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(12) **United States Plant Patent Plate**

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(54) **PHALAEOPSIS PLANT NAMED 'EXOTIC FIRE'**

(52) **U.S. Cl. Plt./311**

(58) **Field of Search Plt./311**

(50) Latin Name: *Phalaenopsis sp. Orchid*
Varietal Denomination: **Exotic Fire**

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(57) **ABSTRACT**

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

A new and distinct cultivar of Phalaenopsis plant named 'Exotic Fire', characterized by its pale yellow-colored flowers with red purple-colored venation and red purple-colored labellum; freely flowering habit; upright, freely branching and sturdy flowering stems, and excellent postproduction longevity.

(21) Appl. No.: **10/232,893**

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(51) **Int. Cl.⁷ A01H 5/00**

2 Drawing Sheets

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Botanical classification/cultivar designation: Phalaenopsis sp. Orchid cultivar Exotic Fire.

from plants of the cultivar Nopsya in the following characteristics:

BACKGROUND OF THE INVENTION

The present invention comprises a new and distinct cultivar of Phalaenopsis Orchid, and hereinafter referred to by the cultivar name, Exotic Fire.

1. Plants of the new Phalaenopsis Orchid were taller than, but not as broad as plants of the cultivar Nopsya.
2. Plants of the new Phalaenopsis Orchid had narrower and darker green-colored leaves than plants of the cultivar Nopsya.
3. Plants of the new Phalaenopsis Orchid were more freely flowering than plants of the cultivar Nopsya.
4. Plants of the new Phalaenopsis Orchid had larger inflorescences with more flowers per inflorescence than plants of the cultivar Nopsya.
5. Plants of the new Phalaenopsis Orchid had larger flowers than plants of the cultivar Nopsya.
6. Plants of the new Phalaenopsis Orchid and the cultivar Nopsya differed in flower color.

The new cultivar is a product of a planned breeding program conducted by the Inventor in Bremen, Germany. The objective of the breeding program is to create new uniform pot-type Phalaenopsis Orchid cultivars having attractive flower coloration.

The new cultivar was discovered by the Inventor from within the progeny of a cross-pollination of two unidentified proprietary selections of Phalaenopsis Orchids, not patented, on Mar. 3, 1998, in a controlled environment in Bremen, Germany.

BRIEF DESCRIPTION OF THE PHOTOGRAPHS

Asexual propagation by tissue culture in a laboratory in Bremen, Germany has been used to increase the number of plants for evaluation and has demonstrated that the unique combination of characteristics as herein disclosed for the new Phalaenopsis Orchid are firmly fixed and are retained through successive generations of asexual reproduction.

Colors in the photographs may appear different from the color values that appear in the detailed botanical description which more accurately describe the new cultivar.

SUMMARY OF THE INVENTION

The photograph on first sheet comprises a side perspective view of a typical flowering plant of the new cultivar grown in a 12-cm container.

The following traits have been repeatedly observed and are determined to be basic characteristics of new cultivar which in combination distinguish this Phalaenopsis Orchid as a new and distinct cultivar:

The photograph at the top of the second sheet is a close-up view of typical inflorescences of the new cultivar.

1. Pale yellow-colored flowers with red purple-colored venation and red purple-colored labellum.
2. Freely flowering habit.
3. Upright, freely branching and sturdy flowering stems.
4. Excellent postproduction longevity.

The photograph at the bottom of the second sheet is a close-up view of a typical flower of the new cultivar.

DETAILED BOTANICAL DESCRIPTION

Plants of the new cultivar differ primarily from plants of the parent cultivars in flower color.

Plants of the new cultivar have not been observed under all possible environmental conditions. The phenotype may vary significantly with variations in environment such as temperature and light intensity, without however, any change in genotype. In the following description, color references are made to The Royal Horticultural Society Colour Chart, 1995 Edition, except where general terms of ordinary dictionary significance are used.

Plants of the new Phalaenopsis Orchid can be compared to plants of the cultivar Nopsya, disclosed in U.S. Plant Pat. No. 10,682. In side-side comparisons conducted in Bremen, Germany, plants of the new Phalaenopsis Orchid differed

Plants used for the aforementioned photographs and following detailed botanical description were 11 months old and grown in 12-cm containers in Bremen, Germany, in a glass-covered greenhouse with day temperatures about 23 to 26° C., night temperatures about 22 to 25° C., and light levels about 18,000 lux. The photographs and the detailed botanical description were taken during the winter.

Botanical classification: *Phalaenopsis* cultivar Exotic Fire.

Patentage:

Female, or seed, parent.—Unidentified proprietary selection of *Phalaenopsis*, not patented.

Male, or pollen, parent.—Unidentified proprietary selection of *Phalaenopsis*, not patented

Propagation:

Type.—Asexual propagation by tissue culture.

Time to initiate and elongate roots.—Summer and winter: About 56 days at 25° C.

Time to produce a fully rooted young plant.—Summer: About 175 days at 25° C. Winter: About 189 days at 25° C.

Root description.—Very thick, fleshy, and greenish white in color.

Plant description:

Form.—Two-ranked leaves affixed to a short central stem (monopodial growth). Single flowers arranged on upright and sturdy flowering racemes.

Plant height, soil level to top of foliar plane.—About 20 cm.

Plant height, soil level to top of inflorescences.—About 60 to 65 cm.

Plant diameter.—About 30 to 35 cm.

Foliage description.—Leaves simple, opposite; sessile.

Quantity per plant: About six. Length: About 20 cm.

Width: About 6 cm. Shape: Elliptic, elongated. Apex:

Obtuse and rounded to slightly retuse. Base:

Cuneate. Margin: Entire. Aspect: Mostly flat and

folded upward from the midrib. Texture, upper and

lower surfaces: Leathery, thick, glabrous. Venation:

Parallel; veins are sunken within the lamina. Color:

Young and mature foliage, upper surface: 147A,

slightly glossy. Young and mature foliage, lower

surface: 147B. Veins, upper and lower surfaces:

Same as lamina.

Flower description:

Flower type and habit.—Single zygomorphic flowers

arranged in racemes; flowers roughly pentagonal in

shape. Flowering stems, upright, freely branching

and sturdy. Plants freely flowering; plants typically

produce one to three branched flowering stems with

at least 7 to 9 flowers each. Flowers not fragrant.

Flowers persistent. Flowers facing mostly outward.

Natural flowering season.—From January to April in

northern Germany. Plants begin flowering about nine

months after planting.

Post-production longevity.—Plants of the new

Phalaenopsis Orchid maintain good leaf and flower

substance for about four to five months on the plant

under interior environmental conditions. Cut flowers

of the new *Phalaenopsis* Orchid maintain good sub-

stance for about three to four weeks.

Inflorescence length.—About 20 to 24 cm.

Inflorescence diameter.—About 12 to 15 cm.

Flower diameter.—About 9.5 cm.

Flower depth.—About 2 cm.

Flower buds.—Shape: Ovoid. Length: About 2.5 cm. Width: About 1.5 cm. Color: 146D.

Petals.—Quantity/type: Three per flower; lateral petals similar in size and shape; the lowermost petal, the labellum, is deeply three-lobed. Lateral petals: Length: About 4.5 cm. Diameter: About 4.5 cm. Shape: Broadly ovate. Apex: Rounded acute. Base: Attenuate; fused with the column. Margin: Entire. Texture, upper and lower surfaces: Velvety, silky; smooth. Color: When opening, upper surface: 11B, with red purple, 70A, venation; towards the base, 70C. When opening, lower surface: 8D; towards the base, overlain with 154D. Fully opened, upper surface: 6D, with red purple, 70B, venation; towards the base, 70C; with subsequent development, venation becoming closer to 70D. Fully opened, lower surface: 11D; towards the base, overlain with 154D. Labellum: Length, not flattened: About 3.6 cm. Diameter, not flattened: About 2.5 cm. Shape: Deeply three-lobed with two prominent callosities on the upper surface at the central junction of the lateral lobes and base of the midlobe. The lateral lobes fold upward about the column, the midlobe extends forward and is terminated by two twisted filiform appendages (about 2 mm in length) at the apex. Callosities length: About 6 mm. Callosities width: About 5 mm. Texture, upper and lower surfaces: Velvety, silky; smooth. Color: When opening and fully opened, upper surface: Lateral lobes and midlobe: 59B; towards the apex, 72A. Callosities: 12A. Central area: Close to 155D with red purple, 59B, stripes and speckles. When opening and fully opened, lower surface: Lateral lobes: Close to 155D; lateral margins, 72A. Midlobe: 72A.

Sepals.—Quantity: Three per flower. Length: About 4.7 cm. Diameter: About 2.8 cm. Shape: Elliptic to ovate. Apex: Rounded acute. Base: Attenuate; fused with the petals and column. Margin: Entire. Texture, upper and lower surfaces: Velvety; smooth. Color: When opening, upper surface: 11B, with red purple, 70A, venation. Lower sepals, towards the base, dark red, 46A, speckles. When opening, lower surface: 8D; towards the base, overlain with 154D. Fully opened, upper surface: 6D, with red purple, 70B, venation. Lower sepals, towards the base, dark red, 46A, to red purple, 72B, random speckles. Fully opened, lower surface: 11D; towards the base, overlain with 154D.

Peduncles.—Length: About 60 cm. Diameter: About 5 mm. Aspect: Upright. Strength: Strong, sturdy. Texture: Smooth, glabrous. Color: 146A overlain with 59A.

Pedicels.—Length: About 4.5 cm. Diameter: About 3 mm. Aspect: About 75° from vertical. Strength: Strong. Texture: Smooth, glabrous. Color: Closest to 154D.

Reproductive organs.—Arrangement. Stamens and pistils fused into a column. Anthers with pollen grains united into pollinia. Stigma situated under the column and behind the pollinia. Ovary inferior with three carpels. Column: Length: About 1.2 cm. Diameter: About 6 mm. Color: 77B to 77C. Pollinia: Quantity of pollen masses: Two. Diameter: About 1.2 cm. Color: 23B. Stigma: Shape: Rounded, concave. Length: About 5 mm. Diameter: About 4.5 mm. Color: 155D. Ovary: Length: About 1.6 cm. Diameter: About 3 mm. Color: 155A.

Seed/fruit.—Seed and fruit production has not been observed.

Disease/pest resistance: Resistance to known pathogens and pests common to *Phalaenopsis* Orchids has not been

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observed on plants of the new cultivar grown under commercial greenhouse conditions.
Temperature tolerance: Plants of the new Phalaenopsis Orchid have been observed to be tolerant to temperatures from about 14 to 32° C.

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It is claimed:
1. A new and distinct cultivar of Phalaenopsis plant named 'Exotic Fire', as illustrated and described.

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