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Schoone

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(54) **PHALAEOPSIS ORCHID PLANT NAMED**
'DOUBLE DELIGHT'

(50) Latin Name: *Phalaenopsis hybrida*
Varietal Denomination: **Double Delight**

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A01H 5/02 (2006.01)

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

(58) **Field of Classification Search**
USPC Plt./311
See application file for complete search history.

(56) **References Cited**

PUBLICATIONS

PLUTO Plant Variety Database Jun. 11, 2016. p. 1.*

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(57) **ABSTRACT**

A new and distinct *Phalaenopsis* plant named 'Double Delight' particularly characterized by flowers which are white with purple/violet and a red/purple labellum; plants which may be propagated economically and uniformly using tissue culture; plants which produce more than one inflorescence; long and sturdy inflorescences; and relatively short, dark-green foliage.

3 Drawing Sheets

Latin name of the genus and species of the plant claimed:
Phalaenopsis hybrida.

Variety denomination: 'Double Delight',

BACKGROUND OF THE INVENTION

The present invention relates to a new and distinct cultivar of *Phalaenopsis* plant, botanically known as *Phalaenopsis* of the Orchidaceae family, and hereinafter referred to by the cultivar name 'Double Delight'.

Phalaenopsis comprises a genus of about 55 species of herbaceous perennials many of which, or the hybrids thereof, are suitable for cultivation in the home or greenhouse. *Phalaenopsis* is predominantly epiphytic or rock-dwelling, and is native to tropical Asia, the Malay Archipelago, and Oceania. The species typically has 2-ranked, fleshy, oblong or elliptic leaves affixed to a short central stem (monopodial growth), which vary in size from 5 to 8 inches to over 2 feet. The leaves may be entirely green or mottled with silver grey.

Phalaenopsis orchids, often referred to as 'Moth Orchids' in the horticultural trade, are frequently used to furnish cut flowers for the florist trade or sold as flowering potted-plants for home or interiorscape.

Phalaenopsis produces upright or pendent lateral racemes, often with many showy flowers which open in succession beginning with the lowermost. The flowers possess three sepals and three petals; the lateral ones being alike. The lowermost petal, called the labellum, is three-lobed and is often more brightly-colored than the other

flower segments. Flower colors include various shades of pink, white, yellow and red-brown.

Phalaenopsis orchids are typically propagated from seeds. Asexual propagation of *Phalaenopsis* is often done from off-shoots which frequently arise from the lower bracts of the inflorescence. The resulting plants are detached from the mother plant and may be planted in a suitable substrate.

The new *Phalaenopsis* 'Double Delight' is a product of a controlled breeding program conducted by the inventor, René Schoone, in Strengweg, Heemskerk, The Netherlands. The objective of the breeding program was to develop a new *Phalaenopsis* cultivar particularly characterized by its attractive and unique colored flowers, economical propagation via tissue culture, rapid growth, and a plant dimension suitable for packaging and shipping to the market.

The new *Phalaenopsis* 'Double Delight' originated from a cross made by the inventor in 2001 in Strengweg, Heemskerk, The Netherlands. The female or seed parent is the *Phalaenopsis* cultivar designated 'Joseph Hampton', unpatented. The male or pollen parent is the *Phalaenopsis* cultivar designated 'Moon World', unpatented. The new *Phalaenopsis* 'Double Delight' was discovered and selected by the inventor as a single flowering plant within the progeny of the stated cross in a controlled environment in 2009 in Strengweg, Heemskerk, The Netherlands.

Asexual reproduction of the new *Phalaenopsis* cultivar by tissue culture (mericlone) was first performed in November, 2009 in Cieweg 13, Heemskerk, The Netherlands, and has demonstrated that the combination of characteristics as

herein disclosed for the new cultivar are firmly fixed and retained through successive generations of asexual reproduction. The new cultivar asexually reproduces true-to-type.

BRIEF DESCRIPTION OF THE INVENTION

The following traits have been repeatedly observed and are determined to be unique characteristics of 'Double Delight', which in combination distinguish this *Phalaenopsis* as a new and distinct cultivar:

1. flowers which are white with purple/violet and a red/purple labellum;
2. plant produces more than one inflorescence;
3. plants may be propagated economically and uniformly using tissue culture;
4. inflorescences are long and sturdy; and
5. relatively short, dark-green foliage.

In comparison with the parental cultivars of 'Double Delight', the female parent 'Joseph Hampton' is white with a pink haze and a red labellum. The male parent 'Moon World' is white, whereas the flowers of 'Double Delight' are white with purple/violet and a red/purple labellum.

Presently, the commercial cultivar to which 'Double Delight' can be meaningfully compared is '331996' (unpatented). The flowers of 'Double Delight' have more white and less purple/violet than the flowers of '331996'. Also differs the shape of the mid lobe of the labellum and the color of the labellum. The main color of the labellum of 'Double Delight' is red/purple, whereas the main color of the labellum of '331996' is purple/violet.

BRIEF DESCRIPTION OF THE PHOTOGRAPHS

The accompanying photographs illustrate the overall appearance of the new *Phalaenopsis* 'Double Delight' showing the colors as true as is reasonably possible with colored reproductions of this type. Colors in the photographs may differ slightly from the color values cited in the detailed botanical description, which accurately describe the color of 'Double Delight'.

FIG. 1 shows a side view perspective of a typical flowering plant of 'Double Delight' in a 12 cm pot, at 16 months of age.

FIG. 2 shows a close-up view of the typical flower of 'Double Delight'.

FIG. 3 shows a close-up view of the typical leaves of 'Double Delight'

DETAILED BOTANICAL DESCRIPTION

The new *Phalaenopsis* cultivar 'Double Delight' has not been observed under all possible environmental conditions. The phenotype of the new cultivar may vary with variations in environment such as temperature, light intensity, and day length without any change in the genotype of the plant.

The aforementioned photographs, together with the following observations, measurements and values describe plants of 'Double Delight' as grown in a greenhouse in Strengweg, Heemskerk, The Netherlands, under conditions which closely approximate those generally used in commercial practice. Initially, the ideal temperature to grow plants of 'Double Delight' is 27° C. during the day and at night. Then, during the flowering phase of 'Double Delight', the ideal growing temperature is 20-22° C. during the day and 18° C. at night. Light levels for growing 'Double Delight' are a minimum of 5,000 lux and a maximum of 10,000 lux.

A balanced fertilizer with level of 200 ppm N, 87 ppm P, 168 ppm K is applied. Duration of growth of 'Double Delight' from potting size is between 10 and 14 months.

Color references are made to The Royal Horticultural Society Colour Chart (R.H.S.), 2007 edition, except where general colors of ordinary significance are used. Color values were taken under daylight conditions at approximately noon in Zaandammerweg, Assendelft, The Netherlands. The age of the 'Double Delight' plants described is 12 months after potting.

Classification:

Botanical.—*Phalaenopsis hybrida*.

Parentage:

Female or seed parent.—*Phalaenopsis* cultivar designated 'Joseph Hampton', unpatented.

Male or pollen parent.—*Phalaenopsis* cultivar designated 'Moon World', unpatented.

Propagation:

Type.—Tissue culture.

Rooting habit and description: Fleshy; approximately 4 mm-6 mm wide and greyed/green in color (RHS 190B); freely branching. It takes 12 weeks for plants growing in tissue culture to initiate roots

Plant:

Size at maturity.—Height (from bottom of pot to highest flower): about 70 cm. Spread: about 25 cm to 55 cm.

Growth habit.—Large; green with grey/purple leaves (RHS 137A) and a relatively normal raceme.

Vigor.—Moderate.

Crop time.—Following asexual propagation, at about 26 weeks 2 leaves appear; at about 30 weeks 3-4 leaves appear; after a cold treatment of about 4-8 weeks at a temperature of about 19° C. about 1-2 racemes with flowers appear.

Foliage:

Quantity per plant.—About 6-8 leaves are produced before flowering.

Arrangement and attachment.—Half up/horizontal and on two sides.

Overall shape of leaf.—Oval; the tip is blunt and asymmetric.

Texture (upper & underside).—Smooth and leathery.

Pubescence.—None.

Mature leaf length.—About 20 cm.

Mature leaf width.—About 7.5 cm.

Mature leaf thickness.—About 2 mm.

Mature leaf color.—Upper side: green (RHS 137A). Under side: green (RHS 137B) with brown (RHS 200A).

Leaf base.—Acute.

Margin.—Entire.

Venation.—Pattern: parallel. Color of midvein: upper side: green (RHS 139A). under side: green (RHS 137A) and brown (RHS 200A).

Inflorescence description:

Appearance.—Upright to slightly pendant, racemose inflorescence with bilaterally symmetrical flowers that open in succession beginning with the lowermost flower.

Raceme.—Quantity per plant: about 1 to 2. Number of flowers per raceme: about 4-15. Length: about 65 cm to 75 cm.

Peduncle.—Length: about 40 cm. Diameter: about 4 mm. Strength: strong. Aspect: upright. Texture: gla-

brous and smooth. Color: yellow/green (RHS 146A) with brown (RHS 200B). Internode: Length: about 40 mm.

Buds.—Height (from base to tip): about 25 mm. Diameter (at midpoint): about 20 mm. Shape: oval/egg-shaped with a bump on one side. Color: yellow/green (RHS 145A) with red/purple (RHS 59A). Orientation: same as flowers (forward facing).

Flowering time.—For an untreated plant (flowering plant that has not undergone cold-treatment where the plant grows at a temperature of 18° C. to 19° C. for about 4 to 8 weeks after a period of about 30 weeks at a temperature of 25° C.), 1-2 racemes appear with flower buds and flowers. First flowers can be expected approximately 4 to 6 months after planting a plant with a leaf diameter of 3 to 5 cm. Flowers persistent.

Flowering longevity.—On the plant: about 4 to 6 months; lastingness of cut flowers: has not been observed.

Fragrance.—No fragrance.

Flower.—Rate of opening: Flowers fully opened about 2 to 3 days after petal and sepal separation. Orientation at opening: slanted upward and outward. Shape: Typical shape of *Phalaenopsis*, see FIG. 2. Size (of single bloom): Height: about 10 cm. Diameter: about 11 cm. Quantity and arrangement: three petals and three sepals that are trimerous, overlapping and arranged in 2 whorls. Petals are more pronounced than sepals.

Petals.—Arrangement: Inner whorl comprises 3 petals: 2 lateral petals and a labellum. 2 lateral petals: Overall shape: broadly ovate and weakly cupped. Apex: oval. Margin: entire and weakly undulate. Base: broadly ovate. Length: about 65 mm. Width: about 50 mm. Texture: Upper surface: smooth and satiny. Under surface: smooth and satiny. Color (when fully opened): upper and under side: white (RHS NN155C) with some purple/violet veins (RHS N80B) and a purple/violet haze at the edges (RHS N80D). Labellum: Overall shape: 3-lobed with 2 prominent callosities at central junction of the lateral lobes and base of the midlobe. Lateral lobes of labellum fold upward about the column; the midlobe extends forward and is terminated by 2 filiform appendages at the apex. Lateral lobes of the labellum are ovate in shape while the midlobe is triangular with a bump and a rib on it. Margin: entire and weakly undulate. Apex: oval. Length: about 25 mm. Width (not flattened): about 30 mm. Depth of tube created by lateral lobes of labellum: about 20 mm. Texture: Upper & under surface: smooth and satiny. Color (when fully opened): Mid lobe, upper side: main color is red/purple (RHS 71A). In the corners yellow/green (RHS 151C). In the center a white mark (RHS NN155B). Under side: white (RHS NN155C) with a the base some red/purple (RHS 70A)

and purple (RHS N79C). In the corners some yellow/green (RHS 151C). Lateral lobes, upper side: white (RHS NN155C) with at the base some red/purple stripes (RHS 59A). At the lower edge first yellow (RHS 13B) than red/purple (RHS 59A) which runs into red/purple (RHS 72A). Under side: white (RHS NN155C) with red/purple (RHS 72A) at the base and yellow at the lower edge (RHS 13B). Is also has a purple/violet haze (RHS N80D). Cirrhi: about 30 mm. color: red/purple (RHS 59A) and (RHS 71A). Pestle (Callosities): Length: about 5 mm. Width (not flattened): about 6 mm. Color: main color is yellow (RHS 13A) with yellow on the sides (RHS 13C) and red/purple spots (RHS 59A).

Sepals.—Arrangement: Outer whorl comprises 3 sepals, one dorsal and two lateral sepals. Overall shape: elliptical and weakly cupped. Margin: entire and weakly undulate. Length: about 42 mm. Width: about 30 mm. Apex: oval and dorsal sepals with a notch. Texture: Upper and under surface: smooth and satiny. Color (when fully opened): Upper side, dorsal: purple/violet (RHS N80C runs into RHS N80D). At the base some white (RHS NN155C). Lateral: white (RHS NN155C) with a purple/violet haze (RHS N80D). At the base some yellow/green (RHS 145A) and red/purple spots (RHS 59A). Under side, dorsal: purple/violet (RHS N80B runs into RHS N80C). In the center some yellow/green (RHS 152C and RHS 145B). Lateral: purple/violet (RHS N80B). At the base yellow/green (RHS 145C).

Pedicel.—Length: about 45 mm. Diameter: about 3.5 mm. Texture: glabrous and smooth. Color: from flower yellow/green (RHS 145A and RHS 145C) which runs into yellow/green (RHS 146C) with a red/purple haze (RHS 70A and RHS 70B).

Reproductive organs:

Arrangement.—The stamens, style and stigmas are fused into a single, short structure called the column, possessing one terminal anther with pollen grains united into a pollinia, which are covered by an anther cap. The stigma is located under the column behind the pollinia. The ovary is inferior with three carpels present. The plant has not produced seed.

Column.—Length: about 9 mm. Diameter: about 4 mm. Color: purple/violet (RHS N80C).

Pollinia.—Quantity: two. Diameter: about 3 mm. Color: yellow/orange (RHS 23A).

Ovary.—Length: about 3 mm. Diameter: about 2.5 mm. Color: white (RHS NN155C).

Disease/pest resistance/ susceptibility: No specific resistance or susceptibility observed.

Temperature tolerance: Tolerant to a low temperature of about 15° C. and to a high temperature about 30° C.

What is claimed is:

1. A new and distinct *Phalaenopsis* plant named 'Double Delight', as illustrated and described herein.

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FIG. 1



FIG. 2

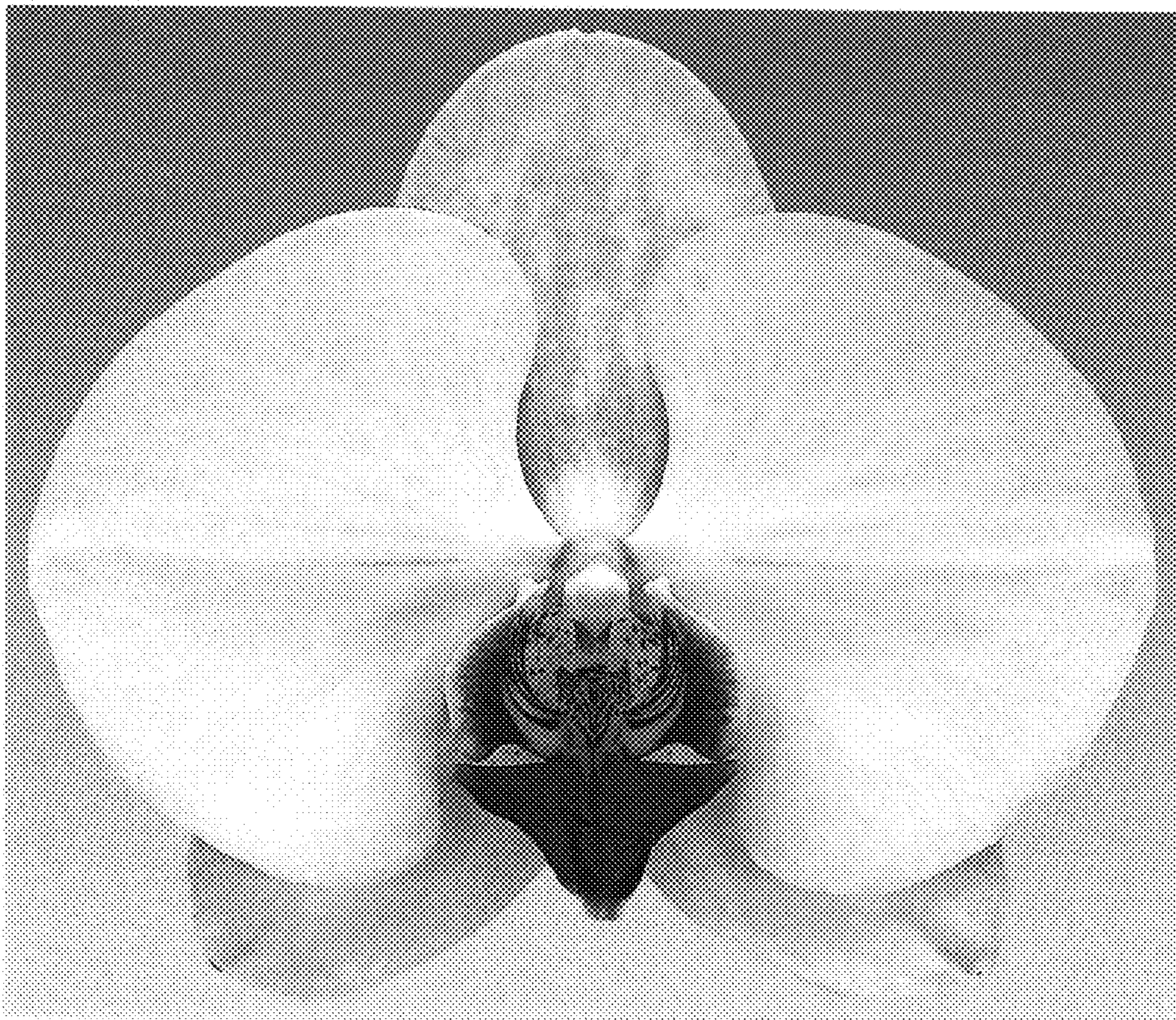


FIG. 3

