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United States Patent [19]**VandenBerg**[11] **Patent Number:** **Plant 8,781**[45] **Date of Patent:** **Jun. 14, 1994**[54] **CHRYSANTHEMUM PLANT NAMED
BRONZE PASION**[75] **Inventor:** **Cornelis P. VandenBerg, Salinas,
Calif.**[73] **Assignee:** **Yoder Brothers, Inc., Barberton,
Ohio**[21] **Appl. No.:** **919,759**[22] **Filed:** **Jul. 27, 1992**[51] **Int. Cl.⁵** **A01H 5/00**[52] **U.S. Cl.** **Plt./76**[58] **Field of Search** **Plt. 76, 78, 79**[56] **References Cited****U.S. PATENT DOCUMENTS**

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Primary Examiner—Howard J. Locker*Attorney, Agent, or Firm*—Foley & Lardner[57] **ABSTRACT**

A Chrysanthemum plant named Bronze Pasion particularly characterized by its flat capitulum form; decorative capitulum type; yellow-orange ray floret color, with a darker bronze center of the flower; diameter across face of capitulum of 73 to 76 mm when fully opened, when grown as a single stem spray cut mum; photoperiodic flowering response to short days when grown in Salinas, Calif., is 51 to 57 days after start of short days; flowering response in Bogota, Colombia is 62 to 64 days; plant height is 74 to 114 cm when grown in Salinas with 17 to 18 long days prior to start of short days; height is 114 to 132 cm when grown in Bogota with 21 long days prior to start of short days; peduncle length of the first lateral at flowering after removing the apical bud without growth regulator applications is 3 to 8 cm when grown in Salinas, and 3 to 5 cm when grown in Bogota; peduncle length of the fourth lateral at flowering is 8 to 13 cm when grown in Salinas, and 8 to 13 cm when grown in Bogota; and excellent tolerance to minimum low night temperatures of 7° C. for bud initiation and flower development.

1 Drawing Sheet**1**

The present invention comprises a new and distinct cultivar of Chrysanthemum, botanically known as *Dendranthema grandiflora*, and referred to by the cultivar name Bronze Pasion.

Bronze Pasion, identified as 0620 (85-251A01), is a product of a mutation induction program. The new cultivar was discovered and selected by Cornelis P. VandenBerg on Jan. 30, 1990, in a controlled environment in Salinas, Calif., as one flowering plant within a flowering block established as rooted cuttings from stock plants which had been exposed as unrooted cuttings to an X-ray source of 2000 rads in Fort Myers, Fla., on Jun. 29, 1989. The irradiated parent cultivar was the cultivar identified as Pasion, disclosed in U.S. Plant Pat. No. 7,489. Pasion is described as a decorative spray cut mum with a flat capitulum form; a light red-purple ray floret color, with a darker red-purple center of the flower; diameter across face of capitulum of 63 to 76 mm when fully opened; flowering response period of 50 to 58 days after start of short days in Salinas, Calif., and of 63 to 70 days in Bogota, Colombia; plant height of 79 to 107 cm when grown in Salinas with 14 to 18 long days prior to start of short days, and of 117 to 130 cm when grown in Bogota with 20 to 21 long days prior to start of short days; and excellent tolerance to low night temperatures for bud initiation and flower devel-

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opment. The above description of Pasion has a wider range of measurements than the description of Pasion in U.S. Plant Pat. No. 7,489. This is based on the continued flowering trials of Pasion after preparing the plant patent application for Pasion. Pasion was commercially introduced in July 1990.

The irradiation program resulting in Bronze Pasion had as its primary objective the expansion of color ranges of the parent cultivar Pasion. The irradiation program comprised irradiating cuttings of the parent cultivar at irradiation levels of 1500, 1750 and 2000 rads. A total of 1149 cuttings harvested from a total of 225 irradiated plants were planted on Nov. 6, 1989, Oct. 23, 1989 and Oct. 2, 1989, respectively. Of these, 13 initial selections were made, which selections were then re-vegetated and reflowered. Three consecutive flowerings resulted in discarding 8 of the original 13 selections on Nov. 1, 1990, while five codes (plants) were retained as PI (Possible Introduction) status. The five retained codes were further tested in Salinas, Calif., and in Bogota, Colombia, ultimately resulting in discarding two of these codes, and the decision to introduce code 0620 as Bronze Pasion, code 0626 as Soft Pasion, and code 0701 as Deep Pasion. Soft Pasion was filed as application Ser. No. 07/919,878 which was issued as U.S. Plant

Pat. No. 8,481 on Nov. 30, 1993. Deep Passion was filed as application Ser. No. 07/920,420 which was issued as U.S. Plant Pat. No. 8,473 on Nov. 23, 1993.

The first act of asexual reproduction of Bronze Pasion was accomplished when vegetative cuttings were taken from the original selection in April 1990 in a controlled environment in Salinas, Calif., by technicians working under supervision of Cornelis P. VandenBerg.

Horticultural examination of controlled flowerings of successive plantings has shown that the unique combination of characteristics as herein disclosed for Bronze Pasion are firmly fixed and are retained through successive generations of asexual reproduction.

Bronze Pasion has not been observed under all possible environmental conditions. The phenotype may vary significantly with variations in environment such as temperature, light intensity and daylength, without, however, any variance in genotype.

The following observations, measurements and comparisons describe plants grown in Salinas, Calif., and in Bogota, Colombia, under greenhouse conditions which approximate those generally used in commercial greenhouse practice. The low night temperature tolerance was determined in repeated flowerings in Bogota, Colombia.

The following traits have been repeatedly observed and are determined to be basic characteristics of Bronze Pasion, which, in combination, distinguish this Chrysanthemum as a new and distinct cultivar:

1. Flat capitulum form.
2. Decorative capitulum type.
3. Yellow-orange ray floret color, with a darker bronze center of the flower.
4. Diameter across face of capitulum of 73 to 76 mm when fully opened, when grown as a single stem spray cut mum.
5. Photoperiodic flowering response to short days when grown in Salinas, Calif., is 51 to 57 days after start of short days. Flowering response in Bogota, Colombia is 62 to 64 days.
6. Plant height is 74 to 114 cm when grown in Salinas with 17 to 18 long days prior to start of short days; height is 114 to 132 cm when grown in Bogota with 21 long days prior to start of short days.
7. Peduncle length of the first lateral at flowering after removing the apical bud without growth regulator applications is 3 to 8 cm when grown in Salinas, and 3 to 5 cm when grown in Bogota. Peduncle length of the fourth lateral at flowering is 8 to 13 cm when grown in Salinas, and 8 to 13 cm when grown in Bogota.
8. Excellent tolerance to minimum low night temperatures of 7° C. for bud initiation and flower development.

The accompanying photographic drawing is a side view of a single stem cut spray mum of Bronze Pasion, with the colors being as nearly true as possible with illustrations of this type.

Of the commercial cultivars known to the inventor, the most similar in comparison to Bronze Pasion is the parent cultivar Pasion. All traits of Bronze Pasion are

similar to those of Pasion, except for the ray floret color and the flowering response. Bronze Pasion has a yellow-orange ray floret color with a darker bronze center of the flower, while Pasion has a light red-purple ray floret color with a darker red-purple center of the flower. In most of our flowering trials, Bronze Pasion has a faster flowering response to short days of two to three days when compared with Pasion. In a few trials, slight differences in plant height were noted between Pasion and Bronze Pasion. However, these differences were not sufficiently consistent to be considered distinguishing differences.

In the following description color references are made to The Royal Horticultural Society Colour Chart. The color values were determined on plant material grown as a single stem spray cut mum in Salinas, Calif. on Dec. 27, 1991.

Classification:

Botanical.—*Dendranthema grandiflora* cv Bronze Pasion.

Commercial.—Flat decorative cut spray mum.

INFLORESCENCE

25 A. Capitulum:

Form.—Flat.

Type.—Decorative.

Diameter across face.—73 to 76 mm when fully opened.

30 B. Corolla of ray florets:

Color (general tonality from a distance of three meters).—Yellow-orange, with a darker bronze center of the flower.

Color (upper surface).—12A to 14B. Inner ray florets tinged to heavily tinged with 168B.

Color (under surface).—12C to 14C, with tips slightly tinged with 168D.

Shape.—Straight, oblong, slightly ribbed.

40 C. Corolla of disc florets:

Color (mature).—Closest to 12A.

Color (immature).—Closest to 144B.

D. Reproductive organs:

Androecium.—Present on disc florets only; no pollen.

Gynoecium.—Present on both ray and disc florets.

PLANT

A. General appearance:

Height.—74 to 114 cm when grown in Salinas with 17 to 18 long days prior to start of short days; height is 114 to 132 cm when grown in Bogota with 21 long days prior to start of short days.

B. Foliage

Color (upper surface).—147A.

Color (under surface).—147B.

I claim:

1. A new and distinct Chrysanthemum plant named Bronze Pasion, as described and illustrated.

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U.S. Patent

June 14, 1994

Plant 8,781

