



US00PP24021P3

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

(10) **Patent No.:** **US PP24,021 P3**  
(45) **Date of Patent:** **Nov. 5, 2013**

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

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

(75) Inventor: **Wilhelmus Bernardus Blom,**  
Leimuiden (NL)

(73) Assignee: **Chrysanthemum Breeders Association**  
**Research B.V., Aalsmeer (NL)**

(\*) Notice: Subject to any disclaimer, the term of this  
patent is extended or adjusted under 35  
U.S.C. 154(b) by 87 days.

(21) Appl. No.: **13/385,346**

(22) Filed: **Feb. 15, 2012**

(65) **Prior Publication Data**

US 2013/0212761 P1 Aug. 15, 2013

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

(52) **U.S. Cl.**  
USPC ..... **Plt./298**

(58) **Field of Classification Search**  
USPC ..... Plt./298  
See application file for complete search history.

*Primary Examiner* — Annette Para

(74) *Attorney, Agent, or Firm* — Steptoe & Johnson LLP

(57) **ABSTRACT**

A *Chrysanthemum* plant named 'Zanmuaval Red' character-  
ized by its medium sized blooms with dark red ray florets and  
prolific branching; natural season flower date datum; bloom-  
ing for a period of five weeks.

**3 Drawing Sheets**

**1**

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

Cultivar denomination: 'Zanmuaval Red'.

RELATED CULTIVARS

The new plant is a mutant obtained from the *Chrysanthe-*  
*mum* plant 'Zanmuaval' (U.S. Plant Pat. No. 22,659).

BACKGROUND OF THE INVENTION

The present invention relates to a new and distinct cultivar  
of *Chrysanthemum* plant, botanically known as *Chrysanthe-*  
*mum*×*morifolium* Ramat., commercially known as a garden  
mum, and hereinafter referred to by the cultivar denomination  
'Zanmuaval Red'. The new plant is a product of a breeding  
and selection program which had the objective of finding  
color mutants from existing parent plants. The new plant  
comprises a whole plant mutant of the *Chrysanthemum* plant  
named 'Zanmuaval'. Plants from the new cultivar 'Zanmu-  
aval Red' differ from plants of the parent in the color of their  
ray-florets; those of the new plant 'Zanmuaval Red' are dark  
red, while those of the parent are purple.

The new cultivar was discovered as a color mutant in April  
2009 by Wilhelmus Bernardus Blom in a controlled environ-  
ment (greenhouse) in Rijsenhout, The Netherlands. The first  
act of asexual reproduction of 'Zanmuaval Red' was accom-  
plished when after planting of the mutant as a motherplant in  
May 2009, vegetative cuttings from this mutant were taken  
and propagated further in Rijsenhout, The Netherlands. The  
new cultivar has been found to retain its distinctive charac-  
teristics through successive propagations.

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 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 grown out door in Rijsenhout, The Netherlands, under  
natural day length and temperature and planted in week 22 in  
2011. The natural blooming date of this crop was October 17  
(week 42). The average height of the plants was 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 dark red ray florets blooming for a period  
of five weeks.

From the cultivars known to inventor the most similar  
existing cultivar in comparison to 'Zanmuaval Red' is 'Zan-  
muaval' (U.S. Plant Pat. No. 22,659), its parent plant, and  
'Zanmuaval Orange' (U.S. Plant patent application Ser. No.  
13/385,345), another mutant developed from the same parent  
plant. When 'Zanmuaval', 'Zanmuaval Orange' and 'Zan-  
muaval Red' are being compared the following differences in  
the color of the ray-florets are observed: that of 'Zanmuaval'  
is purple, while the color in 'Zanmuaval Orange' is bronze  
and in 'Zanmuaval Red' dark red.

The following is a description of the plant and charac-  
teristics that distinguish 'Zanmuaval Red' as a new and distinct  
variety.

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

DETAILED BOTANICAL DESCRIPTION

Bud:  
*Size*.—Small; cross-section 0.5 cm, height 0.3 cm.  
*Shape*.—Oblate.

- Texture*.—Pubescent.  
*Outside color*.—Greyed-green 191B.
- Phyllaries:  
*Number*.—20-22, arranged in 3 rows.  
*Shape*.—Elliptic.  
*Apex*.—Acute.  
*Base*.—Truncate.  
*Margin*.—Entire.  
*Color*.—Upper surface: Greyed-green 191B. Lower surface: Green 138A.  
*Length and width*.—1 cm; 0.1 cm.  
*Texture*.—Pubescent.
- Inflorescence:  
*Type*.—Double.  
*Height*.—1.5 cm.  
*Diameter*.—5 cm.  
*Peduncle length*.—5-6 cm.  
*Peduncle color*.—Green 138C.  
*Peduncle diameter*.—0.2 cm.  
*Peduncle texture*.—Pubescent.  
*Number per branch*.—Approx. 6 inflorescences.  
*Duration of flowering*.—5 weeks.  
*Seeds*.—Produced in small quantities, ovate, Greyed-brown 199A, length 1.5 mm, diameter 0.8 mm.  
*Fragrance*.—Faint *Chrysanthemum* odor.
- Color:  
*Center of inflorescences*.—Immature stage: Greyed-Purple 183A. Mature stage: Greyed-Purple 183A.  
*Color of upper surface of the ray-florets*.—Greyed-Purple 185B.  
*Color of the lower surface of the ray-florets*.—Greyed-Red 182D.  
*Tonality from distance*.—A garden mum with dark red flowers.  
*Color of the ray-florets after aging of the plant*.—Greyed-Purple 185D.
- Ray florets:  
*Texture*.—Upper and lower surface smooth.  
*Number*.—240-260.  
*Shape*.—Elliptic.  
*Type*.—Predominantly ligulate.  
*Apex*.—Varying from acute to dentate.  
*Base*.—Attenuate.  
*Cross-section*.—Flat.  
*Longitudinal axis of majority*.—Straight.  
*Length of corolla tube*.—0.3-0.4 cm.  
*Ray-floret margin*.—Entire.  
*Ray-floret length*.—1.2-2.5 cm.  
*Ray-floret width*.—0.2-0.5 cm.  
*Ratio length/width*.—High.
- Disc florets: Absent.
- Receptacle:  
*Color*.—Green 138C.  
*Shape*.—Domed raised.  
*Height*.—0.4 cm.  
*Diameter*.—0.4 cm.
- Reproductive organs:  
*Androecium*.—Absent.  
*Pollen*.—Not produced.

- Gynoecium*.—Present in ray-florets.  
*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*.—Medium.  
*Height*.—30 cm.  
*Width*.—50 cm.  
*Stem color*.—Greyed-brown 199A.  
*Stem strength*.—Weak.  
*Stem brittleness*.—Brittle.  
*Stem anthocyanin coloration*.—Not observed.  
*Internode length*.—2-4 cm.  
*Length of lateral branch*.—From top to bottom 20 cm.  
*Lateral branch color*.—Green 137 C.  
*Lateral branch, attachment*.—Brittle.  
*Lateral branch diameter*.—2 mm.  
*Branching (average number of lateral branches)*.—Prolific with 8-9 breaks after pinching.  
*Natural season blooming date*.—October 17-21 (week 42).
- Foliage:  
*Leaf color*.—Upper side: Green 139A. Lower side: Green N138A.  
*Color midvein*.—Upper side: Yellow-green 147D. Lower side: Yellow-green 148D.  
*Size*.—Small.; length 3-5 cm, width 2-3.5 cm.  
*Quantity (number per lateral branch)*.—15-17.  
*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*.—Truncate.  
*Apex*.—Mucronulate.  
*Petiole length*.—0.3-0.8 cm.  
*Petiole diameter*.—0.2-0.4 cm.  
*Petiole color*.—Yellow-green 147D.

TABLE 1

Differences with the comparison varieties			
	'Zanmuaval Red'	'Zanmuaval Orange'	'Zanmuaval'
Color upper surface ray florets	Greyed-Purple 185B	Greyed-Orange 164B	Purple N79C

I claim:

1. A new and distinct variety of *Chrysanthemum* plant as described and illustrated.

\* \* \* \* \*



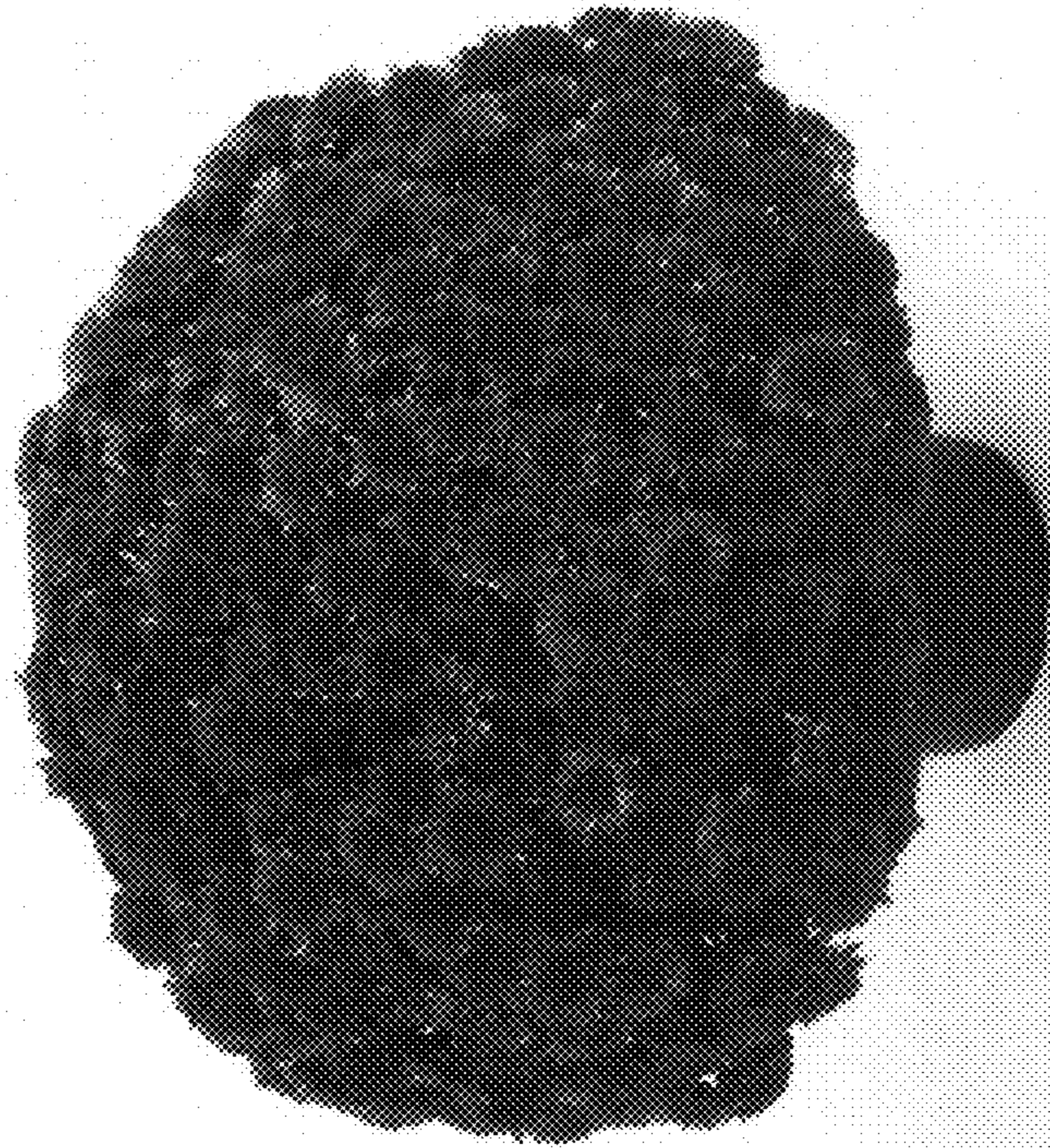


FIG. 1



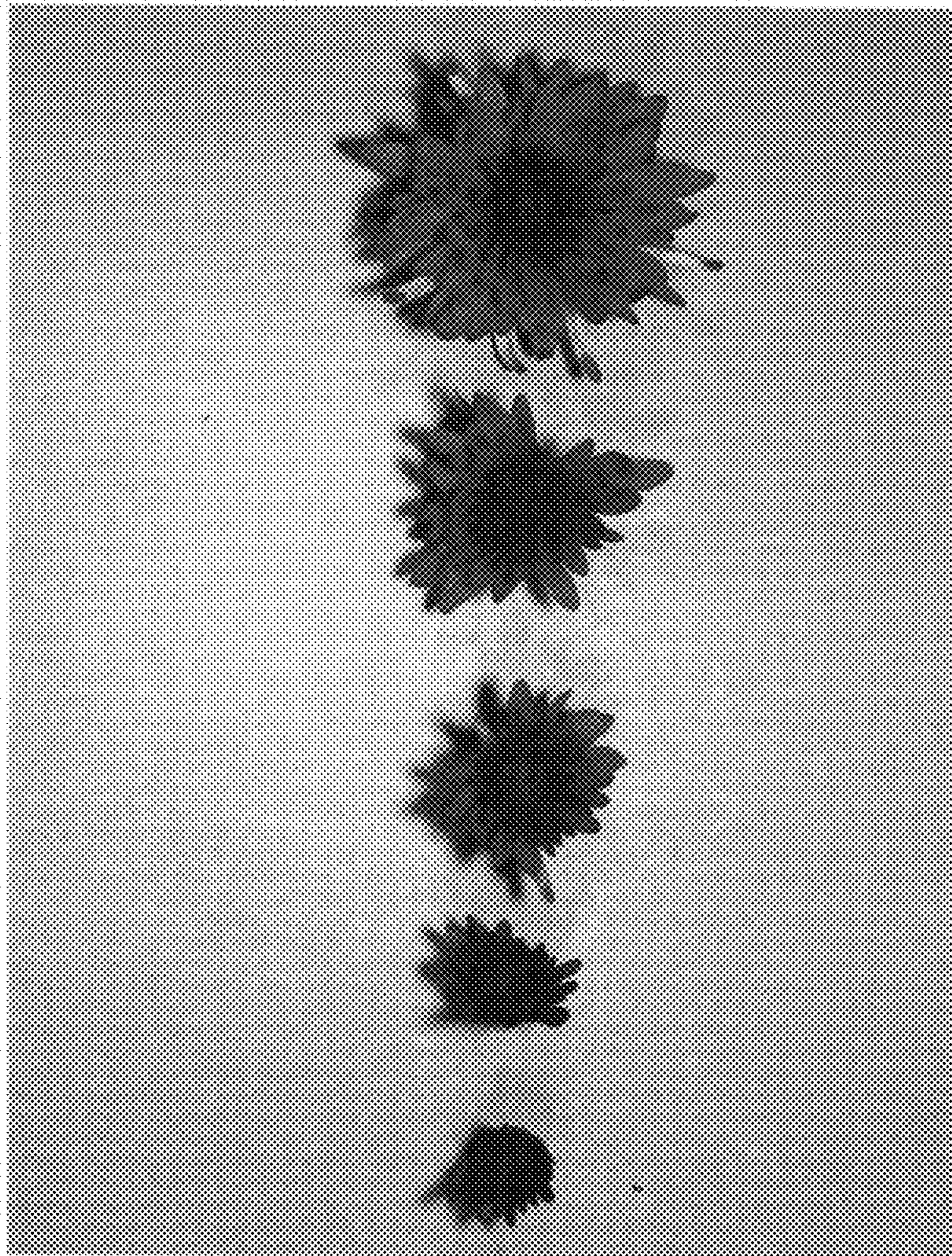


FIG. 2



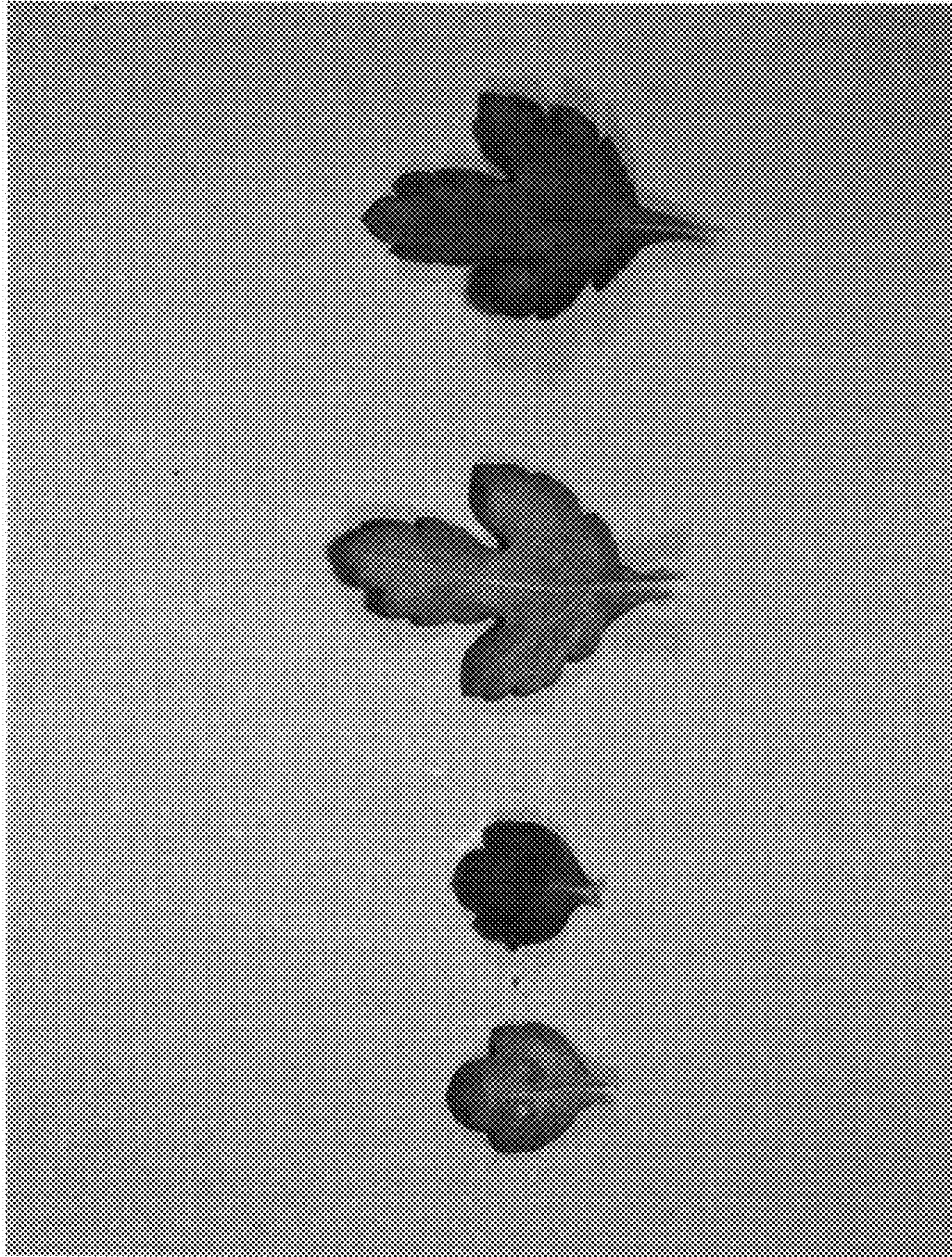


FIG. 3