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

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

(57) **ABSTRACT**

A distinct cultivar of Chrysanthemum plant named 'Shepherd', characterized by its upright, mounded and rounded plant habit; freely branching habit; dense and full plants; uniform and freely flowering habit; daisy-type inflorescences; white-colored ray florets; and natural season flowering in early October in the Northern Hemisphere.

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**1 Drawing Sheet**

**1**

**2**

**BOTANICAL CLASSIFICATION/CULTIVAR DESIGNATION**

*Chrysanthemum*×*morifolium* cultivar Shepherd.

**BACKGROUND OF THE INVENTION**

The present invention relates to a new and distinct cultivar of Chrysanthemum plant, botanically known as *Chrysanthemum*×*morifolium*, commercially known as a garden-type Chrysanthemum, known under the trade name Kristen, and hereinafter referred to by the name 'Shepherd'.

The new cultivar is a product of a planned breeding program conducted by the Inventor in Fareham, United Kingdom. The objective of the breeding program is to create new garden-type Chrysanthemum cultivars having inflorescences with desirable inflorescence forms, attractive floret colors and good garden performance.

The new Chrysanthemum originated from a cross made in March, 1998, in Fareham, United Kingdom, of the Chrysanthemum cultivar Pidoul, disclosed in a U.S. Plant Pat. No. 10,218, as the female, or seed, parent with a proprietary Chrysanthemum selection identified as code number G137A1, not patented, as the male, or pollen, parent. The new Chrysanthemum was discovered and selected by the Inventor as a single flowering plant within the progeny of the stated cross grown in a controlled environment in Fareham, United Kingdom in September, 1998. The selection of this plant was based on its desirable inflorescence form, attractive ray floret color and good garden performance.

Asexual reproduction of the new cultivar by terminal cuttings taken in a controlled environment in Alva, Fla. since December, 1998, has shown that the unique features of this new Chrysanthemum are stable and reproduced true to type in successive generations.

**SUMMARY OF THE INVENTION**

The cultivar Shepherd has not been observed under all possible environmental conditions. The phenotype may vary somewhat with variations in environment such as 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 'Shepherd'. These characteristics in combination distinguish 'Shepherd' as a new and distinct cultivar:

1. Upright, mounded and rounded plant habit.
2. Freely branching habit; dense and full plants.
3. Uniform and freely flowering habit.
4. Daisy-type inflorescences.
5. White-colored ray florets.
6. Natural season flowering in early October in the Northern Hemisphere.

Plants of the new Chrysanthemum are most similar to plants of the female parent, the cultivar Pidoul. In side-by-side comparisons conducted in Alva, Fla., plants of the new Chrysanthemum differed from plants of the cultivar Pidoul, in the following characteristics:

1. Plants of the new Chrysanthemum had larger inflorescences than plants of the cultivar Pidoul.
2. Plants of the new Chrysanthemum flowered about one week earlier than plants of the cultivar Pidoul when grown under artificial photoperiodic conditions.
3. Ray florets of inflorescences of plants of the new Chrysanthemum maintained white coloration longer than ray florets of inflorescences of plants of the cultivar Pidoul.

In side-by-side comparisons conducted in Alva, Fla., plants of the new Chrysanthemum differed from plants of the male parent, the selection G137A1, in the following characteristics:

1. Plants of the new Chrysanthemum were more compact than plants of the selection G137A1.
2. Ray florets of inflorescences of plants of the new Chrysanthemum maintained white coloration longer than ray florets of inflorescences of plants of the selection G137A1.

**BRIEF DESCRIPTION OF THE PHOTOGRAPHS**

The accompanying photographs illustrate the overall appearance of the new Chrysanthemum. These photographs show the colors as true as it is reasonably possible to obtain in colored reproductions of this type. Colors in the photo-

graphs may differ slightly from the color values cited in the detailed botanical description which accurately describe the colors of the new Chrysanthemum.

The photograph at the top of the sheet comprises a side perspective view of a typical flowering plant of 'Shepherd'.

The photograph at the bottom of the sheet comprises a close-up view of typical inflorescences of the cultivar 'Shepherd'.

#### DETAILED BOTANICAL DESCRIPTION

In the following description, color references are made to The Royal Horticultural Society Colour Chart, 1995 Edition, except where general terms of ordinary dictionary significance are used. The following observations and measurements describe plants grown in a fiberglass-covered greenhouse in Alva, Fla. under practices which approximate those generally used in commercial garden-type Chrysanthemum production. One cutting was directly stuck in a 15.25-cm container in November, 2001, and exposed to long day/short night conditions. Plants were pinched once about five weeks after sticking. About one week after the pinch, the photoinductive short day/long night treatments were started. During the production of the plants, day temperatures averaged about 27° C. and night temperatures averaged about 21° C. Measurements and numerical values represent averages for typical flowering plants.

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

Commercial classification: Daisy-type garden Chrysanthemum.

Parentage:

*Female, or seed, parent.*—*Chrysanthemum* × *morifolium* cultivar Pidoul, disclosed in U.S. Plant Pat. No. 10,218.

*Male, or pollen, parent.*—Proprietary selection of *Chrysanthemum* × *morifolium* identified as code number G137A1, not patented.

Propagation:

*Type.*—Terminal tip cuttings.

*Time to initiate roots.*—About four days at 21° C.

*Time to produce a rooted cutting.*—About ten to twelve days at 21° C.

*Root description.*—White, fine and fibrous.

*Rooting habit.*—Freely branching.

Plant description:

*Appearance.*—Perennial herbaceous daisy-type garden Chrysanthemum. Inverted triangle. Stems initially upright, then somewhat outwardly spreading giving a uniformly mounded to rounded appearance to the plant. Freely branching with about eight lateral branches forming after the pinch.

*Plant height.*—About 18 cm.

*Plant diameter.*—About 26 cm.

*Lateral branches.*—Length: About 14 cm. Diameter: About 3 mm. Internode length: About 1 cm. Aspect: Mostly upright. Texture: Pubescent. Color: 146A.

*Foliage description.*—Leaf arrangement: Alternate. Length: About 5.4 cm. Width: About 4.1 cm. Apex: Cuspidate. Base: Truncate. Margin: Palmately lobed, sinuses parallel to divergent. Texture: Both surfaces, pubescent; veins prominent on lower surface. Color:

Young and fully expanded foliage, upper surface: 147A. Young and fully expanded foliage, lower surface: 147B. Venation, upper surface: 147A. Venation, lower surface: 147B. Petiole length: About 1.6 cm. Petiole diameter: About 2 mm. Petiole color, upper and lower surfaces: 147B.

Inflorescence description:

*Appearance.*—Daisy-type inflorescence form with elongated oblong-shaped ray florets. Inflorescences borne on terminals above foliage, arising from leaf axils. Disk and ray florets develop acropetally on a capitulum. About nine inflorescences per lateral.

*Flowering response.*—Early flowering; under natural season conditions, plants flower in early October in the Northern Hemisphere and continue to flower for at least three weeks depending on weather conditions.

*Inflorescence bud (before showing color).*—Height: About 5 mm. Diameter: About 6.5 mm. Shape: Oblate. Phyllary color: Close to 146A.

*Inflorescence size.*—Diameter: About 4.2 cm. Depth (height): About 1.2 cm. Disc diameter: About 1.1 cm. Receptacle diameter: About 3.5 mm.

*Ray florets.*—Shape: Elongated oblong. Length: About 2.1 cm. Corolla tube length: About 3 mm. Width: About 4 mm. Apex: Emarginate. Margin: Entire. Texture: Smooth, glabrous, satiny. Surface: Mostly flat. Orientation: Initially upright, then perpendicular to the peduncle. Number of ray florets per inflorescence: About 36 in one or two rows. Color: When opening, upper and lower surfaces: 155D. Opened inflorescence, upper and lower surfaces: 155D.

*Disc florets.*—Shape: Tubular, apex dentate. Length: About 6 mm. Width: Apex: About 1.5 mm. Base: About 1 mm. Number of disc florets per inflorescence: About 75. Color: Immature: 9A. Mature: Apex: 9A. Mid-section: 145C to 145D. Base: 155D.

*Phyllaries.*—Length: About 7.5 mm. Width: About 2 mm. Shape: Ligulate. Apex: Acute. Base: Truncate. Margin: Entire. Texture: Upper surface, smooth and waxy; lower surface, pubescent. Color, upper and lower surfaces: Close to 146A.

*Peduncle.*—Aspect: Flexible, angled about 45° from vertical. Length: First peduncle: About 4 cm. Fourth peduncle: About 4.3 cm. Diameter: About 2 mm. Texture: Pubescent. Color: 146A.

*Reproductive organs.*—Androecium: Present on disc florets only. Anther color: 9A. Pollen: None observed. Gynoecium: Present on both ray and disc florets. Stigma color: 9A.

*Seed.*—Seed production has not been observed.

Disease/pest resistance: Plants of the new Chrysanthemum have not been shown to be resistant to pathogens and pests common to Chrysanthemums.

Garden performance: Plants of the new Chrysanthemum have been observed to be tolerant to rain, wind and temperatures ranging from 0 to higher than 40° C.

It is claimed:

1. A new and distinct cultivar of Chrysanthemum plant named 'Shepherd', as illustrated and described.

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