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# United States Patent [19]

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Hesse

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- [54] **CHRYSANTHEMUM PLANT NAMED 'GOLDEN STATE'**
- [75] Inventor: Peter S. Hesse, Nipoma, Calif.
- [73] Assignee: Clearwater Nursery, Inc., Nipoma, Calif.
- [21] Appl. No.: 995,298
- [22] Filed: Dec. 21, 1992
- [51] Int. Cl.<sup>5</sup> ..... A01H 5/00
- [52] U.S. Cl. .... Plt./82.2
- [58] Field of Search ..... Plt. 78, 82.2
- [56] **References Cited**

### U.S. PATENT DOCUMENTS

- Plt. 67745 5/1989 Vanden Berg ..... Plt. 82.2
- Plt. 5816 12/1986 Shoesmith ..... Plt. 82.2

Primary Examiner—Howard J. Locker  
Attorney, Agent, or Firm—Arnold, White & Durkee

### [57] ABSTRACT

The present invention comprises a new and distinct

cultivar of Chrysanthemum, botanically known as *Den-  
dranthea grandiflora*, and referred to by the cultivar  
name Golden State. The new cultivar is distinguished  
by its rich golden color, exceptional even flowering and  
spreading habit and its full crested anemone capitulum  
type. It displays superior shipping and keeping charac-  
teristics.

### BACKGROUND OF THE NEW PLANT

Golden State, identified as originally coded P89-0280  
was originated from a cross made by Peter S. Hesse in  
a controlled breeding program at Clearwater Nursery,  
887 Mesa Rd., Nipoma, Calif. 98444, U.S.A.  
The female parent of Golden State is the commercial  
variety Indio, U.S. Plant Pat. No. 6,774, and the male  
parent was Hopscotch, U.S. Plant Pat. No. 5,816.  
Golden State was discovered and selected as one flow-  
ering plant within the progeny of the stated cross by  
Peter S. Hesse in Oct. 1989 in a controlled environment  
in Nipomo, Calif.

1 Drawing Sheet

## 1

The first act of asexual reproduction of Golden State  
was accomplished when vegetative cuttings were taken  
in April 1990 in a controlled environment in Nipomo,  
Calif. by Peter S. Hesse.

Horticultural examination of controlled flowerings of  
successive plantings has shown that the unique combi-  
nation of characteristics as herein disclosed for Golden  
State are firmly fixed and are retained through succe-  
ssive generations of asexual reproduction.

Golden State has not been observed under all possible  
environmental conditions. The phenotype may vary  
significantly with variations in the environment such as  
temperature, light intensity and day length.

The following observations, measurements and com-  
parisons describe plants grown in controlled environ-  
ments in Nipomo, Calif. Unrooted cuttings were di-  
rectly stuck into 6.5" pots and grown under the natural  
temperature and day length prevailing in March-May  
1992.

The following traits have been repeatedly observed  
and are determined to be basic characteristics of Golden  
State, which in combination distinguish this Chrysan-  
themum as a new and distinct cultivar.

1. Flat capitulum form.
2. Anemone capitulum type.
3. Golden Yellow to Clear Yellow fully expanded  
outer ray florets.
4. Yellow Anemone disc with green eye.
5. An average of 6.75 flowers per break.
6. Diameter across the face of capitulum of 6.5 cm.
7. Exceptional upright to spreading habit with an  
average of 5.0 breaks after a single pinch.
8. Flowering response of approximately 59 days from  
the start of short days.
9. Relative easy in controlling plant height such that  
the finished height will range from 10 inches to 18  
inches from the bottom the pot size and market require-  
ments.

## 2

### DESCRIPTION OF THE PHOTOGRAPH

The accompanying photograph shows typical inflo-  
rescence and leaf characteristics of Golden State, with  
the colors being as nearly true as possible with illustra-  
tions of this type. The photograph shows Golden State  
grown as a pinched spray pot mum with 5 cuttings in a  
6.5" pot.

### DESCRIPTION OF THE PLANT

Of the commercial cultivars known to the inventor,  
the most similar in form, color, and habit to Golden  
State are the cultivars Yellow Tara, U.S. Plant Pat. No.  
6,774, and Hopscotch, U.S. Plant Pat. No. 5,816. Refer-  
ence is made to Table I which compares certain charac-  
teristics of Golden State with the cultivars Yellow Tara  
and Hopscotch.

TABLE I

CHARACTERISTIC	HOPSCOTCH	GOLDEN STATE
CAPITULUM FORM	FLAT	FLAT
CAPITULUM TYPE	DAISY	ANEMONE
DIAMETER ACROSS	9.5-11.5 CM	6.5 CM
FACE OF CAPITULUM		
BRANCHING PATTERN	UPRIGHT & SPREADING	UPRIGHT & SPREADING
BREAKS/PINCH	4.4	5.0
HEIGHT IN A 6.5" POT	16-18 INCHES	16-17 INCHES
DISC FLORET	MOSTLY YELLOW GREEN 149 A	EDGE BEGIN W/9A GRADUATING TO YELLOW GREEN 144A
# DISC FLORETS	183.2	171
LENGTH OF DISC FLORETS	.64 CM	1.43 CM
RAY FLORET COLOR	FRONT: GOLDEN YELLOW 9A BACK: PALE YELLOW 6A	FRONT: GOLDEN YELLOW 9A BACK: PALE YELLOW 6B
# RAY FLORETS	32.6	19
SHAPE OF RAY FLORETS	ELLIPTIC	ELLIPTIC

TABLE I-continued

LENGTH OF RAY FLORETS	3.85 CM	3.65 CM
WITH OF RAY FLORETS	1.43 CM	1.09 CM
# OF FLOWERS/BREAK	6.7	6.75
LEAF COLOR	FRONT: 147 A BACK: 147 B	FRONT: 147 A BACK: 147 B
MATURE LEAF LENGTH	UP TO 10.2 CM	UP TO 12.55 CM
MATURE LEAF WIDTH	5.95 CM	8.78 CM
CONTROLLED RESPONSE	8.5 WEEKS weeks: MT (requires nine (9) weeks for flowering: medium vigorous grower)	8.5 WEEKS weeks: MT (requires nine (9) weeks for flowering: medium vigorous grower)
CHARACTERISTIC	YELLOW TARA	
CAPITULUM FORM	FLAT	
CAPITULUM TYPE	ANEMONE	
DIAMETER ACROSS FACE OF CAPITULUM	6.5 CM	
BRANCHING PATTERN	UPRIGHT & SPREADING	
BREAKS/PINCH HEIGHT IN A 6.5" POT	4.4 16-17 INCHES	
DISC FLORET	EDGE BEGIN W/ 9A GRAD. TO 144 A	
# DISC FLORETS	111.8	
LENGTH OF DISC FLORETS	1.19 CM	
RAY FLORET COLOR	FRONT: PALE YELLOW 5B BACK: PALE YELLOW 6B	
# RAY FLORETS	17	
SHAPE OF RAY FLORETS	ELLIPTIC	
LENGTH OF RAY FLORETS	3.09 CM	
WIDTH OF RAY FLORETS	0.95 CM	
# OF FLOWERS/BREAK	9.4	
LEAF COLOR	FRONT: 147 A BACK: 147 B	
MATURE LEAF LENGTH	UP TO 9.6 CM	
MATURE LEAF WIDTH	8.90 CM	
CONTROLLED RESPONSE	8.5 WEEKS weeks: MT (requires nine (9) weeks for flowering: medium vigorous grower)	

Golden State is similar to Yellow Tara in having a flat capitulum form and anemone capitulum type. Hopscotch has a much larger diameter across the capitulum than Golden State and has the daisy capitulum type. Golden State has strong stems, and an exceptional even flowering and spreading habit, whereas Hopscotch has strong stems and a less even and more upright habit. Yellow Tara, Hopscotch and Golden State are approximately the same height; however Yellow Tara is less vigorous than Golden State. Golden State averages more breaks per pinch, than either Yellow Tara or Hopscotch. Therefore, Golden State makes an exceptionally full floriferous pot.

Hopscotch has more disc florets, than Golden State, which in turn has more than Yellow Tara. The length of the disc florets is greatest for Golden State and less for Hopscotch and Yellow Tara, which makes Golden State an exceptional full crested anemone. The front ray floret color for Golden State is similar to Hopscotch but the back of the ray floret is different. Golden State has

a much darker yellow ray floret than Yellow Tara. Hopscotch has more ray florets than Golden State, whereas Golden State has a few more than Yellow Tara. The length of the ray florets is similar for Hopscotch and Golden State, but Golden State has longer ray florets than Yellow Tara. The width of the ray florets for Golden State is intermediate between Hopscotch and Yellow Tara. Yellow Tara has more flowers per break (side stem) than either Hopscotch or Golden State. Leaf color for all three varieties is the same. Golden State has longer leaves than either Hopscotch or Yellow Tara. Hopscotch has narrower leaves than either Golden State or Yellow Tara. The response time on the bench of all three varieties from the start of short days is similar; 56-59 days. Golden State has an excellent root system, similar to Hopscotch, but much better than Yellow Tara. Golden State displays superior shipping and keeping characteristics.

The following lists the characteristic traits of the new cultivar Golden State.

#### Classification:

*Botanical.*—*Dendranthema grandiflora* cv. name Golden State.

*Commercial.*—Flat anemone to be grown primarily as a Spray/CBR or Disbud pot mum.

#### INFLORESCENCE

##### A. Capitulum:

*Form.*—Flat.

*Type.*—Anemone.

*Diameter across face.*—Average of 6.5 cm.

##### B. Corolla of Ray Florets:

*Color (general tonality from a distance of three meters).*—Yellow.

*Color.*—Front fully expanded outer ray floret: 9A. Back fully expanded outer ray floret: 8A. Disc floret color edge begins with 9A to Center 144A.

#### PLANT

##### A. General Appearance:

*Height.*—When grown in a 6.5" pot with 1-4 applications of B-9 the total plant height from the bottom of the pot may be maintained at 16-18 inches. When grown in a 4.5" pot with 1-4 applications of B9 the total plant height from the bottom of the pot may be maintained at 10-12 inches.

*Branching pattern.*—Upright and spreading with an average of 5.0 breaks when grown with one pinch.

##### B. Foliage:

*Color (upper surface).*—147 A.

*Color (lower surface).*—147 B.

#### REPRODUCTIVE ORGANS

A. Androecium: Present in disc florets only, scant pollen.

B. Gynoecium: Present in ray and disc florets.

What is claimed is:

1. A new and distinct cultivar of *Chrysanthemum* plant, substantially as herein shown and described, and being characterized by its rich golden yellow ray floret color, full-crested anemone capitulum type, and its exceptional even flowering and spreading habit.

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U.S. Patent

Apr. 19, 1994

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