-8

<sup>221</sup>. *ADN* 6 Mar 1914, p. 3

<sup>222</sup>. Bloomfield, M.J. (1914) 'Mr. Hawker and the children.' *BMM* 4 March 1914, p. 2 cols 7-8.—Bloomfield, M.J. (1914) 'Mr. Hawker and Australia's young soldiers.' *BMM* 5 March 1914, p. 3 col. 3.—Bloomfield, M.J. (1914) 'For the Hospital Fund.' *ADN* 4 Mar 1914, p. 2 col. 3.

<sup>223</sup>. Advertisement. *AB* 6 Mar 1914, p. 48 cols 2-3.

The media management focused on Albury and the communities to the south. Some advertisements, however, were also placed in the Wagga Wagga papers.<sup>224</sup>

The management was careful in impressing on the Albury papers that Hawker was going to fly low, and that therefore the show could not be properly observed from anywhere other than the race course itself, and thus it was worthwhile paying the attendance fee. Some of the newspapers happily followed the suggestion,<sup>225</sup> even though in the case of the topography of Albury this was untrue.

## HARRY HAWKER IN AUSTRALIA.

~~SIDNEY, SATURDAY, FEBRUARY 21st, 1914.~~

**ALBURY RACECOURSE, SAT. MARCH 7th, 1914**

### Programme.

- 3 p.m. Trial Flight
- 3.35 „ Aerial Manoeuvres  
Including Volplaning and Steeplechasing in the Air
- 4.10 „ Passenger Flights
- 4.35 „ More Aerial Manoeuvres  
Slow and Fast Flying, Figure Eights
- 5.5 „ Passenger Flights

**Harry Hawker uses only CONTINENTAL Tyres on his Biplane**

Popular Selections Will be rendered during the Afternoon by

THE MILITARY BAND

Figure 26  
Flight Program from the overprinted  
Sydney Souvenir Programme.<sup>226</sup>

A special souvenir programme was issued, which was actually the programme printed for the event which took place on 21 February 1914 at Sydney's Randwick Racecourse. The Albury locational details were overprinted in red (figure 4).<sup>227</sup>

We can of course assume that bills had been posted in town, but the effective promotion went beyond the media and billboards. Hawker's *Daily Mail* trophy as well as another trophy and a model of the airplane were

<sup>224</sup> The *Wagga Wagga Express* reports the actual airshow (*WWE* 10 Mar 1914, p. 3 col. 3), but does not provide any advance notice.—The *Wagga Daily Advertiser* ran two column advertisements for three days running (*WDA* 4 March 1914, p. 3 cols 6–7; 5 March, p. 3 cols 6–7; 6 March, p. 3 cols 6–7) and announced the event in its columns: 'Hawker to visit Albury.' *WDA* 4 March 1914, p. 2 cols 2-3, but only ran a very brief article on the actual air show: 'Hawker on the wing.' *WDA* 9 March 1914, p. 2 col. 5.

<sup>225</sup> 'Flying in Albury...' *BMM* 6 March 1914, p. 3 cols 1-2.

<sup>226</sup> 'Harry Hawker in Australia. Albury Racecourse Saturday, March 7th. Official Souvenir Programme. Sydney: J.C.Stephens, Printers.

<sup>227</sup> 'Harry Hawker in Australia...' *op. cit.*

exhibited in a local shop.<sup>228</sup> Hawker stored his plane in Blacklock's garage at 532 Kiewa Street.<sup>229</sup> By coincidence these had been the premises where Azor Robbins and Alexander Porter had built their own monoplane less than a year earlier. The audience was encouraged to come and see the plane in the workshop.

### *Harry Hawker's Flight Demonstration in Albury*

The program for the day was set out as follows:

3:00 pm	Trial Flight
3:35 pm	Aerial Manoeuvres, including Volplaning and Steeplechasing in the air
4:10 pm	Passenger Flights
4:35 pm	More aerial maneuvers, slow and fast flying, figure 8's
5:05 pm	Passenger flights

The start of the program went according to plan, with a brief flight demonstration and some volplaning,<sup>230</sup> in the end gliding to land. During the second flight Hawker performed a large number of volplaning events and flew low, hopping over fences and trees. Near the end of the segment Hawker decided to attempt to reach high altitude hoping to better existing records. Indeed, during this flight he reached an altitude of 7,800 feet (about 2,380m), thereby bettering his own previous Australian altitude of 6,000 feet.<sup>231</sup> On the descent Hawker performed more standard figure eights and some volplaning. To the horror of the crowds Hawker, flying low, seemed to crash at a two-rail fence near the race-course. What could be seen from the race-course was large cloud of dust, with the Sopwith upended sitting on its nose. Hawker climbed out unhurt.



Figure 27  
Preparing the plane for the flight. Note that the upper wing of the bi-plane is not yet installed<sup>232</sup>

During the volplaning Hawker's engine had somehow overcharged with petrol and refused to be restarted. A sudden dive to increase the revolutions

<sup>228</sup>. 'Mr. Hawker in Albury...' *BMM* 4 March 1914, p. 2 cols 4–8

<sup>229</sup>. 'Flying in Albury...' *BMM* 5 Mar 1914, p. 3 col. 1–3.—Charles McDonald's reminiscences, reported in Boyes, stated that the plane was stored in the Crawford and Connely's stables (now the Hub Arcade) are only partially correct. The actual building was next door. (Boyes, Mrs. Frank (1977) *Columns of History*. Episode 330—Reader's Memories, Harry Hawker 1914. *Wodonga Express* February 16, 1977).

<sup>230</sup>. Volplaning, a term used frequently in the early twentieth century aviation literature, describes a maneuver where the pilot turns the engine off and the plane glides through the air.

<sup>231</sup>. 'Harry Hawker in Albury...' *BMM* 8 Mar 1914, p. 2 cols 2–5.

<sup>232</sup>. *BMM* 18 September 1999.

of the idling propeller did not help either. Though he could regain control of the aircraft, this meant that he had to land unaided, so he'd started looking for smooth ground. What Hawker did not know, was that the apparently smooth landing surface chosen in Wynack's paddock was a freshly cultivated field with deep drains every few yards. But, running out of room to land, Hawker had only two choices: risk upending his machine in the softly tilled ground or risk running into the fence. He chose the former, and on landing the skids of the plane dug into the ground.<sup>233</sup> Ultimately, it damaged the plane to a lesser degree than if he had chosen the other option.

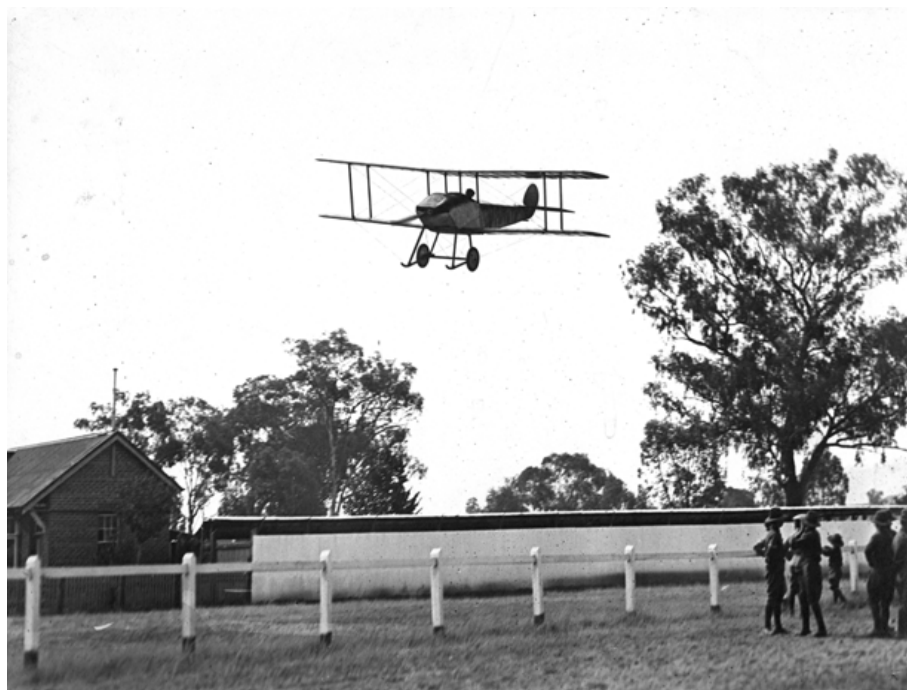


Figure 28  
Harry Hawker flying over the Albury  
Race Course.<sup>234</sup>

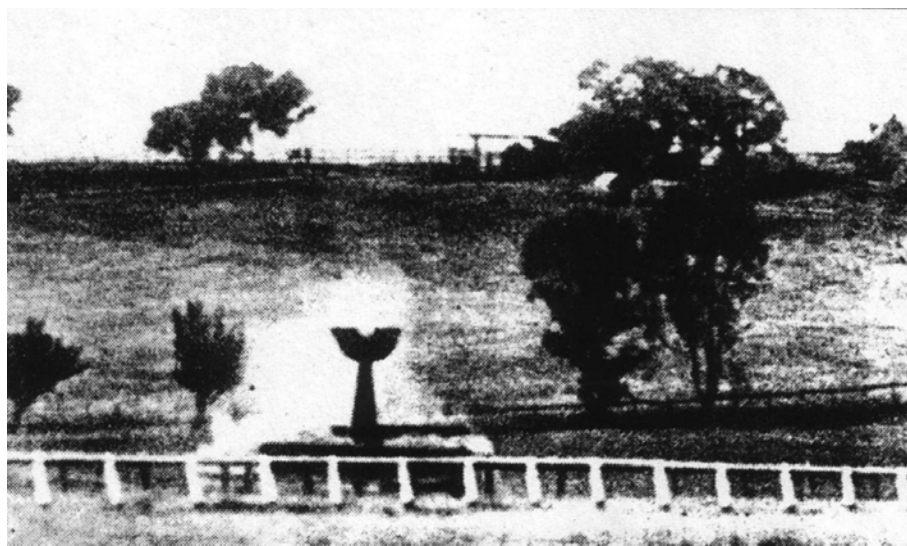


Figure 29.  
The crash of Hawker's plane soon  
after it happened.<sup>235</sup>

<sup>233</sup> 'Harry Hawker in Albury...' *BMM* 8 Mar 1914, p. 2 cols 2–5.—'Mr Harry Hawker...' *ADN* 9 Mar 1914, p. 3 col. 1.

<sup>234</sup> Albury Regional Museum.—2 copies of this photo held, one with a piece of wood, reputedly from the plane, attached.

<sup>235</sup> *BMM* 18 September 1999. In that paper the image is erroneously identified as being taken after the accident.

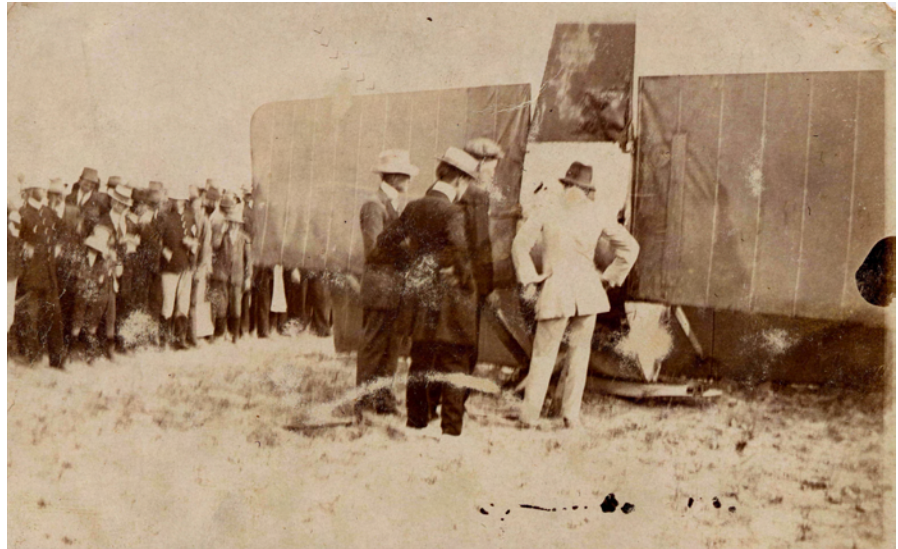


Figure 30  
The upended Sopwith at Albury.  
Note the cadets holding back  
the crowd. Harry Hawker with  
cap in the centre.<sup>236</sup>

The damage sustained by the Sopwith included the walnut propeller (£40), the wrecking of the landing gear by snapping the axle, the snapping of some of the stays, the denting of the metal casing of the cockpit and the tearing of a hole in the cloth-covered tail. The engine, albeit partially buried in the dirt, escaped damage.<sup>237</sup>

Admitting that he had been overconfident, Hawker made light of the incident and the damage to the plane—even though he could well have been killed.

The cadets were employed in keeping the crowd at bay after the accident, but some managed to gather souvenirs of the crash. The Albury Regional Museum has in its possession an image of Hawker flying over the Albury racecourse, with a small piece of the wood attached, which is said to be part of the propeller.

### *The Reaction*

Despite the program being cut short by the accident, all Albury papers were ecstatic. The *Albury Banner* titled its story on the day ‘Hawker, the Hawk’ and labelled him ‘the greatest living aviator.’<sup>238</sup> The *Albury Banner* deemed:

“it not necessary to do more than state the fact that the exhibition was the greatest treat the Albury people ever witnessed. They had endeavoured to picture to themselves what the flight would be like, but the realization of this man Hawker on the wing was altogether beyond their expectations.”<sup>239</sup>

The *Border Morning Mail* called him an ‘eagle in the clouds,’<sup>240</sup> It was moved to turn its normally matter-of-fact style to the poetic:

“And here was a human soul swifter than the swiftest bird, higher than the loftiest Apline peak, frolicking at tremendous speed one and a half

<sup>236</sup> Fielder Collection, Albury Historic Society

<sup>237</sup> ‘Harry Hawker in Albury...’ *BMM* 8 Mar 1914, p. 2 cols 2–5.

<sup>238</sup> ‘Hawker the Hawk...’ *AB* 13 Mar 1914, p. 28 cols. 3–4.

<sup>239</sup> ‘Hawker the Hawk...’ *AB* 13 Mar 1914, p. 28 cols. 3–4.

<sup>240</sup> ‘Harry Hawker in Albury...’ *BMM* 8 Mar 1914, p. 2 cols 2–5.

miles above earth!...Hither and thither, backwards and forwards, up and down, fast and slow, floated and soared, glided and slithered, this human machine with wings of bird and sinews of steel."<sup>241</sup>

The Albury air show was widely reported in the regional press, which was as enthusiastic as the Albury papers. The *Wagga Wagga Express* declared:

"...and enthusiasm stirred in the hearts of the crowd as they knew and recognised they were witnessing manoeuvres from a genius in the art of flying, and an Australian at that."<sup>242</sup>

In the absence of pictures, some papers tried to describe the plane. The description in the *Wagga Wagga Express* is possibly the most memorable:

"The Sopwith biplane resembles something between a bird and a fish. The lines of the body closely follow those of a shark, and the resemblance to something alive is increased by the two eye-like openings in the head."<sup>243</sup>

### *The Aftermath*

The damaged plane was crated and shipped the following day by rail to Melbourne. Hawker was to perform at Elsternwick in Melbourne, but the air show had to be postponed until he could have a propeller fashioned from locally available materials and other, less vital parts, shipped out from England.<sup>244</sup>

The public face was that the flying circus would continue in no time. However, for Hawker the Albury accident was more of a problem than initially assumed. The plane was sufficiently damaged that it could not be repaired in time. All other arrangements of the tour had to be cancelled.<sup>245</sup>

Supplied with the locally made propeller,<sup>246</sup> Hawker flew a test flight of his repaired machine on 20 March 1914 in Melbourne, and a public demonstration in Ballarat on 4 April 1914.<sup>247</sup> However, on 8 April 1914 the French pilot Maurice Guillaux arrived in Australia bringing with him a Bleriot XI. Guillaux commenced flying demonstrations on 20 April at Victoria Park Race Course, Sydney, where he flew the first loop-the-loop in Australia. On a demonstration flight on 2 May 1914 in Sydney, Guillaux looped his Bleriot monoplane ten times before a crowd of about 60,000.<sup>248</sup>

After Ballarat, Hawker made no further flights in Australia. While it is tempting to speculate that he left for England (on 5 May 1914) because his own flying demonstrations did not compare favourably with the aerial acrobatics performed by Guillaux, it seems Hawker had to rush back to England where the flying season with its lucrative prize-moneys, was about

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<sup>241</sup>. 'Harry Hawker in Albury...' *BMM* 8 Mar 1914, p. 2 cols 2–5.

<sup>242</sup>. 'Hawker in Albury. 5000 people present.' *WWE* 10 Mar 1914, p. 3 col. 3.

<sup>243</sup>. 'Hawker in Albury. 5000 people present.' *WWE* 10 Mar 1914, p. 3 col. 3.

<sup>244</sup>. 'Harry Hawker in Albury...' *BMM* 8 Mar 1914, p. 2 cols 2–5.

<sup>245</sup>. Kingston, *Tales of a Theatre Man...* *op cit*.

<sup>246</sup>. Made from French walnut and supplied by James Moore & Sons Pty Ltd, Melbourne for £25 (Parnell & Boughton 1988, p. 21)

<sup>247</sup>. Parnell & Boughton 1988, p. 21.

<sup>248</sup>. Parnell & Boughton 1988, p. 21.

to begin. While Hawker had announced that he would fly the loop-the-loop in his 'Tabloid' while in Australia, he never did.<sup>1</sup> While in Australia, Hawker did fly 60 individual flights carrying a total of 40 passengers.<sup>2</sup>

Back in England Hawker continued a career in aircraft design and continued to set records. In 1919 he failed in an attempt to be the first to fly across the Atlantic. While forced to ditch the plane in the ocean he was rescued. On 12 May 1921 Hawker was killed in an air crash at Hendon in the UK.

### *Hawker's Legacy in Albury*

Hawker's fame as an aviator was ensured, but the Albury populace soon had another hero, for Hawker was not the only early aviation pioneer to include Albury on his tour. On 25 May 1914, only seven weeks after Hawker's visit, the French aviator Maurice Guillaux presented a flight display in Albury that abounded in aeronautical acrobatics, and that included a flight at an altitude 2000 feet higher than that flown by Hawker.<sup>3</sup> Guillaux was also the first to fly into Albury from another town, by including Albury in the route of his ground-breaking Melbourne to Sydney airmail flight.

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<sup>1</sup>. But did so on return to the UK.

<sup>2</sup>. Hawker left aboard RMS *Moultan*.

<sup>3</sup>. Cf. Spennemann, Dirk HR (2003) Early Aviation in Albury II: Maurice Guillaux' aerial acrobatics of 1914..