



⑫ **EUROPEAN PATENT SPECIFICATION**

④⑤ Date of publication of patent specification :
05.01.94 Bulletin 94/01

⑤① Int. Cl.⁵ : **E05D 5/02**

②① Application number : **91201056.8**

②② Date of filing : **03.05.91**

⑤④ **Base with adjustable elements for a hinge wing.**

③⑦ Priority : **11.05.90 IT 2116190 U**

⑦③ Proprietor : **Ferrari, Franco**
Frazione Deviasco, 2
I-22053 Lecco (Como) (IT)

④③ Date of publication of application :
13.11.91 Bulletin 91/46

⑦② Inventor : **Ferrari, Franco**
Frazione Deviasco, 2
I-22053 Lecco (Como,) (IT)
Inventor : **Migli, Carlo**
Via del Pozzo, 8
I-22053 Lecco (Como,) (IT)

④⑤ Publication of the grant of the patent :
05.01.94 Bulletin 94/01

⑧④ Designated Contracting States :
AT BE CH DE DK ES FR GB GR IT LI LU NL SE

⑦④ Representative : **Faraggiana, Vittorio, Dr. Ing.**
Ingg. Guzzi e Ravizza S.r.l. Via Boccaccio, 24
I-20123 Milano (IT)

⑤⑥ References cited :
DE-A- 2 751 459
DE-U- 8 903 362
FR-A- 2 107 135
GB-A- 2 028 914

EP 0 456 314 B1

Note : Within nine months from the publication of the mention of the grant of the European patent, any person may give notice to the European Patent Office of opposition to the European patent granted. Notice of opposition shall be filed in a written reasoned statement. It shall not be deemed to have been filed until the opposition fee has been paid (Art. 99(1) European patent convention).

Description

In the known technique of furniture hinges there are bases which are secured to the piece of furniture and onto which the wing of a hinge is subsequently coupled, for example by snapping into place.

There are bases, such as the one described for example in the IT utility model N° 20408 B/89 on behalf of the same Applicant, that are made with a first part which is firmly secured, for example by means of screws, to the piece of furniture and a second part which is secured to the first part and onto which the wing of the hinge is coupled.

Whenever the hinges are fitted automatically the holes for the screws to secure them to the piece of furniture are drilled automatically by machine and are therefore always accurately positioned.

For substantially aesthetical reasons, it is preferred to have a second part which, once in place, completely covers the first part so as to conceal the fastening screws.

It has been noted, however, that whenever the hinges are fitted by hand it is usually preferable for the screws to be in an easily reachable position even when the two parts of the base have been assembled, in order to be able to mark the position of the holes with the hinge completely assembled, so as to know exactly where to drill them.

Producing two different types of hinges to satisfy these two opposing requirements, however, entails problems and manufacturing and storage costs which are easily imaginable.

The general scope of this invention is to obviate the aforementioned problems by providing a base in two parts for securing wing type hinges, which enables the hinge to be fitted to the piece of furniture with the screw holes either concealed or-visible according to the requirements of the user.

This scope is achieved according to the invention by providing a base having coupling surfaces for a wing of a furniture hinge onto which it can be fitted, comprising a first element, provided from above with said coupling surfaces and from below with a recessed housing, shaped to receive a second element, having a through hole at each end for screws to secure it to the piece of furniture, the first element centrally comprising a through hole for the shank of a screw securing the first element to the second element, as known from IT utility model N° 20408B/89, characterized in that the first element and the second element are reciprocally sized to enable said first element and said second element to be fitted either with an orthogonal or with parallel disposition, and in that in the orthogonal disposition the ends of the second element bearing the through holes protrude from the sides of said first element.

The innovative principles of this invention and its advantages with respect to the known technique will

be more clearly evident from the following description of a possible exemplificative and non-restrictive embodiment applying such principles, with reference to the accompanying drawings, in which:

- figure 1 shows an exploded side view of a hinge with a base applying the principles of this invention;
- figure 2 shows a plan view of one part of the base of figure 1;
- figure 3 shows a plan view of the base of figure 1 in a first fitting condition;
- figure 4 shows a plan view of the base of figure 1 in a second fitting condition.

With reference to the figures, as shown in figure 1, a base made according to the invention and generically indicated by reference 10, comprises a first element 12 shaped to couple with, for example by snapping onto, an articulated wing 13, which is partially shown since it is of known technique and therefore easily imaginable by any technician and a second plate element 11 to be secured to the piece of furniture. The wing can be for example of the type provided with height and position adjustment. For example, the upper portion of the element 12 and the articulated wing 13, with their reciprocal coupling, can be of the type described in the IT utility model N° 22155 B/88 on behalf of the same Applicant.

The plate element 11 (as can be more clearly seen in figure 2) is substantially cross-shaped with two countersunk holes 14 and 15 at the ends of the longer arms of the cross. Disposed between the two holes, and protruding from the upperside of the plate 11, is a strengthening rib 16 centrally provided with a screw hole 17 for a screw 18.

The coupling element 12 is provided from below, as shown by the broken line in figures 1, 3 and 4, with a housing 19, also shaped substantially in the form of a cross, to receive the plate with side play. The cross-shaped housing 19 has its longer arms parallel to the extension of the hinge and its shorter arms opening crosswise to the base (as can be clearly seen in figure 1).

Moreover, the coupling element 12 has a vertical hole 20, extending through to the base, for passage of the shank of the screw 18.

As shown in figures 3 and 4, the plate element 11 and the lower housing 19 are reciprocally sized to enable the plate element 11 and coupling element 12 to be fitted either with an orthogonal disposition (figure 3) or with a parallel disposition (figure 4). In the former case, the longer arms of the plate 11 protrude from the sides of the base so as to give access to the holes 14 and 15 even when the hinge is assembled. In the latter case, the plate 11 fits completely inside the housing 19 and the holes 14 and 15 are only accessible when the element 12 is removed. The hole 20 advantageously enables the screw 18 to slide laterally so that the position of the plate 11 can also be

adjusted crosswise to the hinge with respect to the element 12 by simply loosening the screw 18. For this purpose, the wing 13 can be provided from above with a control passage 21 for the screw 18, so as to be able to carry out the adjustment when the hinge is fully assembled.

It is obvious at this point that the intended scopes have been achieved. By loosening or completely unscrewing the screw 18 and rotating the plate 11 by 90°, the same base 10 can be used with the fastening holes visible (figure 3) or with the fastening holes concealed (figure 4).

The foregoing description of an embodiment applying the innovatory principles of this invention is obviously given merely by way of example in order to illustrate such innovatory principles as defined by the appended claims.

For example, the coupling system between the wing and coupling element can be of any known type, such as snap-on, sliding fit, screw-on, etc..

Moreover, the shape of the plate 11 and, consequently, the housing 19 can be different from those shown and not necessarily cross-shaped.

Claims

1. A base (10) having coupling surfaces for a wing (13) of a furniture hinge onto which it can be fitted, comprising a first element (12) provided from above with said coupling surfaces and from below with a recessed housing (19) shaped to receive a second element (11) having a through hole (14, 15) at each end for screws to secure it to the piece of furniture, the first element (12) centrally comprising a through hole (20) for the shank of a screw (18) securing the first element to the second element, characterized in that the first element (12) and the second element (11) are reciprocally sized to enable said first element and said second element to be fitted either with an orthogonal or with a parallel disposition, and in that in the orthogonal disposition the ends of the second element (11) bearing the through holes (14, 15) protrude from the sides of said first element (12).
2. A base as claimed in claim 1, characterized in that said recessed housing (19) is shaped to enable adjustment of the reciprocal position of the first and second element parallelly to the securing surface and that the through hole (20) for the shank of a screw extends in a direction crosswise to the hinge.
3. A base as claimed in claim 1, characterized in that said recessed housing (19) is generically shaped in the form of a straight cross with its arms

lengthwise and crosswise respectively to the extension of the hinge, the crosswise arms being open at the ends on lateral opposing sides of the first element (12), to enable the passage of the second element (11) when it is disposed in said second position.

4. A base as claimed in claim 3, characterized in that the second element (11) is generically shaped in the form of a straight cross with its first opposing arms bearing the securing holes and second opposing arms shorter in length than said first opposing arms.

Patentansprüche

1. Scharnierunterteil (10) mit Kupplungsflächen für einen Flügel (13) eines Möbelscharniers, auf dem dieser befestigt werden kann, das aus einem ersten Element (12) besteht, welches auf der Oberseite die genannten Kupplungsflächen und auf der Unterseite ein eingelassenes Gehäuse (19) aufweist, dessen Formgebung die Aufnahme eines zweiten Elements (11) ermöglicht, welches an jedem Ende ein Durchgangsloch (14, 15) zu dessen Schraubbefestigung am Möbelstück hat, wobei das erste Element (12) in zentraler Position ein Durchgangsloch (20) zur Aufnahme des Schafts einer Schraube (18) zur Befestigung des ersten Elements am zweiten Element hat, dadurch gekennzeichnet, daß das erste Element (12) und das zweite Element (11) gegeneinander so geformt sind, daß eine Verbindung des genannten ersten Elements und des genannten zweiten Elements sowohl in senkrechter als auch in paralleler Anordnung zueinander möglich ist, sowie dadurch, daß bei einer senkrechten Anordnung der beiden Elemente zueinander die Enden des zweiten Elements (11), das die beiden Durchgangslöcher (14, 15) enthält, unter den Seiten des genannten ersten Elements (12) herausragen.
2. Scharnierunterteil nach Anspruch 1, dadurch gekennzeichnet, daß das besagte eingelassene Gehäuse (19) so geformt ist, daß eine gegenseitige Befestigung des ersten mit dem zweiten Element parallel zur Montageoberfläche ermöglicht wird, und daß das Durchgangsloch (20) zur Aufnahme des Schraubenschafts sich senkrecht zum Scharnier angebracht ist.
3. Scharnierunterteil nach Anspruch 1, dadurch gekennzeichnet, daß das besagte eingelassene Gehäuse im allgemeinen die Form eines rechtwinkligen Kreuzes hat, dessen längs- und querstehende Arme den Ausmaßen des Scharniers entsprechen, wobei die querstehenden Arme an

den Enden der sich seitlich gegenüberstehenden Seiten des ersten Elements (12) offen sind, so daß ein ungehinderter Durchgang für das zweite Element (11) ermöglicht wird, wenn dieses in der genannten zweiten Position befestigt wird.

4. Scharnierunterteil nach Anspruch 3, dadurch gekennzeichnet, daß das zweite Element (11) im allgemeinen die Form eines rechtwinkligen Kreuzes hat, dessen eines Paar sich gegenüberstehender Arme die Befestigungslöcher enthält und dessen zweites Paar in der Länge kürzer als das genannte erste gegenüberstehende Armpaar ist.

Revendications

1. Base (10) ayant des surfaces de liaison pour un bras (13) d'une charnière d'ameublement sur lesquelles il peut être agencé, comportant un premier élément (12) pourvu sur le dessus desdites surfaces de liaison et sur le dessous d'un boîtier creusé (19) formé pour recevoir un second élément (11) ayant un trou traversant (14, 15) au niveau de chaque extrémité pour des vis destinées à le fixer sur le meuble, le premier élément (12) comportant centralement un trou traversant (20) pour la tige d'une vis (18) fixant le premier élément sur le second élément, caractérisé en ce que le premier élément (12) et le second élément (11) sont dimensionnés de manière réciproque pour permettre audit premier élément et audit second élément d'être agencés soit selon une disposition perpendiculaire soit selon une disposition parallèle, et en ce que dans ladite disposition perpendiculaire les extrémités du second élément (11) comportant les trous traversants (14, 15) font saillie par rapport aux côtés dudit premier élément (12).
2. Base selon la revendication 1, caractérisée en ce que ledit boîtier creusé (19) est formé pour permettre le réglage de la position réciproque du premier et du second éléments parallèlement à la surface de fixation, et en ce que le trou traversant (20) pour la tige d'une vis s'étend dans une direction perpendiculaire à la charnière.
3. Base selon la revendication 1, caractérisée en ce que ledit boîtier creusé (19) est formé de manière générale sous la forme d'une croix droite ayant ses bras dans la direction longitudinale et dans la direction transversale respectivement par rapport à l'étendue de la charnière, les bras en direction transversale étant ouverts au niveau des extrémités sur les côtés latéraux opposés du premier élément (12) pour permettre le passage du second élément (11) lorsqu'il est agencé dans la-

dite second position.

4. Base selon la revendication 3, caractérisé en ce que le second élément (11) est de manière générale formé en forme de croix droite ayant ses premiers bras opposés comportant les trous de fixation et ses seconds bras opposés ayant une longueur plus courte que lesdits premiers bras opposés.

15

20

25

30

35

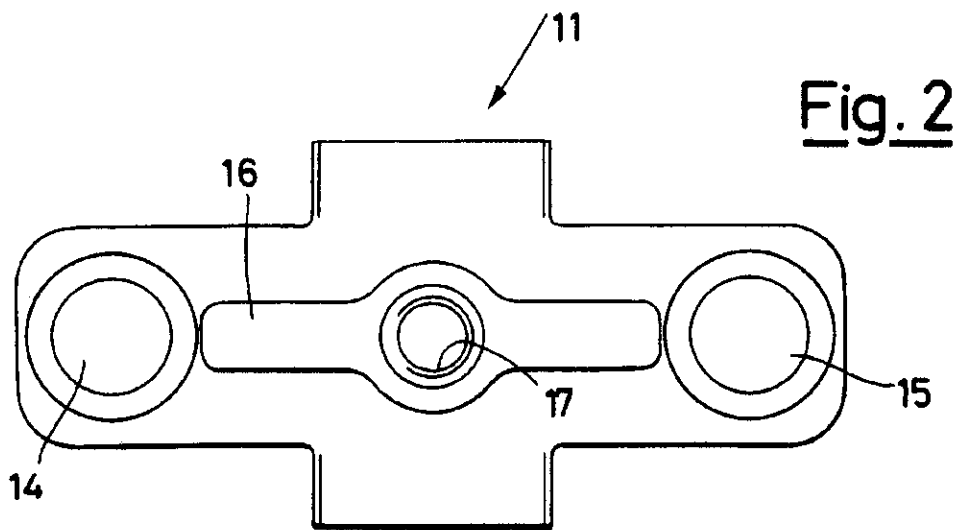
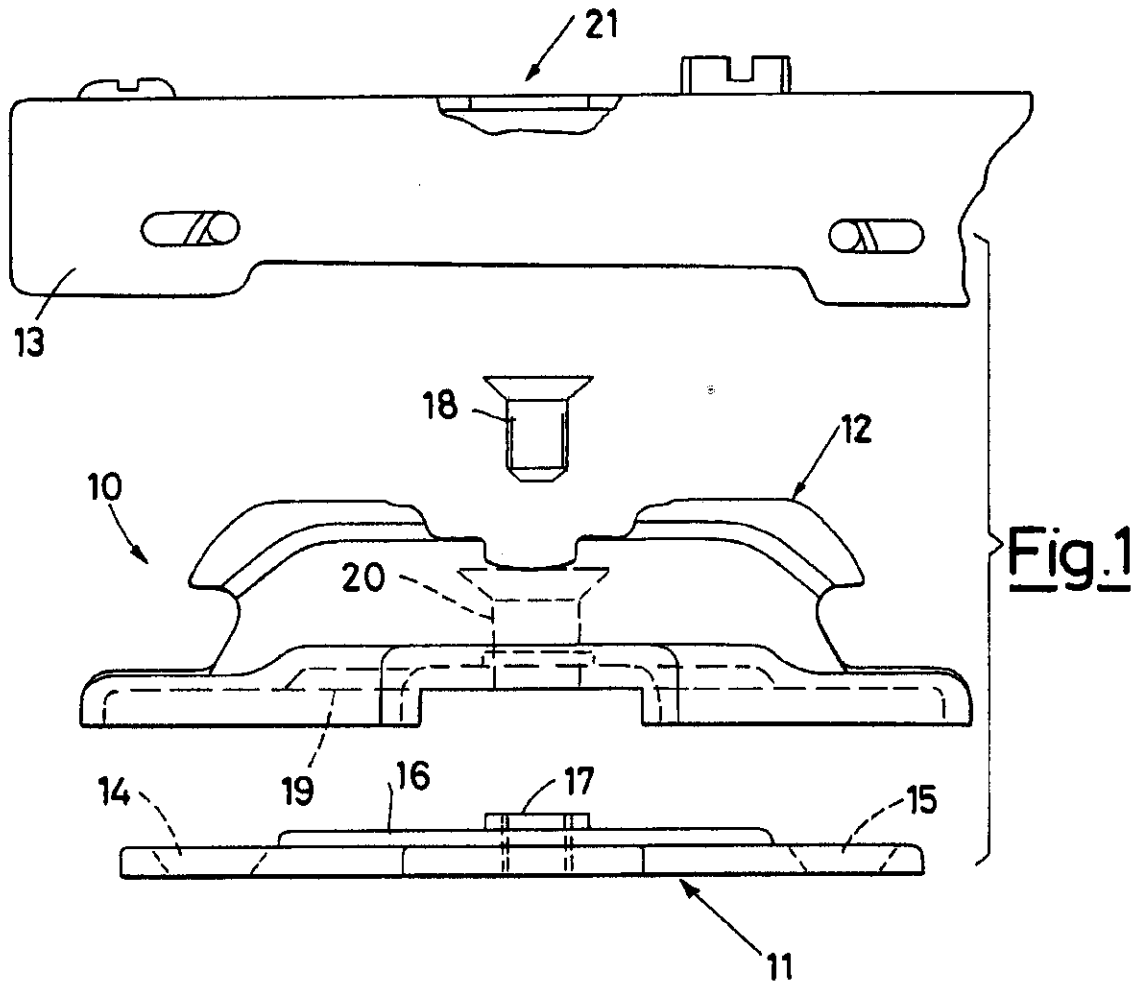
40

45

50

55

4



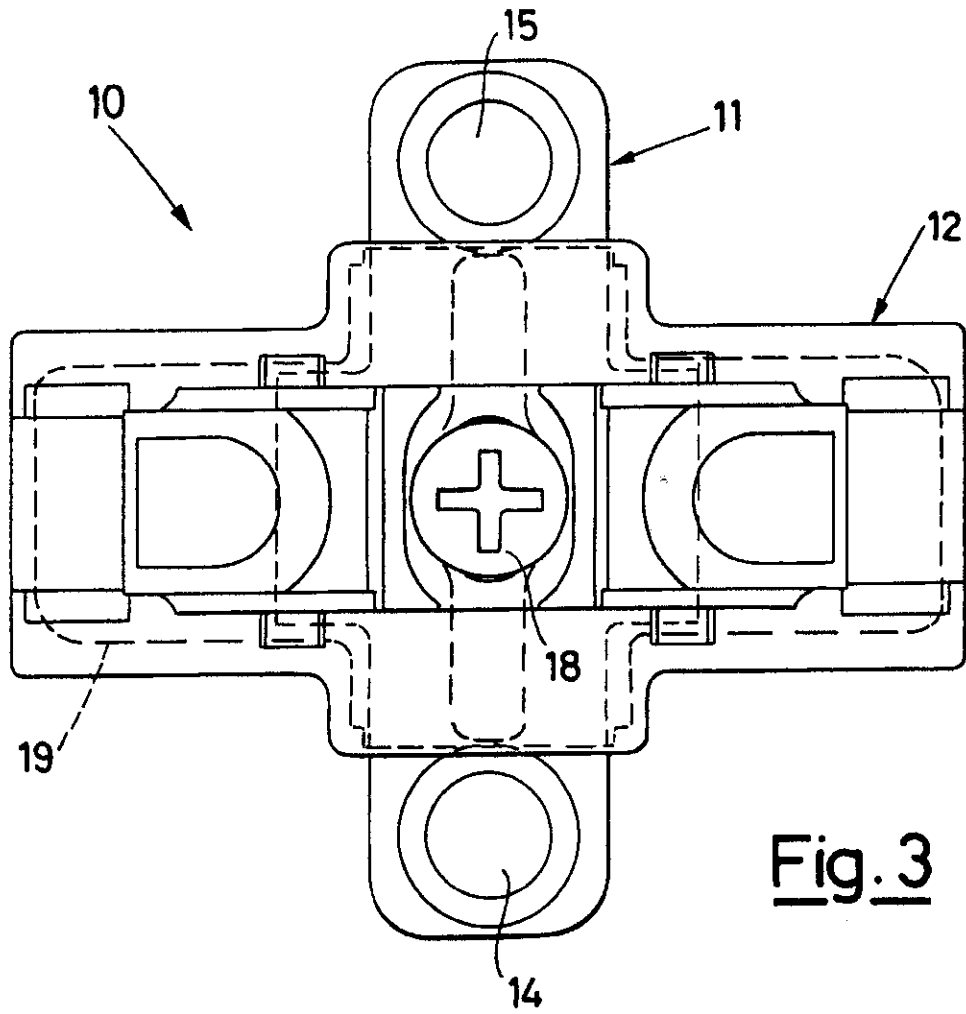


Fig. 3

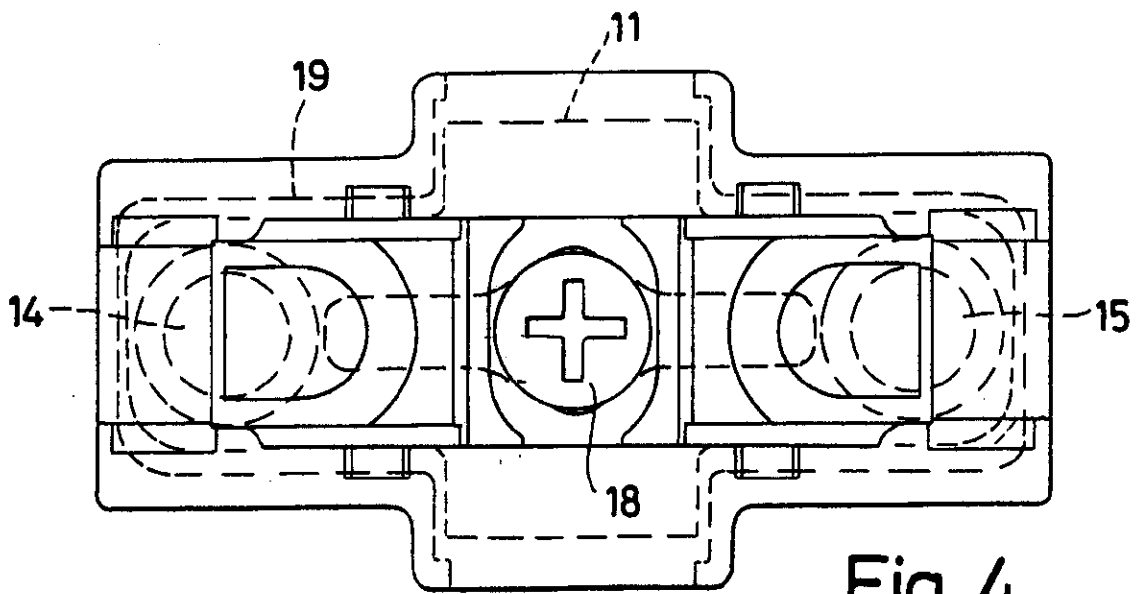


Fig. 4

REGISTER ENTRY FOR EP0456314

European Application No EP91201056.8 filing date 03.05.1991

Priority claimed:

11.05.1990 in Italy - doc: 2116190U

Designated States BE CH DE DK ES FR GB GR IT LI LU NL SE AT

Title BASE WITH ADJUSTABLE ELEMENTS FOR A HINGE WING.

Applicant/Proprietor

FRANCO FERRARI, Frazione Deviscio, 2, I-22053 Lecco (Como), Italy
[ADP No. 59114926001]

Inventors

FRANCO FERRARI, Frazione Deviscio, 2, I-22053 Lecco (Como,), Italy
[ADP No. 59114934001]

CARLO MIGLI, Via del Pozzo, 8, I-22053 Lecco (Como,), Italy
[ADP No. 59114942001]

Classified to

E05D

Address for Service

SWINDELL & PEARSON, 48 Friar Gate, DERBY, DE1 1GY, United Kingdom
[ADP No. 00001578001]

EPO Representative

DR. ING. VITTORIO FARAGGIANA, Ingg. Guzzi e Ravizza S.r.l. Via Boccaccio,
24, I-20123 Milano, Italy [ADP No. 50331990001]

Publication No EP0456314 dated 13.11.1991

Publication in English

Examination requested 11.05.1992

Patent Granted with effect from 05.07.1994 (Section 25(1)) with title BASE
WITH ADJUSTABLE ELEMENTS FOR A HINGE WING.

09.09.1993 SWINDELL & PEARSON, 48 Friar Gate, DERBY, DE1 1GY, United Kingdom
[ADP No. 00001578001]

registered as address for service

Entry Type 8.11 Staff ID. ER1 Auth ID. F51

**** END OF REGISTER ENTRY ****

OA80-01
EP

OPTICS - PATENTS

18/05/94 13:24:54
PAGE: 1

RENEWAL DETAILS

PUBLICATION NUMBER EP0456314

PROPRIETOR(S)
Franco Ferrari, Frazione Deviscio, 2, I-22053 Lecco (Como), Italy

DATE FILED 03.05.1991

DATE GRANTED 05.01.1994

DATE NEXT RENEWAL DUE 03.05.1995

DATE NOT IN FORCE

DATE OF LAST RENEWAL

YEAR OF LAST RENEWAL 00

STATUS PATENT IN FORCE