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[54] **RASPBERRY PLANT NAMED 'GLORIA'**

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[52] **U.S. Cl.** **Plt./204**

[58] **Field of Search** Plt./204

[56] **References Cited**

U.S. PATENT DOCUMENTS

P.P. 9,340 10/1995 Wilhelm et al. Plt./204

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[57] **ABSTRACT**

The present invention relates to a new and distinct cultivar of red raspberry plant named 'Gloria', botanically identified as *Rubus idaeus* L. The new cultivar is distinguished from other red fruited cultivars by its fruit of bright color, excellent fruit firmness, its very early primocane crop, and high primocane and floricane crop yield.

2 Drawing Sheets

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BACKGROUND OF THE INVENTION

The new cultivar 'Gloria', was developed from the hybridization of the selection 'H374-2' (an unpatented variety) as the seed plant with the selection 'Summit' (an unpatented variety) as the pollen plant. The parents were crossed in the Fall of 1992, whereafter fruit and seed were collected to produce seedlings for field planting in Watsonville, Calif. in 1992. The new cultivar was selected from these seedlings in July 1993 for its early primocane crop and firm, attractive fruit. The new cultivar was grown and 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.

SUMMARY OF THE INVENTION

The present invention provides a new and distinct red raspberry plant named 'Gloria'. The cultivar is botanically identified as *Rubus idaeus* L. The 'Gloria' cultivar produces a primocane crop which begins in late June and continues until late October. The floricane crop begins in mid May and continues to mid July. This cultivar is distinguished by its very firm, bright fruit and its short cycle from planting to harvest of the primocane crop, its early primocane crop, and high primocane and floricane copy yield.

BRIEF DESCRIPTION OF THE DRAWINGS

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

FIG. **1** is a photograph of a primocane mature leaf and fruit.

FIG. **2** is a photograph of primocane shoot and leaf.

DETAILED BOTANICAL DESCRIPTION OF THE INVENTION

The following detailed description of the new raspberry cultivar, 'Gloria', is based upon observations taken of plants and fruit grown in Watsonville, Calif. between 1994 and 1997, and is believed to aply to plants of the 'Gloria' cultivar grown in similar conditions of soil and climate elsewhere.

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Throughtout this specification, color names beginning with a small letter signifying that the name of the color, as used in common speech, is aptly descriptive. Color names beginning with a capital letter and followed by an alphanumeric code designating 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.

Tables 1 and 2 provide information on the plant and fruit characteristics of the new cultivar 'Gloria' compared with characteristics of the unpatented raspberry cultivars 'Hertiage', 'Summit' and 'Amity'. The cultivar closest to 'Gloria' is 'Summit' in fruit characteristics and production cycles. Observations of the cultivars were made under similar conditions.

The new variety is distinguished from other red raspberry cultivars by its fruit of bright color, excellent fruit firmness and its very early primocane crop.

The fruit color of 'Gloria' is a medium bright red with little post harvest color change. Fruit of 'Gloria' is very firm at harvest.

'Gloria' is characterized by a short cycle of days from planting to harvest. The primocane harvest begins in late June which is earlier compared to other varieties that begin primocane harvest in mid to late July. 'Gloria' is also characterized by high primocane and floricane crop yields compared to 'Amity' and 'Heritage'.

'Gloria' is distinguished from its pollen parent, 'Summit', by having an earlier and longer primocane fruiting period, better flavor, and higher yields. The new cultivar is distinguished from its seed parent, 'H374-2', by having firmer fruit and an earlier primocane fruiting cycle.

ISOZYME CHARACTERISTICS

In addition to the morphological description above, the new 'Gloria' cultivar has been analyzed to obtain an indication of its genetic makeup to provide further means for identifying the new variety and distinguishing it from some other somewhat similar and/or related raspberry varieties. Specifically, leaf samples of 'Gloria' and the unpatented varieties of 'Summit' and 'Heritage' were analyzed by electrophoresis according to the procedures of J.C. Cous-

ineau and D.J. Donnelly, "Use of isozyme analysis to characterize raspberry cultivars and detect cultivar mislabeling", *Hort Science* 27:1023–1025 (992). The results of the electrophoretic analysis for the cultivars are presented in Table 3, with the letters representing the banding patterns as described in the above-identified article.

DISEASE AND STRESS RESISTANCE

The cultivar is moderately susceptible to late leaf rust. Resistance is unknown to powdery mildew and root rots. Cold tolerance of the new cultivar has not been established. Post harvest fruit rot resistance is average in comparisons over many selections and varieties.

TABLE 1

PLANT CHARACTERISITCS OF 'GLORIA'

	Gloria	Heritage	Summit	Amity
General				
Plant size	medium	large	small–medium	medium
Growth habit	erect	erect	semi-erect	erect
Productivity	high	medium	high	low–medium
Self-fruitfulness	self-fruitful	self-fruitful	self-fruitful	self-fruitful
Primocane fruiting				
percent of cane flowering as primocane	~50–70	~5–20	~40–50	~20–35
percent of total yield	~50–60	~40–60	~50–70	~40–50
Number of young shoots	many	medium	few	many
Primocanes				
number fruiting laterals/cane	10–15 (mean 13)	2–14 (mean 8)	9–15 (mean 12)	6–14 (mean 10)
number of canes/crown	2–4 (mean 3)	3–5 (mean 4)	2–7 (mean 3)	1–6 (mean 3)
young shoot pigmentation	weak intensity red	medium intensity red	medium intensity red	medium intensity red
length (cm)	173–222 (mean 197)	182–230 (mean 208)	137–212 (mean 164)	135–208 (mean 168)
diameter (end of 1st year)				
cane base (cm)	0.8–1.3 (mean 1.1)	0.9–1.4 (mean 1.2)	0.8–1.3 (mean 1.1)	0.8–1.5 (mean 1.1)
central ⅓ of cane (cm)	0.7–1.1 (mean 0.9)	0.8–1.1 (mean 1.0)	0.7–1.0 (mean 0.8)	0.6–1.0 (mean 0.8)
time of shoot emergence	medium	very late	late	medium
prickles				
pigmentation	green–brownish green	green–brownish green	brownish purple–purple	purple
density on young shoots	dense	dense	sparse	sparse
attitude of tip	downward	downward	downward	horizontal
size	medium	medium	medium	small
texture	soft	rigid	heavy	heavy
presence and distribution on petioles	regularly distributed	regularly distributed	regularly distributed	regularly distributed
pubescence on	strong	absent or very weak	medium	medium
canes internodal distance (cm)				
(at central ⅓ of cane)	3.0–6.0 (mean 4.5)	3.0–6.0 (mean 4.7)	3.2–7.5 (mean 4.8)	3.0–6.5 (mean 5.0)
lenticels	not visible	not visible	not visible	not visible
Floricanes				
number nodes/lateral branch	11–17	10–14	10–15	12–19
number of flowers/node	1–2	1–4	2–6	1–2
Leaves				
Arrangement	compound	compound	compound	compound
Relief between veins	strong	very weak	medium	medium
Cross section	flat	concave	flat	concave–flat
Leaflet number	3–5	3–5	usually 5	usually 3
Terminal leaflet				
length (cm)	12.8	14.6	12.4	13.7
width (cm)	7.8	7.8	7.2	12.1
shape	ovate	ovate	ovate	lobed
tip	acuminate	acuminate	acuminate	acuminate
base	round–cordate	acute	rounded	cordate
margin	doubly serrate	doubly serrate	doubly serrate	doubly serrate
Lateral leaflets (basal pair)				
overlap	overlapping	free	overlapping	overlapping
orientation	opposite	opposite	opposite	opposite
shape	oblique	oblique	ovate–lobed	ovate–lobed
tip	acuminate	acuminate	acuminate	acuminate
base	oblique	oblique	oblique–rounded	oblique
margin	doubly serrate	doubly serrate	doubly serrate	doubly serrate
length (cm)	11.4	14.7	11.6	11.7
width (cm)	7.8	8.6	7.7	8.2
Rachis length between terminal leaflet and adjacent lateral leaflets (cm)	0.8–2.3 (mean 1.4)	0.8–2.2 (mean 1.5)	0.5–1.8 (mean 1.2)	2.4–3.9 (mean 3.0)
Glossiness	medium	medium	medium	dull
Color				
face	medium 147A	medium 137A, 139A	medium 137A	medium 147A
underside	138B	148C, 191B	191B	191A
Petiole				
length (cm)	4.9–7.8 (mean 6.3)	6.6–8.5 (mean 7.6)	5.8–8.9 (mean 7.4)	4.0–8.2 (mean 6.0)
pigmentation of upper surface	unpigmented	lightly	lightly	lightly
pigmentation underside	unpigmented	unpigmented	lightly	unpigmented
Petiolule length	very short	very short	short	very short
Stipule orientation	erect–relfexed	erect	erect–clasping	erect–clasping
Flowers				
Flower color	white	white	white	white

TABLE 1-continued

PLANT CHARACTERISITCS OF 'GLORIA'

	Gloria	Heritage	Summit	Amity
Flowering period				
primocane	early June–mid September	mid June–early October	early June–mid September	early June–early October
floricane	early April–mid June	early April–early June	early April–early June	mid March–early June
Flower size	large	small	medium	large
Petal				
length (cm)	0.8–1.0	0.7–0.8	0.7–0.9	0.7–1.0
width (cm)	0.3–0.4	0.3	0.3–0.4	0.3–0.5
Pedicel				
coloration	present, medium intensity red	present, strong intensity red	present, strong intensity red	present, medium intensity red
length	medium	medium	medium	long
Productivity				
Primocane	~8.8 t/acre	~5.1 t/acre	~7.3 t/acre	~6.4 t/acre
Floricane	~6.8 t/acre	~4.1 t/acre	~2.9 t/acre	~5.1 t/acre

TABLE 2

FRUIT CHARACTERISITCS OF 'GLORIA'

Fruit	Gloria	Heritage	Summit	Amity
Harvest season				
primocane	late June–late October	late July–mid November	mid July–late October	mid July–mid November
floricane	mid May–mid July	mid May–mid July	mid May–mid July	late April–mid July
Color	Medium Red	Medium Red	Medium Red	Medium Red

TABLE 2-continued

FRUIT CHARACTERISITCS OF 'GLORIA'

Fruit	Gloria	Heritage	Summit	Amity
immature	41B	53A	46A	46A
maturing	47A, 47B	45A, 46D	45A	47A
mature	46A	44C	42B	42B
Glossiness	strong	medium	medium	medium
Dimensions weight (g/fruit)				
primocane	3.0–3.7 (mean 3.3)	2.7–2.9 (mean 2.8)	2.5–3.3 (mean 2.8)	2.7–3.7 (mean 3.2)
floricane	2.7–3.2 (mean 3.0)	2.3–2.7 (mean 2.6)	2.5–2.8 (mean 2.6)	3.0–3.4 (mean 3.2)
length (primocane) (mm)	17.5–24.6 (mean 21.1)	—	17.5–25.4 (mean 20.2)	17.5–22.2 (mean 20.1)
width (primocane) (mm)	18.3–23.8 (mean 21.0)	—	18.3–23.0 (mean 20.4)	15.9–23.0 (mean 20.2)
Soluble solids (%)	9.5	—	9.4	9.7
Titratable acidity (% as citric acid)	12.7	—	14.5	11.2
Seeds				
weight (mg)	1.5	—	1.8	1.5
Number druplets/fruit	49–127 (mean 102)	45–102 (mean 72)	73–119 (mean 98)	62–108 (mean 88)
Firmness	firm	firm	firm	firm
Yield	high	medium	high	medium

TABLE 3

ISOZYME BANDING PATTERNS OF 'GLORIA' COMPARED WITH 'HERITAGE' AND 'SUMMIT'

	Isozyme and Pattern		
Cultivar	PGI	MDH	PGM
Gloria	D	C	A
Heritage	A	D	C
Summit	A	C	A

We claim:

1. A new and distinctive cultivar of raspberry plant, as illustrated and described herein.

* * * * *

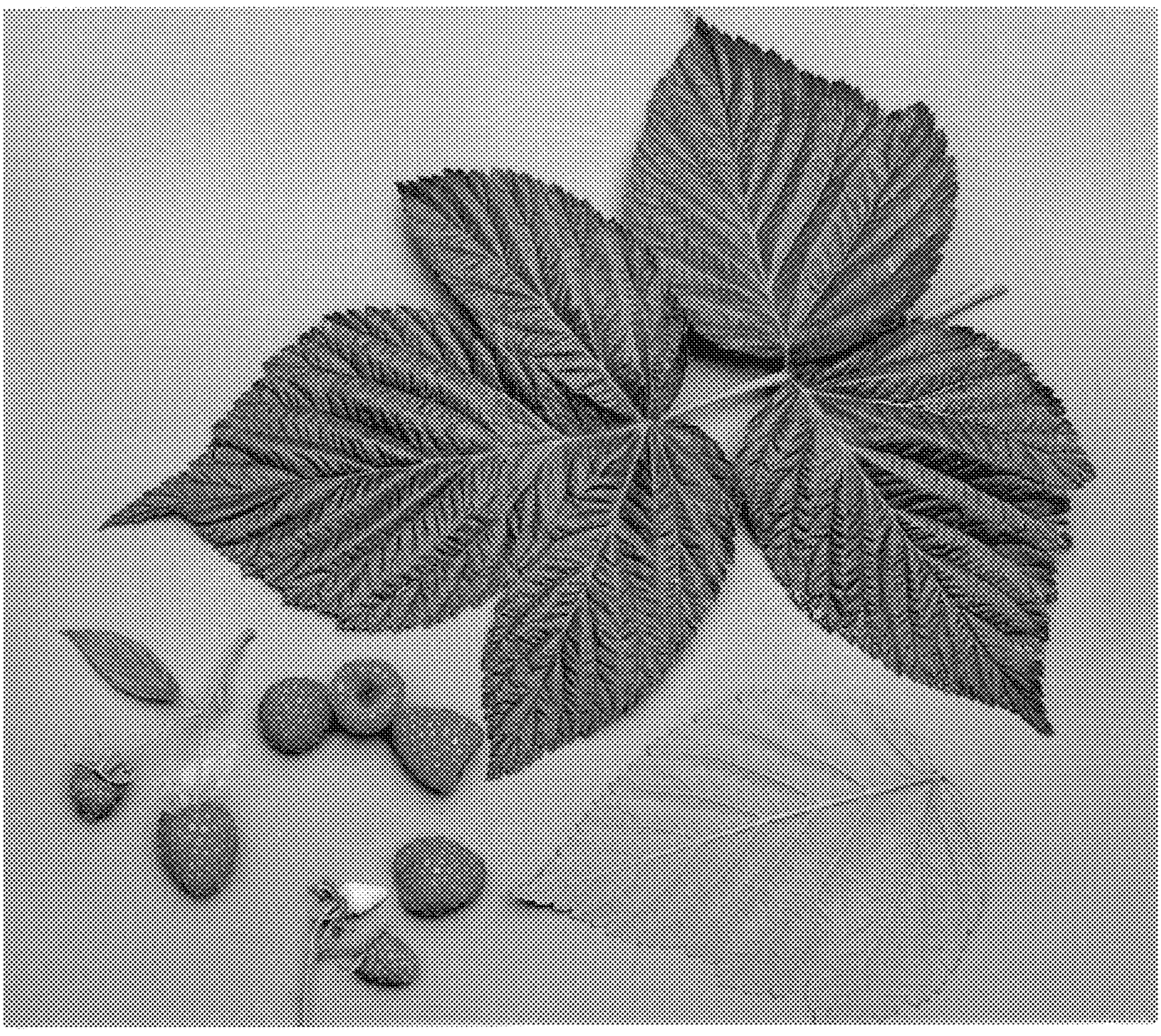

FIG. 1

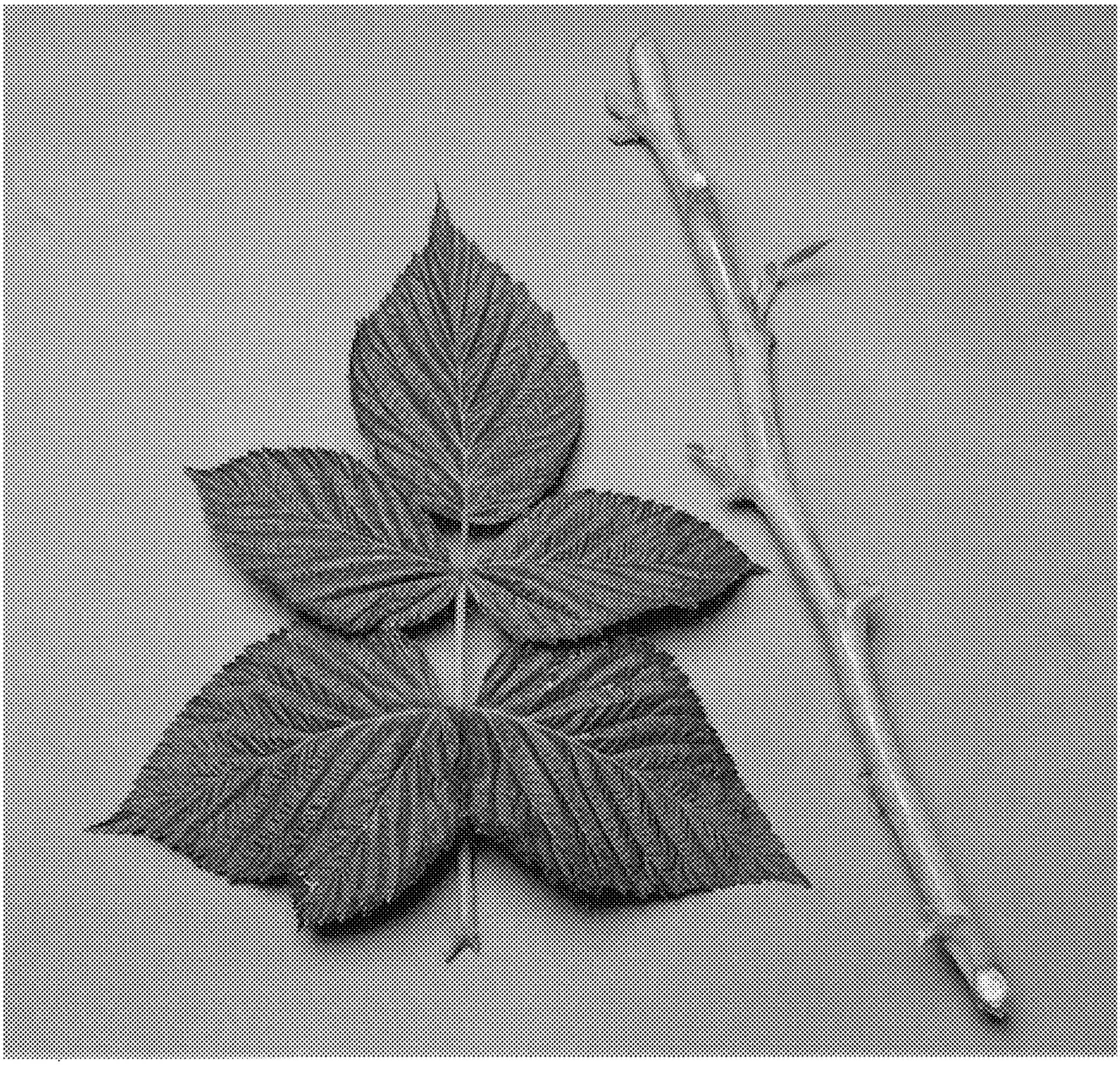

FIG. 2