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Schoone

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(54) ***PHALAENOPSIS* ORCHID PLANT NAMED 'PETTICOAT'**

(50) Latin Name: ***Phalaenopsis hybrida***
Varietal Denomination: **Petticoat**

(71) Applicant: **Floricultura**, Heemskerk (NL)

(72) Inventor: **René Schoone**, Assendelft (NL)

(73) Assignee: **Floricultura**, Heemskerk (NL)

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USPC **Plt./311**

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Primary Examiner — Susan McCormick Ewoldt
(74) *Attorney, Agent, or Firm* — Foley & Lardner LLP; Sunit Talapatra

(57) **ABSTRACT**

A new and distinct *Phalaenopsis* plant named 'Petticoat' particularly characterized by flowers which are white with re/purple marks and some yellow in the 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

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

Variety denomination: 'Petticoat'.

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 'Petticoat'.

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.

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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* 'Petticoat' 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* 'Petticoat' 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 '(Chain Xen Pearl×Tinny Ivory)', unpatented. The male or pollen parent is the *Phalaenopsis* cultivar designated 'Amabilis', unpatented. The new *Phalaenopsis* 'Petticoat' 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 (mericloning) 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 'Petticoat', which in combination distinguish this *Phalaenopsis* as a new and distinct cultivar:

1. flowers which are white with red/purple marks and some yellow in the 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 'Petticoat', the female parent '(Chain Xen Pearl×Tinny Ivory)' is white/violet with purple spots and a purple labellum, the male parent 'Amabilis' is white with some yellow in the labellum, whereas 'Petticoat' is white with red/purple marks and some yellow in the labellum.

Presently, the commercial cultivar to which 'Petticoat' can be meaningfully compared is 'Summerland' (unpatented). The flowers of 'Summerland' have larger red/purple marks, darker yellow in the labellum and shorter cirrhi.

BRIEF DESCRIPTION OF THE PHOTOGRAPHS

The accompanying photographs illustrate the overall appearance of the new *Phalaenopsis* 'Petticoat' 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 'Petticoat'.

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

FIG. **2** shows a close-up view of the typical flower of 'Petticoat'.

FIG. **3** shows a close-up view of the typical leaves of 'Petticoat'.

DETAILED BOTANICAL DESCRIPTION

The new *Phalaenopsis* cultivar 'Petticoat' 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 'Petticoat' 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 'Petticoat' is 27° C. during the day and at night. Then, during the flowering phase of 'Petticoat', the ideal growing temperature is 20-22° C. during the day and 18° C. at night. Light levels for growing 'Petticoat' 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 'Petticoat' 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 'Petticoat' plants described is 12 months after potting.

Classification:

Botanical.—Phalaenopsis hybrida.

Parentage:

Female or seed parent.—Phalaenopsis cultivar designated '(Chain Xen Pearl×Tinny Ivory)', unpatented.

Male or pollen parent.—Phalaenopsis cultivar designated 'Amabilis', unpatented.

Propagation:

Type.—Tissue culture.

Rooting habit and description.—Fleshy; approximately 3 mm-6 mm wide and greyed/green in color (RHS 190A); 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 60 cm. Spread: about 55 cm.

Growth habit.—Standard; green leaves (RHS N137B) 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 1-3 racemes with flowers appear.

Foliage:

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

Arrangement and attachment.—Alternate, clasping.

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 9 cm.

Mature leaf thickness.—About 2 mm.

Mature leaf color.—Upper side: green (RHS N137B). Under side: green (RHS 138A).

Leaf base.—Acute.

Margin.—Entire.

Venation.—Pattern: parallel. Color of midvein: upper side: green (RHS 137A). Under side: green (RHS 138A).

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 3. Number of flowers per raceme: about 10-16. Length: about 50-60 cm. Width: about 4 mm.

Peduncle.—Diameter: about 3 mm. Strength: strong. Aspect: upright. Texture: glabrous and smooth. Color: yellow/green (RHS 144A) and RHS 146A with brown (RHS N200A). Internode: Length: about 35 mm.

Buds.—Height (from base to tip): about 22 mm. Diameter (at midpoint): about 20 mm. Shape: oval/egg-shaped with a bump on one side. Color: yellow/green (RHS 144D) with purple spots (RHS 79A). 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.), 1-3 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 73 mm. Diameter: about 80 mm. 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: round. Margin: entire and weakly undulate (little wrinkled). Base: broadly ovate. Length: about 55 mm. Width: about 35 mm. Texture: Upper surface: smooth and satiny. Under surface: smooth and satiny. Color (when fully opened): upper side: white (RHS NN155C) with red/purple spots and marks (RHS 59A and RHS N79A). Under side: white (RHS NN155C) with red/purple spots and marks (RHS N79A). 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 20 mm. Width (not flattened): about 25 mm. Depth of tube created by lateral lobes of labellum: about 16 mm. Texture: Upper & under surface: smooth and satiny. Color (when fully opened): Mid lobe, upper side: at the base yellow (RHS 12B). This runs thru in the center on the mid vein and also some yellow (RHS 12B) in the corners. Further white (RHS NN155D) with red/purple spots (RHS 71A) on the sides and in the corners. Some also have some red/purple on the edges (RHS 71A). Under side: in the center of the base some yellow/green (RHS N144D). Further white (RHs NN155D). In the corners yellow (RHS 12A) with some red/purple spots (RHS 71A). Lateral lobes, upper side: main color is white (RHS NN155D). From base a purple mark (RHS N79A) and lower edge is yellow (RHS 12A). Under side: white (RHS NN155D). At the base violet (RHS N88D) which runs into purple (RHS N79A). Lower edge is yellow (RHS 12A). Cirrhi: about 16 mm (long and curly). color: white (RHS NN155D) runs into yellow (RHS 7D). Pestle (Callosities): Length: about 7 mm. Width (not flattened): about 6 mm. Color: sides grey/white (RHS 156A) with yellow haze (RHS 12A). Rest is purple (RHS N77).

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 39 mm. Width: about 25 mm. Apex: oval; dorsal is little pointy with a notch and lateral is little pointy. Texture: Upper and under surface: smooth and satiny. Color (when fully opened): Upper side, dorsal: from base purple (RHS N79A and RHS N79C). Sides and upper edge are white (RHS NN155D) with a red/purple haze (RHS 70B). Lateral: white (RHS NN155D) with purple spots and marks (RHS N79A and RHS N79C) and a red/purple haze (RHS 70B). Under side, dorsal: From base purple (RHS N79B and RHS N79D). In the center a little yellow/green (RHS 144D) and on the sides and on the top white (RHS NN155C) with a red/purple haze (RHS 70B). Lateral: white (RHS NN155B) with purple (RHS N79A) stripes and marks and a yellow/green haze (RHS 144D).

Pedicel.—Length: about 35 mm. Diameter: about 4 mm. Texture: glabrous and smooth. Color: green/white (RHS 157D) with a red/purple haze (RHS 70B) which runs into yellow/green (RHS 145B) and ends into purple (RHS N79B and RHS N79A).

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 5 mm. Color: purple (RHS N79B and RHS N79D) and tip is white (RHS NN155B).

Pollinia.—Quantity: two. Diameter: about 2 mm. Color: yellow/orange (RHS 23A).

Ovary.—Length: about 4 mm. Diameter: about 3 mm. Color: white (RHS NN155D) with purple haze (RHS 70B).

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 'Petticoat', as illustrated and described herein.

* * * * *

FIG. 1

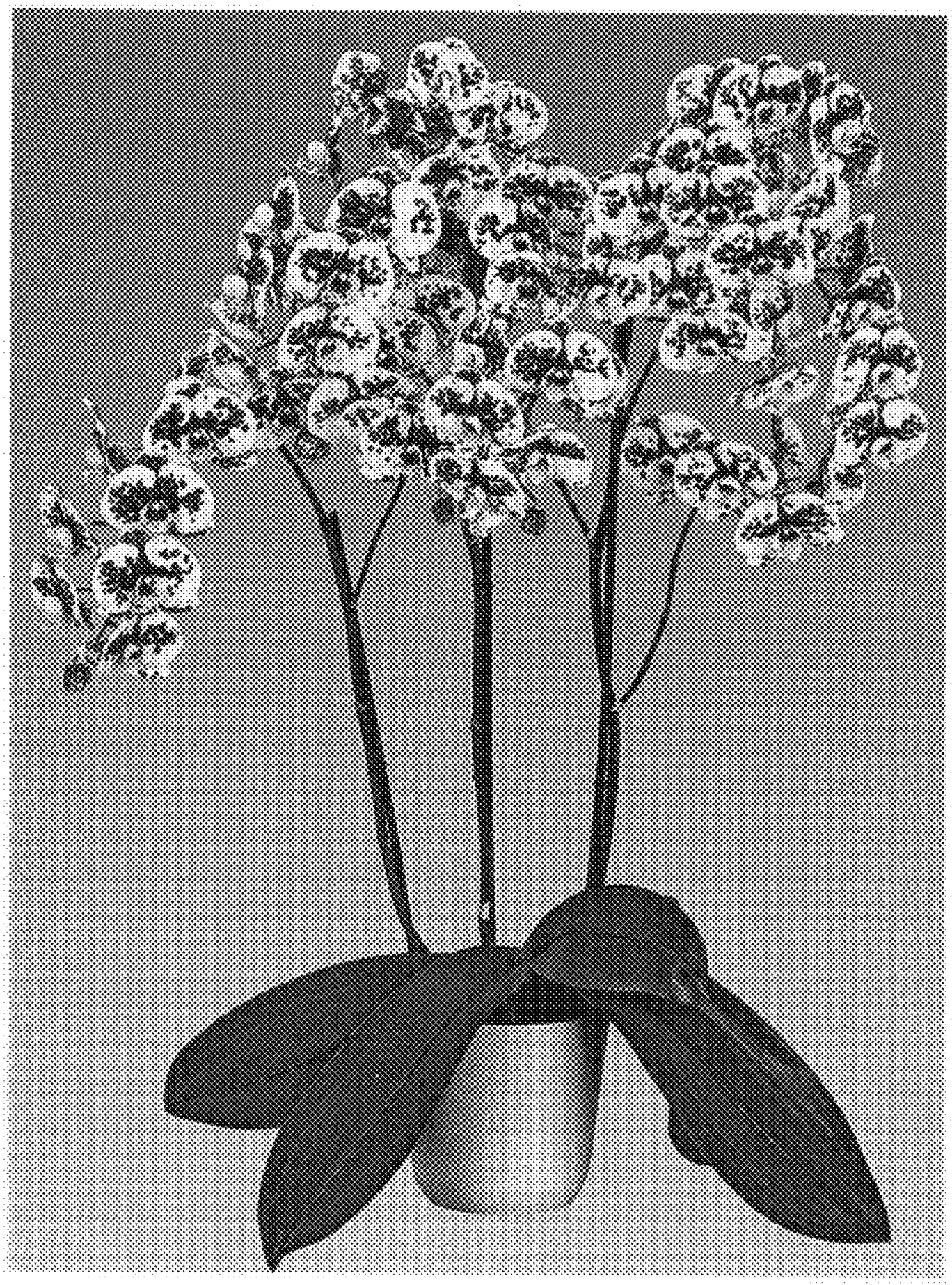

FIG. 2

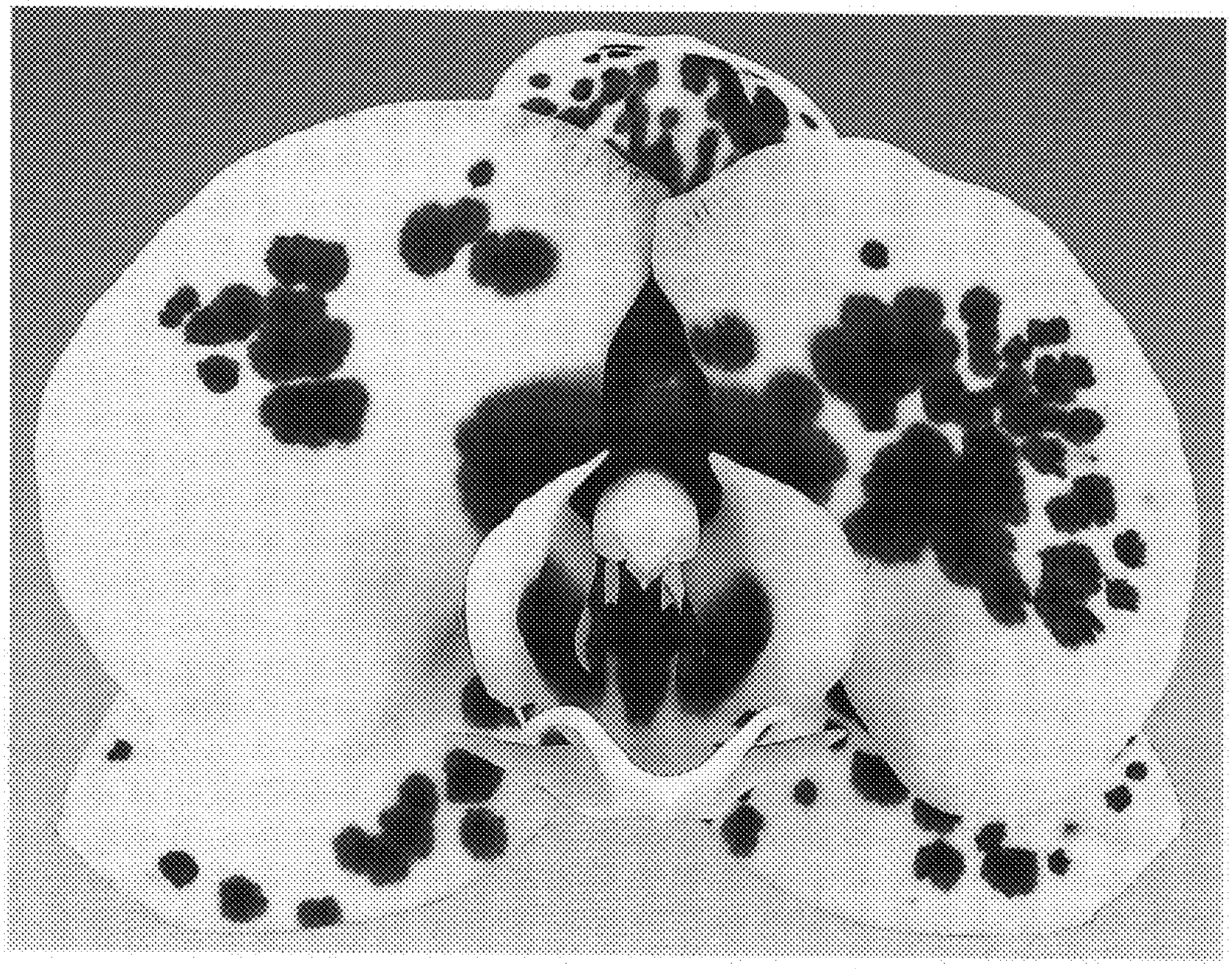

FIG. 3