



US00PP24020P3

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

(10) **Patent No.:** **US PP24,020 P3**
(45) **Date of Patent:** **Nov. 5, 2013**

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

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

(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 84 days.

(21) Appl. No.: **13/385,344**

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

(65) **Prior Publication Data**

US 2013/0212759 P1 Aug. 15, 2013

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

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

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

(56) **References Cited**

U.S. PATENT DOCUMENTS

PP15,531 P3 * 2/2005 Redman **Plt./295**
PP19,631 P2 * 1/2009 Wain **Plt./295**
PP23,615 P3 * 5/2013 Blom **Plt./295**

* cited by examiner

Primary Examiner — Wendy C Haas

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

(57) **ABSTRACT**

A *chrysanthemum* plant named 'Zanmuaval Golden' charac-
terized by its medium sized blooms with yellow ray florets
and prolific branching; natural season flower date week 42;
blooming for a period of five weeks.

3 Drawing Sheets

1

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

Cultivar denomination: 'Zanmuaval Golden'.

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 Golden'. 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 'Zanmuaval
Golden' differ from plants of the parent in the following
characteristics. (1) Color ray-florets. (2) Type ray-florets. (1)
The ray-florets of the new plant are yellow, while those of the
parent plant are purple. (2) Ray-floret type is in the parent
plant predominantly ligulate, while it is mostly quilled in the
new plant.

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 Golden' was
accomplished when after planting of the mutant as a mother-
plant in May 2009, vegetative cuttings from this mutant were
taken and propagated further in Rijsenhout, The Netherlands.

2

The new cultivar has been found to retain its distinctive char-
acteristics 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.

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 yellow ray florets blooming for a period of
five weeks.

From the cultivars known to inventor the most similar
existing cultivar in comparison to 'Zanmuaval Golden' is its
parent plant 'Zanmuaval' (U.S. patent application Ser. No.
12/805,257).

The following is a description of the plant and character-
istics that distinguish 'Zanmuaval Golden' as a new and dis-
tinct 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.

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.—2.5 cm.
Diameter.—4.5 cm.
Peduncle length.—5-6 cm.
Peduncle color.—Green 138C.
Peduncle diameter.—0.2 cm.
Peduncle texture.—Pubescent.
Number per branch.—Approx 0.6 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: Green-Yellow 1B. Mature stage: Green-Yellow 1A.
Color of upper surface of the ray-florets.—Yellow 13C.
Color of the lower surface of the ray-florets.—Yellow 13C.
Tonality from distance.—A garden mum with yellow flowers.
Color of the ray-florets after aging of the plant.—Yellow 13C.

Ray florets:

Texture.—Upper and lower surface smooth.
Number.—230-250.
Type.—Predominantly quilled.
Shape.—Elliptic.
Apex.—Varying from acute to dentate.
Base.—Attenuate.
Cross-section.—Flat.
Longitudinal axis of majority.—Straight.
Length of corolla tube.—0.2-0.4 cm.
Ray-floret margin.—Entire.
Ray-floret length.—1.4-2.8 cm.

Ray-floret width.—0.2-0.3 cm.
Ratio length/width.—High.

Disc florets: Absent.

Receptacle:

Color.—Green 138C.
Shape.—Domed raised.
Height.—0.3 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 137C.
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).

35 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 3-4 cm, width 2-3.5 cm.
Quantity (number per lateral branch).—15-17.
Shape.—Broadly 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		
Color upper surface ray-florets	'Zanmuaval Golden' Yellow 13C	'Zanmuaval' Purple N79C
60 Type ray-florets	Predominantly quilled	Predominantly ligulate

I claim:

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

* * * * *

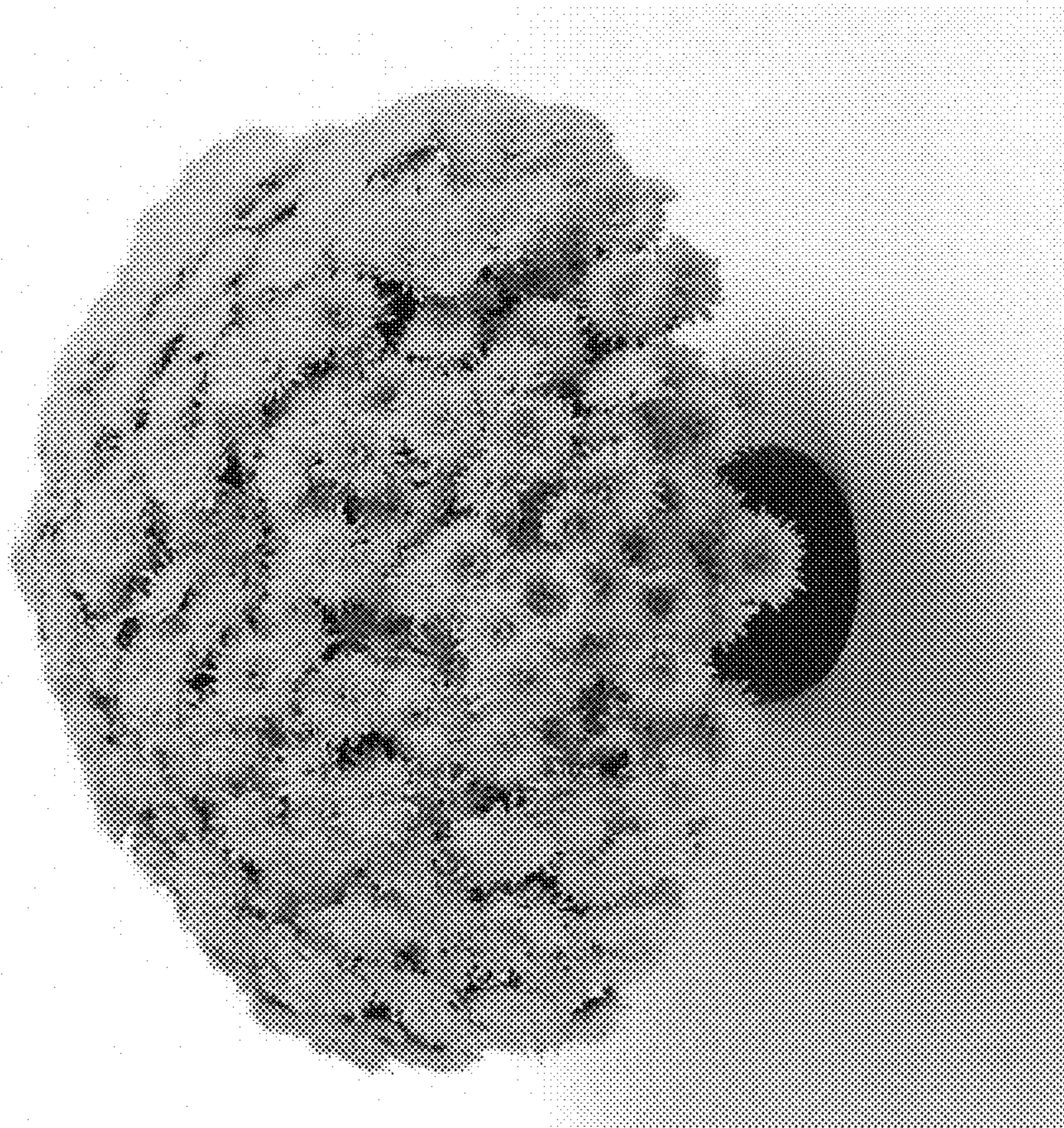


FIG. 1

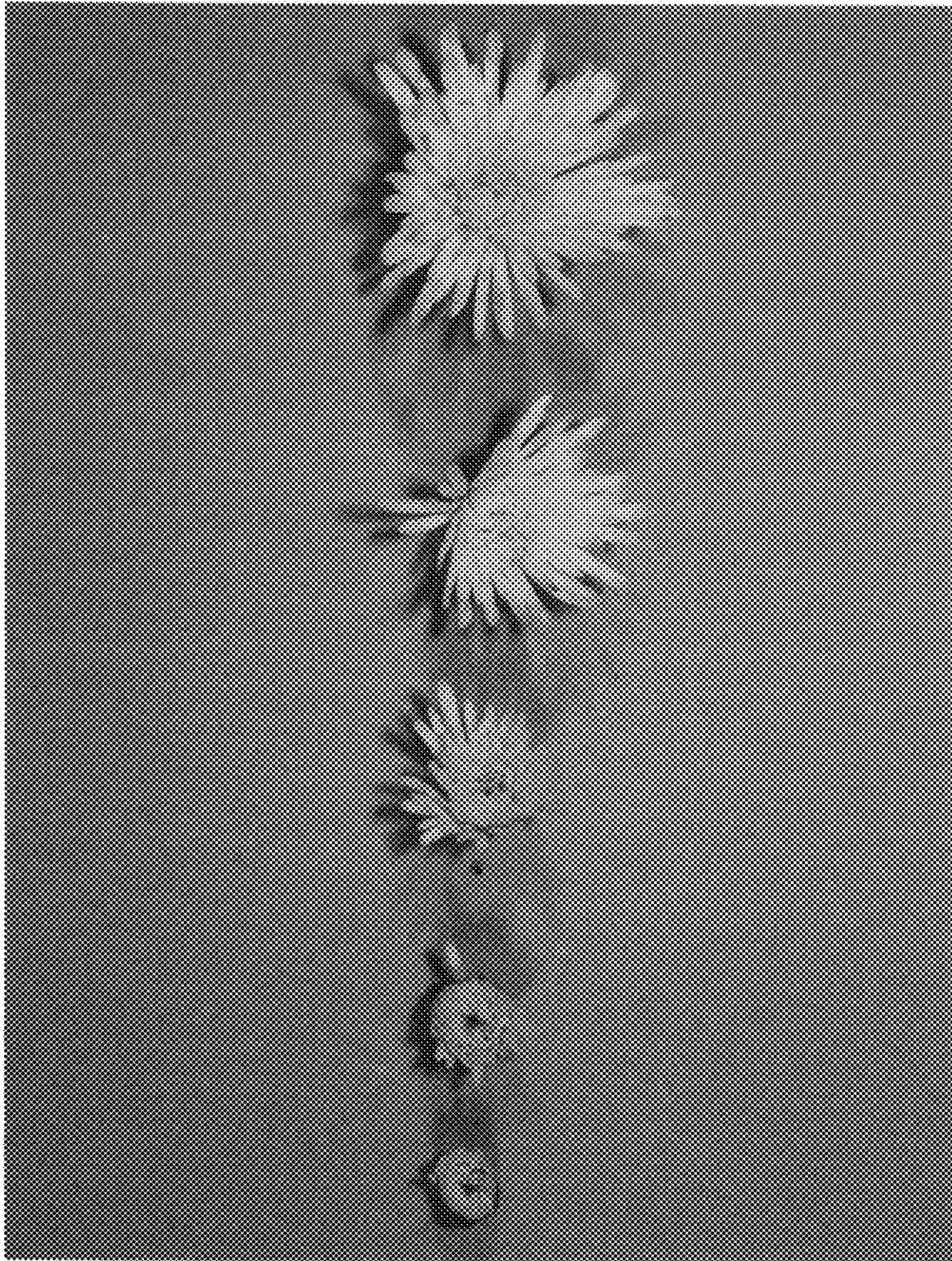


FIG. 2

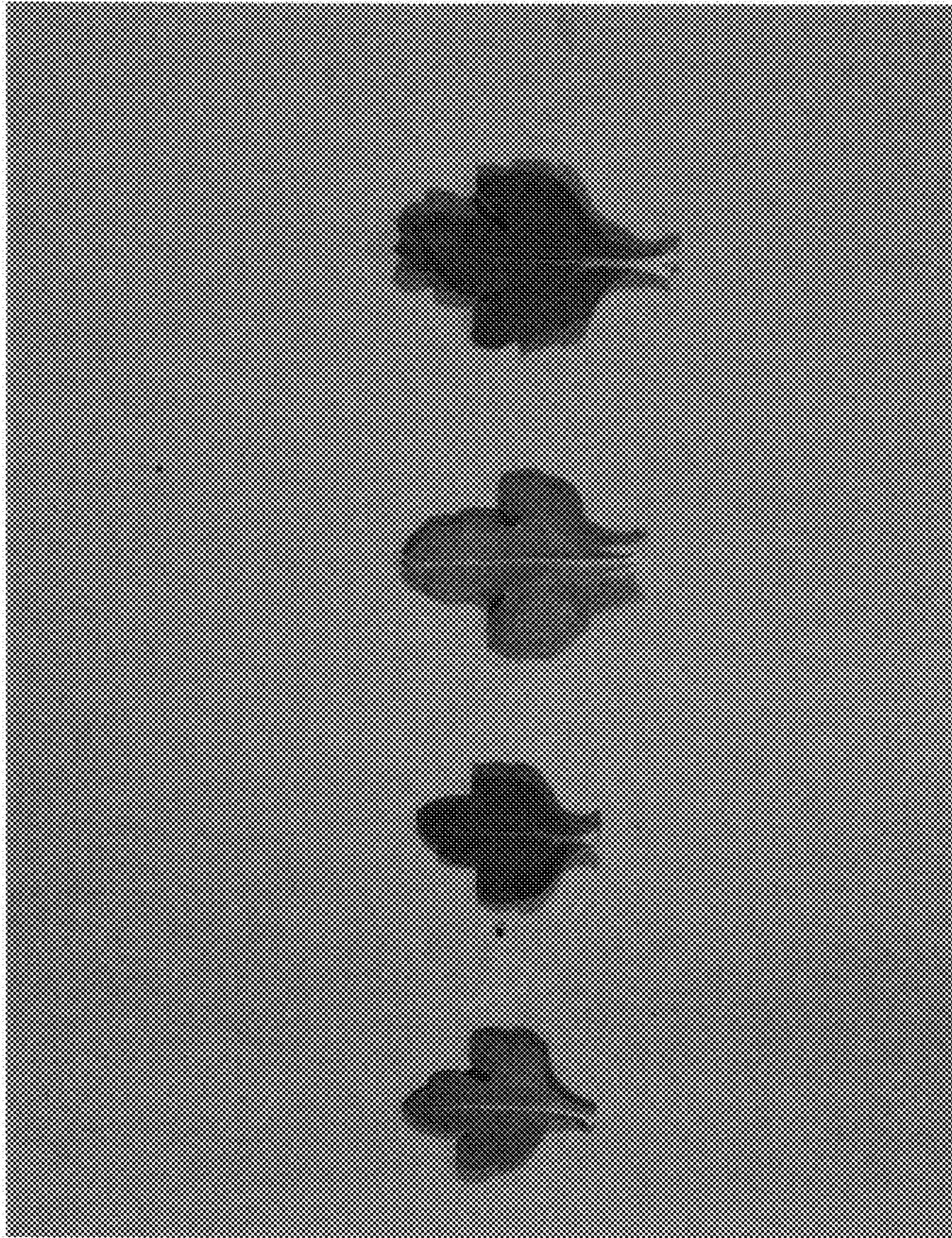


FIG. 3