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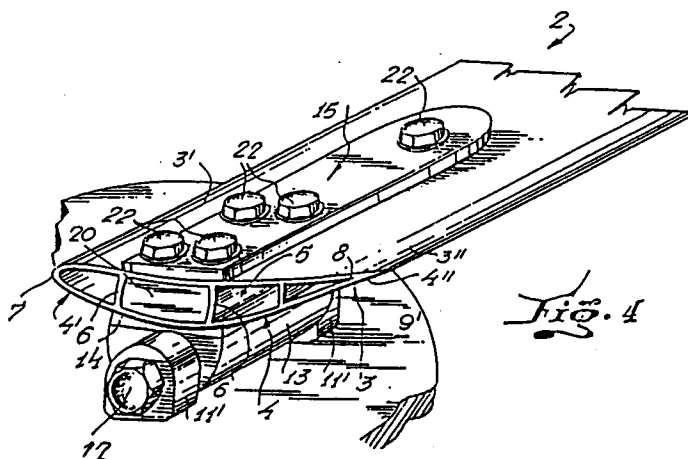
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15.01.92 Bulletin 92/03(71) Applicant: **CEUTE S.A.**
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CH-6900 Lugano(CH)(54) **Industrial axial-flow fan having offset airfoil-to-hub mounting system for improved aerodynamic performance.**

(57) An industrial fan (1) having a plurality of blades (2) attached to a common hub (21), wherein each blade (2) has a substantially uniform aerodynamic shape the length thereof including its root, by virtue of novel attachment means which do not require added strengthening of the root deforming its aerodynamic shape, thereby improving overall performance. The attachment means include an intermediate member (13) of each blade (2) coupled to the

hub (9) and clamped against one of the faces of the associated blade (2). Radial pivot means are provided between each intermediate member (13) and the hub (9) according to feathering axes offset from the blade longitudinal axes, for manually adjusting the pitch (angle of incidence) of the blades according to a required flow. The invention also includes a pneumatic system (30) for varying the position (pitch) of the fan blades in motion.

**EP 0 413 663 A3**



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EUROPEAN SEARCH REPORT

Application Number

DOCUMENTS CONSIDERED TO BE RELEVANT			EP 90810598.4
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
A	<u>FR - A3 - 2 498 266</u> (AXIAL ITALIANA) * Totality * --	1-9, 10,14	F 04 D 29/36 F 04 D 19/00
A	<u>US - A - 1 935 314</u> (FINCH) * Totality * --	1-9, 10,14	
A	<u>US - A - 2 656 971</u> (MADER) * Totality; esp. fig. 1,2, pos. No. 12-15 * --	1,2	
A	<u>FR - A - 951 522</u> (MONNEY) * Totality; esp. fig. 1,2,5, 6 * --	1,10	
A	<u>DE - A1 - 2 548 372</u> (AXIAL INTERNATIONAL) * Totality * --	1,2,14	
A	<u>DE - A1 - 2 807 899</u> (AXIAL INTERNATIONAL) * Totality * --	1,14	
A	<u>FR - A - 1 500 088</u> (HOLZER) * Totality; esp. fig. 1-3 * --	1	
A	<u>FR - B3 - 2 542 386</u> (VASA POLLI) * Totality; esp. fig. 4,5; claims 1,6,7 * ----	1,2	
The present search report has been drawn up for all claims			
Place of search VIENNA		Date of completion of the search 31-10-1991	Examiner WERDECKER
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- & : member of the same patent family, corresponding document	