



US00PP30684P3

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

(10) **Patent No.:** **US PP30,684 P3**

(45) **Date of Patent:** **Jul. 9, 2019**

(54) **PHALAEENOPSIS ORCHID PLANT NAMED**
'CALM STORM'

(50) Latin Name: *Phalaenopsis hybrida*
Varietal Denomination: **Calm Storm**

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

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

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

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

(21) Appl. No.: **15/732,151**

(22) Filed: **Sep. 27, 2017**

(65) **Prior Publication Data**
US 2018/0092272 P1 Mar. 29, 2018

Related U.S. Application Data

(60) Provisional application No. 62/400,862, filed on Sep. 28, 2016.

(30) **Foreign Application Priority Data**

Sep. 29, 2016 (NL) PBR OPS1385

(51) **Int. Cl.**
A01H 5/02 (2018.01)

(52) **U.S. Cl.**
USPC **Plt./311**
CPC *A01H 5/02* (2013.01)

(58) **Field of Classification Search**
USPC **Plt./263.1, 311**
See application file for complete search history.

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

(57) **ABSTRACT**

A new and distinct *Phalaenopsis* plant named 'Calm Storm' particularly characterized by flowers which are red/purple with many small red/purple spots and a spotted 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

1

Latin name of the genus and species of the plant claimed:
Phalaenopsis hybrida.
Variety denomination: 'Calm Storm'.

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 'Calm Storm'.

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.

2

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* 'Calm Storm' 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* 'Calm Storm' originated from a cross made by the inventor in 2004 in Strengweg, Heemskerk, The Netherlands. The female or seed parent is the *Phalaenopsis* cultivar designated (Brother Spotter x Ever Spring King), unpatented. The male or pollen parent is the *Phalaenopsis* cultivar designated (Ever Spring Prince x Happy Valentine), unpatented. The new *Phalaenopsis* 'Calm Storm' was discovered and selected by the inventor as a single flowering plant within the progeny of the stated cross in a controlled environment in 2011 in Strengweg, Heemskerk, The Netherlands.

Asexual reproduction of the new *Phalaenopsis* cultivar by tissue culture (mericlone) was first performed in July, 2012 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 'Calm Storm', which in combination distinguish this *Phalaenopsis* as a new and distinct cultivar:

1. flowers which are red/purple with many small red/purple spots and a spotted 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 'Calm Storm', the female parent (Brother Spotter x Ever Spring King) white with red/purple spots, the male parent (Ever Spring Prince x Happy Valentine) purple/violet with red/purple marks, whereas the flowers of 'Calm Storm' are red/purple with red/purple spots and a white haze.

Presently, the commercial cultivar to which 'Calm Storm' can be meaningfully compared is 'Dreamer' (U.S. Plant Pat. No. 27,235). The flowers of 'Dreamer' are purple/violet with some white at the edges, whereas the flowers of 'Calm Storm' are red/purple with red/purple spots. Also the labellum differs in color.

BRIEF DESCRIPTION OF THE PHOTOGRAPHS

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

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

FIG. 2 shows a close-up view of the typical flower of 'Calm Storm'.

FIG. 3 shows a close-up view of the typical leaves of 'Calm Storm'.

DETAILED BOTANICAL DESCRIPTION

The new *Phalaenopsis* cultivar 'Calm Storm' 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 'Calm Storm' as grown in a greenhouse in Strenweg, Heemskerk, The Netherlands, under conditions which closely approximate those generally used in commercial practice. Initially, the ideal temperature to grow plants of 'Calm Storm' is 27° C. during the day and at night. Then, during the flowering phase of 'Calm Storm', the ideal growing temperature is 20-22° C. during the day and 18° C. at night. Light levels for growing 'Calm Storm' 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 'Calm Storm' 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 'Calm Storm' plants described is 12 months after potting.

Classification:

Botanical.—*Phalaenopsis hybrida*.

Parentage:

Female or seed parent.—*Phalaenopsis* cultivar designated (Brother Spotter x Ever Spring King), unpatented.

Male or pollen parent.—*Phalaenopsis* cultivar designated (Ever Spring Prince x Happy Valentine), unpatented.

Propagation:

Type.—Tissue culture.

Rooting habit and description.—Fleshy; approximately 5 mm-8 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 50 cm.

Growth habit.—Standard; green leaves (RHS N137A) 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.—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 22 cm.

Mature leaf width.—About 8 cm.

Mature leaf thickness.—About 2 mm.

Mature leaf color.—Upper side: green (RHS N137A). Under side: green (RHS 137A) with a little brown (RHS 200A).

Leaf base.—Acute.

Margin.—Entire.

Venation.—Pattern: parallel. Color of midvein.—Upper side: green (RHS 139A). Under side: green (RHS 137A).

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 2.

Number of flowers per raceme.—About 10.

Length.—About 30 cm.

Diameter.—About 4 mm.

Peduncle:

Length.—About 30 cm.

Diameter.—About 4 mm.

Strength.—Strong.

Aspect.—Upright.

Texture.—Glabrous and smooth.

Color.—Green (RHS 137A) with brown (RHS 200A).
Buds:

Height (from base to tip).—About 30 mm.

Diameter (at midpoint).—About 25 mm.

Shape.—Oval with a bump.

Color.—Red/purple (RHS 72A and RHS 72B) with a yellow/green haze (RHS 145C).

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 85 mm. Diameter: about 100 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. Base: broadly ovate. Length: about 55 mm. Width: about 50 mm. Texture: Upper surface: smooth and satiny. Under surface: smooth and satiny. Color (when fully opened): upper side: red/purple RHS 70A, with red/purple spots (RHS 59A) and a white haze (RHS NN155D). Under side: red/purple (RHS 70B) with white haze (RHS NN155D). 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 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 of the midlobe and lateral lobes: oval. Length midlobe: about 22 mm. Width midlobe (not flattened): about 20 mm. Length lateral lobe: about 18 mm. Width lateral lobe (not flattened): about 17 mm. Depth of tube created by lateral lobes of labellum: about 18 mm. Texture: Upper & under surface: smooth and satiny. Color (when fully opened): Midlobe, upper side: red/purple (RHS 70A) with a white haze (RHS NN155D). At the base red/purple spots (RHS 59A) and some yellow (RHS 5B). Under side: red/purple edges (RHS 71A) with some purple (RHS 76C) and a white haze (RHS N155C). Lateral lobes, upper side: white (RHS NN155D) with red/purple stripes (RHS 59A) which runs into RHS 70A) and a

thin white edge (RHS NN155D). Lower edge is yellow (RHS 5B). Under side: white (RHS NN155D) with red/purple (RHS 70A). Lower edge is red/purple (RHS 59A) with a yellow haze (RHS 12B). Cirrhi: about 18 mm. Color: red/purple (RHS 70A) with white tips (RHS NN155D). Pestle (Callosities): Length: about 9 mm. Width (not flattened): about 6 mm. Color: yellow (RHS 12A) with red/purple stripes/spots (RHS 59A) and a yellow/green haze (RHS 144B).

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 45 mm.

Width.—About 30 mm.

Apex.—Oval.

Texture.—Upper and under surface: smooth and satiny.

Color (when fully opened): Upper side, dorsal: red/purple (RHS 70A) with purple stripes/spots (RHS 70B) and mainly at the edges a white haze (RHS NN155D). Lateral: red/purple (RHS 70A) with red/purple stripes/spots (RHS 72A and RHS 59A). At the base a yellow/green haze (RHS 150D). Under side, dorsal: red/purple (RHS 70A with some RHS 72A) and a white haze (RHS NN155D). Lateral: red/purple (RHS 70A) which runs into RHS 72A. At the base a yellow/green haze (RHS 145C).

Pedicel:

Length.—About 4.5 cm.

Diameter.—About 3 mm.

Texture.—Glabrous and smooth.

Color.—Red/purple (RHS 70A) which runs into yellow/green (RHS 145A).

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 or fruit.

Column:

Length.—About 1 cm.

Diameter.—About 6 mm.

Color.—Red/purple (RHS 70A and RHS 70B).

Pollinia:

Quantity.—Two.

Diameter.—About 4 mm.

Color.—Yellow/orange (RHS 23A).

Ovary:

Length.—About 4 mm.

Diameter.—About 3 mm.

Color.—White (RHS NN155D).

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 'Calm Storm', as illustrated and described herein.

* * * * *

FIG. 1

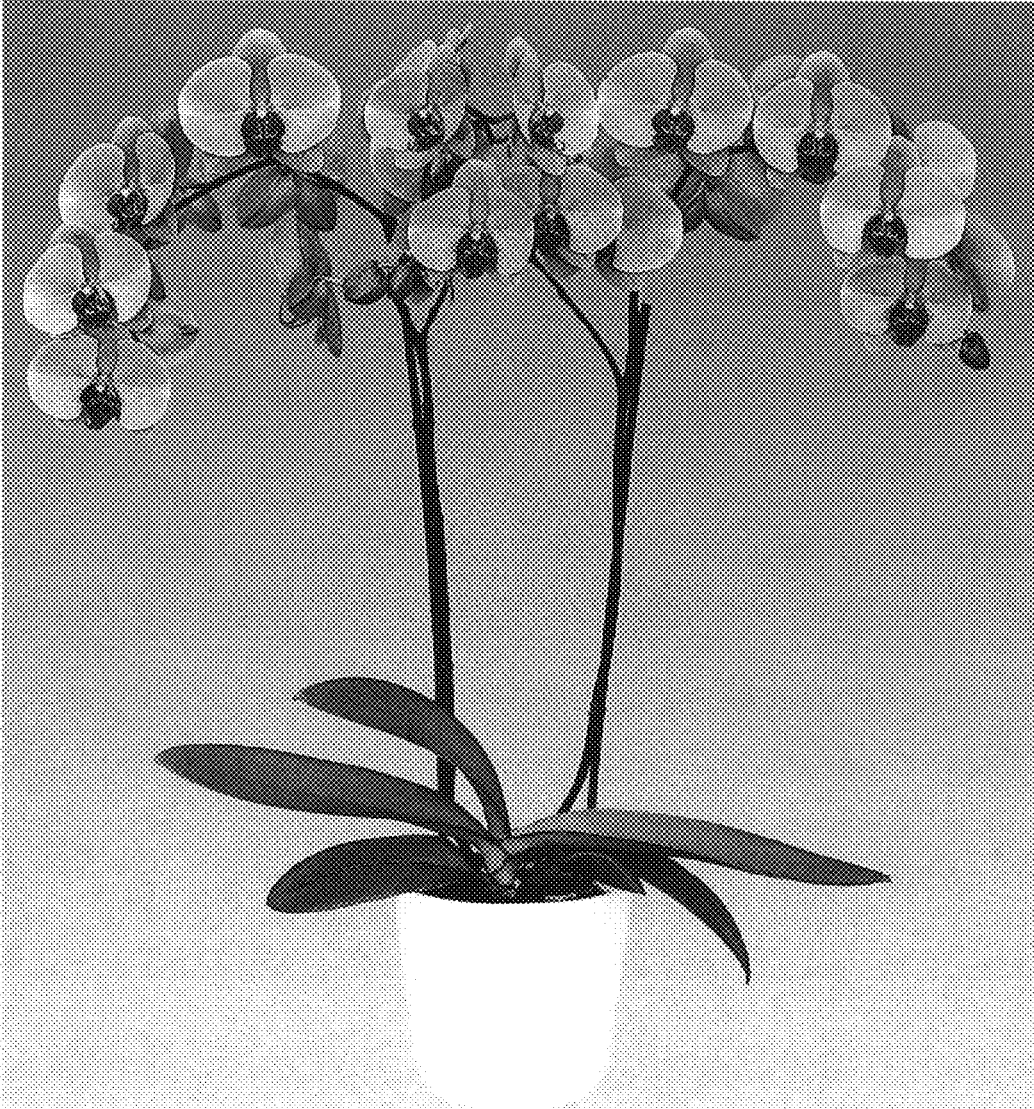


FIG. 2

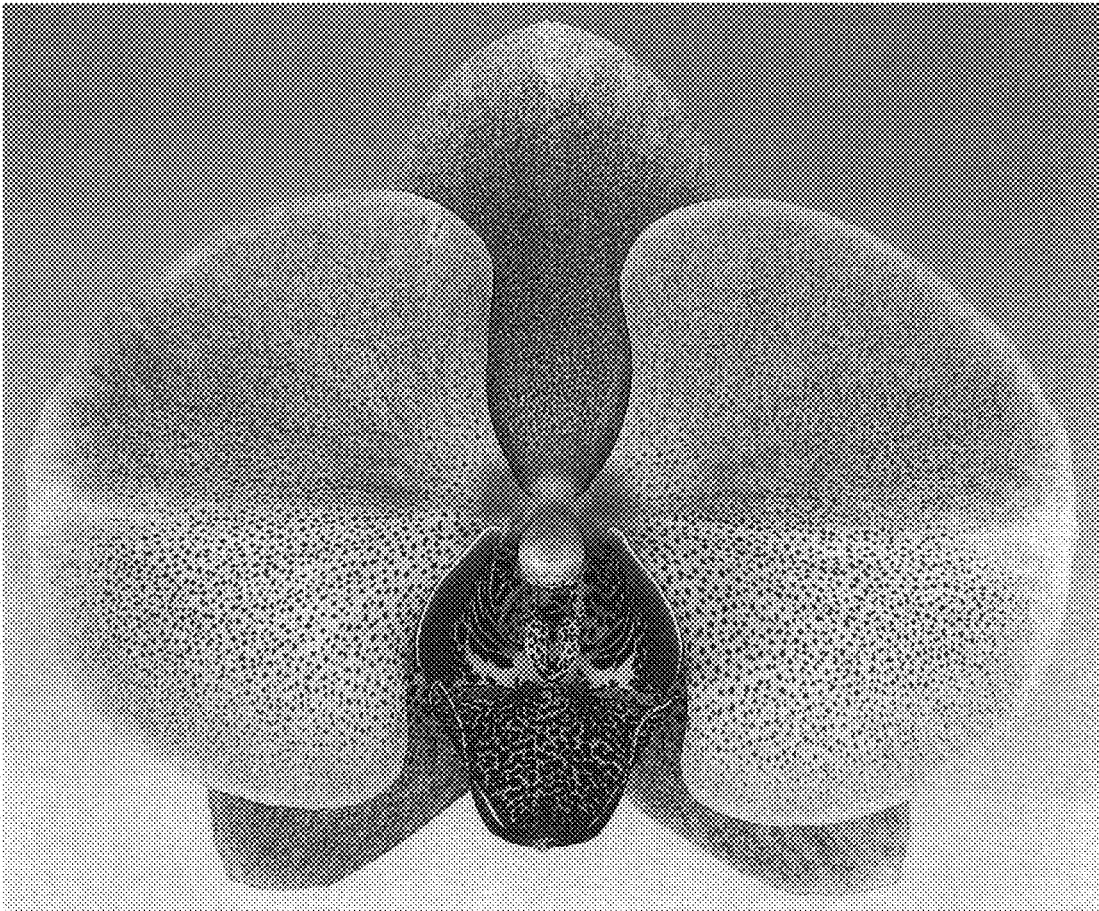


FIG. 3

