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

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- (54) **CHRYSANTHEMUM PLANT NAMED**  
**'ZANMUKEY'**
- (50) Latin Name: *Chrysanthemum×morifolium*  
**Ramat.**  
Varietal Denomination: **Zanmukey**
- (71) Applicant: **Chrysanthemum Breeders Association**  
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patent is extended or adjusted under 35  
U.S.C. 154(b) by 85 days.
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- (58) **Field of Classification Search**  
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See application file for complete search history.

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(57) **ABSTRACT**  
A *chrysanthemum* plant named 'Zanmukey' characterized by its small sized blooms with light green blooms and a dark green center, with prolific branching; natural season flowering date September 28; blooming for a period of 5 weeks.

**3 Drawing Sheets**

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Botanical designation: *Chrysanthemum×morifolium*  
Ramat.  
Cultivar denomination: 'Zanmukey'.

**RELATED CULTIVARS**

This new plant cultivar 'Zanmukey' is of the botanical classification *Chrysanthemum×morifolium* Ramat.

**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 'Zanmukey'. 'Zanmukey' 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 flowering date around September 28, blooming for a period of 5 weeks. 'Zanmukey' is a seedling resulting from a cross of the female parent 36.3379 (unpatented) with the male parent 10-010389 (unpatented). Plants of the new cultivar 'Zanmukey' differ from plants of the female parent in the following characteristics. (1) Inflorescence color—Blooms of the seedling are light green, while those of the female parent are white. (2). Inflorescence size—Blooms of the seedling are smaller than those of the female parent. Plants of the new cultivar 'Zanmukey' differ from plants of the male parent in the following characteristic. (1) Plant shape— the plant shape of the seedling is round, while that of the male parent is more erect.

The new and distinct cultivar was discovered and selected as a flowering plant by Henricus Cornelius Maria Jacobs on a cultivated field in Rijsenhout, The Netherlands in May 2011. The first act of asexual production of 'Zanmukey' was accomplished in July 2011 when vegetative cuttings from the initial selection were propagated further in a controlled

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environment in Rijsenhout, the Netherlands. In summer, about 6-8 days are needed to initiate roots in cuttings of the new cultivar, after another 5 days rooted plants are formed. The new cultivar has been found to retain its distinctive characteristics through successive propagations.

**BRIEF DESCRIPTION OF THE DRAWINGS**

The present invention of a new and distinct variety of *chrysanthemum* (of about 19 weeks) 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 in the period of 17 to 22 weeks of age grown outdoor in Rijsenhout, the Netherlands, under natural day length and temperature and planted in week 23 in 2015, receiving drip irrigation. The natural blooming date of this crop was September 28 (week 40). The average height of the plants was 40 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 small sized blooms with light green ray florets blooming for a period of 5 weeks.

From the cultivars known to the inventor the most similar existing cultivar in comparison to 'Zanmukey' is 'Zanmusundown' (U.S. Plant Pat. No. 21,164). When 'Zanmusundown' and 'Zanmukey' are being compared the following differences are noticed: (1). Color ray-florets. And (2). Plant vigor. (1). Ray-florets of 'Zanmukey' are green colored,

while those of 'Zanmusundown' are yellow. (2). Plants of 'Zanmukey' are more vigorous than those of 'Zanmusundown.'

The following is a description of the plant and characteristics that distinguish 'Zanmukey' 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

Botanical Description of <i>Chrysanthemum × morifolium</i> Ramat. 'Zanmukey'	
<b>Bud</b>	
Size:	Small; cross-section 5 mm, height 4 mm
Shape:	Round
Texture:	Pubescent
Outside color:	Green 138B
<b>Phyllaries</b>	
Number:	25-27, arranged in 3 rows
Shape:	Elliptic
Apex:	Acute
Base:	Truncate
Margin:	Entire
Color:	Upper side: Green 137C Lower side: Green 138A
Length and width:	4-6 mm; 2 mm
Texture:	Pubescent
<b>Inflorescences</b>	
Type:	Double
Height:	1 cm
Diameter:	3.5 cm
Peduncle length:	5-6 cm
Peduncle color:	Green 138B
Peduncle diameter:	1.5 mm
Peduncle texture:	Pubescent
Number per branch:	About 8-9 inflorescences
Duration of flowering:	5 weeks
Fragrance:	Typical chrysanthemum odor
<b>Color inflorescences</b>	
Center of inflorescence :	Green 143C
Color of upper side of ray florets:	Outer rows: Yellow-green 150B; Inner rows: Green 143C
Color of lower side of ray florets:	Outer rows: Yellow-green 150C; Inner rows: Green 143C
Tonality from distance:	A garden mum with light green blooms and a dark green center
Color of ray florets after aging of the plant:	Yellow-green 150C to 150D
<b>Ray florets</b>	
Number of types:	Two
Type:	Outer rows: Ligulate; Inner rows: Quilled
Texture:	Upper and lower side smooth
Number:	210-220
Shape:	Outer rows: Elliptic; Inner rows: Narrowly elliptic
Apex:	Outer rows: Dentate; Inner rows: Rounded
Base:	Acute
Cross-section:	Outer rows: Flat; Inner rows: Circular
Longitudinal axis:	Outer rows: Straight; Inner rows: Incurving
Length of corolla tube:	1-2 mm
Diameter corolla tube:	1 mm

TABLE 1-continued

Botanical Description of <i>Chrysanthemum × morifolium</i> Ramat. 'Zanmukey'		
5	Ray floret margin:	Entire
	Ray floret length:	Outer rows: 1.5 cm; Inner rows: 0.7 cm
	Ray-floret width:	Outer rows: 3 mm; Inner rows: 1 mm
10	<b>Disc florets</b>	
	Disc diameter:	1-2 mm
	Distribution of disc florets:	Very few, only occasionally visible in mature stage of inflorescence
	Shape:	Tubular
15	Color:	Yellow-green 145C at base to Green Yellow 11D at apex
	Length:	4 mm
	Diameter:	0.8 mm
	<b>Receptacle</b>	
20	Color:	Yellow-green 145D
	Shape:	Domed raised
	Height:	2 mm
	Diameter:	3 mm
	<b>Reproductive Organs</b>	
25	Androecium:	Present on only disc florets
	Stamen length:	3 mm
	Stamen color:	Yellow-green 144A
	Anther color:	Yellow 2A
	Pollen:	Scarce
	Pollen color:	Yellow 12A
30	Gynoecium:	Present on both ray and disc florets
	Style color:	Yellow-green 154C
	Style length:	4 mm
	Stigma color:	Yellow 7A
	Stigma width:	1 mm
	Ovary:	Enclosed in calyx
35	Ovary color:	Yellow-green 149D
	Seed set:	Has not been determined to date
	<b>Plant</b>	
	Type:	Non-bushy
	Growth habit:	Spherical shape
40	Growth rate:	Medium
	Height:	40 cm
	Width:	45 cm
	Stem color:	Greyed-brown 199B
	Stem strength:	Not strong
	Stem brittleness:	Brittle
45	Stem anthocyanin coloration:	Absent
	Internode length:	0.8-2 cm
	Length of lateral branch:	From top to bottom 19-23 cm
	Lateral branch color:	Green 137C
	Lateral branch, attachment:	Weak
50	Lateral branch diameter:	2 mm
	Lateral branch, texture:	Pubescent with ribs
	Branching (average number of lateral branches):	Dense with 12 breaks after pinching
	Natural season blooming date:	September 28 (week 40) in Rijsenhout, the Netherlands
55	Roots—habits:	Fine, freely branching
	Roots—color:	White 155A
	<b>Foliage</b>	
	Glossiness:	Leaf upper side: weak; Leaf lower side: absent
60	Leaf color:	Upper side: Green 147D; Lower side: Green 138A
	Color midvein:	Upper side: Yellow-green 147D; Lower side: Yellow-green 148D
	Size:	Small; length 4-8 cm, width 1.3-4.2 cm
65		

TABLE 1-continued

Botanical Description of <i>Chrysanthemum × morifolium</i> Ramat. 'Zanmukey'	
Quantity (number per lateral branches):	14-16
Shape:	Elliptic
Texture upper side:	Sparsely pubescent
Texture under side:	Pubescent
Venation arrangement:	Pinnate
Shape of margin:	Serrated
Shape of base of sinus between lateral lobes:	Rounded
Margin of sinus between lateral lobes:	Diverging
Shape of base:	Acute to truncate
Apex:	Mucronulate
Petiole strength:	Weak
Petiole attitude:	Moderately upwards
Petiole length:	0.8-1 cm
Petiole diameter:	1.5 mm

TABLE 1-continued

Botanical Description of <i>Chrysanthemum × morifolium</i> Ramat. 'Zanmukey'	
5 Petiole color:	Yellow-green 147D
Stipule:	When present, very small

TABLE 2

Differences with the comparison variety, when grown under identical conditions			
		'Zanmukey'	'Zanmusundown'
10			
15	Color ray-florets	Yellow-green 150B	Yellow 12A
	Plant height	40 cm	25 cm

I claim:

1. A new and distinct *chrysanthemum* plant named 'Zanmukey' as described and illustrated.

\* \* \* \* \*

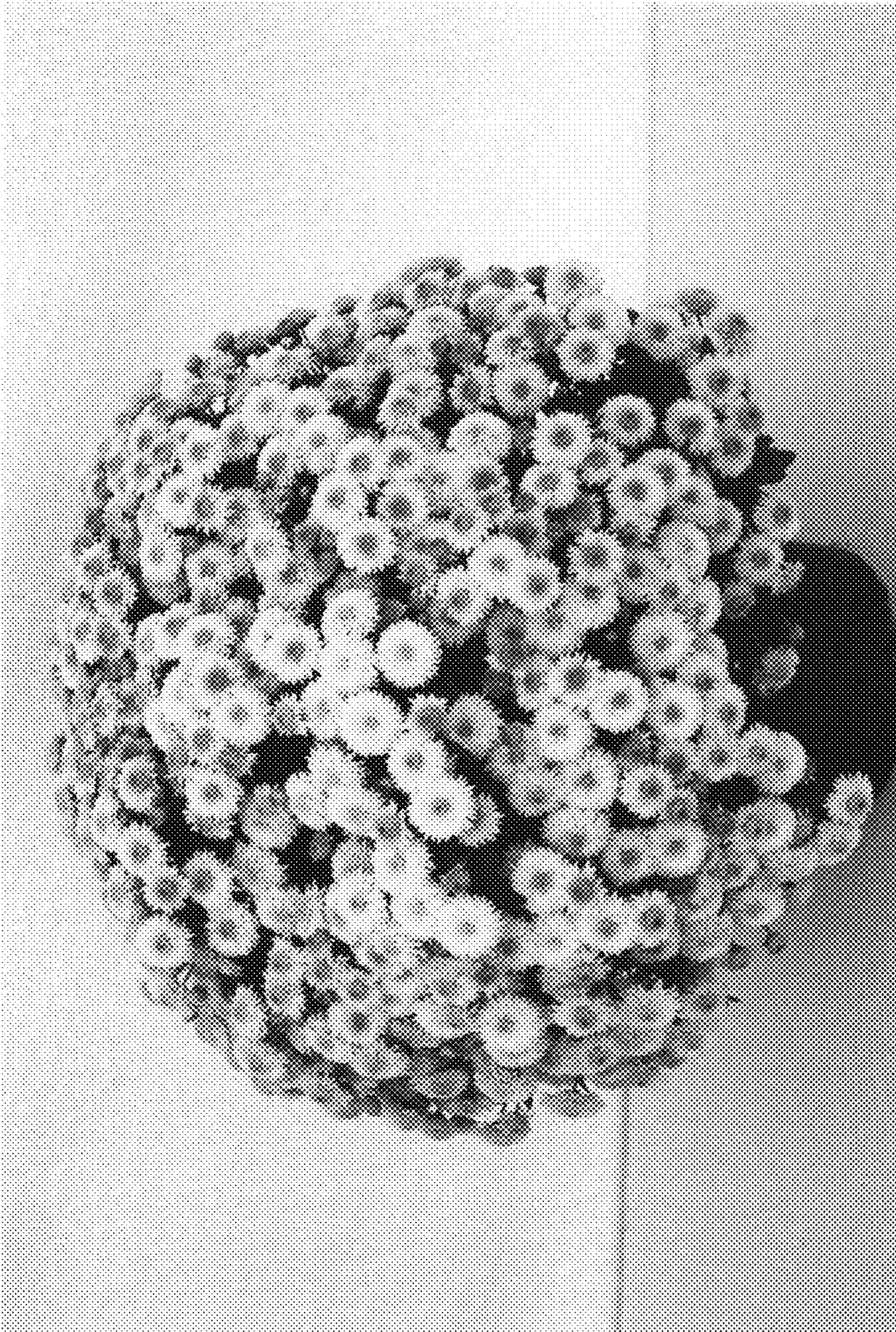


FIG. 1

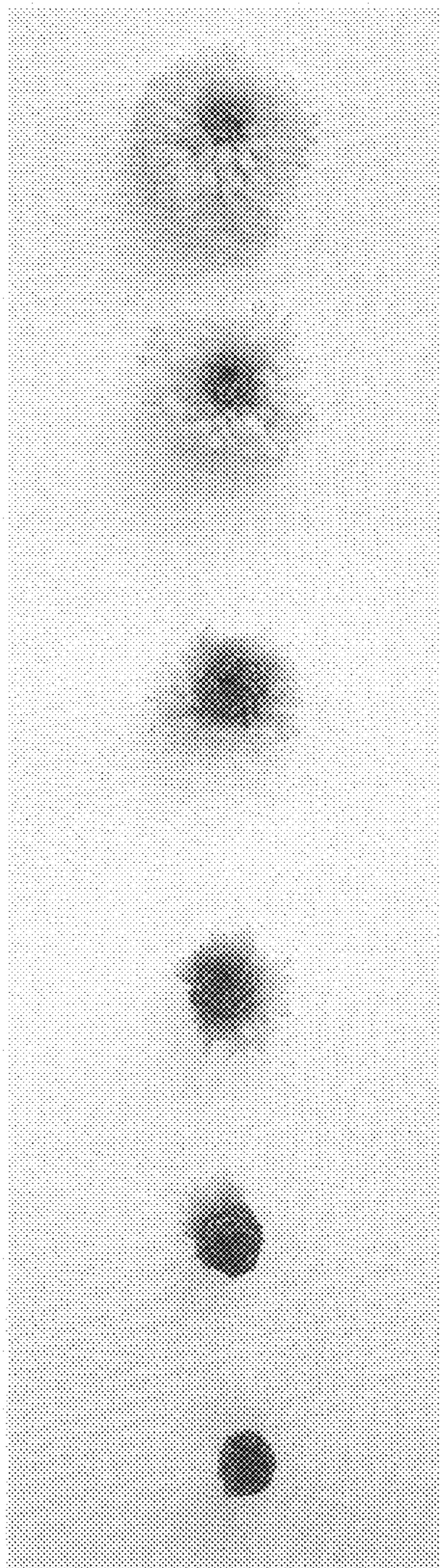


FIG. 2

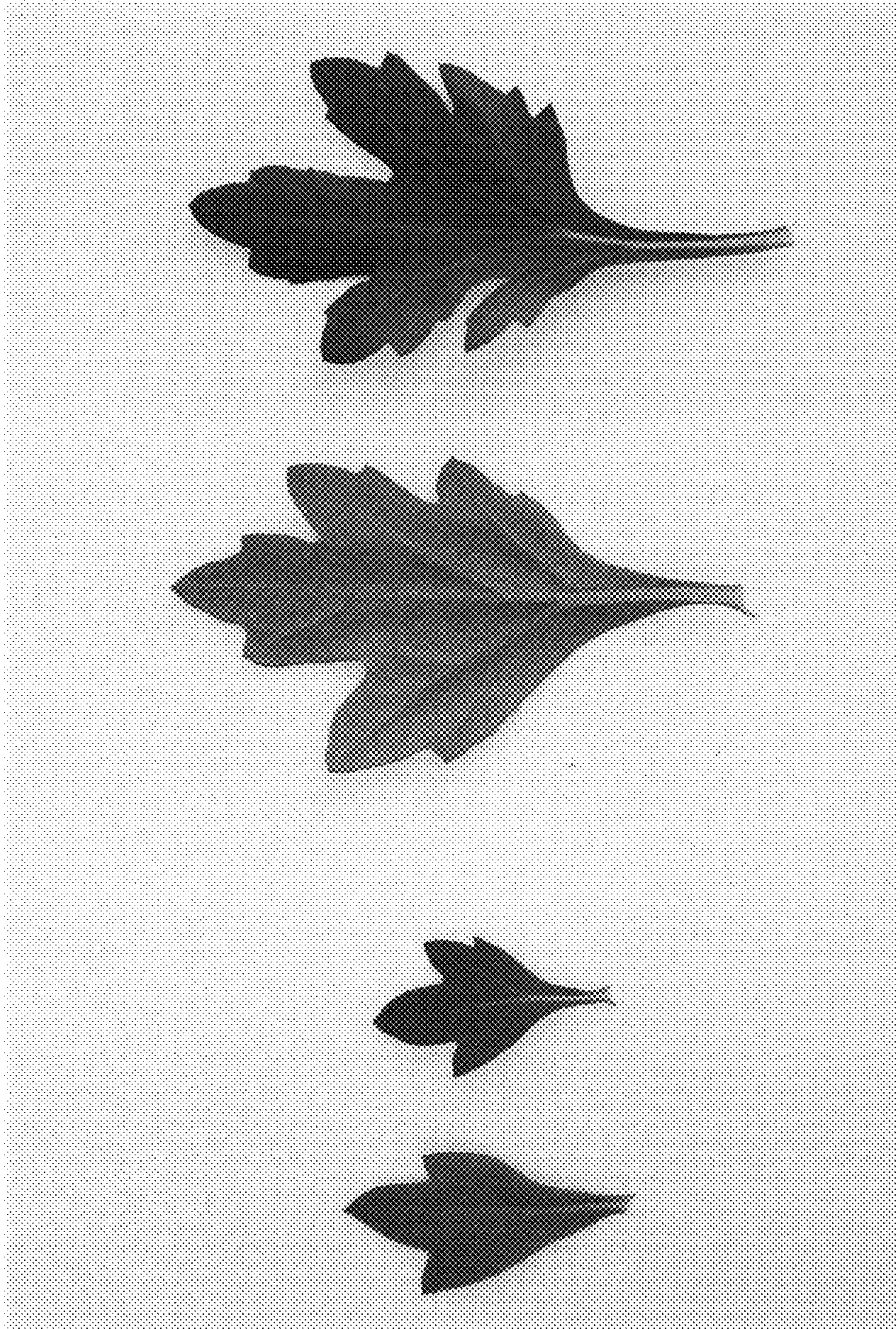


FIG. 3