

US00PP31856P3

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

(10) **Patent No.:** **US PP31,856 P3**
(45) **Date of Patent:** **Jun. 9, 2020**

(54) **CHRYSANTHEMUM PLANT NAMED**
'ZANMUMADORE RED'

(50) Latin Name: *Chrysanthemum x morifolium*
Ramat.
Varietal Denomination: **Zanmumadore Red**

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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.: **16/350,058**

(22) Filed: **Sep. 21, 2018**

(65) **Prior Publication Data**

US 2020/0100414 P1 Mar. 26, 2020

(51) **Int. Cl.**
A01H 5/02 (2018.01)
A01H 6/14 (2018.01)

(52) **U.S. Cl.**
USPC **Plt./293**
CPC *A01H 6/1424* (2018.05)

(58) **Field of Classification Search**
USPC Plt./293
CPC *A01H 6/1424*; *A01H 5/02*
See application file for complete search history.

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(57) **ABSTRACT**

A *Chrysanthemum* plant named 'Zanmumadore Red' char-
acterized by its medium sized blooms with red ray florets
with dark centers and prolific branching; natural season
flowering date October 2 (week 41); blooming for a period
of 5 weeks.

3 Drawing Sheets

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Botanical designation: *Chrysanthemum x morifolium*
Ramat.
Cultivar denomination: 'Zanmumadore Red'.

RELATED CULTIVARS

The new plant is a flower color mutant of 'Zanmumadore'
(unpatented)

BACKGROUND OF THE INVENTION

The present invention relates to a new and distinct cultivar
of *Chrysanthemum* plant, botanically known as *Chrysanthe-*
mum x morifolium Ramat, commercially known as a garden
mum, and hereinafter referred to by the cultivar denomina-
tion 'Zanmumadore Red'. 'Zanmumadore Red' is a product
of a breeding and selection program which had the objective
of finding flower color mutants from existing parent plants.
The new plant comprises a whole plant mutant of the parent
Chrysanthemum named 'Zanmumadore' (unpatented).
Plants from the new cultivar 'Zanmumadore Red' differ
from plants of the parent in the color of the ray-florets. The
ray-florets of the parent are pink, while those of the new
plant are red.

In order to obtain color mutants, unrooted cuttings of the
parent plant were irradiated in April 2014 at Ziekenhuis,
Rotterdam, the Netherlands, with gamma radiation at a dose
of 15 Gy. These treated cuttings were then planted in a
controlled environment (greenhouse) in Rijsenhout, the
Netherlands. In this population of planted cuttings, the new
cultivar was discovered as a natural flower color mutant in
October 2014 by Sjoukje Heimovaara. The first act of
asexual reproduction of 'Zanmumadore Red' was accom-
plished when after planting of the 'Zanmumadore Red' as a
motherplant in December 2014, vegetative cuttings from
this 'Zanmumadore Red' were taken and propagated further

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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 characteris-
tics through successive propagations.

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention of a new and distinct variety of
Chrysanthemum (of about 22 weeks) is shown in the accom-
panying 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 blooms 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 19 to 25 weeks of age grown outdoors
in Rijsenhout, the Netherlands, under natural day length and
temperature and planted in week 22 in 2017. The natural
blooming date of this crop was October 2 (week 41). The
average height of the plants was 25-30 cm. No growth
retardants were used. No tests were done on disease or
insects resistance or susceptibility. No tests were done on
cold or drought resistance. This new variety produces
medium sized blooms with red ray florets and a dark center
blooming for a period of five weeks.

From the cultivars known to the inventor the most similar
existing cultivars in comparison to 'Zanmumadore Red' are
its parents 'Zanmumadore' and 'Zanmumadore Orange'
(U.S. Plant Pat. No. 31,047). When 'Zanmumadore', 'Zan-
mumadore Red' and 'Zanmumadore Orange' are being com-

pared the following differences are noticed: ray floret color in 'Zanmumadore' is pink, red in 'Zanmumadore Red' and bronze in 'Zanmumadore Orange'.

The following is a description of the plant and characteristics that distinguish 'Zanmumadore Red' 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, sixth edition, 2015.

Botanical description of *Chrysanthemum* x *morifolium* Ramat. 'Zanmumadore Red'.

Bud:

Size.—Small; cross-section 5 mm, height 4 mm.

Shape.—Round.

Texture.—Pubescent.

Outside color.—Greyed-green 191A.

Phyllaries:

Number.—24, arranged in 3 rows.

Shape.—Elliptic.

Apex.—Acute.

Base.—Truncate.

Margin.—Entire.

Color.—Upper side: Green 139A. Lower side: Green N138C.

Length and width.—0.6-0.8 mm; 2-4 mm.

Texture.—Pubescent.

Inflorescences:

Type.—Double.

Height.—13 cm.

Diameter.—3.5-4 cm.

Peduncle length.—6-7 cm.

Peduncle color.—Green 138B.

Peduncle diameter.—1.5 mm.

Peduncle texture.—Pubescent.

Peduncle strength.—Medium.

Number per branch.—About 8-9 inflorescences.

Duration of flowering.—5 weeks.

Seeds.—Ovate, Greyed-brown 199A, length 1.5 mm, diameter 0.5 mm; texture: rough with ribs.

Fragrance.—Faint *Chrysanthemum* odor.

Color inflorescences:

Center of inflorescence.—Immature stage: Greyed-purple 183A; Mature stage: Greyed-purple 183A.

Color of upper side of ray florets (outer rows).—Greyed-red 178A.

Color of lower side of ray florets (outer rows).—Greyed-purple 187B.

Color of upper side ray florets (inner rows).—Greyed-red 178C.

Color of lower side ray-florets (inner rows).—Greyed-red 178C.

Tonality from distance.—A garden mum with dark bronze blooms and a dark rim in the center.

Color of ray florets after aging of the plant.—Greyed-red 178C.

Ray florets:

Number of types.—2.

Type.—Ligulate.

Rows.—About 15.

Texture.—Upper and lower side smooth.

Number.—Outer rows: 140; inner rows: 30.

Density.—Outer rows: medium; inner rows: sparse.

Shape.—Outer rows: elliptic; inner rows: narrowly elliptic.

Apex.—Outer rows: dentate; inner rows: dentate.

Base.—Attenuate.

Cross-section.—Outer rows: flat; inner rows: concave.

Longitudinal axis.—Outer rows: straight; inner rows: straight.

Length of corolla tube.—3 mm.

Diameter corolla tube.—1 mm.

Ray floret margin.—Entire.

Ray floret length (outer rows).—1.5-2 cm.

Ray-floret length (inner rows).—0.8-1 cm.

Ray-floret width (outer rows).—3 mm.

Ray floret width (inner rows).—1 mm.

Ratio length/width.—5-10.

Disc florets: Absent.

Receptacle:

Color.—Yellow-green 145D.

Shape.—Domed raised.

Height.—3-4 mm.

Diameter.—4 mm.

Reproductive organs:

Androecium.—Absent.

Pollen.—Lacking.

Gynoecium.—Present on ray florets.

Style color.—Yellow-green 154C.

Style length.—4 mm.

Stigma color.—Yellow 7A.

Stigma width.—1 mm.

Ovary.—Enclosed in calyx.

Ovary color.—Yellow-green 149D.

Plant:

Type.—Bushy.

Growth habit.—Spherical shape.

Growth rate.—High.

Height.—25-30 cm.

Width.—40-45 cm.

Stem color.—Greyed-brown 199A.

Stem strength.—Not strong.

Stem brittleness.—Brittle.

Stem anthocyanin coloration.—Absent.

Internode length.—0.5-2.5 cm.

Length of lateral branch.—From top to bottom 20-22 cm.

Lateral branch color.—Green 137 C.

Lateral branch attachment.—Weak.

Lateral branch diameter.—3 mm.

Lateral branch texture.—Pubescent with ribs.

Branching (average number of lateral branches).—Medium with 8 breaks after pinching.

Natural season blooming date.—October 2 (week 41) in Rijsenhout, the Netherlands.

Root habits.—Fine, freely branching.

Root color.—White 155D.

Rooting time.—6-8 days.

Formation rooted plants.—12-14 days.

Foliage:

Leaf glossiness.—Upper side: very weak. Lower side: absent.

Leaf color.—Upper side: Green 136A. Lower side: Green 137A.

Color midvein.—Upper side: Yellow-green 147D. Lower side: Yellow-green 148D.

Size.—Small; length 2.5-3.5 cm, width 0.5-2.6 cm.

Quantity (number per lateral branches).—About 25.

Shape.—Elliptic to obovate.
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.
Apex.—Mucronulate.
Petiole attitude.—Moderately upwards.
Petiole length.—0.1-0.8 cm.
Petiole diameter.—3 mm.
Petiole color.—Yellow-green 147D.
Stipules.—About 1-2 mm in size.

TABLE 1

| Differences with the comparison variety, when grown under identical conditions | | | |
|--|--------------------------|-------------------|----------------------|
| | 'Zanmumadore' | 'Zanmumadore Red' | 'Zanmumadore Orange' |
| 5 | | | |
| | Color upper side ray | Red - purple | Greyed - red |
| | floret - outer row | 72C | 178A |
| | Color upper side ray | Red - purple | Greyed - |
| 10 | floret color - inner row | 72A | purple 187B |
| | | | Greyed - orange 163C |
| | | | Greyed - red 178A |

I claim:

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

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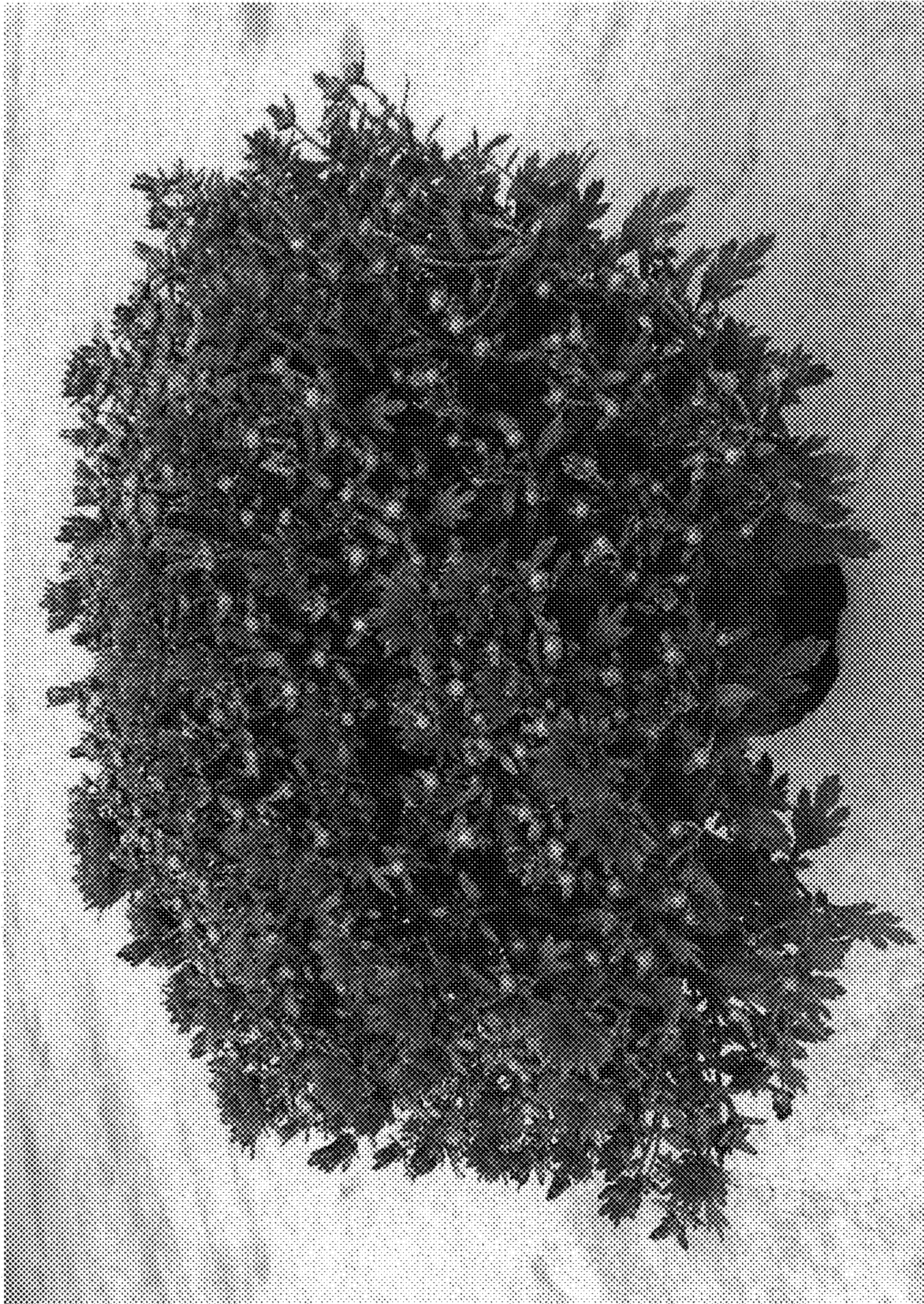


FIG. 1

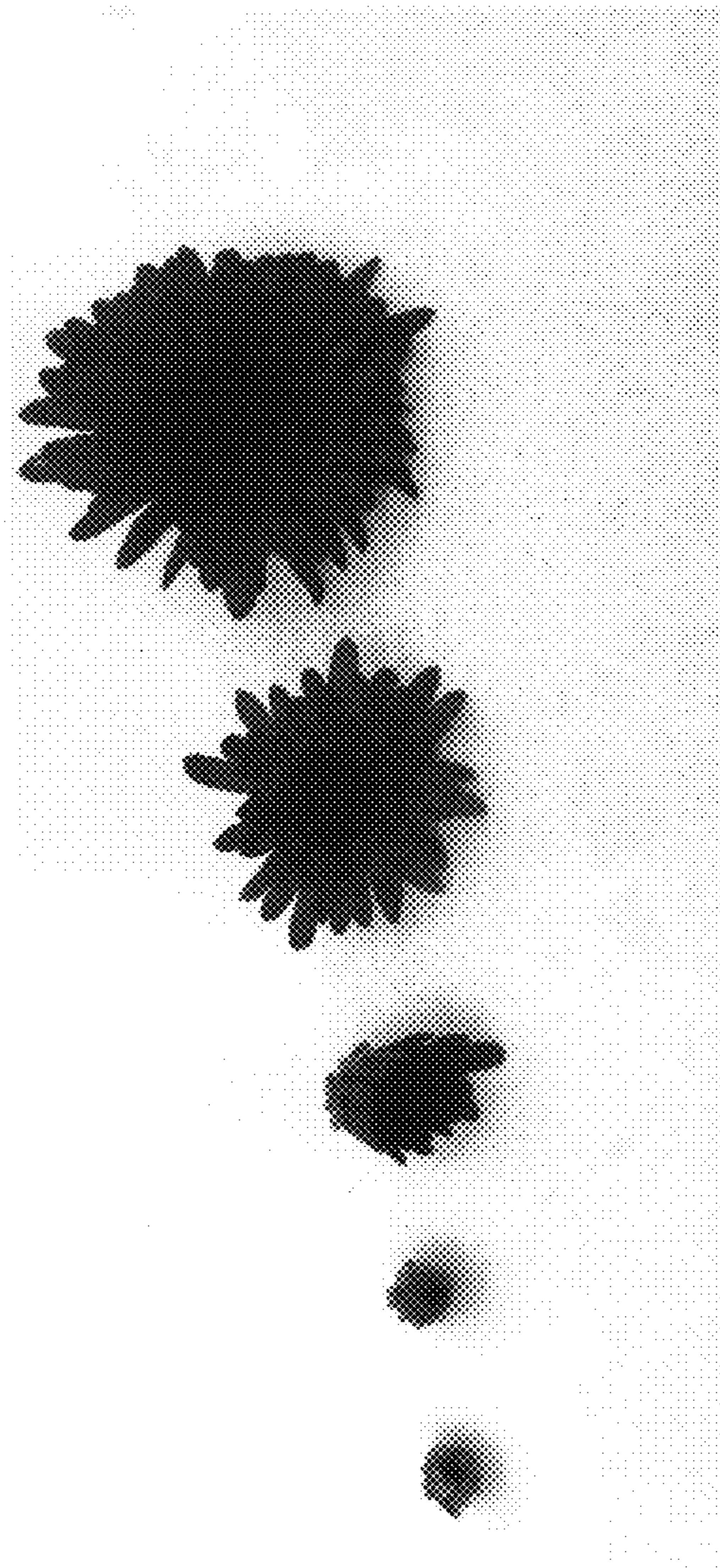


FIG. 2

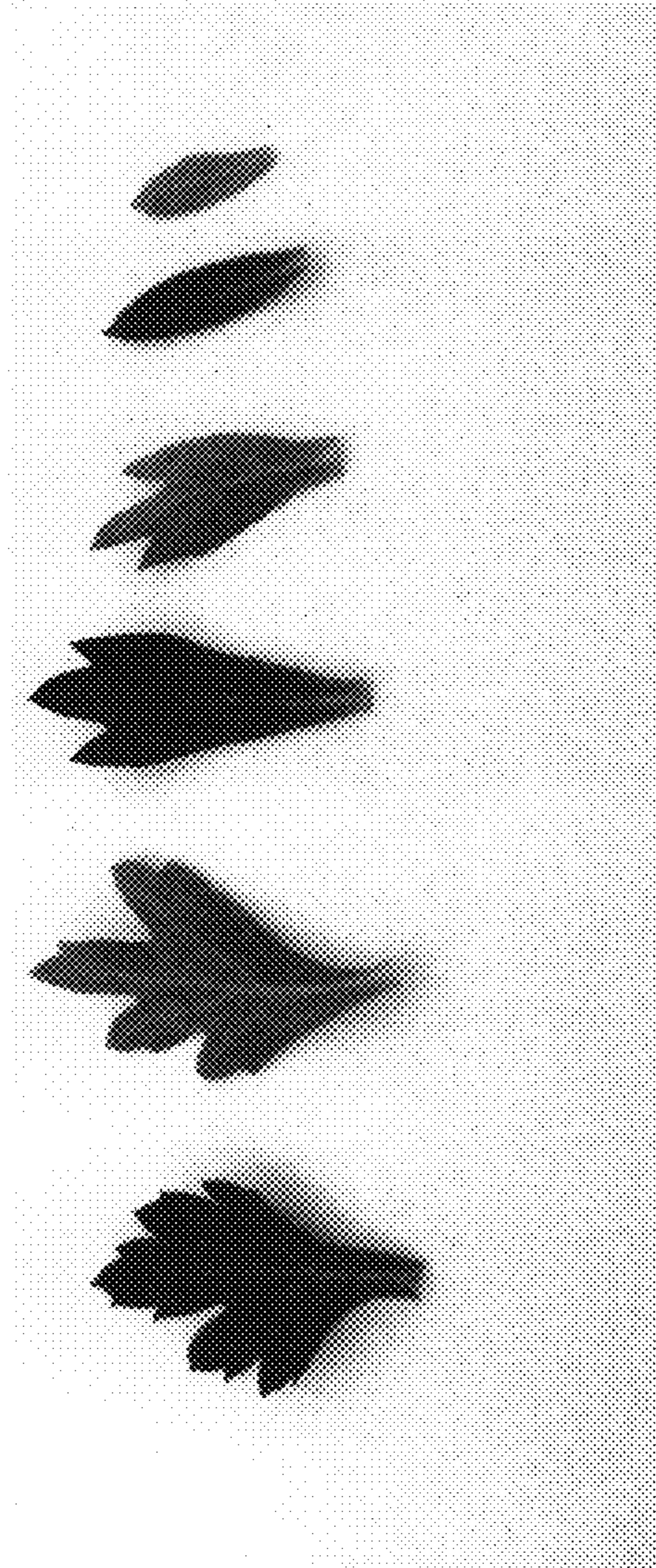


FIG. 3