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Señora Jefe de la
DIVISION DE NUEVAS CREACIONES
Superintendencia de Industria y Comercio
E. S. D.

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO



No. 05-076607- -00004-0000

Fecha: 2007-11-23 17:47:25 Dep. 2020 NUECREACIONE
Tra. 11 PATENTEIYII Eve: 379 FASENACIONALII
Act. 538 PETICION Folios: 2

Trámite : 011
Evento : 379
Actuación : 538

Referencia : Expediente No. 05.076.607
Asunto : SOLICITUD DE PATENTE PCT VENTILADOR DE
REFRIGERACION CON ASPA REFORZADA
Solicitante : DELTA T CORPORATION
Clase : B21C 023/012
Publicada en : La Gaceta No. 576 Del 31 de mayo de 2007
Fecha de Solicitud : 03 de agosto de 2005

1. Yo, Emilio FERRERO, identificado como aparece al pie de mi firma, actuando como apoderado en el asunto de la referencia, atentamente, solicito se efectúe el examen de patentabilidad de la solicitud en referencia presentada de acuerdo con el Capítulo II del PCT y según lo establecido en el artículo 44 de la Decisión 486 de la Comisión de la Comunidad Andina. Para tal efecto presento junto con este escrito el recibo por valor de \$ 202.000.00, que corresponde a la tasa fijada según lo dispuesto en la resolución No. 36155 de 28 de diciembre de 2006.

2. Ruego atentamente a la Señora Jefe se sirva ordenar que se anexe este recibo para que se efectúe dicho examen y se continúe con el trámite de la solicitud.

Señora Jefe,

EMILIO FERRERO
T.P.A. No. 31.929

COLO-14823-841-001-0
MVN\SCT\ID-113112\WPC14823
No. M-2007-113112\MVN

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SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO

NIT : 800176089-2

RECIBO OFICIAL DE CAJA : 07 - 86,448
FECHA : OCTUBRE 22 DE 2007

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO



No. 05-076607-00004-0000

Fecha: 2007-11-23 17:47:25 Dep. 2020 NUECREAC
Tra. 11 PATENTEIYII Eve: 379 FASENACIONAL
Act. 533 PETICION Folios: 2

***** CONSIGNACION *****

DEPOSITANTE	TIPO PAGO	BANCO	CUENTA	No. PAGO	FECHA PGO	Gr. PAGO
CAVELIER ABOGADOS	CONSIGNACION	BANCO POPULAR	050-00110-6	71021991	22/10/2007	31,595,000.00

***** CONCEPTO *****

CANT. IDENTIFIC	CONCEPTO	TOTAL CONCEPTO
1 50005-01-01 SOLICITUDES	114 PTC CAP-II EXAMEN DE PATENTIBILIDAD	202,000.00
	TOTAL :	\$ 202,000.00

CON: DISEÑOS DOS MIL PESOS

RESPONSABLE :

RECIBO DE CAJA APLICADO AL EXPEDIENTE No.

0101.14823-841-001-0

Oct. 5, 1948.

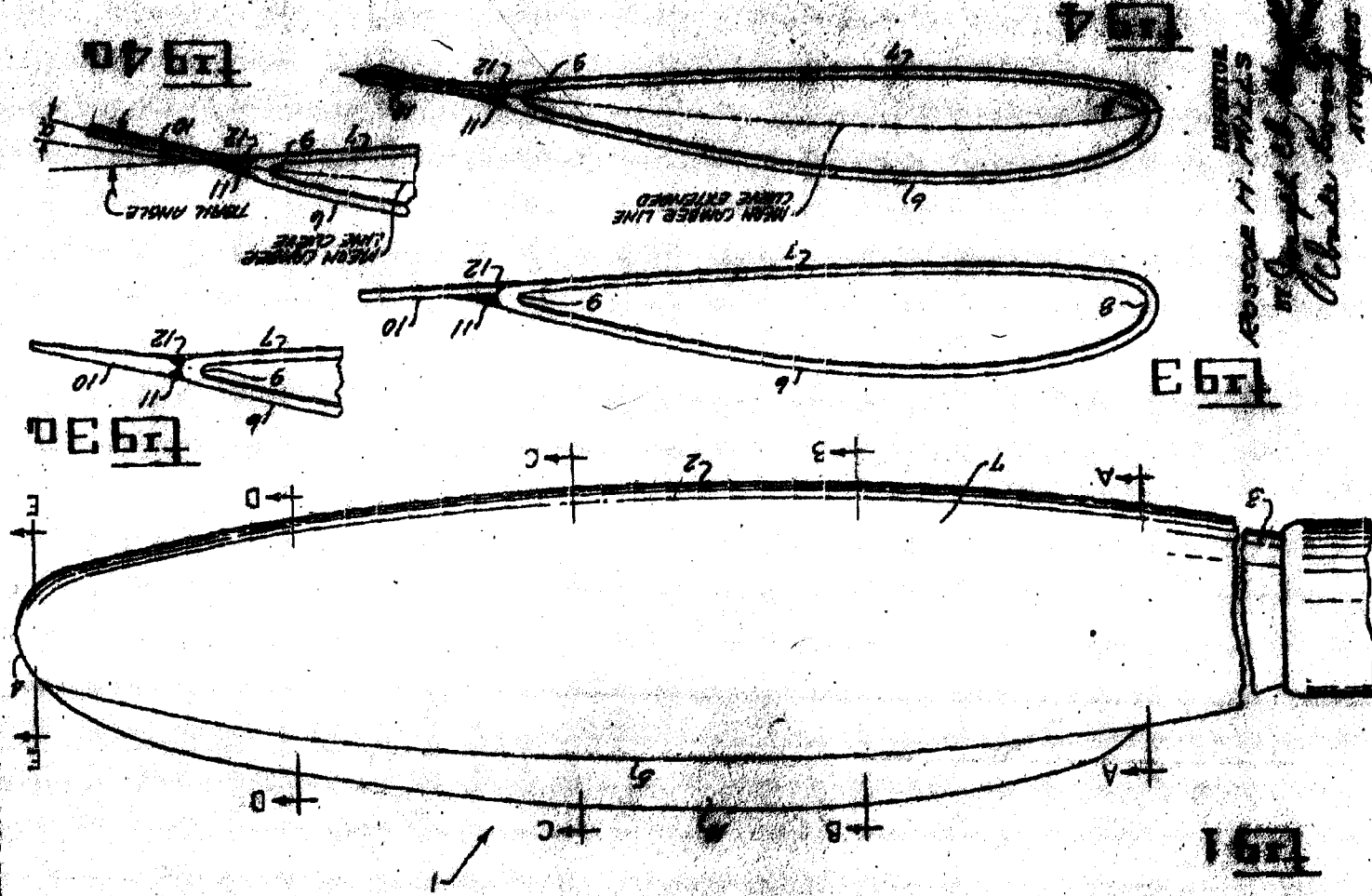
R. H. MILLS

PROPELLER BLADE CONSTRUCTION

2,400,440

Filed Dec. 19, 1944

5 Sheets-Sheet 1



Oct. 5, 1943.

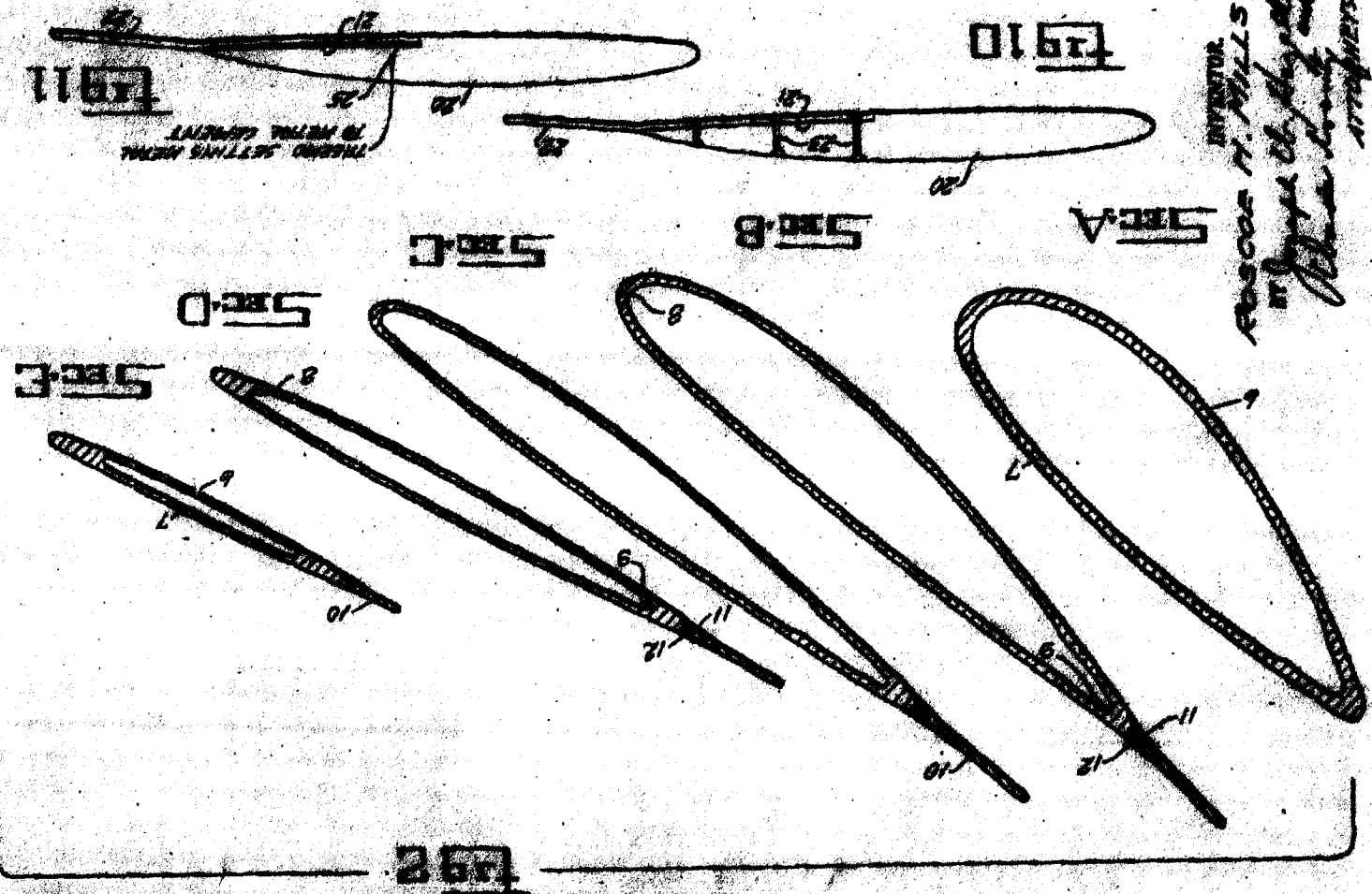
R. H. MILLS

PROPELLER BLADE CONSTRUCTION

Filed Dec. 19, 1944

2,800,400

5 Sheets-Sheet 2



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31 August 1961

Filed Dec. 19, 1944

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Patented Oct. 5, 1948

2,450,440

UNITED STATES PATENT OFFICE

2,450,440

PROPELLER BLADE CONSTRUCTION

Escoe H. Mills, Dayton, Ohio

Application December 19, 1944, Serial No. 568,914

3 Claims. (Cl. 170-159)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

1 The invention described herein may be manufactured and used by or for the Government for governmental purposes, without the payment to me of any royalty thereon.

The present invention relates to airplane propeller blade construction whereby a basic propeller blade may be modified by adding a trailing edge extension thereto to thereby vary blade area and where desired, the blade pitch distribution so that a basic design may be employed to cover a much wider power and speed range than was previously possible. The invention has particular application to hollow steel propellers though in no way limited to such application.

Present day propellers particularly for use on high power aviation engines have their design fixed as to diameter by ground clearance requirements, the blade area and pitch distribution being fixed by the power to be absorbed, the altitude range of operation, the high speed of the airplane, and the permissible engine speed of rotation. A propeller, such as of hollow steel construction, designed for a particular airplane flight speed, altitude range and particular engine cannot be changed once in production without encountering enormous expense in retooling and its attendant delays, particularly where the diameter cannot be altered. If the engine power output is changed for a particular airplane, such as by employing a supercharged engine, the propeller blade area must be increased, and generally, the pitch distribution must be altered to absorb the increased power particularly at high altitudes or else the acceptance of a reduced performance from that which might otherwise be obtained.

In accordance with the present invention, a basic design of propeller blade may be altered to suit changed operating conditions so that, to a certain degree, the blade diameter may be varied and considerable changes may be made in blade area and pitch distribution. Where, for example, it is desired to alter an existing hollow steel propeller so as to increase the blade width to give an increased blade area to take care of increased power requirements, a thin steel strip is welded to the trailing edge of the basic propeller blade and bent such that the trailing edge extension forms an extension of the mean camber line of the airfoil sections of the blade. Where change in pitch distribution as well as blade area is desired, the trailing edge extension may be bent to alter the mean camber line curve of the resultant airfoil sections to change the aerodynamic characteristics of the respective sections. The trailing

2 ing edge extension may be carried around to the propeller tip to also increase propeller diameter, if such increase is permissible, or a separate tip may be welded on. Since the welded joint may be made from both sides of the metal sheet forming the trailing edge extension, the particular method of welding employed is not critical and arc, acetylene and electric flash welding are suitable welding procedures.

Extensive tests on propeller blades constructed in accordance with the invention have shown that modification of the basic airfoil sections of the blade has a much less detrimental effect on section characteristics than was at first anticipated so that the principles of the invention may be incorporated in new designs to give a much greater flexibility in metal propeller blade manufacture. When applied to new designs, the trailing edge extension may be formed as an integral extension of the upper or lower envelope sheets, or by extending both sheets, which permits the propeller blade width and pitch distribution to be widely varied so that one basic propeller design may be altered to suit a wide variety of operation requirements.

The blade modifications, in accordance with the invention, may be employed with non-ferrous propeller blades by securing the blade extension to the basic blade by riveting or by use of the recently-developed, high strength thermosetting metal to metal adhesives.

It is therefore the principal object of the invention to provide a simple means for varying propeller blade diameter, blade area and pitch distribution without alteration of the basic propeller blade.

It is a further object of the invention to provide means for varying propeller blade area, and if desirable, the pitch distribution by securing a trailing edge extension to the basic propeller blade to vary the blade area and adjusting the angle of the said extension with respect to the chord line of the airfoil sections of the basic blade to vary the pitch distribution.

Other objects and features of the invention, not specifically enumerated above, will appear by reference to the detailed description hereinafter given and to the appended drawings in which:

Fig. 1 is a developed plan view of a propeller blade modified in accordance with the invention; and

Fig. 2 is a view showing enlarged cross sections of the propeller of Fig. 1 taken on section lines A-A to E-E inclusive respectively; and

Fig. 3 is an enlarged fragmentary view showing

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a typical welded joint between the basic propeller blade and the trailing edge extension in the propeller of Fig. 1; and

Fig. 3a is a view similar to Fig. 3, but showing the alternative use of a trailing edge extension tapered in thickness in the chordwise direction in lieu of the plate of constant thickness employed in the blade of Figs. 1 and 2; and

Figs. 4 and 4a illustrate respectively a cross-section of the propeller of Fig. 1 in which the trailing edge extension is arranged to conform with the mean camber line curve of the basic airfoil section and an arrangement where the trailing edge extension is arranged at an angle to a continuation of the mean camber line curve of the basic airfoil section to thereby vary the airfoil section characteristics of the blade section; and

Fig. 5 is a view similar to Fig. 1 showing a trailing edge extension of variable width; and

Fig. 6 is a view similar to Fig. 1 showing a trailing edge extended to the blade tip to increase blade diameter as well as blade area; and

Fig. 7 is a cross-sectional view illustrating a modified form of the invention in which the trailing edge extension is made as an integral part of the upper envelope sheet of a hollow steel propeller blade; and

Fig. 8 is a view similar to Fig. 7, but showing the trailing edge extension integral with the bottom cover or envelope sheet of a hollow steel propeller blade; and

Fig. 9 is a view similar to Fig. 7, but showing the trailing edge extension made integral with upper and lower envelope plate members of a hollow steel propeller blade; and

Fig. 10 is a cross-sectional view showing the application of a trailing edge extension to a typical aluminum or other non-ferrous propeller blade by means of rivets; and

Fig. 11 is a view similar to Fig. 10 showing the application of a trailing edge extension to a non-ferrous propeller blade by means of a thermosetting adhesive.

Referring now to Fig. 1, the reference numeral 1 generally indicates a hollow steel propeller blade which may be made in accordance with any one of a number of well-known methods such as from a die formed tube, upper and lower plate members each die formed and welded along the leading and trailing edge, or by transverse butt welded hollow formed blade sections. The propeller 1, as initially constructed, has a leading edge 2 joining the blade shank 3 and tip portion 4 and a trailing edge 5. The blade, as seen in the cross-sectional views thereof in Fig. 2, is hollow and is formed of airfoil section having an upper camber plate portion 6, a lower camber plate portion 7 and fillets 8 and 9 merging the plates together. The blade area of the basic propeller blade 1 is increased by the trailing edge extension 10 made of steel plate of uniform thickness and secured to the original trailing edge 5 by fillet welds 11 and 12 made from opposite sides of the plate respectively where, for example, shielded arc welding or torch or furnace brazing is employed, while if electrical flash butt welding is employed, there will be but a single weld. The welded joint is ground off smooth, note Fig. 3, after which the extension is bent to give the desired pitch distribution of the resultant blade. The blade, as a whole, is then normalized to stress, relieve the weld, and any final forming done with soft hammers.

Fig. 3a illustrates a trailing edge extension tapered in thickness in the chordwise direction and welded to the trailing edge 5 of the blade, which simplifies the fairing of the extension into the blade sections and would be a preferable form of construction where electric flash butt welding is employed.

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As seen in Fig. 4, the trailing edge extension 10 of Fig. 1 is arranged so that it lies in the plane of the mean camber line curve extended of the basic propeller blade airfoil section, and hence, will change the aerodynamic section characteristics very little so that if the trailing edge extension is warped so as to lie in the plane of the mean camber line curve at each radius, the total effect on the propeller, as a whole, will be primarily that due to a change in blade area. If, however, the plane of the trailing edge extension makes an angle such as at a, Fig. 4a, with the mean camber line curve extended of the basic propeller blade section at each radial station, the aerodynamic characteristics of the basic airfoil sections can be considerably altered. If the angular relation between the zero lift lines of the resultant airfoil sections retain the same geometric relation as in the basic propeller blade, the pitch distribution will be substantially unchanged, and the thrust of the modified blade will then depend on the change in aerodynamic section characteristics as well as increase in blade area. If the angles of the zero lift lines of the modified airfoil sections of the propeller blade have a different variation from that in the basic propeller blade, the pitch distribution, aerodynamic section characteristics, and blade area will be simultaneously altered, giving three variables, subject to change. The fact that a trailing edge extension, even of small width, can be employed to either vary the blade area, to increase the blade area and aerodynamic characteristics of the blade sections, or simultaneously change blade area section characteristics and pitch distribution is largely responsible for the increased flexibility given to propeller blade manufacture by the invention.

The trailing edge extension, illustrated in Fig. 1, is of substantially constant width throughout its length except where it fair into the main blade planform adjacent the blade tip and root portions. Considerable change may be made, however, in the blade planform by varying the width of the extension such as indicated by the variable width extension 10a shown in Fig. 5, or the blade trailing edge extension may be made to include a tip portion 10c, Fig. 6, to give an increased tip radius as well as increased blade area.

The principles of the invention are readily applied to certain types of hollow steel propeller blades during the course of manufacture as an integral part of the blade as seen in Figs. 7, 8, and 9, which will now be separately described.

The construction in Fig. 7 is of the type where the upper and lower camber faces 6 and 7 of the propeller blade are made of separate stamped or forged and machined sheets, the trailing edge extension 10d, however, being formed as an integral part of the upper camber sheet 6 and the sheets 6 and 7 being welded at the leading edge and at the aft terminal edge of sheet 7, as indicated by reference numerals 15 and 16 respectively, the latter welds being, for example, overlapping spot or stitch welds. The trailing edge extension 10d may be cut or ground to give any desired blade area and bent to give a desired pitch distribution. The blade may then be finally normalized.

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malized and brazed copper internal fillets formed in the manner well known in the art. This manner of construction of propeller blades allows considerable variation to be made without requiring any manufacturing methods changes, such as new dies or forming tools.

The blade shown in Fig. 8, is identical with that illustrated in Fig. 7, with the exception that the trailing edge extension 10e is formed as an integral part of the lower camber sheet 7.

The construction of Fig. 9 is a combination of the construction of Figs. 7 and 8 in which the trailing edge extension 10f is formed by extended portions of the upper and lower camber sheets 6 and 7, this construction being particularly advantageous in that a plurality of rows of stitch welds may be employed to secure the trailing edge extension sheets to each other and form a joint highly resistant to fatigue failure.

Although solid non-ferrous propeller blades, such as of aluminum alloy, are generally formed by forging and contour milling, involving much less expense in design changes than in hollow steel manufacturing processes, the principles of the invention may be applied to such propeller blades in the manner illustrated in Figs. 10 and 11. In each of these figures the solid basic propeller blade 20 is recessed on its under camber as indicated at 21 so as to provide for flush mounting of a metal trailing edge extension 22 therein, which may extend beyond the trailing edge of the basic blade section any desired amount. The trailing edge extension 22 may be secured to the blade proper by means of countersunk rivets 23, Fig. 10, or screws, not shown, may be employed, or the extension 22 may be cemented to the blade proper by any one of a number of commercially available thermosetting metal-to-metal adhesives such as the cement known as "Cyclo-weld," as indicated at 25 in Fig. 11.

It will be apparent to those skilled in the art that other variations and forms of the invention may be made falling within the scope of the invention as defined in the appended claims.

I claim:

1. In a basic propeller blade construction having the cross-sections thereof of airfoil section terminating in a trailing edge, means for increas-

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ing the blade area and altering the pitch distribution, comprising a thin rigid metal plate secured to the basic blade such that the plate extends beyond the said basic blade trailing edge to increase the blade area, and the said plate extending radially over at least the working section of the blade, and the plane of the plate at any point being warped angularly away from the plane containing the extended mean camber line curves of the blade sections at that point, the angle of warpage changing progressively from the shank end of the blade to the tip to thereby alter the aerodynamic properties of the sections and to alter the distribution of pitch from that of the basic blade.

2. The structure as claimed in claim 1, in which the basic propeller blade is of hollow steel construction and said rigid sheet metal plate being in the form of a trailing edge extension welded along one edge on both sides of the plate to the trailing edge of the basic blade whereby it is smoothly faired by said welds into the respective blade sections thereof.

3. The structure as claimed in claim 1, in which the rigid sheet metal plate member forming the trailing edge extends around and is welded to the tip of the basic propeller blade to thereby increase the tip radius as well as increasing the blade width and area.

ROSCOE H. MILLS.

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The following references are of record in the file of this patent:

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Number	Country	Date
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142
192



United States Patent [19]
Perry et al.

[11] **Patent Number:** **5,492,448**
[45] **Date of Patent:** **Feb. 20, 1996**

[54] **ROTARY BLADES**
[75] **Inventors:** **Frederick J. Perry, Yeovil; Alan Brocklehurst, Bradford Abbas, both of England**
[73] **Assignee:** **Westland Helicopters Limited, Yeovil, England**
[21] **Appl. No.:** **207,053**
[22] **Filed:** **Mar. 8, 1994**
[30] **Foreign Application Priority Data**
Mar. 13, 1993 [GB] United Kingdom 9305187
Nov. 25, 1993 [GB] United Kingdom 9324298
[51] **Int. Cl.⁶** **B64C 27/467**
[52] **U.S. Cl.** **416/62; 416/228; 416/236 R; 416/243**
[58] **Field of Search** **416/62, 228, 235, 416/236 R, 237, 243; 244/198**

[56] **References Cited**
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88/09745 12/1988 WIPO .

Primary Examiner—F. Daniel Lopez
Assistant Examiner—James A. Larson
Attorney, Agent, or Firm—Larson & Taylor

[57] **ABSTRACT**
A rotary blade includes a fixed boundary layer control device extending spanwise on a lower surface adjacent the trailing edge to improve the lift/thrust characteristics of the blade especially at positive incidence angles. It was discovered that expected detrimental effects at zero/negative incidence did not materialize and the reasons are identified. Such blades are particularly useful for helicopter sustaining and anti-torque rotors.

15 Claims, 8 Drawing Sheets

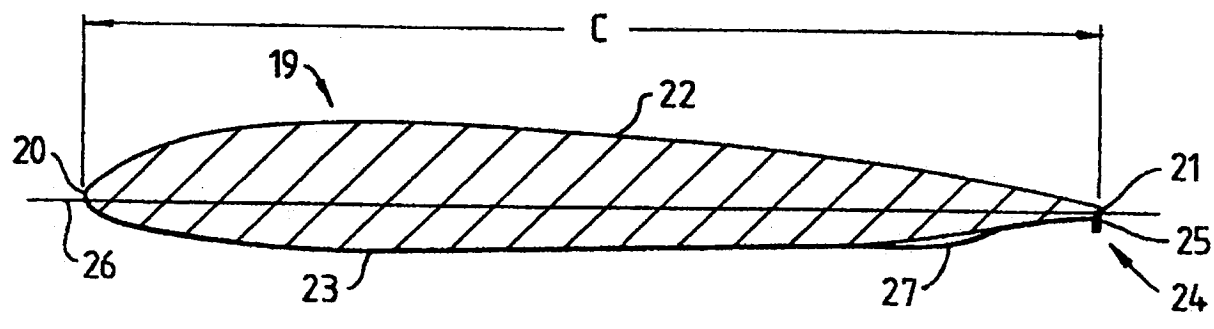


Fig. 12 A

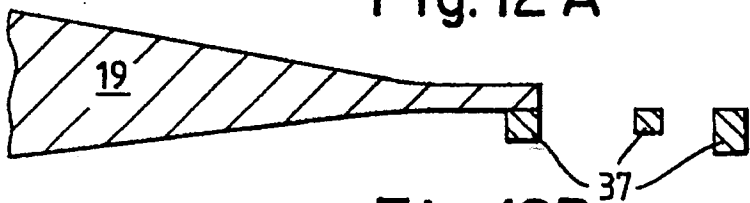


Fig. 12 B

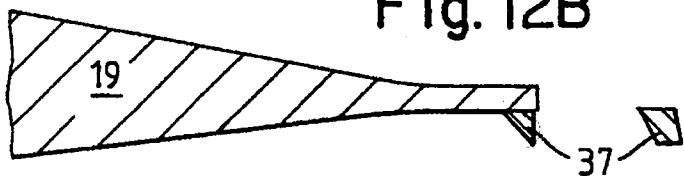


Fig. 12 G

Fig. 12 C

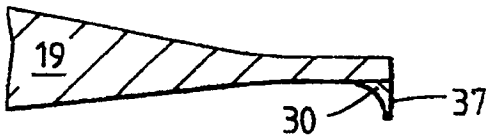
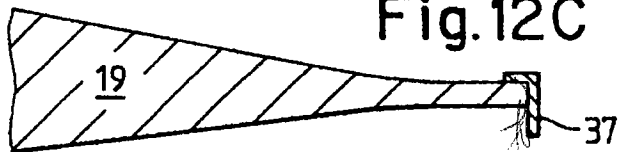


Fig. 12 D

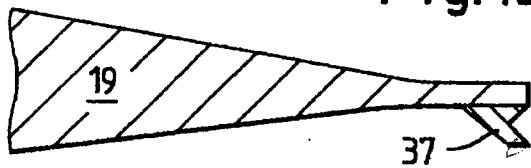


Fig. 12 H

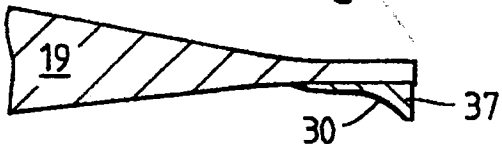


Fig. 12 E

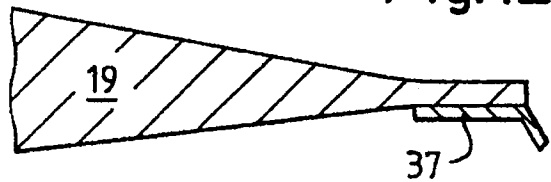


Fig. 12 K

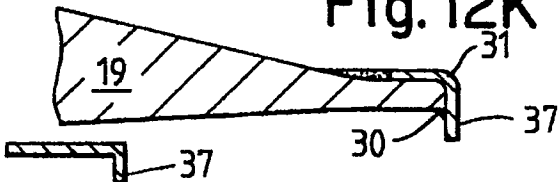


Fig. 12 F

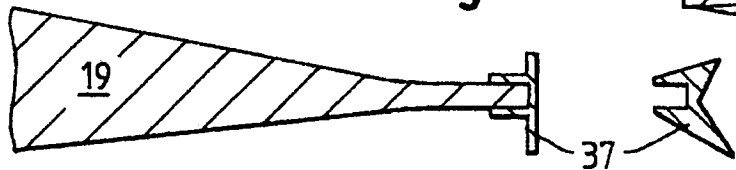
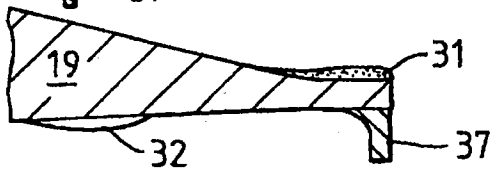


Fig. 12 J



SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
DIVISI3N DE NUEVAS CREACIONES

202086
Bogot3, D.C.,

Abogado
EMILIO FERRERO

ASUNTO	Radicaci3n	05076607
	Tr3mite	002
	Evento	001
	Actuaci3n	430
	Oficio	
	Folios	12

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Patente de Invenci3n	☒	Patente de Modelo de Utilidad	☐
V3a Nacional	☐		
V3a PCT (fase nacional)	☒	Cap. I	☐
		Cap. II	☒
No. Sol. Internacional		PCT/US2004/000125	
Fecha de Presentaci3n Internal.		05-01-2004	

Como resultado del examen de fondo, realizado con fundamento en el art3culo 45 de la Decisi3n 486 de la Comisi3n de la Comunidad Andina, se le comunica:

1. Documentos estudiados

Descripci3n:	Folios: 25 a 46
Reivindicaciones:	Folios: 133 a 138
Dibujos:	Folios: 47 a 52
Prioridad:	Folios: 5 a 52 06-01-2003; US10/338.820

2. Objeto de la invenci3n

- T3tulo de la solicitud: "VENTILADOR DE REFRIGERACION CON ASPA REFORZADA" (folio 25).
- Objeto de la invenci3n: la invenci3n se refiere a un ventilador de refrigeraci3n con aspas para manejar un gran volumen de aire.

Según el autor, para manejar grandes caudales de aire en los edificios se necesita ventiladores de gran diámetro. La mayoría de ventiladores de este tipo tienen aspas extruidas con bordes remanentes sin soporte que pueden rasgarse a causa de la deformación o pandeo durante la formación y el enfriamiento.

Por lo anterior el autor propone un ventilador de refrigeración con aspa reforzada y un método para su fabricación. El aspa del ventilador posee paredes curvas con una unión remanente con una brida doblada que se extiende distalmente desde el borde remanente de manera continua.

- El objeto de esta invención se clasifico como *B21C23/00; B63H1/20* según la Clasificación Internacional de Patentes (IPC.).

3. De la solicitud de Patente

3.1. Reivindicaciones (artículo 30 D 486)

Se sugiere al solicitante:

- Presentar una única reivindicación independiente para el ventilador con aspa reforzada, ya que la solicitud posee un número innecesario de reivindicaciones independientes (1, 16, 28 y 44).
- Eliminar reivindicaciones que aunque están numeradas no tiene ningún contenido (2, 19, 30, 39).
- Eliminar la reivindicación cuarenta (40) ya que depende de la reivindicación treintainueve (39).
- Eliminar y no incluir dentro de las reivindicaciones dimensiones o medidas (7, 9, 10, 11, 20, 21, 22, 23, 25, 28, 44, 45, 47).
- Incluir dentro de todas las reivindicaciones los números de referencia de cada uno de los elementos que hacen parte de la invención, de acuerdo con la numeración empleada en los dibujos (figuras 1 a 7B), con el fin de hacer mas fácil y sencilla la comprensión de la materia objeto reivindicada.
- Definir mejor la reivindicación de método (34) como una secuencia de etapas para obtener las aspas del ventilador.

4. Determinación del Estado de la Técnica

Teniendo en cuenta que la fecha de prioridad reivindicada es 06-01-2003, se encontraron los siguientes documentos relevantes:

N.	Documento	Título	Fecha de pub.
D1	US2450440	PROPELLER BLADE CONSTRUCTION	05-10-1948
D2	US5492448	ROTARY BLADES	20-02-1996

5. Análisis de patentabilidad (artículo 14 D486)

5.1 Novedad (artículo 16 D486)

De acuerdo con la definición de novedad del Artículo 16 de la Decisión 486 de la Comisión de la Comunidad Andina y basándonos en el objeto de la invención se realizó el siguiente análisis:

Al comparar elemento por elemento de la invención tal como esta definido en la reivindicación uno (1) con el documento D1, encontramos que el mencionado documento revela algunos de los elementos y características de dicha reivindicación:

Reivindicación Uno (1, folio 33)	D1
1) Un conjunto de ventilador para la circulación del aire en un edificio industrial, donde el conjunto de ventilador comprende, un soporte adaptado para permitir el montaje del conjunto del ventilador al techo del edificio industrial; un motor acoplado al soporte, el motor accionado por un eje giratorio para inducir la rotación del eje.	SI Ver: Elementos 1, figuras 1-10.
2) Y un grupo de aspas en forma de ala unidas al eje giratorio.	SI Ver: Elementos 1, 3 figura 1.
3) Donde cada aspa es fabricada en un metal extrudido tal que la primera pared recurva es unida a la segunda pared recurva para formar una unión principal y una unión remanente.	SI Ver: Elementos 7, 8, 9 figuras 1-4, columna 2 filas 15 a 20.
4) Y donde la unión remanente se extiende para formar una tercera pared recurva con un borde remanente y siguiendo la curvatura de la primera pared recurva,	SI Ver: Elementos 9, 10, 11, 12, figuras 1-4, columna 2 filas 15 a 20.
5) Cada aspa comprenderá además una brida doblada que se extiende distalmente desde el borde remanente de manera continua.	NO Posee ningún doblez en el extremo de las aspas.

5.2 Nivel Inventivo (artículo 18 D486)

Continuando con el estudio de patentabilidad, la reivindicación independiente uno (1) define una brida doblada que se extiende distalmente desde el borde remanente de manera continua. La utilización de una brida doblada (denominada así por el autor) significa una mejora en las características estructurales de las aspas del ventilador y mas concretamente mejora el desempeño del borde remanente reforzado, esta característica en las aspas de ventilador fue demostrada con mucha anterioridad por el documento D2 que sugiere un reborde extendido de diferentes formas y en diferentes posiciones para el extremo del aspa. (Ver en D2. Elemento 37, figuras 12A – 12J).

Así las cosas, la solicitud se vería afectada por nivel inventivo ya que el contenido de los documentos D1 y D2 brindan las herramientas necesarias para que la persona del oficio normalmente conocedora en el campo pueda tomarlos en consideración, emplearlos y obtener sin dificultad un ventilador de aspas de paredes curvas con bordes remanentes y bridas dobladas. Hecho que no constituye un resultado sorprendente e inesperado y que por el contrario se ubica en el desarrollo normal de la tecnología.

El análisis anterior permitiría afirmar que la presente solicitud no cumpliría con lo estipulado en el artículo 18 de la Decisión 486 de la Comisión de la Comunidad Andina de Naciones.

6. Conclusión:

Los requisitos de patentabilidad de la presente solicitud se encuentran afectados así:

N°	Documento N°	Reivindicaciones afectadas	Requisito que afecta
D1	US2450440	1-33, 44-49	NIVEL INVENTIVO
D2	US5492448	1-33, 44-49	NIVEL INVENTIVO

En cumplimiento del artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se le indica que debe dar respuesta dentro del término de sesenta (60) días contados a partir de la fecha de notificación de la presente comunicación. En caso de no dar respuesta al presente requerimiento, o si a pesar de la respuesta subsistieran los impedimentos para la concesión, se denegará la patente.

Notifíquese el presente oficio conforme a lo dispuesto en el numeral 5.2, literal e), del capítulo quinto del título primero de la Circular Única N° 10 de 2001.


ALIX CARMENZA CÉSPEDES DE VERGEL
Jefe de División de Nuevas Creaciones

El anterior requerimiento fue notificado por fijación en lista, de fecha 12 JUN. 2009

CONCEPTO TÉCNICO No 1619	EXAMINADOR TÉCNICO Código No.202086
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