

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

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

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

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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.

(21) Appl. No.: **12/923,738**

(22) Filed: **Oct. 6, 2010**

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

(52) **U.S. Cl.** **Plt./287**

(58) **Field of Classification Search** **Plt./287**
See application file for complete search history.

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(57) **ABSTRACT**

A *chrysanthemum* plant named 'Zanmudeep' characterized
by its large sized blooms with dark purple ray florets and
prolific branching, and response time of 8 weeks.

3 Drawing Sheets

1

Botanical designation: *Chrysanthemum*×*morifolium*
Ramat.

Cultivar denomination: 'Zanmudeep'.

BACKGROUND OF THE INVENTION

The present invention relates to a new and distinct cultivar
of *chrysanthemum* plant, botanically known as *Chrysante-*
mum×*morifolium* Ramat., and hereinafter referred to by the
cultivar denomination 'Zanmudeep'. 'Zanmudeep' is a prod-
uct of a breeding and selection program for pot mums which
had the objective of creating new cultivars with a double type
inflorescence, a 8 weeks response time and a medium plant
height. 'Zanmudeep' is a seedling resulting from a cross of the
female parent id 45927 with the male parent id 44279. Plants
of the new cultivar 'Zanmudeep' differ from plants of the
female parent in inflorescence color. The female parent has
pink inflorescences, while those of 'Zanmudeep' are dark
purple. Plants of the new cultivar 'Zanmudeep' differ from
plants of the male parent in the following characteristics. (1)
Plant vigor. And (2) Inflorescence size. (1). Plants of the male
parent are less vigorous than those of 'Zanmudeep'. (2) Inflo-
rescences of the male parent are smaller than those of 'Zan-
mudeep'.

The new and distinct cultivar was discovered and selected
as a flowering plant within the progeny of the stated cross by
Wilhelmus Bernardus Blom in a controlled environment
(greenhouse) in Rijnsenhout, The Netherlands in April 2004.
The first act of asexual production of 'Zanmudeep' was
accomplished when vegetative cuttings were used from the
initial selection in June 2004 and propagated further in a
controlled environment in Rijnsenhout, The Netherlands. The
new cultivar has been found to retain its distinctive charac-
teristics through successive propagations, although the phe-
notype may somewhat vary with variations in environment
such as light intensity and temperature.

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.

2

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

FIG. 2 shows the various stages of bloom of the new cul-
tivar.

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

DESCRIPTION OF THE INVENTION

The observations and measurements were gathered in May
2010 from plants grown in a greenhouse in Rijnsenhout, The
Netherlands, in a photo-periodic controlled crop under con-
ditions generally used in commercial practice. Three cuttings
were planted in a pot with a diameter of 12 cm. The green-
house temperatures for this crop were at day-time
18.degree.C. to 25.degree. C., and at night about 20.degree.
C. The photo-periodic response time in this crop was 8 weeks
after an average of eight long days. After this long day period
growth retardants (Alar) were applied six times in an average
dose of 1.5 gram/liter water until flowering. The plants were
observed (directly) during the flowering of this crop. No tests
were done on disease or insect resistance or susceptibility. No
tests were done on cold or drought tolerance. To show the
phenotype as described 'Zanmudeep' can be planted without
assimilation lighting (high pressure sodium lamps) between
week 50 and week 40 of the next year under greenhouse
conditions in the Netherlands. With assimilation lighting
(minimum level 2500 lux) it can be planted all year round
under greenhouse conditions in the Netherlands.

This new variety produces potmums with large sized
blooms with dark purple ray florets. From the cultivars known
to inventor the most similar existing cultivar in comparison to
'Zanmudeep' is 'Midnight Time' (U.S. Plant Pat. No.
17,056). When 'Midnight Time' and 'Zanmudeep' are being
compared the following difference is noticed: The difference
of 'Midnight Time' and 'Zanmudeep' are the following char-
acteristics. (1) Color of the ray florets. And (2) Response
Time. (1) Both plant varieties have dark blooms, but the
purple ray florets of 'Midnight Time' have a red hue, while
those of 'Zanmudeep' are more dark purple. (2) The response
Time of 'Midnight Time' is lower than that of 'Zanmudeep'.

The following is a description of the plant and character-
istics that distinguish 'Zanmudeep' 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 xmorifolium</i> Ramat. 'Zanmudeep'	
Bud	
Size	Medium; cross-section 6 mm, height 4 mm
Shape	Round
Texture	Smooth
Outside Color	Greyed-green 191A
Phyllaries	
Number	16-18, arranged in 3 rows
Shape	Elliptic
Apex	Acute
Base	Truncate
Margin	Entire
Color	Upper surface: Greyed-green 191A Lower Surface: Greyed-green 191B
Length and width	5 mm; 2 mm
Texture	Pubescent
Inflorescence	
Type	Double
Height	2 cm
Diameter	6.5 cm
Peduncle length	3 cm
Peduncle color	Green N138B to N138C
Peduncle diameter	2 mm
Peduncle texture	Pubescent
Number per branch	Approx. 4-5 inflorescences
Shelf life	4 weeks
Seeds	Produced in small quantities, ovate, Greyed-brown 199A, length 1.5 mm, diameter 0.8 mm
Fragrance	Faint <i>chrysanthemum</i> odor
Color	
Center of inflorescence	Immature stage: Red-purple 71A Mature stage: Red-purple 71A
Color of upper surface of the ray-florets	Red-purple 71A to 71B
Color of the lower surface of the ray-florets	Red-purple 70B
Tonality from Distance	A pot mum with dark purple flowers
Color of the upper surface of ray-florets after aging of the plant	Purple N77B
Ray florets	
Texture	Upper and lower side smooth
Number	170-180
Shape	Elliptic
Apex	Dentate
Base	Attenuate
Cross-section	Concave
Longitudinal axis of majority	Straight
Length of corolla tube	3-5 mm
Ray-floret margin	Entire
Ray-floret length	2-3 cm
Ray-floret width	0.4-1 cm
Ratio length/width	Medium
Disc florets	Absent
Receptacle	
Color	Yellow-green 145D
Shape	Domed raised

TABLE 1-continued

Botanical Description of <i>Chrysanthemum xmorifolium</i> Ramat. 'Zanmudeep'		
5	Height	3 mm
	Diameter	1.2 cm
	Reproductive Organs	
	Androecium	Absent
	Pollen	Not produced
10	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
15	Plant	
	Form	Upright and free branching
	Growth rate	Medium
	Height	18 cm
	Width	24 cm
	Stem Color	Greyed-brown 199A
20	Stem Strength	Strong
	Stem Brittleness	Not brittle
	Stem Anthocyanin Coloration	Not observed
	Internode length	1 cm
	Length of lateral branch	From top to bottom 14 cm
	Lateral branch color	Green 137 C
25	Lateral branch diameter	3 mm
	Lateral branch, attachment	Strong
	Branching (average number of lateral branches)	Prolific with 3 breaks after pinching
	Response time	8 weeks
	Foliage	
30	Leaf color	Upper surface: Green 137A Lower surface: Green N138B
	Color midvein	Upper surface: Yellow-green 147D Lower surface: Yellow-green 148D
	Size	Medium; length 7-8.5 cm, width 4-5 cm
35	Quantity (number per lateral branch)	12
	Shape	Broadly elliptic
	Texture upper side	Sparsely pubescent
	Texture under side	Pubescent
	Venation arrangement	Palmate
40	Shape of the margin	Serrated
	Shape of Base of Sinus	Rounded
	Between Lateral Lobes	
	Margin of Sinus Between Lateral Lobes	Diverging
	Shape of Base	Acute to truncate
45	Apex	Mucronulate
	Petiole length	1-2 cm
	Petiole diameter	2 mm
	Petiole color	Yellow-green 147D

TABLE 2

Differences with the comparison variety when grown side-to-side		
55	'Zanmudeep'	'Midnight Time'
	Color ray florets	Red-purple 71A to 71B
	Response time	8 weeks
		Red-purple 61B
		7 weeks

I claim:
1. A new and distinct *chrysanthemum* plant named 'Zanmudeep' as described and illustrated.

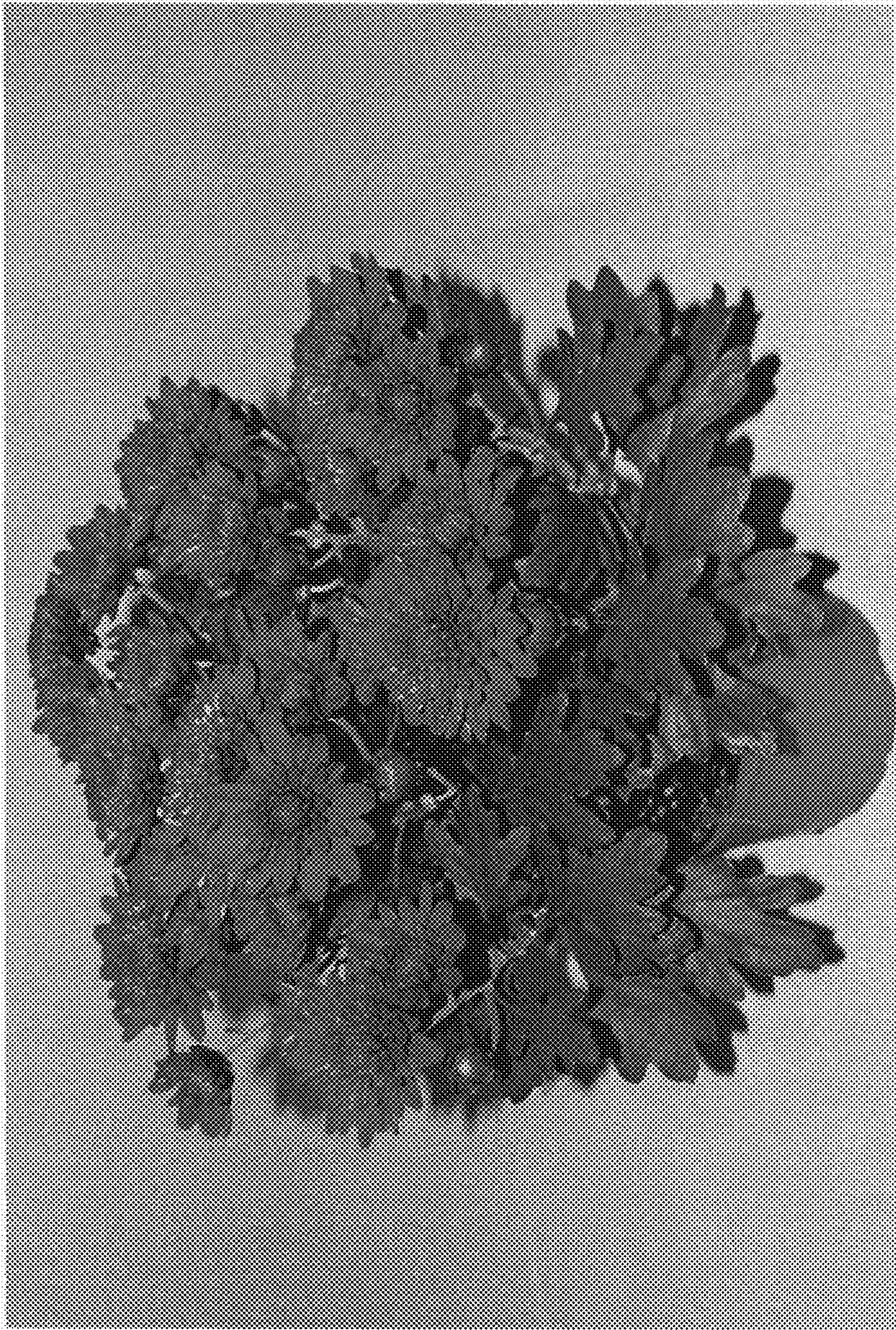


FIG. 1

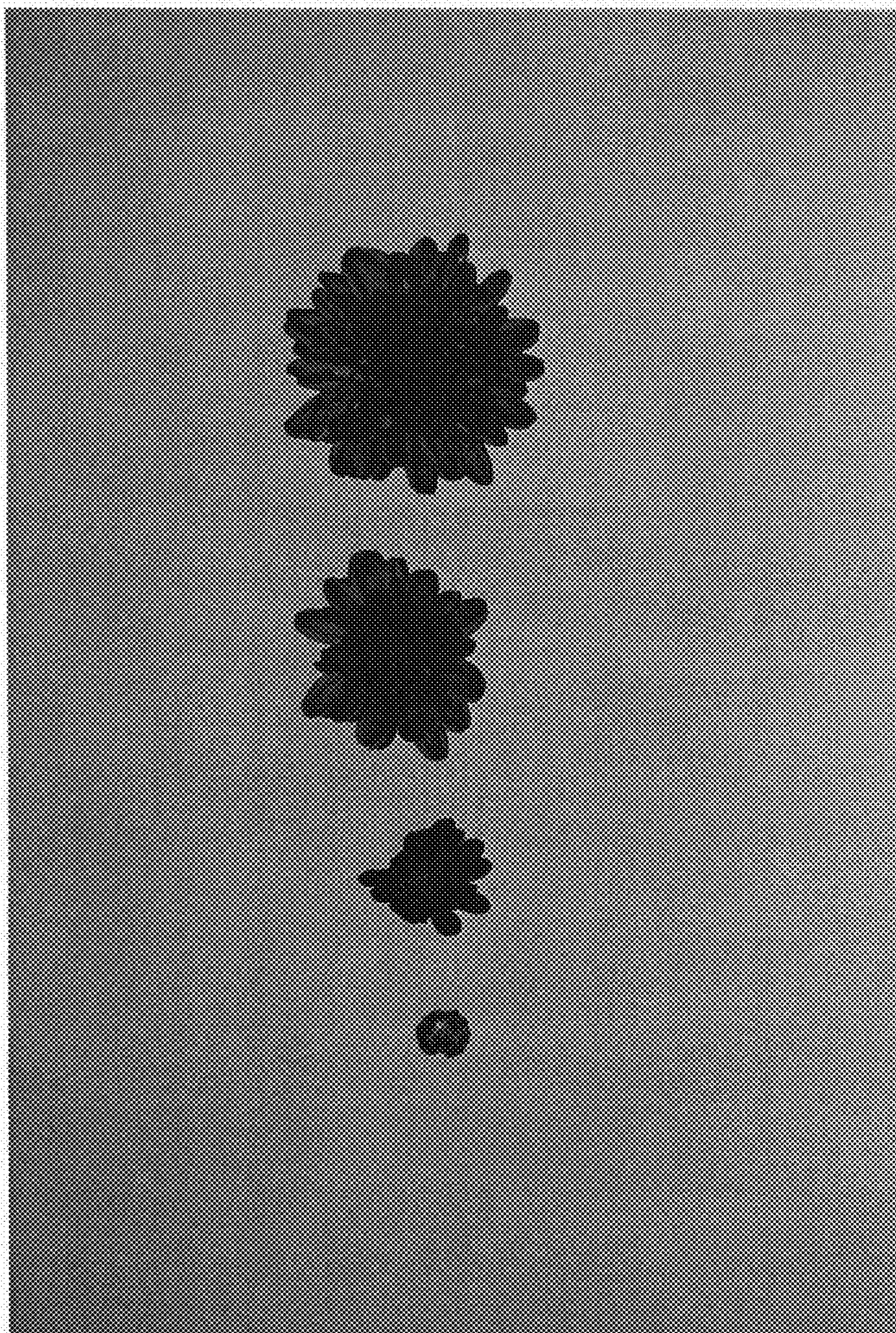


FIG. 2

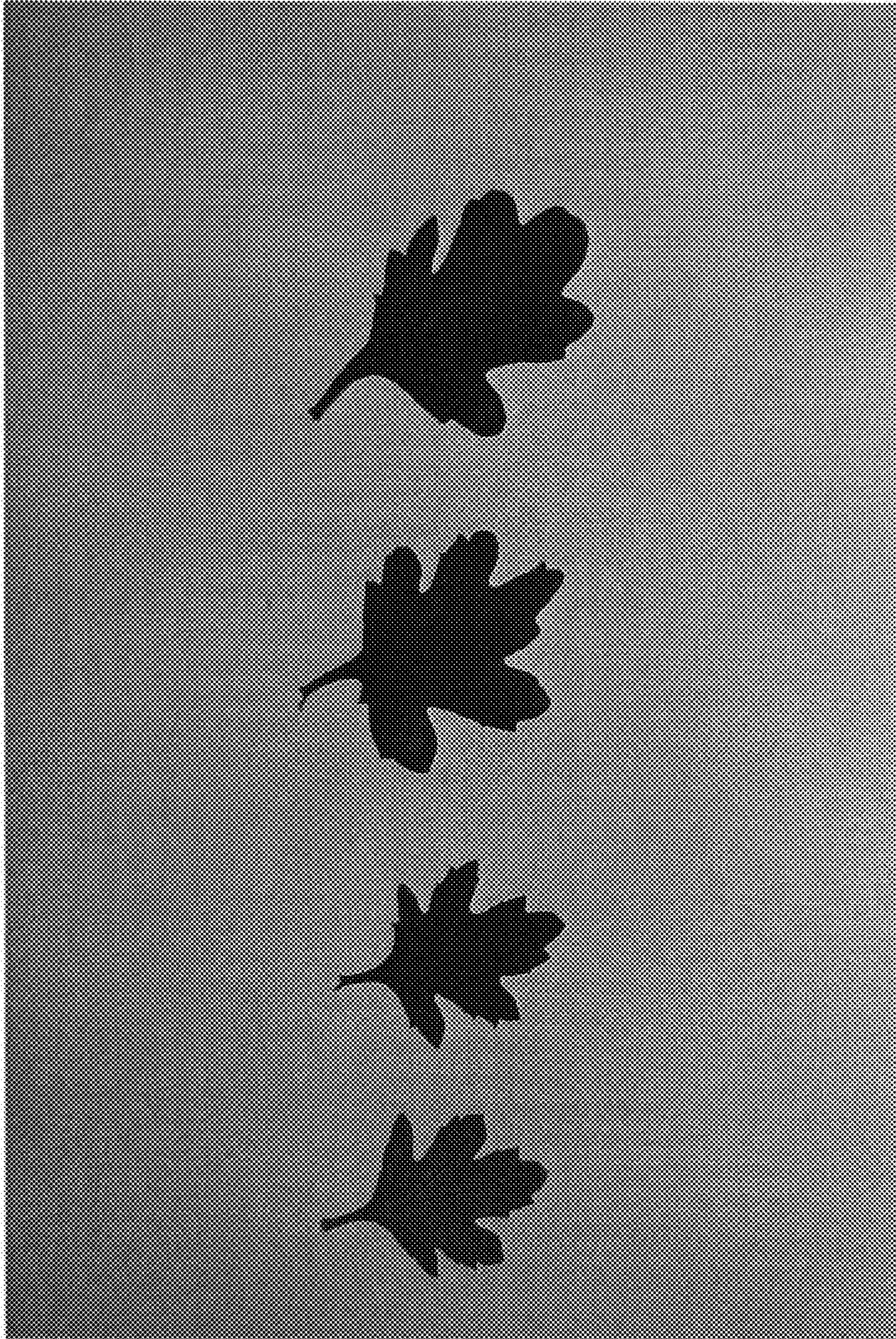


FIG. 3