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Van Swieten

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(54) **PHALAEOPSIS ORCHID PLANT NAMED**
'PHALDUEL'

(50) Latin Name: *Phalaenopsis* hybrid
Varietal Denomination: **PHALDUEL**

(71) Applicant: **ANTHURA B.V.**, Bleiswijk (NL)

(72) Inventor: **Martinus Nicolaas Gerardus Van Swieten**, Utrecht (NL)

(73) Assignee: **ANTHURA B.V.**, Bleiswijk (NL)

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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

Enclosure for the Plant Patent application of Anthura BV, 13 pages, 2015.

Primary Examiner — Susan McCormick Ewoldt
(74) *Attorney, Agent, or Firm* — Jondle & Associates, P.C.

(57) **ABSTRACT**

A new and distinct variety of *Phalaenopsis* plant named 'PHALDUEL', particularly characterized by having white flowers, 1 to 3 peduncles, an inflorescence that is short and moderate, leaves that are oblong, and is propagated by meristem tissue culture, is disclosed.

3 Drawing Sheets

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Genus and species: *Phalaenopsis* hybrid.
Variety denomination: 'PHALDUEL'.

BACKGROUND OF THE NEW PLANT

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

Phalaenopsis comprises a genus of about 60 species of herbaceous perennials many of which, or the hybrids thereof, are suitable for cultivar 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 12 to 20 cm to over 60 cm. 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 petals, called the labellum, are three-lobed and are 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 arise from the lower bracts of the

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inflorescence. The resulting plants are detached from the mother plants and may be planted in a suitable substrate.

The new *Phalaenopsis* 'PHALDUEL' is particularly characterized by its attractive and unique white flowers, economical propagation by tissue culture, rapid growth, and a plant dimension suitable for packaging and shipping to the market.

'PHALDUEL' is a product of a planned breeding program conducted by the inventor in Bleiswijk, The Netherlands.

The new *Phalaenopsis* 'PHALDUEL' originated from a cross made in January 2006 in Bleiswijk, The Netherlands. The female parent is a white *Phalaenopsis* pot plant named '01-0274' (unpatented), while the male parent is a white *Phalaenopsis* pot plant named '22481-01' (unpatented). A single plant was selected in March 2009 and has been asexually reproduced repeatedly by meristem tissue culture in Bleiswijk, The Netherlands over a 4-year period. The new variety has been found to retain its distinctive characteristics through successive asexual propagations.

Asexual reproduction of 'PHALDUEL' by tissue culture was first performed in January 2012 in Bleiswijk, The Netherlands and has demonstrated that the new cultivar is firmly fixed and retained through successive generations of asexual reproduction.

Plant Breeder's Rights for this variety have been applied for in Europe on Sep. 30, 2014. 'PHALDUEL' has not been made publicly available or sold anywhere in the world more than one year prior to the filing date of this application.

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.

- 1) White flowers;
- 2) 1 to 3 peduncles;
- 3) Inflorescence is short and moderate;
- 4) Shape of the leaf is oblong; and
- 5) Plants are propagated by meristem tissue culture.

DESCRIPTION OF THE PHOTOGRAPHS

This new *Phalaenopsis* plant is illustrated by the accompanying photographs which show the overall plant habit including blooms, buds and foliage of the plant; the colors shown are as true as can be reasonably obtained by conventional photographic procedures. The photographs are of a 50-week old plant grown in a greenhouse in Bleiswijk, The Netherlands in May 2015.

FIG. 1 shows the overall plant habit, including blooms, buds and foliage of 'PHALDUEL'.

FIG. 2 shows a close-up of a flower of 'PHALDUEL'.

FIG. 3 shows a close-up of the leaves of 'PHALDUEL'.

DESCRIPTION OF THE NEW VARIETY

The following detailed description sets forth the distinctive characteristics of 'PHALDUEL'. The data which define these characteristics were collected from asexual reproductions carried out in Bleiswijk, The Netherlands. The plant history was taken on 40-week old plants which were planted from a nursery tray in 9 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. Observations were made in May 2015. Color readings were taken under 4-6000 lux natural light in the greenhouse. Color references are primarily to The R.H.S. Colour Chart of The Royal Horticultural Society of London (R.H.S.) (1995).

DETAILED BOTANICAL DESCRIPTION

Classification:

- Family*.—Orchidaceae.
Botanical.—*Phalaenopsis* hybrid.
Common name.—*Phalaenopsis*.
Variety name.—'PHALDUEL'.

Parentage:

- Female parent*.—*Phalaenopsis* cultivar '01-0274' (unpatented).
Male parent.—*Phalaenopsis* cultivar '22481-01' (unpatented).

Propagation:

- Type*.—Meristem tissue culture.

Plant:

- Crop time (time to produce a finished flowering plant)*.—38 to 40 weeks for a 9 cm pot.
Growth habit of inflorescence.—Standard, green leaves, panicle.
Height (including pot, including inflorescence).—38.0 cm to 48.0 cm.
Width (measured from leaf tips).—21.0 cm to 24.0 cm.
Vigor.—Moderate.

Roots:

- Root description*.—Grey-green colored roots with branching lateral roots having light brown colored root tips.

Leaves:

- Mature leaves*.—Quantity per plant: 7 to 9 leaves are produced before flowering. Length (fully expanded):

11.0 cm to 13.0 cm. Width: 4.5 cm to 5.5 cm. Shape: Oblong. Base shape: Slightly elongated. Apex: Acute unequal. Leaf blade angle with the petiole (measured from the horizontal position): Between 15 degrees and 60 degrees. Leaf margin: Entire. Color: Upper surface: RHS 146A. Lower surface: RHS 146B. Texture: Rough. Thickness: 2.6 mm to 2.8 mm. Venation: Pattern: Parallel. Color of the midvein: Upper surface: RHS 146A. Lower surface: RHS 146B.

Peduncle:

- Quantity per plant*.—1 to 3.
Number of flowers per peduncle.—14 to 20.
Length.—30.0 cm to 35.0 cm.
Diameter.—4.5 mm to 5.5 mm.
Strength.—Moderate.
Aspect.—Upright.
Texture.—Slightly rough.
Color.—Green (RHS 146B) and slightly greyed-purple (RHS 183A).
Internode length.—45.0 mm to 55.0 mm.
Callosities.—None.

Inflorescence description:

- Appearance*.—Upright to slightly pendant, panicle inflorescence with bilaterally symmetrical flowers that open in succession beginning with the lowermost flower.
Inflorescence size.—Height (from base to tip): 130.0 mm to 180.0 mm.
Flowering time.—First flowers can be expected 7 to 8 months after planting in a 9 cm pot.
Flower.—Height: 53.0 mm to 58.0 mm. Diameter: 57.0 mm to 62.0 mm. Depth of lip: 17.0 mm to 19.0 mm.
Flower longevity.—On the plant: 10 to 16 weeks.
Fragrance.—Absent.
Flower bud.—Average size: Medium. Length: 1.6 cm to 1.8 cm. Width: 1.4 cm to 1.6 cm. Shape: Egg shaped. Color: Green (RHS 144C) and a touch of greyed-purple (RHS 183D).
Petals.—Arrangement: Open/free. Shape: Semi-circular. Apex: Rounded and slightly asymmetric. Margin: Entire. Length (from base to tip): 26.0 mm to 28.0 mm. Width: 28.0 mm to 30.0 mm. Color (when fully opened): Upper surface: Basic color: White (RHS 155C). Over color: Absent. Lower surface: Basic color: White (RHS 155C). Over color: Absent.
Dorsal sepal.—Shape: Narrow elliptic. Apex: Mucronate symmetric. Margin: Entire. Length (from base to tip): 29.0 mm to 31.0 mm. Width: 17.0 mm to 19.0 mm. Color (when fully opened): Upper surface: Basic color: White (RHS 155C). Over color: Absent. Lower surface: Basic color: White (RHS 155C). Over color: Absent.
Lateral sepals.—Shape: Ovate. Apex: Obtuse and slightly asymmetric. Margin: Entire. Length (from base to tip): 30.0 mm to 32.0 mm. Width: 17.0 mm to 19.0 mm. Color (when fully opened): Upper surface: Basic color: White (RHS 155C). Over color: Yellow-green (RHS 145C). Lower surface: Basic color: White (RHS 155C). Over color: Yellow-green (RHS 145C).
Labellum (lip).—Margin: Entire. Whiskers: Present. Length of whiskers: 9.0 mm to 11.0 mm. Color of whiskers: White (RHS 155C). 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. Length (from base to tip): 18.0 mm to 20.0 mm. Width: 13.0 mm to 15.0 mm. Color: White (RHS 155C) and yellow (RHS 6A) and green (RHS 145B) towards the callus.

Apical lobe.—Shape: Triangular. Length (from base to tip): 16.0 mm to 18.0 mm. Width: 16.0 mm to 18.0 mm. Color: White (RHS 155C) and yellow-green towards the callus (RHS 1A to 1B).

Callus.—Average size: Medium. Height: 5.0 mm to 7.0 mm. Length: 4.0 mm to 6.0 mm. Width: 3.0 mm to 5.0 mm. Color: Yellow (RHS 13A to 13B) with small dots (RHS 180A).

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 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.

Column.—Length: 9.0 mm to 10.0 mm. Diameter: 4.0 mm to 5.0 mm. Color: White (RHS 155C).

Pollinia.—Quantity: 2. Size: 0.9 mm to 1.1 mm. Color: Yellow-orange (RHS 23A).

Ovary.—Part of the pedicel with small ribs towards the column. Length: 7.0 mm to 9.0 mm. Diameter: 2.0 mm to 2.3 mm.

Pedicel.—Length: 27.0 mm to 31.0 mm. Diameter: 2.4 mm to 2.7 mm. Color: Darker green (RHS 146A) and slightly purple (RHS 9187A) close to the inflorescence and lighter green towards the flower (RHS 145B to 145D).

Disease, pest, and stress resistance: No specific resistance or susceptibility observed.

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

COMPARISON WITH PARENTAL AND
COMMERCIAL VARIETIES

‘PHALDUEL’ differs from female parent plant ‘01-0274’ (unpatented) in that ‘PHALDUEL’ has lateral sepals that are even and a callus with smaller dots, whereas ‘01-0274’ has lateral sepals that are slightly dotted towards the center of the flower and a callus with larger dots. Additionally, ‘PHALDUEL’ has shorter whiskers of the lip than the whiskers of ‘01-0274’.

The male parent ‘22481-01’ (unpatented) of ‘PHALDUEL’ is no longer available, so a comparison cannot be made.

‘PHALDUEL’ differs from commercial variety ‘PHALBOFAK’ (unpatented) in that ‘PHALDUEL’ has lateral sepals that are even and the margins of the petals are entire, whereas ‘PHALBOFAK’ has lateral sepals that are partially dotted towards the center of the flower and the margins of the petals are slightly undulated. Additionally, ‘PHALDUEL’ has a Type V (spatulate) shaped lateral lobe, while ‘PHALBOFAK’ has a Type IV (weakly spatulate) shaped lateral lobe.

‘PHALDUEL’ differs from commercial variety ‘PHALFLABAL’ (U.S. Plant Pat. No. 27,458) in that ‘PHALDUEL’ has very small dots on the callus and dorsal sepals with no over color on the lower surface, whereas ‘PHALFLABAL’ has small dots on the callus and dorsal sepals with lilac over color on the lower surface. Additionally, ‘PHALDUEL’ has shorter dorsal sepals and narrower apical lobes than ‘PHALFLABAL’.

I claim:

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

* * * * *



FIG. 1



FIG. 2

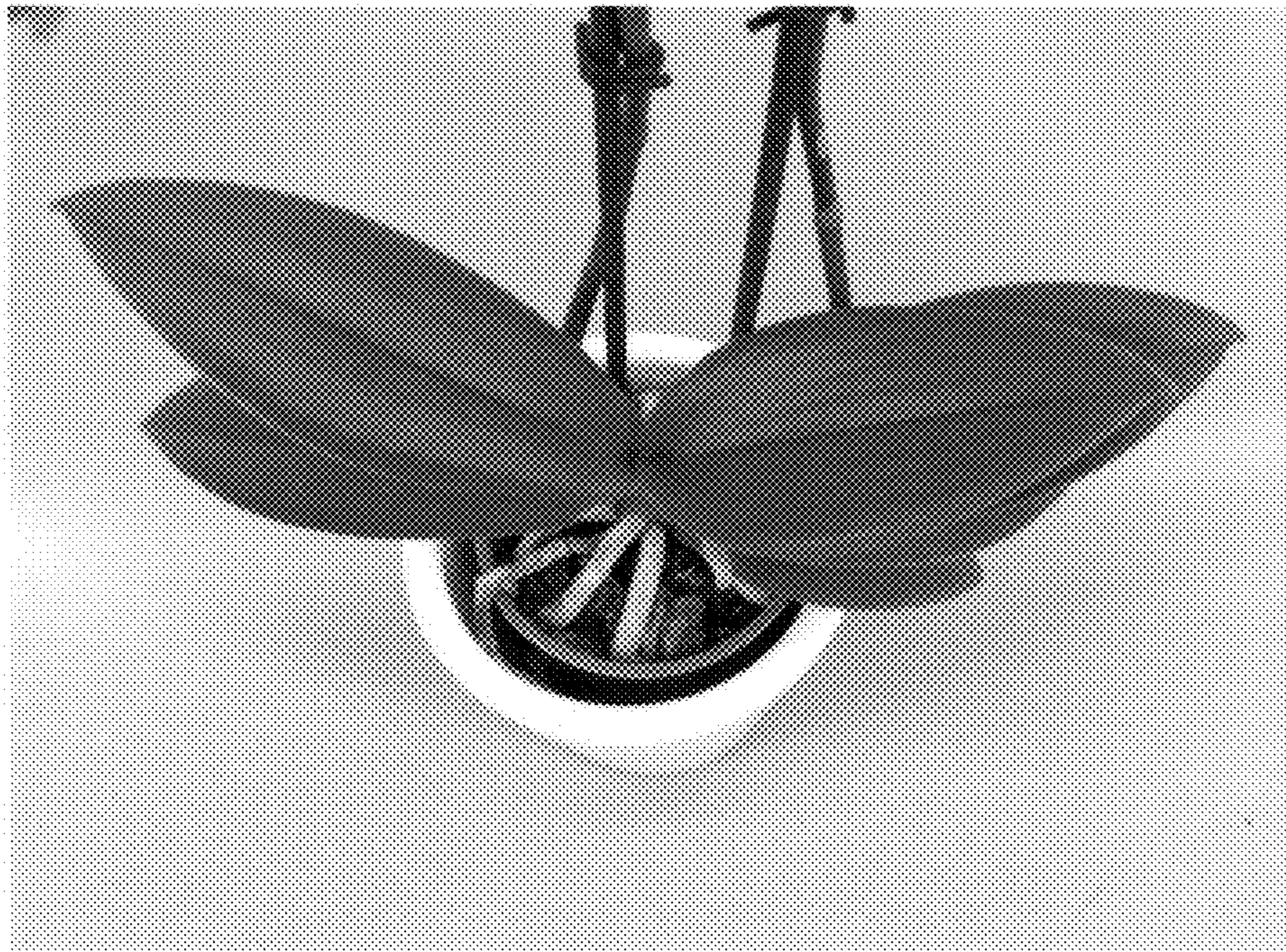


FIG. 3