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(12) **United States Plant Patent**
Fear et al.(10) **Patent No.:** **US PP14,904 P2**(45) **Date of Patent:** **Jun. 15, 2004**(54) **RASPBERRY PLANT NAMED 'DRISCOLL DULCITA'**(50) Latin Name: *Rubus idaeus L.*
Varietal Denomination: **Dulcita**(75) Inventors: **Carlos D. Fear**, Aptos, CA (US);
Richard E. Harrison, Aptos, CA (US);
Fred M. Cook, Aptos, CA (US); **Gavin Sills**, Watsonville, CA (US)(73) Assignee: **Driscoll Strawberry Associates, Inc.**,
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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 37 days.

(21) Appl. No.: **10/306,459**(22) Filed: **Nov. 27, 2002**(51) **Int. Cl.⁷** **A01H 5/00**(52) **U.S. Cl.** **Plt./204**(58) **Field of Search** **Plt./204***Primary Examiner*—Bruce R. Campell*Assistant Examiner*—Susan B. McCormick(74) *Attorney, Agent, or Firm*—Pennie & Edmonds LLP(57) **ABSTRACT**

The present invention relates to a new and distinct cultivar of raspberry plant named Dulcita. The new cultivar is distinguished from other raspberry cultivars by its fruit firmness, fruit structure, good flavor and yield. The new cultivar is distinguished from its seed parent by having larger fruit with better flavor. The new cultivar is distinguished from its pollen parent by producing a higher yield of fruit.

3 Drawing Sheets**1****1. BACKGROUND OF THE INVENTION**

The new cultivar of raspberry plant was developed from the hybridization of the selection 'Gloria' (U.S. Plant Pat. No. 11,067) as the seed parent with the selection 'N257.1' (an unpatented variety) as the pollen parent. The parents were crossed in 1994, whereafter fruit and seed were collected to produce seedlings for field planting in Watsonville, Calif. in 1994. The new cultivar was selected from these seedlings in 1995 for its excellent fruit firmness, fruit structure, and flavor. The new cultivar has been asexually propagated by in vitro shoot tip culture, root sucker division and root cuttings at the Cassin Ranch in Santa Cruz county, Calif. and has been shown to maintain the desired and distinguishing characteristics after propagation over several generations.

2. SUMMARY OF THE INVENTION

The present invention provides a new and distinct cultivar of red raspberry plant named 'Dulcita'. The cultivar is botanically identified as *Rubus idaeus L.* The 'Dulcita' red raspberry plant produces a primocane crop which begins in mid to late July and continues until mid-October. The florican crop begins in late May and continues until late July. Both the primocane and florican yields are high relative to other comparable varieties. The fruit of 'Dulcita' is notably quite firm and very consistent with regard to its size and shape throughout its harvest period. The flavor is sweet and the fruit of 'Dulcita' separates easily from its receptacle.

3. BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying photographs show typical specimens of the primocane fruit, leaves and shoot of the new cultivar, in color as nearly true as it is reasonably possible to make in color illustrations of these characteristics.

FIG. 1 is a photograph of 'Dulcita' primocane fruit in various stages of development.

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FIG. 2 is a photograph of 'Dulcita' primocane leaves showing upper and lower surfaces.

FIG. 3 is a photograph of 'Dulcita' primocane shoot.

4. DETAILED BOTANICAL DESCRIPTION

The following detailed description of the new raspberry cultivar, 'Dulcita' is based upon observations taken of plants and fruit grown in Watsonville, Calif. between 2001 and 2002, and is believed to apply to plants of the 'Dulcita' cultivar grown in similar conditions of soil and climate elsewhere.

Throughout this specification, color names beginning with a small letter signify that the name of the color, as used in common speech, is aptly descriptive. Color data followed by an alphanumeric code designates the color according to The R.H.S. Colour Chart published by The Royal Horticultural Society of London, England. 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.

Table 1 provides information on the plant and fruit characteristics of the new cultivar 'Dulcita' compared with characteristics of the unpatented raspberry cultivar 'Heritage'. Observations of the cultivars were taken under similar conditions.

The new variety is particularly characterized and distinguished from other cultivars by its fruit firmness, fruit structure, good flavor and yield.

The fruit color of 'Dulcita' is a medium red at harvest but darkens after harvest to a deeper color. Fruit of 'Dulcita' separates easily from the receptacle and is of excellent firmness at harvest. The fruit of 'Dulcita' is very consistent in size and shape throughout the harvest period with good flavor.

The florican yields of 'Dulcita' are high relative to the variety 'Heritage'. 'Dulcita' is distinguishable from its pol-

len parent, selection 'N257.1', by producing a higher yield of fruit. The new cultivar is distinguished from its seed parent, selection 'Gloria', by having larger fruit with better flavor.

4.1 DISEASE AND STRESS RESISTANCE

Resistance is unknown to powdery mildew. Cold tolerance of the new cultivar has not been established. Post harvest fruit rot resistance is good in comparison over many selections and varieties.

TABLE I

PLANT CHARACTERISTICS OF 'DULCITA'		
	Dulcita	Heritage
<u>General</u>		
Plant size	Medium	Large
Growth habit	Erect	Erect
Productivity	Medium	Medium
Self-fruitfulness	Self-fruitful	Self-fruitful
Time of bud burst	Late	Late
<u>Primocane fruiting</u>		
Percent of cane length flowering as primocane	30-50	20-40
Percent of total yield Primocanes	48	53
<u>Number of young shoots</u>	Medium	Medium
Number fruiting laterals/cane	17	18
Young shoot pigmentation	Medium	Medium
Length (cm)	203	196
Time of shoot emergence	Medium	Very late
Glaucosity (waxy bloom)	Weak	Weak
Strength	Medium	Medium
Cane cross section (from mid cane of primocane)	Rounded to angular	Rounded
Dormant cane color	brown to tan	brown to purple brown
<u>Prickles</u>		
Pigmentation	brown to purple	green-brownish to green
Density on young shoots	Medium	Dense
Attitude of tip	Downward	Downward
Size: Length (base to tip) at 1 m height at the end of season (mm)	1	1
Texture	Heavy	Rigid
Presence and distribution on petioles	Present, irregularly distributed	Present, irregularly distributed
Pubescence on canes	Absent	Absent
Internodal distance (cm) (at central 1/3 of cane)	6.7	5.3
<u>LEAVES</u>		
<u>Color</u>		
Face	147A	147A
Underside	148C	148B
Relief between veins	Strong	Very weak
Cross section	Flat (Plane)	Concave
Glossiness	Medium	Medium
<u>Petiole</u>		
Length (cm)	6.4	7.7
Pigmentation of Upper Surface	Very light-red purple	Lightly
Pigmentation of underside	yellow-green	Unpigmented
Petiolule length	Short	Very short
Stipule orientation	Erect	Erect

TABLE I-continued

PLANT CHARACTERISTICS OF 'DULCITA'		
	Dulcita	Heritage
<u>Arrangement</u>	Compound	Compound
Number of leaflets	Usually 5	Sometimes 3 sometimes 5
<u>Overlapping of lateral leaflets</u>	Overlapping	Free to touching
<u>Terminal leaflet</u>		
Length(cm)	12.5	14.6
Width (cm)	8.6	7.8
Shape	Ovate	Ovate
Tip	Acuminate	Acuminate
Base	Cordate	Acute to rounded
Margin	Doubly serrate	Doubly serrate
<u>Lateral leaflets (basal pair)</u>		
Length (cm)	9.9	14.7
Width (cm)	7.6	8.6
Rachis length between terminal leaflet and adjacent lateral leaflets (cm)	4.1	1.5
Overlap	Yes	Free
Orientation	Opposite	Opposite
Shape	Ovate	Ovate
Tip	Acuminate	Acuminate
Base	Oblique	Oblique
Margin	Doubly serrate	Doubly serrate
<u>FLOWERS</u>		
<u>Flowering period</u>		
Primocane	14 weeks, Mid June to mid September	19 weeks, Late May to late September
Floricanes	10 weeks, Early April to mid June	10 weeks, Late March to mid June
Flower diameter (cm)	1.5	1.8
Petal		
Length (cm)	0.9	0.8
Width (cm)	0.4	0.3
Pedicel coloration	Absent	Present, strong intensity
<u>FRUIT</u>		
<u>Harvest season</u>		
Primocane	Late July-mid October	Early July-early November
Floricanes	Late May-late July	Late May-late July
<u>Fruiting laterals (floricane)</u>		
Length (4 th lateral from tip) (cm)	67.8	49.8
Number of fruit per lateral	19	20.3
Color	Medium red	Medium red
Immature	45C	42C
Maturing	46A	46A
Mature Fruit	46A	59A
Glossiness	Weak	Medium
Shape	Ovate	Ovate
<u>Dimensions</u>		
Size	Medium	Small
Length(mm)	21	17
Width(mm)	21	18
Length: width ratio	1.0	0.94
<u>Weight (g/Fruit)</u>		
Primocane	3.9	3.1
Floricanes	3.5	2.3
Soluble solids (%)	12.4	10.8
Titrate acidity (% as citric acid)	1.45	1.58
Seed weight (mg)	2.0	1.5
Number drupelets/fruit	80	72

TABLE I-continued

<u>PLANT CHARACTERISTICS OF 'DULCITA'</u>		
	Dulcita	Heritage
Adherence to plug	Medium	Medium
Firmness	Medium firm	Firm
Yield	High	Medium

4.2 NUCLEIC ACID FINGERPRINTING

Distinctive patterns of polymorphism can be detected using a variety of nucleic acid analysis methods. In one non-limiting example, molecular genetic maps can be pro-

duced using random amplified polymorphic DNA (RAPD) (Williams et al., 1990, "DNA polymorphisms amplified by arbitrary primers are useful as genetic markers", *Nucleic Acids Res.* 18(22):6531-5). Using a variety of oligonucleotide primers, alone or in combination, RAPD analysis of Dulcita and Heritage yielded DNA fragment patterns that uniquely distinguish each of these genetically distinct genotypes.

We claim:

1. A new and distinctive cultivar of raspberry plant, substantially as shown and described.

* * * * *

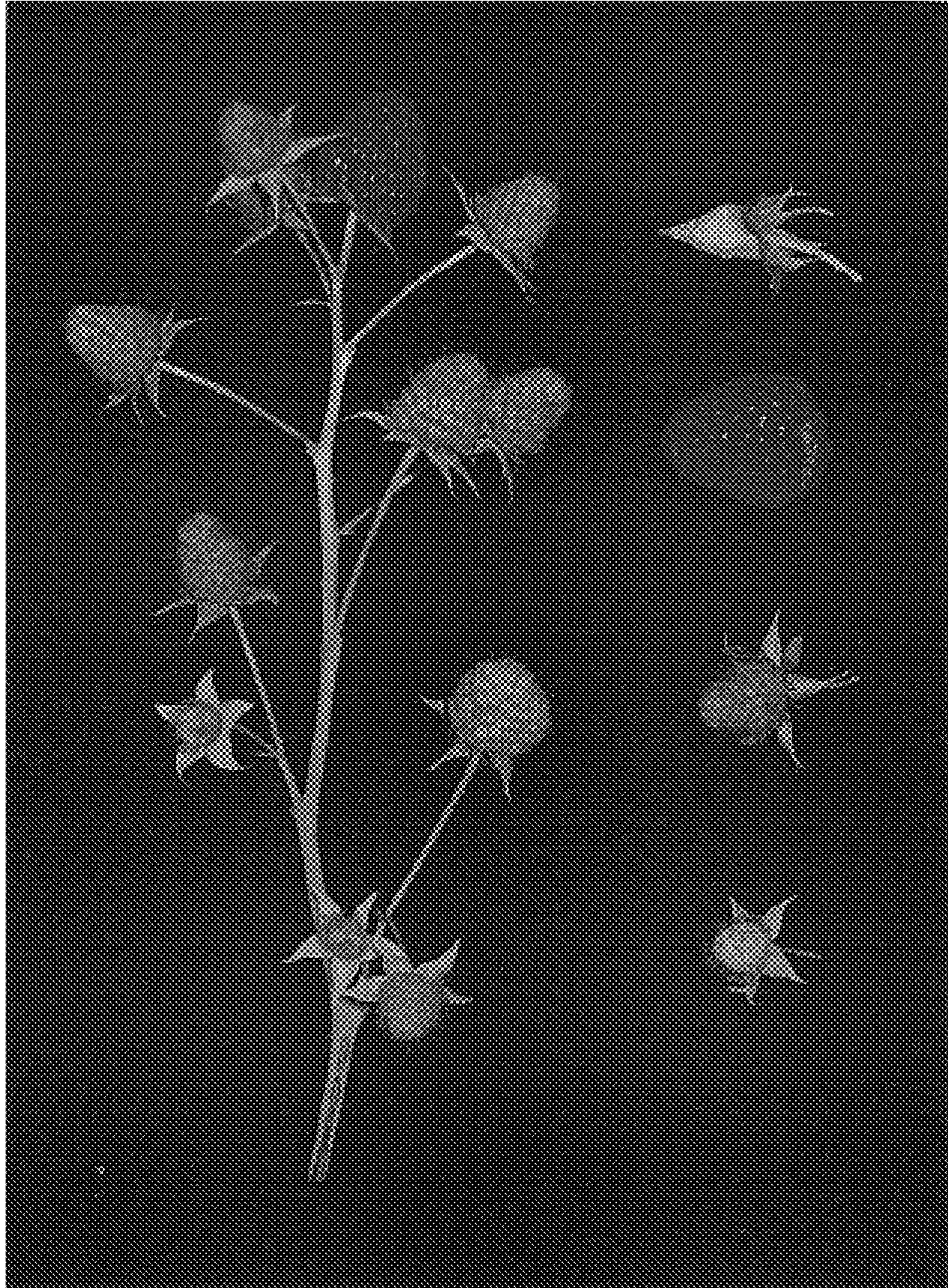


FIG. 1

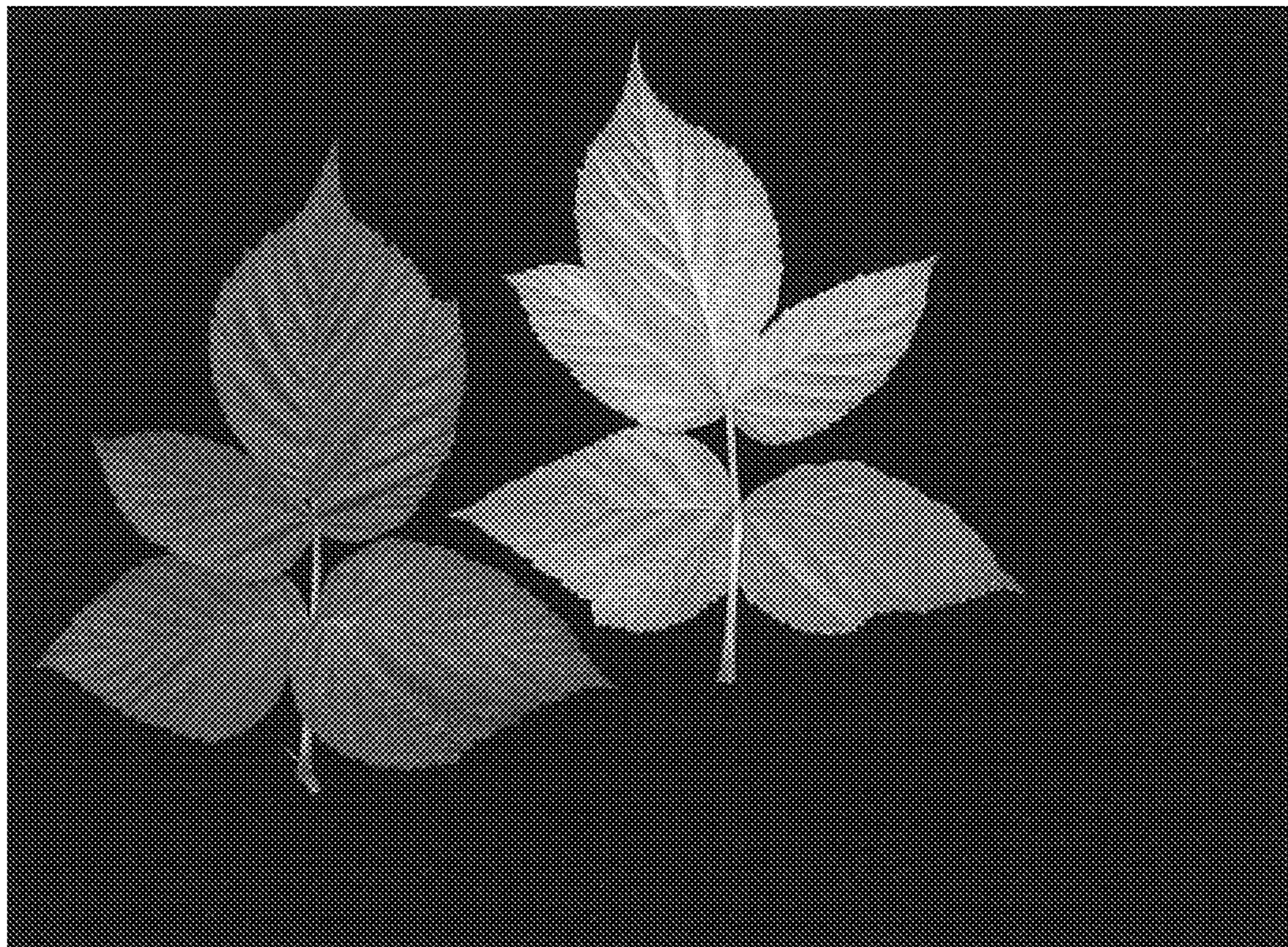


FIG. 2

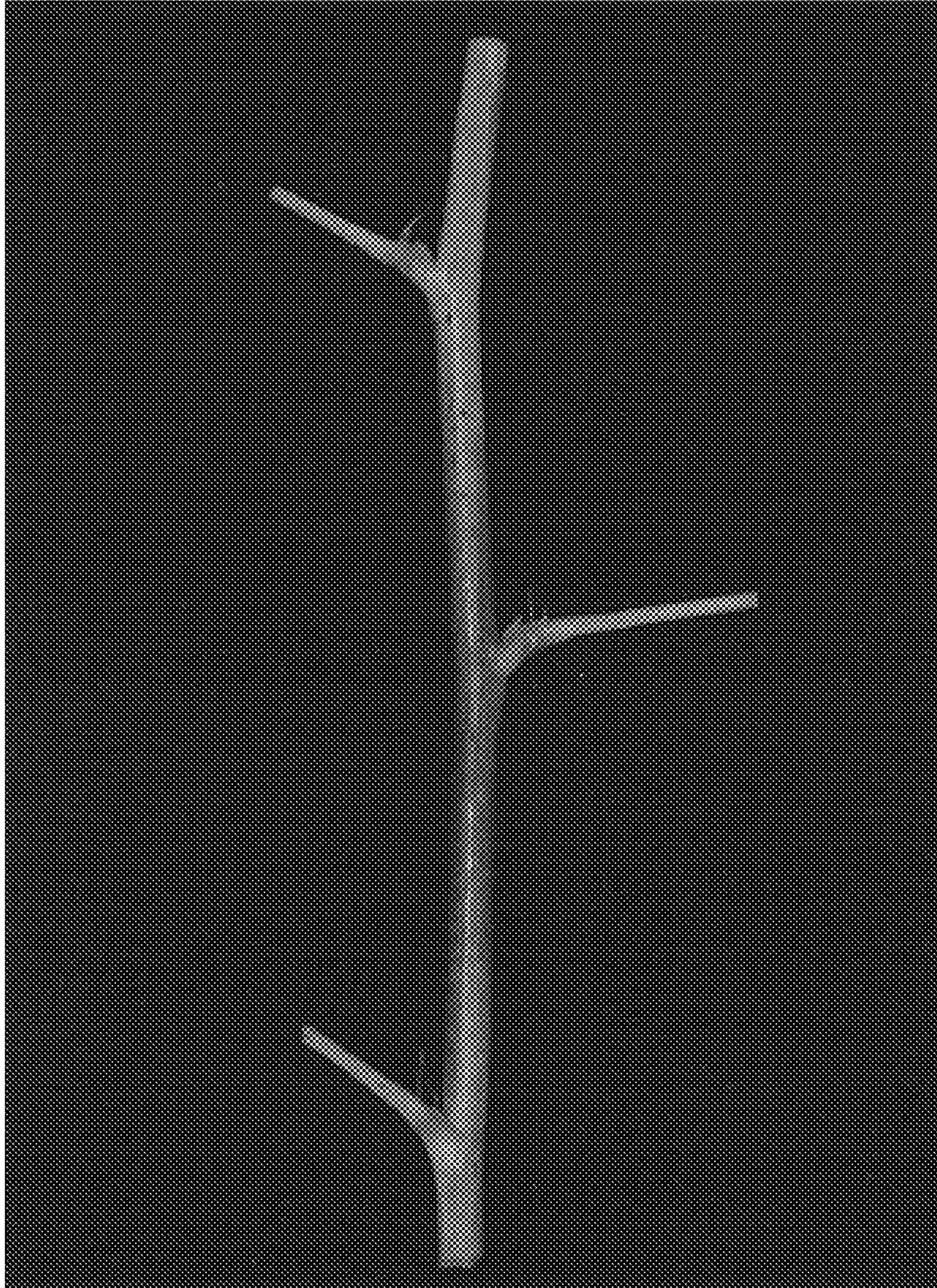


FIG. 3