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(12) **United States Plant Patent**
Van Swieten

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- (54) **PHALAEOPSIS ORCHID PLANT NAMED ‘PHALEKDEK’**
- (50) Latin Name: *Phalaenopsis* hybrid
Varietal Denomination: **PHALEKDEK**
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- (52) **U.S. Cl.**
USPC **Plt./311**
- (58) **Field of Classification Search**
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See application file for complete search history.

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(57) **ABSTRACT**
A new and distinct variety of *Phalaenopsis* plant named ‘PHALEKDEK’, particularly characterized by having yellow flowers with small white centers and red lips, 1 to 3 peduncles that are long and sturdy, and is propagated by meristem tissue culture, is disclosed.

3 Drawing Sheets

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Genus and species: *Phalaenopsis* hybrid.
Variety denomination: ‘PHALEKDEK’.

BACKGROUND OF THE NEW PLANT

The present invention relates to a new and distinct cultivar of *Phalaenopsis* plant, botanically known as *Phalaenopsis* hybrid of the Orchidaceae family, commonly referred to as moth orchid, and hereinafter referred to by the variety name ‘PHALEKDEK’.

The new *Phalaenopsis* plant is a product of a planned breeding program conducted by the inventor in Bleiswijk, the Netherlands. The objective of this breeding program was to create a new *Phalaenopsis* plant with numerous attractive yellow flowers with small white centers and red lips, suitable for potted plant production.

The new *Phalaenopsis* plant ‘PHALEKDEK’ is a result of cross-pollination made by the inventor in May 2010 in Bleiswijk, the Netherlands, of the proprietary female, or seed parent, *Phalaenopsis* hybrid ‘6541-01’ (unpatented) With the proprietary male, or pollen parent, *Phalaenopsis* hybrid ‘00001-1960’ (unpatented).

The new *Phalaenopsis* was selected by the inventor as a single plant within the progeny of the stated cross-pollination in a controlled greenhouse in Bleiswijk, the Netherlands, in April 2013. Asexual reproduction of the new *Phalaenopsis* plant by meristem tissue culture since 2016 in Bleiswijk, the Netherlands, has demonstrated that the new variety reproduces true to type with all of the characteristics, as herein described, firmly fixed and retained through successive generations.

Community Plant Variety Rights for this variety have been applied for in the European Union on Sep. 28, 2017, by Applicant who obtained the subject matter disclosed directly from the inventor. ‘PHALEKDEK’ has not been made publicly available or sold anywhere in the world prior to the effective filing date of this application with the exception of sales or disclosures made one year or less before the

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effective filing date of this claimed invention by Applicant who obtained ‘PHALEKDEK’ directly from the inventor.

SUMMARY OF THE INVENTION

The following are the most outstanding and distinguishing characteristics of this new cultivar when grown under normal horticultural practices in Bleiswijk, the Netherlands, and can be used to distinguish ‘PHALEKDEK’ as a new and distinct variety of *Phalaenopsis* plant:

- 1) Yellow flowers with small white centers and red lips;
- 2) 1 to 3 peduncles; and
- 3) Peduncle is long and sturdy.

DESCRIPTION OF THE PHOTOGRAPHS

This new *Phalaenopsis* plant is illustrated by the accompanying photographs which show the overall plant habit including blooms and foliage of the plant; the colors shown are as true as can be reasonably obtained by conventional photographic procedures. The photographs were taken in a greenhouse in Bleiswijk, the Netherlands, from 50-week-old plants in August 2019. Colors in the photographs may differ from the color values cited in the detailed botanical description, which accurately describe the actual colors of the new variety.

FIG. 1 shows the overall plant habit, including blooms and foliage of ‘PHALEKDEK’.

FIG. 2 shows a close-up of a flower of ‘PHALEKDEK’.

FIG. 3 shows an overhead view of the leaves of ‘PHALEKDEK’.

DESCRIPTION OF THE NEW VARIETY

The following detailed description sets forth the distinctive characteristics of ‘PHALEKDEK’. Plants of the new *Phalaenopsis* have not been observed under all possible environmental conditions. The phenotype may vary somewhat with variations in environment such as temperature, light intensity and day length, without, however, any vari-

ance in genotype. The chart used in the identification of colors described herein is The R.H.S. Colour Chart of The Royal Horticultural Society, London, England, 2015 edition, except where general color terms of ordinary significance are used. The color values were determined under 4000-6000 lux natural light in a greenhouse in Bleiswijk, the Netherlands. Observations and measurements were made in August 2019 on flowering plants which were planted in 12-centimeter (diameter) pots. After in-vitro propagation, the plants were grown in nursery trays for 20-24 weeks, followed by transplantation to 12-centimeter pots and grown in a greenhouse between 27° C. to 29° C. for 30 weeks, continued by a cooling period of 8 weeks between 18° C. to 20° C. and 12 weeks in a greenhouse of 21° C. Flowering occurs after 50 weeks in 12-centimeter pots.

DETAILED BOTANICAL DESCRIPTION

Classification:

Family.—Orchidaceae.
Botanical.—*Phalaenopsis* hybrid.
Common name.—Moth orchid.
Variety name.—‘PHALEKDEK’.

Parentage:

Female parent.—*Phalaenopsis* cultivar ‘6541-01’ (unpatented).
Male parent.—*Phalaenopsis* cultivar ‘00001-1960’ (unpatented).

Propagation:

Type.—Meristem tissue culture.

Roots:

Root description.—Greyed-green (between RHS 190B and 190C) colored roots with branching lateral roots having light yellow-green (RHS 146D) colored root tips with a hint of pink (RHS 51D).

Plant:

Commercial crop time to flowering.—Following asexual propagation (in-vitro), the rooted cuttings grow for 20-24 weeks. After transplantation into 12-cm pots, the plants are finished after 48 to 50 weeks.

Growth habit of peduncle.—Upright to slightly pendant with raceme inflorescence.

Height (from soil level to top of inflorescence).—Approximately 60.0 cm to 70.0 cm.

Width (measured from leaf tips).—About 28.0 cm to 33.0 cm.

Vigor.—Strong.

Leaves:

Mature leaves.—Quantity per plant: 6 to 8 leaves are produced before flowering. Length (fully expanded): 18.0 cm to 22.0 cm. Width: 6.5 cm to 7.5 cm. Position of the broadest part of the leaf: Toward the apex. Shape: Obovate. Base shape: Moderately elongated. Apex: Acute unequal. Leaf blade angle with the petiole (measured from the horizontal position): Between 20 degrees and 40 degrees. Leaf margin: Entire. Color: Upper surface: RHS 146A. Lower surface: RHS 146B. Texture (both upper and lower surfaces): Smooth. Thickness: 2.1 mm to 2.3 mm. Variegation: Absent. Venation: Pattern: Parallel. Color of the midvein: Upper surface: RHS 146A. Lower surface: RHS 146C.

Peduncle:

Quantity per plant.—1 to 3.

Number of flowers per peduncle.—8 to 10.

Length.—60.0 cm to 70.0 cm.

Diameter.—5.6 mm to 6.0 mm.

Strength.—Strong.

Aspect.—Upright to slightly pendant.

Texture.—Smooth.

Color.—Mix of brown (RHS 200B) and green (RHS 146C).

Internode length.—3.0 cm to 4.0 cm.

Callosities.—None.

Inflorescence description:

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

Number of inflorescences.—1 to 2.

Inflorescence size.—Height (from base to tip): 200.0 mm to 250.0 mm.

Flowering time.—First flowers can be expected 10 to 11 months after planting in a 12-cm pot.

Flower.—Height: 78.0 mm to 83.0 mm. Diameter: 94.0 mm to 99.0 mm. Depth of lip: 22.0 mm to 24.0 mm.

Flower longevity.—On the plant: 8 to 12 weeks.

Flower shape.—Flat.

Fragrance.—Absent.

Flower bud.—Average size: Medium to large. Length: 22.0 mm to 24.0 mm. Width: 18.0 mm to 20.0 mm. Shape: Egg shaped. Color: Light green (RHS 150B) with a touch of diluting red (RHS 182A to 182B).

Petals.—Arrangement: Open/free. Shape: Semi-circular. Apex: Emarginated. Margin: Entire. Length (from base to tip): 43.0 mm to 46.0 mm. Width: 57.0 mm to 59.0 mm. Position of the broadest part of the petal: Toward the base. Color (when fully opened): Upper surface: Basic color: Light greenish-yellow (RHS 3D). Over color: White center (RHS NN155C). Lower surface: Basic color: Light yellow-green (RHS 4D). Over color: White center (RHS NN155C). Number of spots and stripes on the petals: None. Color of spots and stripes on the petals: None. Density of netting of the petals: None. Color of the netting: None.

Dorsal sepal.—Shape: Elliptic. Apex: Obtuse. Margin: Entire. Length (from base to tip): 45.0 mm to 47.0 mm. Width: 33.0 mm to 35.0 mm. Position of the broadest part of the dorsal sepal: In the middle. Color (when fully opened): Upper surface: Basic color: Light greenish-yellow (RHS 4C). Over color: White (RHS NN155C) at the base. Lower surface: Basic color: Light yellow-green (RHS 4D). Over color: Hint of diluting red (RHS 182B) in the middle. Number of spots and stripes on the dorsal sepals: None. Color of spots and stripes on the dorsal sepals: None. Density of netting of the dorsal sepals: None. Color of the netting: None.

Lateral sepals.—Shape: Ovate. Apex: Obtuse symmetric. Margin: Entire. Length (from base to tip): 45.0 mm to 48.0 mm. Width: 29.0 mm to 31.0 mm. Position of the broadest part of the lateral sepal: At the middle. Color (when fully opened): Upper surface: Basic color: Light greenish-yellow (RHS 4C). Over color: White (RHS NN155C) at the base and yellow-green (RHS 154D). Lower surface: Basic

color: Light yellow-green (RHS 4D). Over color: Slightly white (RHS NN155C) at the base; light yellow-green (RHS 154D) in the middle with red midvein (RHS 182B). Number of spots and stripes on the lateral sepals: Few. Color of spots and stripes on the lateral sepals: Red (RHS 182A). Density of netting of the lateral sepals: None. Color of the netting: None.

Labellum (lip).—Whiskers: Present. Length of whiskers: 11.0 mm to 13.0 mm. Color of whiskers: Dark red (RHS 187B to 187C) with yellow tips (RHS 5C). Pubescence on the lip: Absent.

Lateral lobe.—Shape: Type V (as described in the International Union for the Protection of New Varieties of Plants (UPOV) Test Guidelines for *Phalaenopsis*); spatulate. Margin: Entire. Length: 20.0 mm to 22.0 mm. Width: 14.0 mm to 16.0 mm. Color: Upper surface: White (RHS NN155C); purplish-pink (RHS N78C) and light purple (RHS 76A) in the center; dark reddish-orange edge (RHS 178B) toward the front margin. Lower surface: White (RHS NN155C) at the base; very light purple (RHS 76B to 76C) and brown-orange (mix of RHS 172A and N172D) toward the front margin. Number of spots and stripes on the lateral lobe: Few. Color of spots and stripes on the lateral lobe: RHS 178A. Density of netting of the lateral lobe: None. Color of the netting: None.

Apical lobe.—Shape: Triangular. Margin: Entire. Length: 22.0 mm to 24.0 mm. Width: 22.0 mm to 24.0 mm. Color: Upper surface: A bit of yellow (RHS 13A) toward the callus; red wings (RHS 185A to 185B) and dark reddish-orange (RHS 175B) toward the margin. Lower surface: Greenish-white (RHS 155C) in the middle; purplish-pink (RHS N78C) and orange-red (RHS 175B to 175C) toward the margin. Number of spots and stripes on the apical lobe: None. Color of spots and stripes on the apical lobe: None. Density of netting of the apical lobe: None. Color of the netting: None.

Callus.—Average size: Medium. Height: 0.5 cm to 0.6 cm. Length: 0.5 cm to 0.6 cm. Width: 0.3 cm to 0.4 cm. Color: Yellow (RHS 13A) with brown-reddish spots (RHS 175A).

Reproductive organs:

Column.—Length: 8.0 mm to 10.0 mm. Diameter: 5.0 mm to 6.0 mm. Color: White (RHS NN155C).

Pollinia.—Quantity: 2. Diameter: 0.8 mm to 1.0 mm. Color: Orange-yellow (RHS 23A).

Ovary.—Length: 13.0 mm to 15.0 mm. Diameter: 2.0 mm to 3.0 mm.

Pedice.—Length: 35.0 mm to 37.0 mm. Diameter: 3.0 mm to 4.0 mm. Color: Yellow-green (RHS 145A to 145B) with a hint of dark red (RHS 187B) and very light purple (RHS 76C) toward the flower. Texture: Smooth.

Disease, pest, and stress resistance: No specific resistance or susceptibility observed to pathogens and pests common to *Phalaenopsis* to date.

Fruit and seeds: Fruit and seed development has not been observed on plants of the new *Phalaenopsis* to date.

COMPARISON WITH PARENTAL LINES AND MOST SIMILAR VARIETIES

‘PHALEKDEK’ differs from female parent plant ‘6541-01’ (unpatented) in that ‘PHALEKDEK’ has dark red whiskers with yellow tips, whereas ‘6541-01’ has greenish-yellow whiskers. Additionally, ‘PHALEKDEK’ has shorter whiskers and wider petals than ‘6541-01’.

‘PHALEKDEK’ differs from male parent plant ‘00001-1960’ (unpatented) in that ‘PHALEKDEK’ has a centered flower pattern, whereas ‘00001-1960’ has a striped and centered flower pattern. Additionally, ‘PHALEKDEK’ has wider petals than ‘00001-1960’.

‘PHALEKDEK’ is most similar to the commercial *Phalaenopsis* plants named ‘PHALFYQDHA’ (U.S. Plant Pat. No. 27,456) and ‘PHALCUVAK’ (U.S. Plant Pat. No. 30,582). ‘PHALEKDEK’ differs from the commercial variety ‘PHALFYQDHA’ in that ‘PHALEKDEK’ has a moderately elongated leaf base and an emarginated petal apex, whereas ‘PHALFYQDHA’ has a very elongated leaf base and a rounded petal apex. Additionally, ‘PHALEKDEK’ has larger flowers, shorter whiskers, and wider petals than ‘PHALFYQDHA’.

‘PHALEKDEK’ differs from the commercial variety ‘PHALCUVAK’ in that ‘PHALEKDEK’ has an emarginated petal apex, whereas ‘PHALCUVAK’ has a rounded petal apex. Additionally, ‘PHALEKDEK’ has larger flowers, shorter whiskers, and wider petals than ‘PHALCUVAK’.

I claim:

1. A new and distinct variety of *Phalaenopsis* plant named ‘PHALEKDEK’, substantially as described and illustrated herein.

* * * * *



FIG. 1

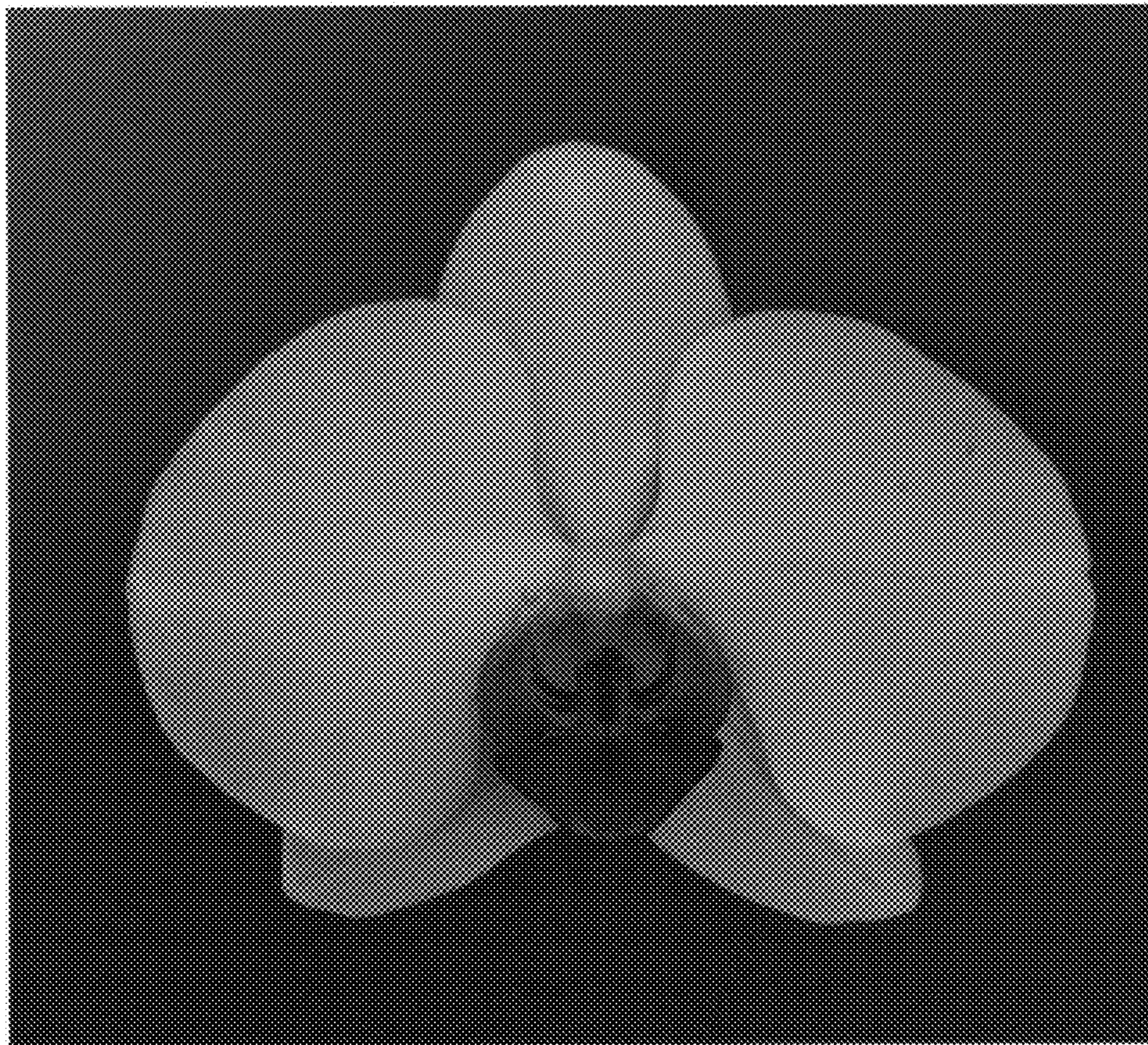


FIG. 2

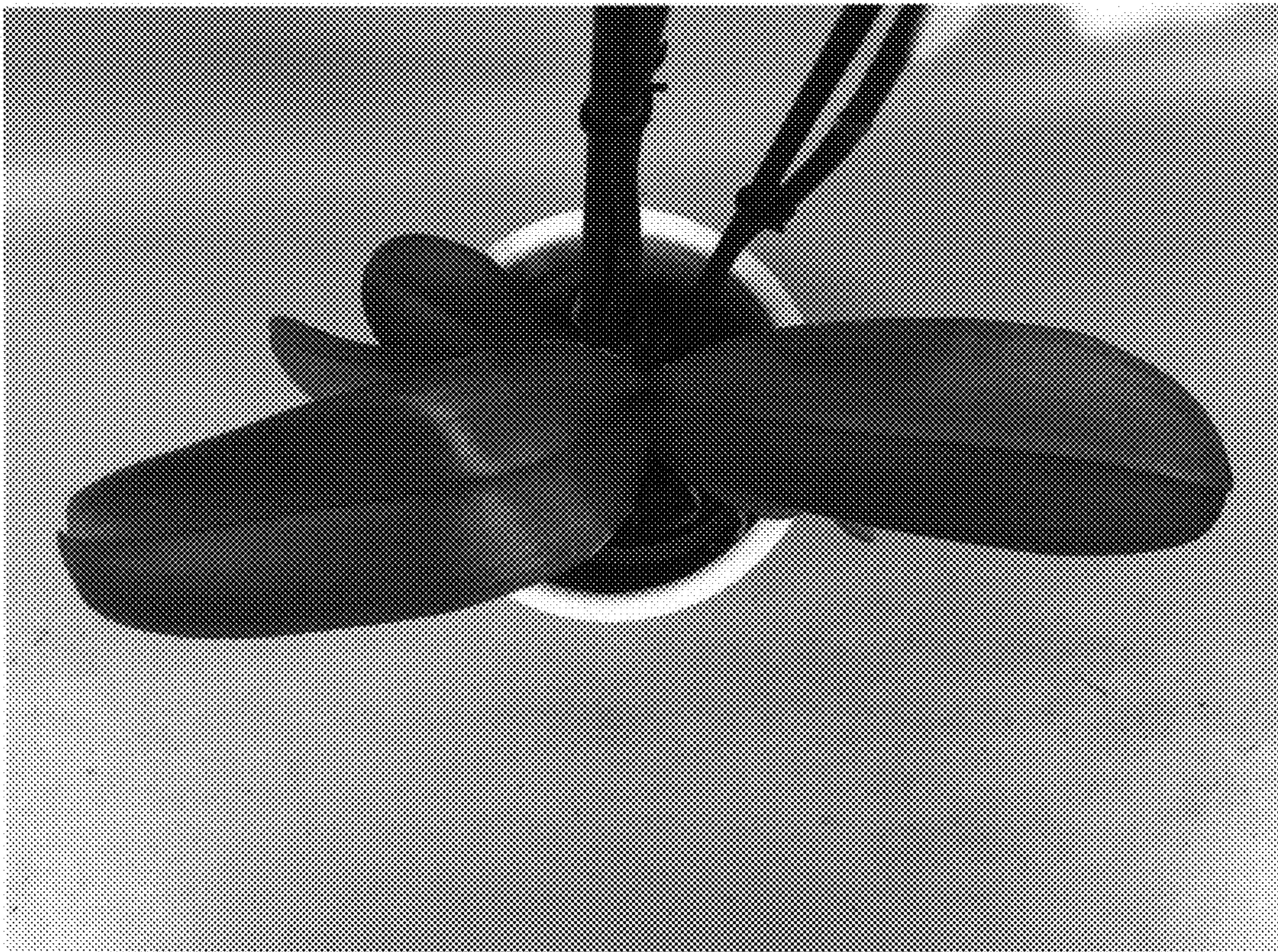


FIG. 3