US00PP29728P2

(12) **United States Plant Patent**
Stewart et al.

(10) **Patent No.: US PP29,728 P2**
(45) **Date of Patent: Oct. 9, 2018**

(54) **STRAWBERRY PLANT VARIETY NAMED 'DRISSTRAWFIFTYSEVEN'**

(50) Latin Name: ***Fragaria* x *ananassa***
Varietal Denomination: **DrisStrawFiftySeven**

(71) Applicant: **Driscoll's, Inc.**, Watsonville, CA (US)

(72) Inventors: **Philip J. Stewart**, Watsonville, CA (US); **JoAnne F. Coss**, Watsonville, CA (US); **Amy Marie Edmondson**, Watsonville, CA (US); **Iana Kostina**, Watsonville, CA (US)

(73) Assignee: **Driscoll's, Inc.**, Watsonville, CA (US)

(*) 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.: **15/731,421**

(22) Filed: **Jun. 6, 2017**

(51) **Int. Cl.**
A01H 5/08 (2018.01)

(52) **U.S. Cl.**
USPC **Plt./208**

(58) **Field of Classification Search**
USPC Plt./156, 208
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

PP1,745 P	8/1958	Lang
PP3,981 P	11/1976	Bringhurst et al.
PP4,487 P	11/1979	Bringhurst et al.
PP4,538 P	5/1980	Bringhurst et al.
PP5,262 P	7/1984	Voth et al.
PP5,265 P	7/1984	Voth et al.
PP5,266 P	7/1984	Bringhurst et al.
PP5,300 P	10/1984	Johnson, Jr.
PP5,480 P	5/1985	Nakagawa
PP5,840 P	12/1986	Johnson, Jr. et al.
PP6,191 P	5/1988	Johnson, Jr. et al.
PP6,231 P	7/1988	Johnson, Jr. et al.
PP6,578 P	1/1989	Voth et al.
PP6,579 P	1/1989	Bringhurst et al.
PP7,024 P	9/1989	Johnson, Jr. et al.
PP7,172 P	2/1990	Voth et al.
PP7,522 P	5/1991	Johnson, Jr. et al.
PP7,614 P	8/1991	Bringhurst et al.
PP7,615 P	8/1991	Bringhurst et al.
PP8,086 P	1/1993	Nelson et al.
PP8,205 P	4/1993	Nelson et al.
PP8,649 P	3/1994	Sjulin et al.
PP8,661 P	3/1994	Bringhurst et al.
PP8,708 P	5/1994	Voth et al.
PP8,745 P	5/1994	Sjulin et al.
PP9,130 P	5/1995	Sjulin et al.
PP9,909 P	6/1997	Ackerman et al.
PP10,221 P	2/1998	Sjulin et al.
PP10,534 P	8/1998	Sjulin et al.
PP10,642 P	10/1998	Amorao et al.
PP11,035 P	8/1999	Mowrey et al.
PP11,277 P	3/2000	Gilford et al.
PP11,279 P	3/2000	Gilford et al.
PP11,522 P	9/2000	Amorao et al.
PP11,548 P	10/2000	Amorao et al.
PP11,554 P	10/2000	Sjulin et al.
PP11,639 P	11/2000	Mowrey et al.
PP12,186 P2	11/2001	Gilford et al.
PP12,436 P2	3/2002	Amorao et al.
PP12,577 P2	4/2002	Amorao et al.
PP12,817 P2	7/2002	Gilford et al.
PP12,889 P2	8/2002	Lamb et al.
PP12,899 P2	9/2002	Mowrey et al.
PP13,386 P2	12/2002	Mowrey et al.
PP13,469 P3	1/2003	Larson et al.
PP14,005 P3	7/2003	Amorao et al.
PP14,062 P3	8/2003	Amorao et al.
PP14,109 P3	8/2003	Gilford et al.
PP14,771 P3	5/2004	Amorao et al.
PP15,145 P2	9/2004	Mowrey et al.
PP15,308 P2	11/2004	Sjulin et al.
PP15,375 P2	11/2004	Mowrey et al.
PP15,435 P2	12/2004	Sjulin et al.
PP15,596 P2	3/2005	Amorao et al.
PP15,731 P2	4/2005	Amorao et al.
PP15,752 P2	5/2005	Gilford et al.
PP16,070 P2	10/2005	Gilford et al.
PP16,238 P2	2/2006	Amorao et al.
PP16,241 P2	2/2006	Mowrey et al.
PP16,298 P2	2/2006	Gilford et al.
PP16,299 P2	2/2006	Gilford et al.
PP16,475 P2	4/2006	Gilford et al.
PP16,558 P3	5/2006	López
PP18,000 P2	9/2007	Meulenbroek
PP18,040 P3	9/2007	Mowrey et al.
PP18,041 P3	9/2007	Gilford
PP18,458 P2	1/2008	Ferguson et al.
PP18,575 P3	3/2008	Amorao et al.
PP18,878 P2	6/2008	Mowrey et al.
PP19,240 P2	9/2008	Gilford et al.
PP19,673 P3	2/2009	Ferguson et al.
PP19,767 P2	2/2009	Shaw et al.
PP20,248 P3	9/2009	Rogers et al.
PP20,701 P2	2/2010	Gilford et al.
PP20,731 P2	2/2010	Mowrey et al.
PP20,733 P2	2/2010	Mowrey et al.
PP20,735 P2	2/2010	Ferguson
PP20,775 P2	2/2010	Mowrey et al.
PP20,922 P2	4/2010	Gilford et al.
PP21,538 P2	11/2010	Gilford et al.
PP21,559 P2	12/2010	Ferguson et al.
PP21,762 P2	3/2011	Stewart et al.
PP22,040 P3	7/2011	Stewart et al.
PP22,218 P2	11/2011	Ferguson
PP22,247 P2	11/2011	Ferguson
PP23,107 P2	10/2012	Ferguson et al.

(Continued)

OTHER PUBLICATIONS

Unpublished U.S. Appl. No. 14/999,062, filed Mar. 25, 2016, titled "Strawberry Plant Named 'DrisStrawFifty'".

(Continued)

Primary Examiner — Susan McCormick Ewoldt
Assistant Examiner — Karen M Redden
(74) *Attorney, Agent, or Firm* — Morrison & Foerster LLP

(57) **ABSTRACT**

A new and distinct variety of strawberry plant named 'DrisStrawFiftySeven' particularly characterized by its pink fruit flesh, medium fruit size, and very aromatic fruit, is disclosed.

5 Drawing Sheets

(56) **References Cited**

U.S. PATENT DOCUMENTS

PP23,148	P2	10/2012	Gilford et al.
PP23,377	P2	2/2013	Ferguson et al.
PP23,378	P2	2/2013	Pullen et al.
PP23,382	P2	2/2013	Ferguson et al.
PP23,383	P2	2/2013	Ferguson et al.
PP23,400	P2	2/2013	Ferguson et al.
PP23,401	P2	2/2013	Pullen et al.
PP23,459	P2	3/2013	Stewart et al.
PP23,506	P3	4/2013	Ferguson et al.
PP23,517	P3	4/2013	Ferguson et al.
PP24,096	P3	12/2013	Fear et al.
PP24,317	P3	3/2014	Ferguson et al.
PP24,333	P3	3/2014	Vitten et al.
PP24,395	P3	4/2014	Vitten et al.
PP24,533	P3	6/2014	Ferguson et al.
PP24,745	P2	8/2014	Vitten et al.
PP25,408	P3	4/2015	Vitten et al.
PP25,437	P3	4/2015	Vitten et al.
PP25,698	P3	7/2015	Ferguson et al.
PP25,699	P3	7/2015	Stewart et al.
PP25,747	P3	7/2015	Kibbe et al.
PP25,866	P3	9/2015	Ferguson et al.
PP26,800	P3	6/2016	Stewart et al.
PP26,801	P3	6/2016	Stewart et al.
PP26,802	P3	6/2016	Rodriguez Alcazar et al.
PP27,442	P2	12/2016	Kibbe et al.
PP27,645	P3	2/2017	Vitten et al.
PP27,682	P3	2/2017	Kibbe et al.
PP27,711	P3	2/2017	Vitten et al.
PP27,813	P3	3/2017	Ferguson et al.
2003/0079263	P1	4/2003	Gilford et al.
2013/0276182	P1	10/2013	Fear et al.

OTHER PUBLICATIONS

Unpublished U.S. Appl. No. 15/731,415, filed Jun. 6, 2017, titled "Strawberry Plant Variety Named 'DrisStrawFiftyThree'".
Unpublished U.S. Appl. No. 15/731,542, filed Jun. 26, 2017, titled "Strawberry Plant Variety Named 'DrisStrawFiftyTwo'".
Unpublished U.S. Appl. No. 15/731,545, filed Jun. 26, 2017, titled "Strawberry Plant Variety Named 'DrisStrawFiftyOne'".
Unpublished U.S. Appl. No. 15/731,546, filed Jun. 26, 2017, titled "Strawberry Plant Variety Named 'DrisStrawFiftySix'".
Unpublished U.S. Appl. No. 15/731,559, filed Jun. 27, 2017, titled "Strawberry Plant Variety Named 'DrisStrawFiftyFour'".
Unpublished U.S. Appl. No. 15/731,560, filed Jun. 27, 2017, titled "Strawberry Plant Variety Named 'DrisStrawFiftyFive'".

STRAWBERRY PLANT VARIETY NAMED 'DRISSTRAWFIFTYSEVEN'

Latin name: Botanical classification: *Fragaria* x *ananassa*.

Varietal denomination: The varietal denomination of the claimed variety of strawberry plant is 'DrisStrawFiftySeven'.

BACKGROUND OF THE INVENTION

Cultivated strawberry is a hybrid species of the genus *Fragaria* that is grown worldwide for its fruit. Modern strawberry was first bred in Brittany, France, in the 18th century by crossing *Fragaria virginiana* with *Fragaria chiloensis*. Strawberry fruit is an aggregate accessory fruit, with the fleshy part of the fruit being derived from the receptacle that holds the ovaries.

Strawberry varieties vary widely in color, size, shape, flavor, season of ripening, degree of fertility, and susceptibility to disease. Certain varieties vary in foliage, and some vary in the relative development of their reproductive organs. Typically, strawberry flowers appear hermaphroditic in structure, but function as either male or female. Generally, commercial production of strawberry plants involves propagation from runners and distribution as either plugs or bare root plants. Cultivation is either perennial or annual plasticulture. During the off season, strawberries can also be produced in greenhouses.

Strawberry fruit is widely appreciated for its characteristic bright red color, aroma, juicy texture, and sweetness. Strawberry fruit is a popular fruit that is generally consumed either fresh or in prepared foods, such as preserves and baked goods.

Strawberry is an important and valuable fruit crop. Accordingly, there is a need for new varieties of strawberry plants. In particular, there is a need for improved varieties of strawberry plant that are stable, high yielding, and agronomically sound.

SUMMARY OF THE INVENTION

In order to meet these needs, the present invention is directed to an improved variety of strawberry plant. In particular, the invention relates to a new and distinct variety of strawberry plant (*Fragaria* x *ananassa*), which has been denominated as 'DrisStrawFiftySeven'.

Strawberry plant variety 'DrisStrawFiftySeven' was discovered in Monterey County, Calif. in May of 2012, and originated from a cross between the proprietary female parent '148S291' (unpatented) and the proprietary male parent '88Q179' (unpatented). A single plant was selected and asexually propagated via stolons in Monterey County, Calif.

'DrisStrawFiftySeven' was subsequently asexually propagated via stolons, and underwent further testing at a farm in Monterey County, Calif. for five years (2012 to 2016). The present invention has been found to be stable and reproduce true to type through successive asexual propagations via stolons and tissue culture.

'DrisStrawFiftySeven' exhibits the following distinguishing characteristics when grown under normal horticultural practices in Monterey County, Calif.:

1. Medium-sized, pink, aromatic fruit with an ovoid shape;
2. Upright plant habit;

3. Taller plants with wider diameter and medium vigor; and
4. Moderate resistance to Botrytis fruit rot.

'DrisStrawFiftySeven' was selected for its pink (rather than red) fruit flesh, large fruit size, and very aromatic fruit.

DESCRIPTION OF THE DRAWINGS

This new strawberry plant is illustrated by the accompanying photographs which show fruit of the plant, as well as the flowers and leaves. The colors shown are as true as can be reasonably obtained by conventional photographic procedures. The photographs are of plants that are eight months old.

FIG. **1** illustrates whole fruit of variety 'DrisStrawFiftySeven'.

FIG. **2** illustrates longitudinal cross-sections of fruit of variety 'DrisStrawFiftySeven'.

FIG. **3** illustrates the lower and upper surfaces of the flowers of variety 'DrisStrawFiftySeven'.

FIG. **4**A shows the upper surface of a leaf of variety 'DrisStrawFiftySeven' with three leaflets.

FIG. **4**B shows the lower surface of a leaf of variety 'DrisStrawFiftySeven' with three leaflets.

FIG. **5** illustrates the overall plant habit including fruit at various stages of development of variety 'DrisStrawFiftySeven'.

DESCRIPTION OF THE NEW VARIETY

The following detailed descriptions set forth the distinctive characteristics of 'DrisStrawFiftySeven'. The data which define these characteristics is based on observations taken in Monterey County, Calif. from 2012 to 2016. This description is in accordance with UPOV terminology. Color designations, color descriptions, and other phenotypical descriptions may deviate from the stated values and descriptions depending upon variation in environmental, seasonal, climatic, and cultural conditions. 'DrisStrawFiftySeven' has not been observed under all possible environmental conditions. The botanical description of 'DrisStrawFiftySeven' was taken from plants that were eight months old. The indicated values represent averages calculated from measurements of several plants. Color references are primarily to The R.H.S. Colour Chart of The Royal Horticultural Society of London (R.H.S.) (2007 edition). Descriptive terminology follows the *Plant Identification Terminology, An Illustrated Glossary,* 2nd edition by James G. Harris and Melinda Woolf Harris, unless where otherwise defined.

DETAILED BOTANICAL DESCRIPTION OF THE PLANT

Classification:

Species.—*Fragaria* x *ananassa.*

Common name.—Strawberry.

Denomination.—'DrisStrawFiftySeven'.

Parentage:

Female parent.—The proprietary variety '148S291' (unpatented).

Male parent.—The proprietary variety '88Q179' (unpatented).

Plant:

Height.—34.1 cm.

Diameter.—65.6 cm.

Number of crowns/plant.—6.

Habit.—Upright.

Terminal leaflets:

Length.—8.3 cm.

Width.—8.0 cm.

Length/width ratio.—1.0.

Number of teeth/terminal leaflet.—20.

Shape of teeth.—Obtuse — serrate to crenate.

Color.—Upper surface: RHS NN137A (Greyish olive-green). Lower surface: RHS 191A (Greyish yellow-green).

Shape in cross section.—Concave.

Number of leaflets.—Three only.

Shape.—Obicular.

Base shape.—Rounded.

Apex descriptor.—Rounded.

Margin.—Crenate.

Margin profile.—Revolute (margins rolled backwards).

Variegation.—Absent.

Petiole:

Length.—22.2 cm.

Diameter.—3.91 mm.

Pose of hairs.—Outwards — horizontal.

Color.—RHS 144C (Strong yellow-green).

Bract frequency (*number present on each petiole*).—2.

Petiolule:

Length.—7.46 mm.

Diameter.—1.90 mm.

Color.—RHS 144A (Strong yellow-green).

Stipule:

Length.—3.5 cm.

Width.—9.87 mm.

Stipule anthocyanin coloration.—Present. Color: RHS 70D (Moderate purplish pink).

Stolon:

Average number of daughter plants per square foot.—10.

Anthocyanin coloration.—Present. Color: RHS 162B (Moderate yellow).

Diameter at bract.—0.13 mm.

Inflorescence:

Position relative to foliage.—Level with.

Flower diameter.—21.54 mm.

Number of flowers per plant.—7.20.

Petals.—Shape: Obicular. Apex: Rounded. Base: Concavo-convex. Margin: Entire. Spacing: Touching to overlapping. Length: 9.96 mm. Width: 10.25 mm. Length/width ratio: 1.0. Petal number per flower: 6. Color (upper surface): RHS N155D (White).

Calyx.—Diameter: 32.30 mm. Insertion of calyx: Level. Pose of calyx segments: Reflexed — upwards.

Sepal.—Shape: Elliptical. Apex: Convex. Margin: Entire. Length: 12.57 mm. Width: 4.47 mm. Sepal number: 13.

Receptacle color.—RHS 153C (Strong greenish yellow).

Stamen.—Present. Anther color: RHS 17A (Strong orange-yellow).

Pedicel.—Attitude of hairs: Slightly upwards.

Time of flowering (*50% of plants at first flower*).—Medium.

Flowering interval.—February to October.

Fruiting truss:

Length.—25.7 cm.

Diameter at base of truss.—3.95 mm.

Number of berries per fruiting truss.—6.

Attitude at first picking.—Prostrate.

Color at base of truss.—RHS 146A (Moderate olive-green).

Fruit:

Length.—38.56 mm.

Width.—42.01 mm.

Length/width ratio.—0.9.

Fruit hollow length.—17.34 mm.

Fruit hollow width.—7.19 mm.

Fruit hollow length/width ratio.—2.4.

Fruit weight.—22.5 g.

Predominant fruit shape.—Ovoid.

Fruit skin color.—RHS 179B (Moderate red) on top; and RHS 179C (Moderate reddish orange) on underside.

Achenes.—Insertion of achenes: Level with surface to above surface. Coloration (sunward side of berry): RHS 175A (Moderate reddish brown). Coloration (shaded side of berry): RHS 145A (Strong yellow-green).

Color of flesh (*excluding core*).—RHS N155D (Yellowish white).

Color of core.—RHS 56B (Pale purplish pink).

Distribution of flesh color.—Marginal and central.

Type of bearing.—Not everbearing — not remontant.

Harvest maturity (*beginning of fruit ripening when 50% of plants have ripe fruit*).—Early.

Harvest interval.—March to October.

Production.—1442.83 grams/plant.

Stress resistance:

High temperatures.—Moderately susceptible.

High soil salt levels.—Susceptible.

Disease resistance:

Botrytis fruit rot.—Moderately resistant.

Verticillium wilt.—Susceptible.

Powdery mildew.—Susceptible.

Leather rot.—Susceptible.

Xanthomonas fragariae.—Susceptible.

COMPARISON WITH PARENTAL AND COMMERCIAL VARIETIES

When ‘DrisStrawFiftySeven’ is compared to the female parent ‘148S291’ (unpatented), ‘DrisStrawFiftySeven’ produces plants that are more mildew tolerant, and produces fruit that is larger and more aromatic than ‘148S291’. Moreover, ‘DrisStrawFiftySeven’ produces pink fruit, while ‘148S291’ produces white fruit.

When ‘DrisStrawFiftySeven’ is compared to the male parent ‘88Q179’ (unpatented), ‘DrisStrawFiftySeven’ produces a lower yield of fruit that is rounder and less firm that ‘88Q179’. Moreover, ‘DrisStrawFiftySeven’ produces pink fruit, while ‘88Q179’ produces red fruit.

When ‘DrisStrawFiftySeven’ is compared to the commercial variety ‘DrisStrawEleven’ (U.S. Plant Pat. No. 20,731), ‘DrisStrawFiftySeven’ produces plants that are wider in diameter and have less vigor than ‘DrisStrawEleven’. Additionally, ‘DrisStrawFiftySeven’ produces pink fruit with an ovoid shape, while ‘DrisStrawEleven’ produces medium-red fruit with a conical shape. Moreover, ‘DrisStrawFiftySeven’ is more resistant to *Botrytis* fruit rot than ‘DrisStrawEleven’.

When ‘DrisStrawFiftySeven’ is compared to the commercial variety ‘DrisStrawFortyFour’ (U.S. Plant Pat. No. 26,801), ‘DrisStrawFiftySeven’ produces plants that are greater in height and diameter than ‘DrisStrawFortyFour’. Additionally, ‘DrisStrawFiftySeven’ has an upright plant habit and produces pink fruit with an ovoid shape, while ‘DrisStrawFortyFour’ has a globose plant habit and produces dark-red fruit with a conical shape.

We claim:

1. A new and distinct variety of strawberry plant named 'DrisStrawFiftySeven' as shown and described herein.

* * * * *

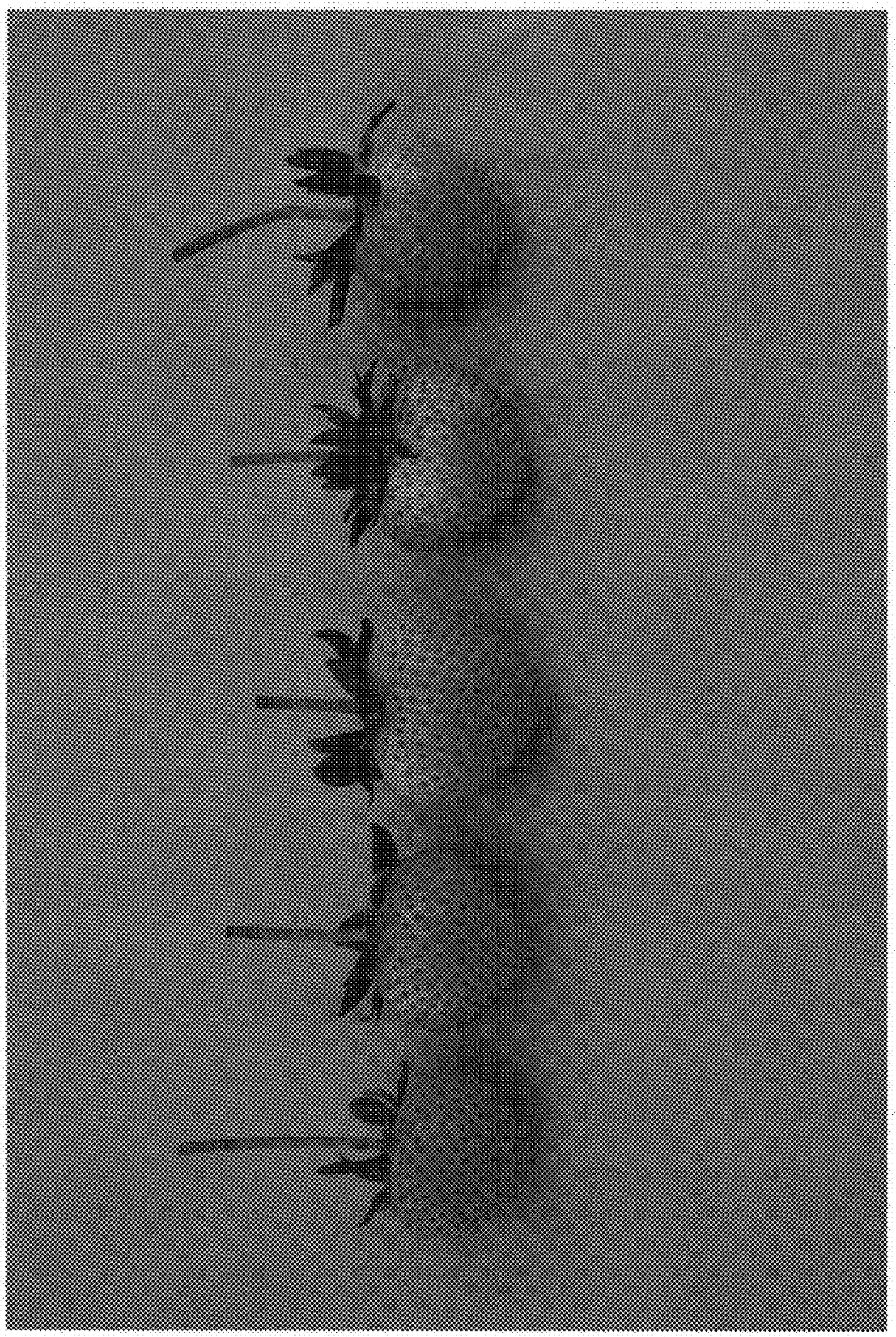

FIG. 1

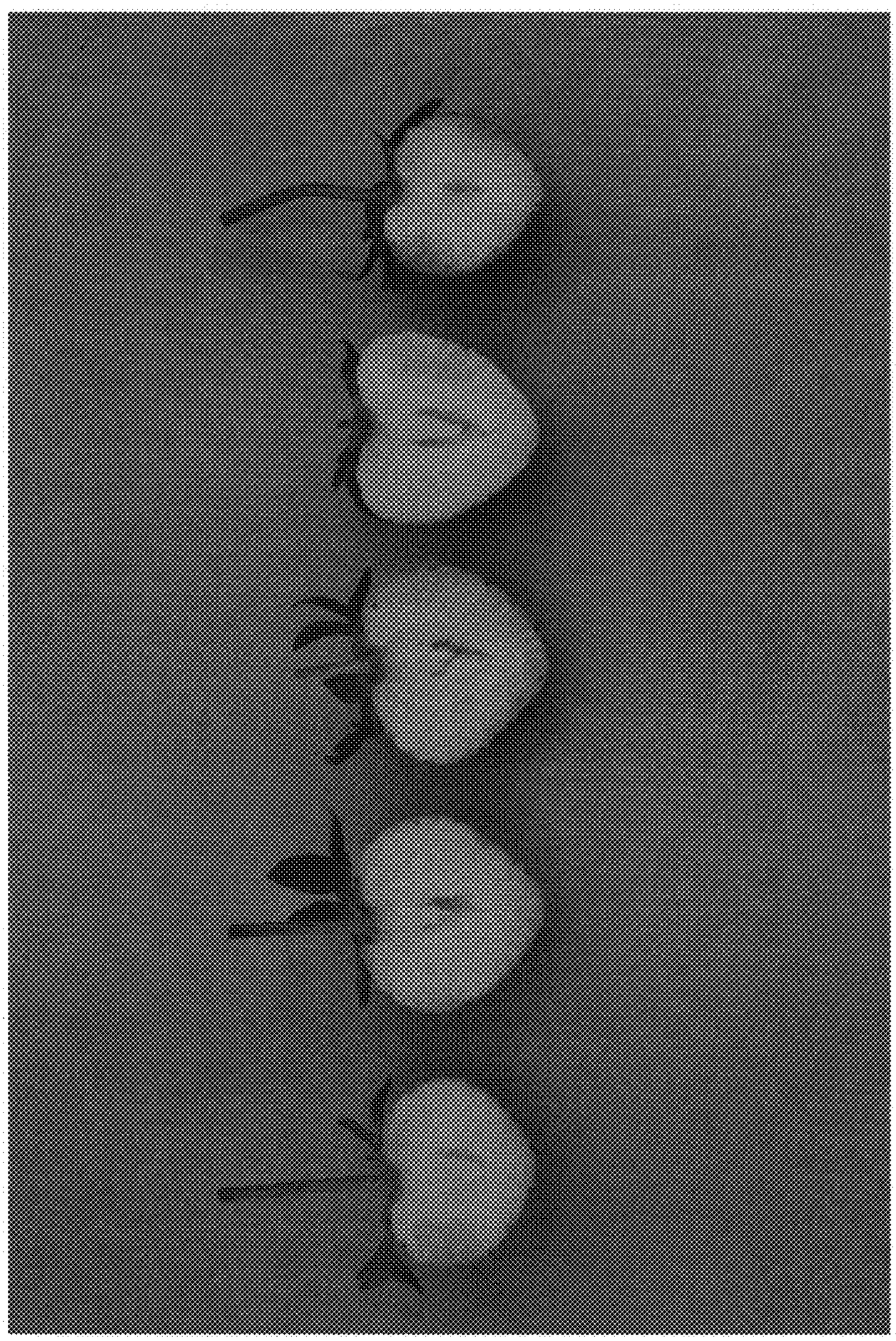

FIG. 2

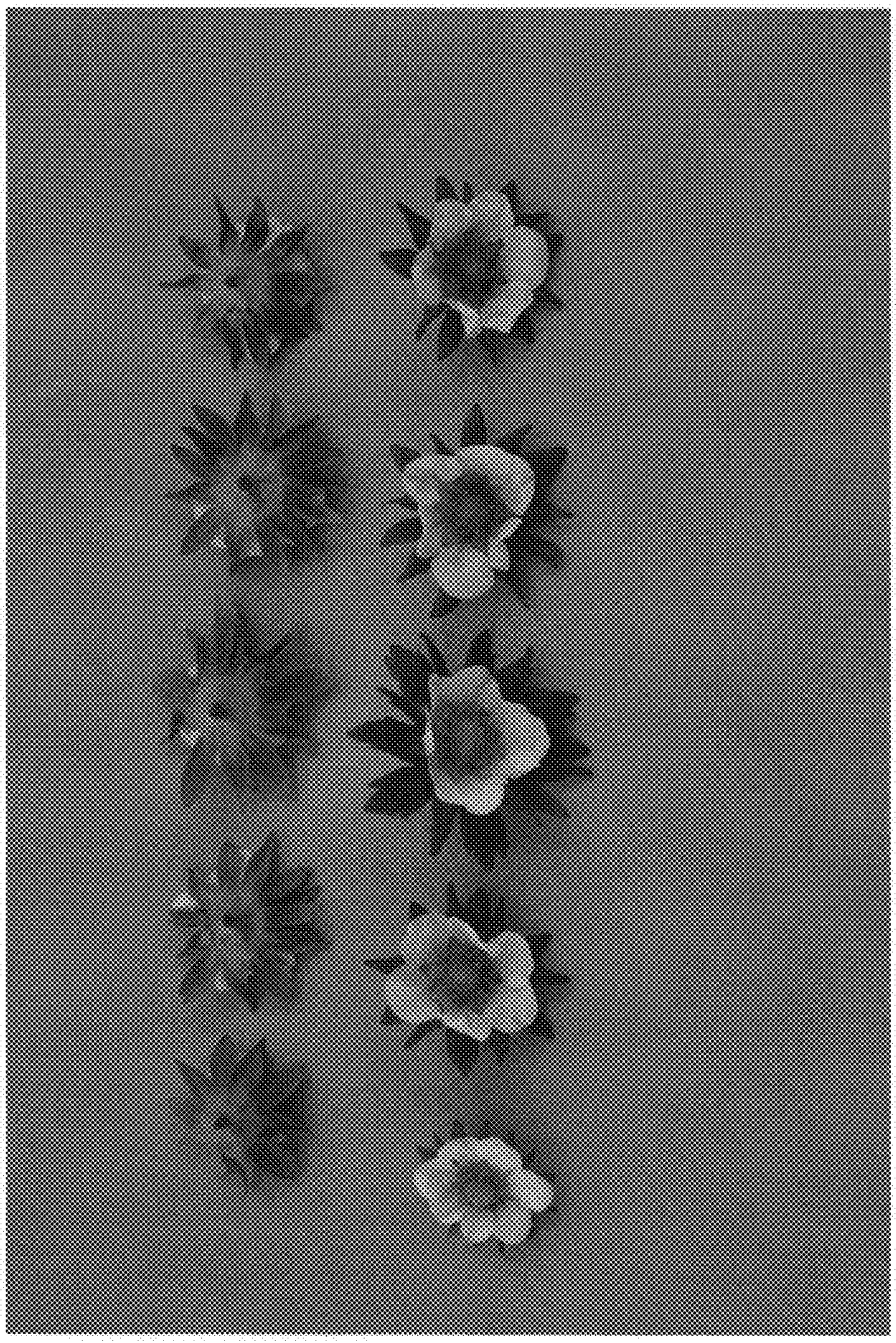

FIG. 3

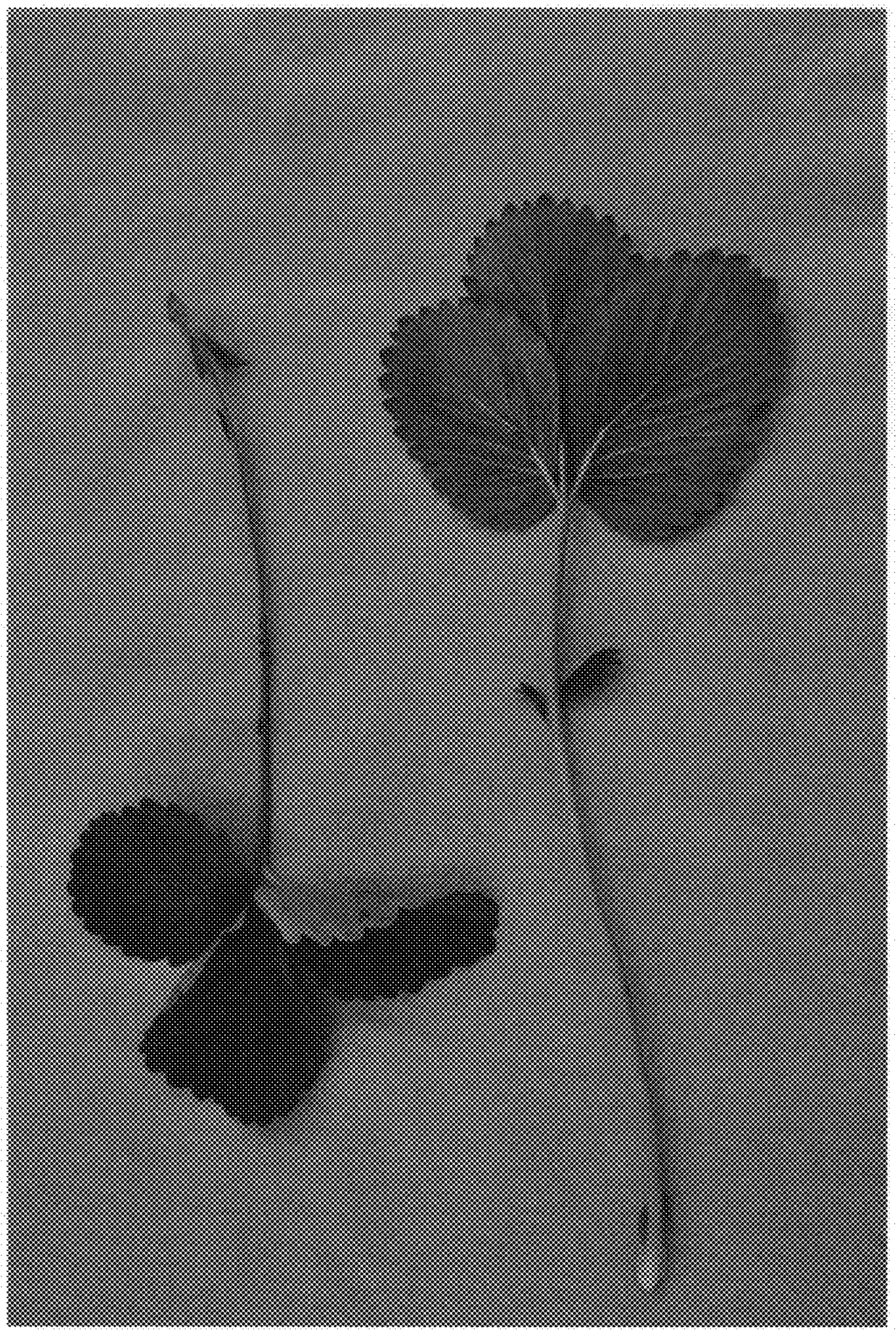

FIG. 4A

FIG. 4B

FIG. 5