

CORRESPONDENCE.

To the Editor of the JOURNAL OF THE ROYAL AERONAUTICAL SOCIETY.

Sir,—While commending Mr. A. R. Weyl's letter in the July issue of the Journal, toning down to a more proper relative pitch the unquestionably important contributions of Professor Junkers to aircraft development, I would like to add a few words in connection with the question of the origin of the stressed skin design, cantilever wings, and the use of aluminium alloy.

The earliest, to my knowledge, attempt at skin stressed design can be found in the patent issued to Alphonse Pénaud and Paul Gauchet in 1876, in France. This patent, covering the construction of an aeroplane, which differed from our present aeroplanes only by the lack of provision for lateral control, specifies among other most remarkable features (for that period of time): "in case the surfaces of the wings should be of veneer or even of metal, we reserve making of the surfaces themselves the frame piece of the wings"—in other words, stressed skin construction of wings.

Mr. Weyl credits Levavasseur, the famous designer of the "Antoinette" monoplane, with producing a low-wing monoplane with cantilever wings in 1911. However, my recollection is that another Frenchman, M. Blanc, built a monoplane with full cantilever wings of wooden construction (with veneer cover), which was flown in 1912 or 1913, and that the Levavasseur monoplane with fabric covered wings and the trousered undercarriage was produced afterwards.

The exact dates could easily be found, for instance, in *l'Aérophile*, which recorded promptly such events but which, unfortunately, I do not have handy right now for verification, and I therefore venture this remark with due apology if my recollection is in error.

Regarding the use of Dural, it should be of particular interest that while this strong aluminium alloy was developed by Wilm, a German metallurgist, in 1903-1909, and acquired by Düren Metalwerke A.G. in Düren, Germany, who put it on the market in 1910, the first application to aircraft construction took place in England, the very same year, in the airship "Mayfly." The Zeppelin organisation started to use this new metal in 1916 and Junkers, in his monoplane "Ju 4," in 1917. I state this on the authority of a pamphlet giving the history of this development and published by the German manufacturers of this metal.

Yours very truly,

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