

## 1.—Statistical Summary of Civil Aviation in Canada, 1932-37—concluded.

| Item.                                       | 1932. | 1933. | 1934. | 1935. | 1936. | 1937. |
|---|-------|-------|-------|-------|-------|-------|
|   | No.   | No.   | No.   | No.   | No.   | No.   |
| <b>Licensed Civil Aircraft.<sup>4</sup></b> |       |       |       |       |       |       |
| <b>Total aircraft (all types)—</b>          |       |       |       |       |       |       |
| <b>Gross weight—</b>                        |       |       |       |       |       |       |
| Up to 2,000 lb.....                         | 416   | 331   | -     | -     | -     | 316   |
| 2,001-4,000 lb.....                         | -     | 1     | -     | -     | -     | 132   |
| 4,001-10,000 lb.....                        | 1     | -     | -     | -     | -     | 147   |
| Over 10,000 lb.....                         | -     | -     | -     | -     | 5     | 9     |
| <b>Type—</b>                                |       |       |       |       |       |       |
| Sea boats.....                              | 416   | 331   | -     | -     | -     | 32    |
| Amphibians.....                             | 26    | 12    | -     | -     | -     | 1     |
| Land planes.....                            | 2     | 1     | -     | -     | -     | 322   |
| Convertible.....                            | 445   | 345   | 368   | 380   | 450   | 249   |
| <b>Licensed Civil Air Personnel.</b>        |       |       |       |       |       |       |
| Commercial pilots.....                      | 5     | 474   | 405   | 414   | 380   | 320   |
| Limited commercial pilots.....              | 6     | 6     | 6     | 6     | 65    | 129   |
| Transport pilots.....                       | 6     | 6     | 6     | 6     | 42    | 73    |
| Private pilots.....                         | 5     | 405   | 429   | 496   | 559   | 625   |
| Air engineers.....                          | 5     | 403   | 461   | 472   | 533   | 595   |
| Unlicensed air mechanics employed.....      | 52    | 60    | 61    | 318   | 55    | 90    |

<sup>1</sup> Crews for 1935-37.<sup>2</sup> Passengers for 1935-37.<sup>3</sup> Canadian postal contracts, 1,323,584 lb.<sup>4</sup> Details of licensed aircraft for 1937 are given in Table 2.<sup>5</sup> The basis of classification was changed

in 1935 and is now shown from 1933 onward. Figures on the old basis for 1929-34 will be found at p. 746 of the 1934-35 edition of the Year Book.

<sup>6</sup> This class did not exist prior to 1936.

## 2.—Licensed Civil Aircraft in Canada, Dec. 31, 1937.

NOTE.—Dashes in this table indicate that no information was reported under the corresponding head for those years.

| Aircraft.                        | Dominion and Provincial. | Private.   | Flying Clubs. | Commer-<br>cial. | Total.     |
|----------------------------------|--------------------------|------------|---------------|------------------|------------|
|                                  | No.                      | No.        | No.           | No.              | No.        |
| <b>GROSS WEIGHT.<sup>1</sup></b> |                          |            |               |                  |            |
| Up to 2,000 lb.....              | 39                       | 95         | 71            | 111              | 316        |
| 2,001 to 4,000 lb.....           | 21                       | 16         | -             | 95               | 132        |
| 4,001 to 10,000 lb.....          | 17                       | 3          | -             | 127              | 147        |
| Over 10,000 lb.....              | -                        | -          | -             | 9                | 9          |
| <b>Totals.....</b>               | <b>77</b>                | <b>114</b> | <b>71</b>     | <b>342</b>       | <b>604</b> |
| <b>TYPE.</b>                     |                          |            |               |                  |            |
| Sea boats.....                   | 25                       | 1          | 1             | 5                | 32         |
| Amphibians.....                  | 1                        | -          | -             | -                | 1          |
| Land planes.....                 | 34                       | 99         | 68            | 121              | 322        |
| Convertible <sup>2</sup> .....   | 17                       | 14         | 2             | 216              | 249        |
| <b>Totals.....</b>               | <b>77</b>                | <b>114</b> | <b>71</b>     | <b>342</b>       | <b>604</b> |

<sup>1</sup> Total weight of aircraft with supplies and full load. skis as conditions demand.<sup>2</sup> May be equipped with wheels, floats or

## Section 1.—History and Administration.

## Subsection 1.—Development of Aviation in Canada.

**Historical Sketch.**—About the turn of the century Mr. W. R. Turnbull, who may be termed the "father of aeronautical research in Canada", was experimenting with aerofoils and propellers at Rothesay, New Brunswick, where, in 1902, he set up the first small wind tunnel in Canada. He discovered the laws of the centre of pressure movement on aerofoils, and made deductions from these laws which explained the longitudinal stability of aeroplanes. He also propounded the static laws of air propellers and in later years evolved and developed the controllable-pitch propeller.

At the time that Mr. Turnbull was beginning his work, Dr. Graham Bell was experimenting with kites and air-screws in laboratories at his summer home at