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Kester

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(54) **CHRYSANTHEMUM PLANT NAMED**
'SHINING'

(50) Latin Name: *Chrysanthemum*×*morifolium*
Varietal Denomination: **Shining**

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(57) **ABSTRACT**

A new and distinct cultivar of cut flower *Chrysanthemum* plant named 'Shining', characterized by its upright growth habit; freely flowering habit; anemone-type inflorescences; attractive pink-colored ray florets and red purple-colored disc florets; response time about 50 days when grown at 18° C.; dark green-colored foliage; strong flowering stems and peduncles; and good postproduction longevity with inflorescences and foliage maintaining good substance and color for about two weeks in an interior environment.

1 Drawing Sheet

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Botanical classification/cultivar designation: *Chrysanthemum*×*morifolium* cultivar Shining.

BACKGROUND OF THE INVENTION

The present invention relates to a new and distinct cultivar of cut flower *Chrysanthemum* plant, botanically known as *Chrysanthemum*×*morifolium* and hereinafter referred to by the name 'Shining'.

The new *Chrysanthemum* is a product of a planned breeding program conducted by the Inventor in De Lier, The Netherlands. The objective of the breeding program is to create new high-yielding cut flower *Chrysanthemum* cultivars with attractive ray and disc coloration, good inflorescence form and substance and good post-production longevity.

The new *Chrysanthemum* originated from a cross-pollination made by the Inventor in 1999, in De Lier, The Netherlands, of the *Chrysanthemum*×*morifolium* cultivar Glance, not patented, as the female, or seed, parent with the *Chrysanthemum*×*morifolium* cultivar Le Mans, not patented, as the male, or pollen, parent.

The cultivar Shining was discovered and selected by the Inventor as a flowering plant within the progeny of the stated cross-pollination in a controlled environment in De Lier, The Netherlands in September, 2000. The selection of this plant was based on its desirable inflorescence coloration and good form and substance.

Asexual reproduction of the new *Chrysanthemum* by vegetative tip cuttings taken in a controlled environment in De Lier, The Netherlands since December, 2000, has shown that the unique features of this new *Chrysanthemum* are stable and reproduced Shining to type in successive generations.

SUMMARY OF THE INVENTION

Plants of the cultivar Shining have not been observed under all possible environmental conditions. The phenotype may vary somewhat with variations in environment such as

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temperature, daylength and light intensity, without, however, any variance in genotype.

The following traits have been repeatedly observed and are determined to be the unique characteristics of 'Shining'. These characteristics in combination distinguish 'Shining' as a new and distinct cultivar:

1. Upright cut *Chrysanthemum* that is usually grown as a natural spray.
2. Freely flowering habit, about 16 inflorescences per flowering stem.
3. Large anemone-type inflorescences.
4. Attractive pink-colored ray florets and red purple-colored disc florets.
5. Response time about 50 days when grown at 18° C.
6. Dark green-colored foliage.
7. Strong flowering stems and peduncles.
8. Good postproduction longevity with inflorescences and foliage maintaining good substance and color for about two weeks in an interior environment.

Plants of the new *Chrysanthemum* can be compared to plants of the female parent, the cultivar Glance. In side-by-side comparisons conducted in De Lier, The Netherlands, plants of the new *Chrysanthemum* differed from plants of the cultivar Glance in the following characteristics:

1. Flowering stems of plants of the new *Chrysanthemum* were stronger than flowering stems of plants of the cultivar Glance.
2. Plants of the new *Chrysanthemum* had larger leaves than plants of the cultivar Glance.
3. Plants of the new *Chrysanthemum* had larger inflorescences than plants of the cultivar Glance.

Plants of the new *Chrysanthemum* can be compared to plants of the male parent, the cultivar Le Mans. In side-by-side comparisons conducted in De Lier, The Netherlands, plants of the new *Chrysanthemum* differed from plants of the cultivar Le Mans in the following characteristics:

1. Plants of the new *Chrysanthemum* had larger leaves than plants of the cultivar Le Mans.

2. Plants of the new *Chrysanthemum* had larger inflorescences than plants of the cultivar Le Mans.
3. Disc florets of plants of the new *Chrysanthemum* were lighter in color than disc florets of plants of the cultivar Le Mans.

Plants of the new *Chrysanthemum* can also be compared to plants of the *Chrysanthemum*×*morifolium* cultivar Funshine, disclosed in U.S. Plant Pat. No. 8,106. In side-by-side comparisons conducted in De Lier, The Netherlands, plants of the new *Chrysanthemum* differed from plants of the cultivar Funshine in the following characteristics:

1. Flowering stems of plants of the new *Chrysanthemum* were stronger than flowering stems of plants of the cultivar Funshine.
2. Plants of the new *Chrysanthemum* had larger leaves than plants of the cultivar Funshine.
3. Plants of the new *Chrysanthemum* had larger inflorescences than plants of the cultivar Funshine.
4. Disc florets of plants of the new *Chrysanthemum* were lighter in color than disc florets of plants of the cultivar Funshine.

Plants of the new *Chrysanthemum* can also be compared to plants of the *Chrysanthemum*×*morifolium* cultivar Target, disclosed in U.S. Plant Pat. No. 6,621. In side-by-side comparisons conducted in De Lier, The Netherlands, plants of the new *Chrysanthemum* differed from plants of the cultivar Target in the following characteristics:

1. Flowering stems of plants of the new *Chrysanthemum* were stronger than flowering stems of plants of the cultivar Target.
2. Plants of the new *Chrysanthemum* had larger inflorescences than plants of the cultivar Target.
3. Disc florets of plants of the new *Chrysanthemum* were lighter in color than disc florets of plants of the cultivar Target.

BRIEF DESCRIPTION OF THE PHOTOGRAPH

The accompanying colored photograph illustrates the overall appearance of the new *Chrysanthemum*, showing the colors as reasonably possible to obtain in colored reproductions of this type. Colors in the photograph may differ slightly from the color values cited in the detailed botanical description which accurately describe the colors of the new *Chrysanthemum*.

The photograph comprises a side perspective view of a typical flowering stem of 'Shining' grown as a natural spray.

DETAILED BOTANICAL DESCRIPTION

The aforementioned photograph and following observations and measurements describe plants grown in De Lier, The Netherlands, under conditions which approximate commercial practice in a glass-covered greenhouse in June. Cuttings were planted in ground beds and received two weeks of long day/short nights followed by short day/long nights until flowering. Plants were grown as single-stem natural spray cut *Chrysanthemums*. During the production of the flowering plants, day and night temperatures averaged 18.5° C. The photograph and botanical description were taken about ten weeks after planting. In the following description, color references are made to The Royal Horticultural Society Colour Chart, 2001 Edition, except where general terms of ordinary dictionary significance are used.

Botanical classification: *Chrysanthemum*×*morifolium* cultivar Shining.

Commercial classification: Anemone-type cut flower *Chrysanthemum*.

Parentage:

Female or seed parent.—*Chrysanthemum*×*morifolium* cultivar Glance, not patented.

Male or pollen parent.—*Chrysanthemum*×*morifolium* cultivar Le Mans, not patented.

Propagation:

Type.—Vegetative tip cuttings.

Time to initiate roots.—Summer: About five days at temperatures of 20° C. Winter: About six days at temperatures of 20° C.

Time to produce a rooted young plant.—Summer: About 11 days at temperatures of 20° C. Winter: About 15 days at temperatures of 20° C.

Root description.—Fine, fibrous and white in color.

Rooting habit.—Freely branching.

Plant description:

Appearance/growth habit.—Herbaceous anemone-type cut flower that is typically grown as a natural spray.

Narrow columnar; moderately vigorous to vigorous.

Flowering stem description.—Aspect: Erect. Length: About 76 cm. Diameter (natural spray diameter): About 20 cm. Diameter: About 7 mm. Internode length: About 2.9 cm. Texture: Pubescent; longitudinally ridged. Strength: Strong. Color: 138B.

Foliage description.—Arrangement: Alternate; single. Length: About 12.1 cm. Width: About 6.1 cm. Apex: Acute. Base: Attenuate. Margin: Palmately lobed; sinuses divergent. Texture, upper and lower surfaces: Sparsely pubescent; slightly rough. Color: Developing foliage, upper surface: 137B. Developing foliage, lower surface: 137C. Fully expanded foliage, upper surface: 137A. Fully expanded foliage, lower surface: Between 137C and 191A. Venation, upper surface: 191A. Venation, lower surface: Between 138B to 138C and 191A. Petiole: Length: About 1.9 cm. Diameter: About 3.5 mm. Color, upper and lower surfaces: 138A to 138B.

Flowering description:

Appearance.—Anemone-type inflorescence form with narrow oblanceolate-shaped ray florets and enlarged disc florets. Inflorescences borne on terminals, arising from leaf axils. Disc and ray florets developing acropetally on a capitulum.

Flowering response.—Under natural conditions, plant flower mid-October to early November in The Netherlands. At other times of the year, inflorescence initiation and development can be induced under short day/long night conditions (at least 13.5 hours of darkness). Plants exposed to two weeks of long day/short night conditions after planting followed by photoinductive short day/long night conditions flower about 50 days later when grown as a natural spray.

Postproduction longevity.—In an interior environment, inflorescences and foliage will maintain good color and substance for about two weeks in an interior environment.

Quantity of inflorescences.—Freely flowering habit, about 15 inflorescences per flowering stem.

Inflorescence size.—Diameter: Large, about 7.4 cm. Depth (height): About 2.9 cm. Disc diameter: About 4.2 cm. Receptacle diameter: About 1.5 cm. Receptacle height: About 5 mm.

Inflorescence buds.—Shape: Oblate, flattened. Height: About 5 mm. Diameter: About 1 cm. Color: 137A to 137B.

Ray florets.—Shape: Narrowly oblanceolate. Length: About 3.4 cm. Width: About 6 mm. Apex: Obtuse. Base: Attenuate. Texture: Smooth, glabrous; longitudinally ridged. Aspect: Initially upright; when fully expanded horizontal to about 20° from horizontal. Number of ray florets per inflorescence: About 35 arranged in two rows. Color: When opening, upper surface: 73D. When opening, lower surface: 72C. Fully opened, upper and lower surfaces: 75D to 76D.

Disc florets.—Arrangement: Massed at center of receptacle. Shape: Tubular, enlarged, elongated. Apex: Five-pointed. Length: About 1.7 cm. Width: Apex: About 1 mm. Base: About 0.8 mm. Number of disc florets per inflorescence: About 200. Color: Immature: 73D; towards the apex, 72C to 72D; apex, 71A. Mature: 75D, apex, 73C.

Phyllaries.—Quantity per inflorescence: About 17. Length: About 6 mm. Width: About 3 mm. Shape: Ovate. Apex: Acute. Base: Broadly cuneate. Margin: Entire. Texture, upper and lower surfaces: Densely

pubescent. Color, upper surface: 143A. Color, lower surface: 137A.

Peduncles.—Length: First peduncle: About 7.5 cm. Fourth peduncle: About 8.2 cm. Seventh peduncle: About 11.8 cm. Diameter: About 3 mm. Angle: About 20° from vertical. Strength: Strong. Texture: Densely pubescent. Color: 138A.

Reproductive organs.—Androecium: Present on disc florets only. Anther color: N170A. Pollen amount: None observed. Gynoecium: Present on both ray and disc florets. Stigma color: 153D. Ovary color: 145D.

Seed/fruit.—Seed and fruit production has not been observed.

Disease/pest resistance: Resistance to pathogens and pests common to *Chrysanthemums* has not been observed on plants grown under commercial conditions.

Temperature tolerance: Plants of the new *Chrysanthemum* have demonstrated good tolerance to low temperatures of 10° C. and high temperatures of 35° C.

It is claimed:

1. A new and distinct cultivar of cut flower *Chrysanthemum* plant named 'Shining', as illustrated and described.

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