US00PP23616P3

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

(10) **Patent No.: US PP23,616 P3**
(45) **Date of Patent: May 21, 2013**

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

(50) Latin Name: ***Chrysanthemum×morifolium* Ramat.**
Varietal Denomination: **Zanmudande**

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(73) Assignee: **Chrysanthemum Breeders Research Association B.V.**, Valkenburg Z-H (NL)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 94 days.

(21) Appl. No.: **13/200,327**

(22) Filed: **Sep. 23, 2011**

(65) **Prior Publication Data**

US 2013/0081163 P1 Mar. 28, 2013

(51) **Int. Cl.**
A01H 5/00 (2006.01)

(52) **U.S. Cl.**
USPC **Plt./295**

(58) **Field of Classification Search** Plt./295
See application file for complete search history.

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(57) **ABSTRACT**

A *chrysanthemum* plant named 'Zanmudande' characterized by its medium sized blooms with yellow ray florets and prolific branching; natural season flower August 13 (week 33) blooming for a period of 5 weeks.

3 Drawing Sheets

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Botanical designation: *Chrysanthemum×morifolium* Ramat.

Cultivar denomination: 'Zanmudande'.

RELATED CULTIVARS

This new plant cultivar 'Zanmudande' is related to 'Zanmutang' (U.S. Plant patent application Ser. No. 13/200,328), a sibling from the same cross with parent plants.

BACKGROUND OF THE INVENTION

The present invention relates to a new and distinct cultivar of *Chrysanthemum* plant, botanically known as *Chrysanthemum×morifolium* Ramat., commercially known as a garden mum, and hereinafter referred to by the cultivar denomination 'Zanmudande'. 'Zanmudande' is a product of a breeding and selection program for outdoor pot mums (garden mums) which had the objective of creating new cultivars with a double type inflorescence, a natural season flower date around August 13 (week 33), blooming for a period of 5 weeks. 'Zanmudande' is a seedling resulting from a cross of the female parent id 21570 with the male parent id 23262. Both parents are unpatented plants. Plants of the new cultivar 'Zanmudande' differ from plants of the female parent in the following characteristics. (1) Plant vigor and (2) Natural season flower date. (1). Plants of the seedling are more vigorous than plants of the female parent. (2) Plants of the seedling flower earlier in the season than plants of the female parent. Whileas plants of the new cultivar 'Zanmudande' differ from plants of the male parent in the following characteristics. (1) Plant vigour and (2) Natural season flower date. (1). Plants of the seedling are less vigorous than plants of the male parent. (2) Plants of the seedling flower earlier in the season than plants of the male parent.

The new and distinct cultivar was discovered and selected as a flowering plant by Wilhelmus Bemardus Blom on a cultivated field in Rijsenhout, The Netherlands in 2005. The first act of asexual production of 'Zanmudande' was accomplished when vegetative cuttings from the initial selection in 2005 were propagated further in a controlled environment in Rijsenhout, The Netherlands. The new cultivar has been found to retain its distinctive characteristics through successive propagations.

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BRIEF DESCRIPTION OF THE DRAWINGS

The present invention of a new and distinct variety of *Chrysanthemum* is shown in the accompanying drawings, the color being as nearly true as possible with color photographs of this type.

FIG. **1** shows a plant of the cultivar in full bloom.

FIG. **2** shows the various stages of bloom of the new cultivar.

FIG. **3** shows the various stages of foliage of the new cultivar.

DESCRIPTION OF THE INVENTION

The observations and measurements were gathered from plants grown out door in Rijsenhout, The Netherlands under natural day length and temperature and planted in week 23 in 2005. The natural blooming date of this crop was August 13 (week 33). The average height of the plants was 35 cm. No growth retardants were used. No tests were done on disease or insect resistance or susceptibility. No tests were done on cold or drought tolerance. This new variety produces medium sized blooms with yellow ray florets blooming for a period of 5 weeks.

From the cultivars known to inventor the most similar existing cultivar in comparison to 'Zanmudande' are 'Mermaid Yellow Improved' (U.S. Plant Pat. No. 18,905) and 'Zanmugolmine' (U.S. Plant Pat. No. 22,618). When the three cultivars are being compared the following differences are noticed: (1) Inflorescence size. And (2) Color ray-florets. (1) The inflorescences of 'Mermaid Yellow' are larger than those of 'Zanmudande' and 'Zanmugolmine'. (2) The ray florets

are more dark yellow in 'Zanmudande' than in 'Mermaid Yellow' and 'Zanmugolmine'.

The following is a description of the plant and characteristics that distinguish 'Zanmudande' as a new and distinct variety.

The color designations are taken from the plant itself. Accordingly, any discrepancies between the color designations and the colors depicted in the photographs are due to photographic tolerances. The color chart used in this description is: The Royal Horticultural Society Colour Chart, edition 2001.

TABLE 1

Detailed Botanical Description	
Bud	
Size	Small; cross-section 6 mm, height 6 mm
Shape	Round
Texture	Pubescent
Outside Color	Greyed-green 138A
Phyllaries	
Number	18-20, arranged in 2 rows
Shape	Elliptic
Apex	Acute
Base	Truncate
Margin	Entire
Color	Upper surface: Green 137B Lower surface: Green 137D
Length and width	5 mm; 3 mm
Texture	Pubescent
Inflorescences	
Type	Double
Height	1.8-2 cm
Diameter	5 cm
Peduncle length	8-9 cm
Peduncle color	Green 137D
Peduncle diameter	1.5 mm
Peduncle texture	Pubescent
Number per branch	Approx 5 inflorescences
Duration of flowering	5 weeks
Seeds	Produced in small quantities, ovate, Greyed-brown 199A, length 1.5 mm, diameter 0.5 mm
Fragrance	Faint chrysanthemum odor
Color	
Center of inflorescences	Immature stage: Yellow-orange 15A Mature stage: Yellow 13 A
Color of upper surface of the ray-florets	Yellow 12B
Color of the lower surface of the ray-florets	Yellow 11B
Tonality from Distance	A garden mum with yellow blooms
Color of the ray-florets after aging of the plant	Yellow 12C
Ray florets	
Texture	Upper and lower surface smooth
Number	150-170
Shape	Elliptic
Apex	Dentate
Base	Attenuate
Cross-section	Concave
Longitudinal axis of majority	Straight to Reflexing
Length of corolla tube	3 mm
Ray-floret margin	Entire
Ray-floret length	1.2-2 cm
Ray-floret width	6-8 mm
Ratio length/width	Medium
Disc florets	Absent

TABLE 1-continued

Detailed Botanical Description	
Receptacle	
Color	Green 138D
Shape	Conical raised
Height	3 mm
Diameter	4 mm
Reproductive Organs	
Androecium	Absent
Gynoecium	Present on ray florets
Style color	Yellow-green 154C
Style Length	3 mm
Stigma color	Yellow 7A
Stigma Width	1 mm
Ovary	Enclosed in calyx
Plant	
Form	Grown as a spray type pot mum, outdoor raised and mounded
Growth habit	Spherical shape
Growth rate	High
Height	35 cm
Width	50 cm
Stem Color	Greyed-brown 199A
Stem Strength	Medium
Stem Brittleness	Brittle
Stem Anthocyanin Coloration	Not observed
Internode length	3-4 cm
Length of lateral branch	From top to bottom 22 to 25 cm
Lateral branch color	Green 137 C
Lateral branch, attachment	Medium strength
Lateral branch diameter	2 mm
Branching (average number of lateral branches)	Prolific with 7-8 breaks after pinching
Natural season blooming date	August 13 (week 33)
Foliage	
Leaf color	Upper side: Green 138A Lower side: Green 138B
Color midvein	Upper side: Yellow-green 147D Lower side: Yellow-green 148D
Size	Small; length 3.5-5 cm, width 2.4-3 cm
Quantity (number per lateral branch)	20-22
Shape	Elliptic
Texture upper side	Sparsely pubescent
Texture under side	Pubescent
Venation arrangement	Palmate
Shape of the margin	Serrated
Shape of Base of Sinus Between Lateral Lobes	Rounded
Margin of Sinus Between Lateral Lobes	Diverging
Shape of Base	Attenuate
Apex	Mucronulate
Petiole length	0.6-1 cm
Petiole diameter	2 mm
Petiole color	Yellow-green 147D

TABLE 2

Differences with the comparison varieties			
	'Zanmudande'	'Mermaid Yellow'	'Zanmugolmine'
Inflorescence size	5 cm	5-7 cm	5 cm
Color upper surface ray florets	Yellow 12B	Yellow 8B	Yellow 8A

I claim:

1. A new and distinct *Chrysanthemum* plant named 'Zanmudande' as described and illustrated.

* * * * *

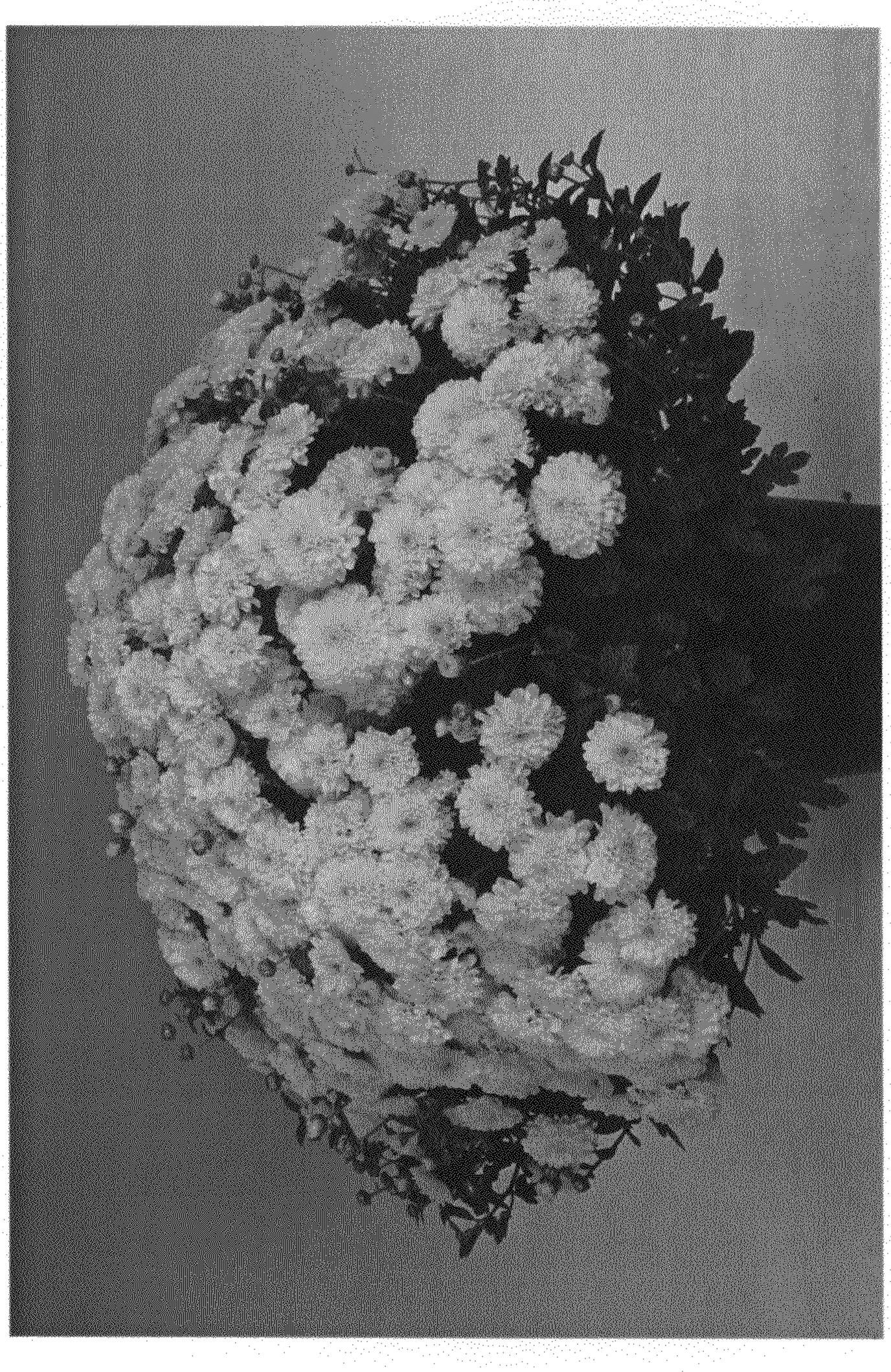

FIG. 1

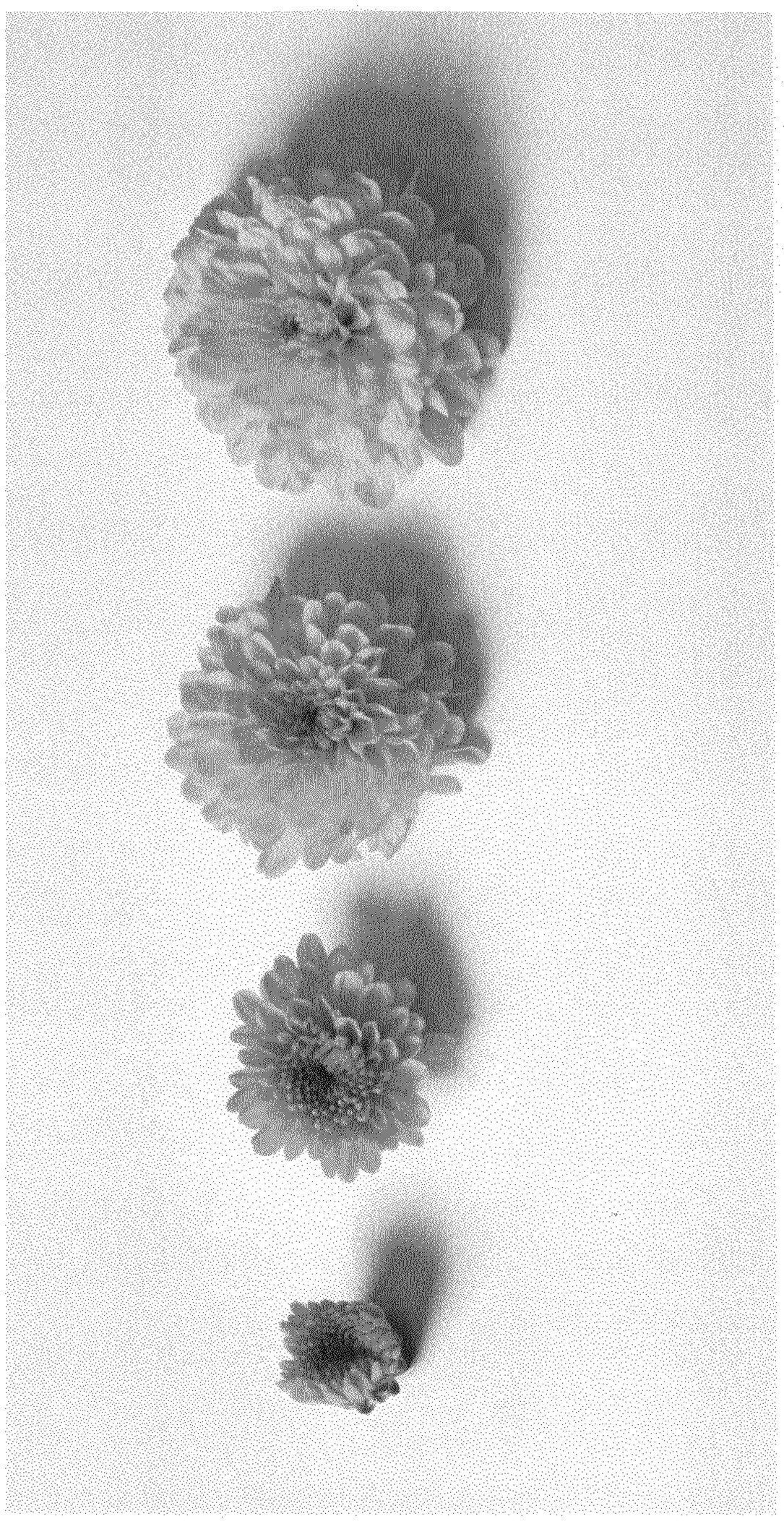

FIG. 2

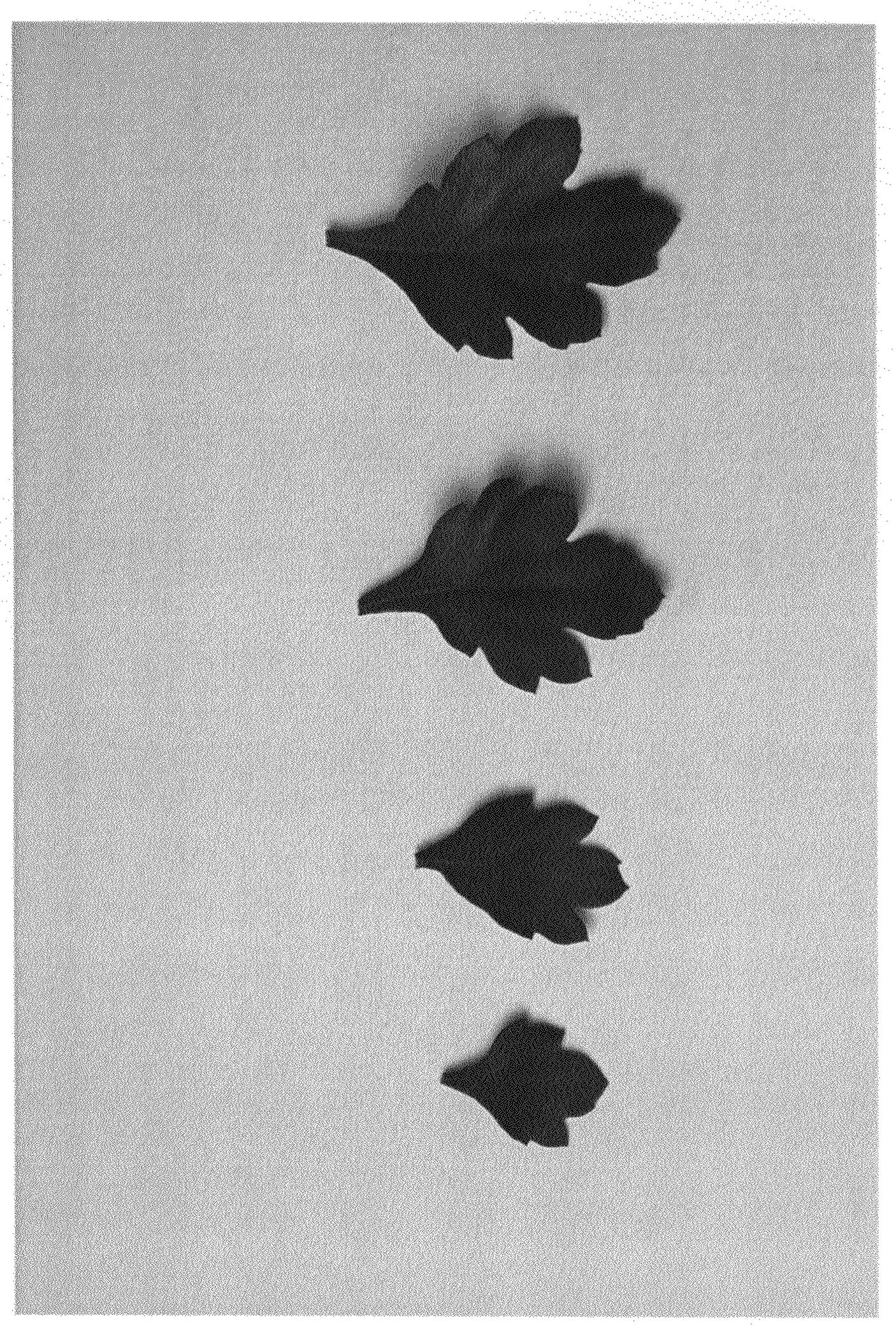

FIG. 3