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

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(54) **RASPBERRY PLANT NAMED 'DRISCOLL MARAVILLA'**

(50) Latin Name: *Rubus idaeus L.*  
Varietal Denomination: **Driscoll Maravilla**

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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 6 days.

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(22) Filed: **Nov. 27, 2002**

(51) **Int. Cl.<sup>7</sup>** ..... A01H 5/00  
(52) **U.S. Cl.** ..... Plt./204  
(58) **Field of Search** ..... Plt./204

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(57)

## ABSTRACT

The present invention relates to a new and distinct cultivar of raspberry plant named Driscoll Maravilla. The new cultivar is distinguished from other raspberry cultivars by its fruit firmness, large size, high yield, and long post-harvest life. The new cultivar is distinguished from its seed parent by having larger and firmer fruit. The new cultivar is distinguished from its pollen parent by producing a higher yield of fruit and having shinier, brighter fruit.

## 3 Drawing Sheets

### 1

Latin name of the genus and species of the plant claimed:  
The variety is botanically identified as *Rubus idaeus L.*

### 1. BACKGROUND OF THE INVENTION

The new cultivar of raspberry plant was developed from the hybridization of the selection 'Q491.1' (an unpatented variety) as the seed parent with the selection 'Q480.3' (an unpatented variety) as the pollen parent. The parents were crossed in 1996, whereafter fruit and seed were collected to produce seedlings for field planting in Watsonville, Calif. in 1996. The new cultivar was selected from these seedlings in 1998 for its attractiveness and excellent fruit firmness. 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 'Driscoll Maravilla'. The cultivar is botanically identified as *Rubus idaeus L.* The 'Driscoll Maravilla' red raspberry plant produces a primocane crop, which begins in early July and continues until late October. The floricanes begin in mid-May and continue until late July. Both the primocane and floricanes yields are high relative to other comparable varieties. The fruit of 'Driscoll Maravilla' is notably quite firm, large and very consistent with regard to its size and shape throughout its harvest period. The fruit of 'Driscoll Maravilla' 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.

### 2

FIG. 1 is a photograph of 'Driscoll Maravilla' primocane flower and fruit in various stages of development.

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

FIG. 3 is a photograph of 'Driscoll Maravilla' primocane shoots.

### 4. DETAILED BOTANICAL DESCRIPTION

10 The following detailed description of the new raspberry cultivar, 'Driscoll Maravilla', is based upon observations taken of 7 to 17 month old plants and fruit grown in Watsonville, Calif. between 2001 and 2002, and is believed to apply to plants of the 'Driscoll Maravilla' cultivar grown in similar conditions of soil and climate elsewhere.

15 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 phenotypal descriptions may deviate from the stated values and descriptions depending upon variation in environmental, seasonal, climatic and cultural conditions.

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

25 The new variety is particularly characterized and distinguished from other cultivars by its fruit firmness, large size, high yield, and long postharvest life.

30 The fruit color of 'Driscoll Maravilla' is a bright red at harvest with very little post harvest color change. Fruit of 'Driscoll Maravilla' separates easily from the receptacle and is of excellent firmness at harvest. The fruit of 'Driscoll Maravilla' is very consistent in size and shape throughout

the harvest period. The average plant height is about 210 cm and the average plant spread is about 60 cm. The pigmentation of the young shoots is 144B and there were an average of 4 young shoots in the observed plants of 'Driscoll Maravilla'. The prickle pigmentation color is 187A.

The pigmentation color of both surfaces of the petals is 155D and there are five petals per flower. The style pigmentation color is 157D, the average number of styles per flower is about 89, the anther pigmentation color is 155D, and the average number of anthers per flower is about 86. The color of the seeds of 'Driscoll Maravilla' is 161A, the average seed weight is about 1.3 mg, and there are an average of about 83 seeds per fruit.

The primocane and floricane yields of 'Driscoll Maravilla' are high relative to the variety 'Heritage'.

'Driscoll Maravilla' is distinguishable from its pollen parent, selection 'Q480.3', by producing a higher yield of fruit and having shinier, brighter fruit. The new cultivar is distinguished from its seed parent, selection 'Q491.1', by having larger and firmer fruit.

#### 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 1

PLANT CHARACTERISTICS OF 'DRISCOLL MARAVILLA'		
	Driscoll Maravilla	Heritage
<u>General</u>		
Plant size	Large	Large
Growth habit	Semi-erect	Erect
Productivity	High	Medium
Self-fruitfulness	Self-fruitful	Self-fruitful
Time of bud burst	Late	Late
Primocane fruiting		
Percent of cane length flowering as primocane	30-40	20-40
Percent of total yield	44	53
Primocanes		
Number of young shoots	Medium	Medium
Young shoot pigmentation	Medium	Medium
Length (cm)	231	196
Time of shoot emergence	Late	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	tan w/slight purple	brown to purple brown
Prickles		
Pigmentation	purple	green-brownish to green
Density on young shoots	Medium	Dense
Attitude of tip	Horizontal	Downward
Size: Length (base to tip at 1 m height at end of season) (mm)	1.0	2.3
Texture	smooth	Rigid
Presence and distribution on petioles	Present irregularly distributed	Present irregularly distributed
Pubescence on canes	Absent	Absent
<u>LEAVES</u>		
Color		
Face	147A	147A
Underside	148C	148B
Relief between veins	Medium	Medium
Glossiness	Medium	Medium
Petiole length (cm)	6.2	7.6
Stipule orientation	Erect	Erect
Arrangement	Compound	Compound
Number of leaflets	Usually 5	Sometimes 3, sometimes 5
Overlapping of lateral leaflets	Overlapping	Free to touching
Lateral leaflet: length of stalket (lower pair)	Medium	Very short
Terminal leaflet		
Length (cm)	11.9	14.6
Width (cm)	8.4	7.8
Shape	Ovate	Ovate
Tip	Acuminate	Acuminate
Base	Round	Oblique
Margin	Doubly serrate	Doubly serrate
Lateral leaflets (basal pair)		
Length (cm)	10.9	14.7
Width (cm)	8.1	8.6
Orientation	Opposite	Opposite
Shape	Ovate	Ovate
Tip	Acuminate	Acuminate
Base	Round	Oblique
Margin	Doubly serrate	Doubly serrate
Rachis length between terminal leaflet and adjacent lateral leaflets (cm)	3.8	1.5
<u>FLOWERS</u>		
Flowering period		
Primocane	19 weeks, Late May–late September	19 weeks, Late May–late September
Floricane	12 weeks, Late March–late June	10 weeks, Late March–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>		
Harvest season		
Primocane	Early July–late October	Early July–early November
Floricane	Mid May–mid July	Late May–late July
<u>Fruiting laterals (floricane)</u>		
Length (4 <sup>th</sup> lateral from tip) (cm)	60.7	49.8
Number of fruit per lateral	24.6	20.3
Color		
Immature	47C	42C
Maturing	46A	46A
Mature fruit	46A	59A
Glossiness	Medium	Medium
Shape	Ovate	Ovate

TABLE 1-continued

TABLE 1-continued

PLANT CHARACTERISTICS OF 'DRISCOLL MARAVILLA'		
	Driscoll Maravilla	Heritage
<u>Dimensions</u>		
Size	large	small
Length (mm)	22	17
Width (mm)	22	18
Length: width	1.0	.94
Weight (g/fruit)		
Primocane	5.5	3.1
Floricanes	4.2	2.3
Soluble solids (%)	1.36	1.58
Titratable acidity (% as citric acid)	8.5	9.9
Seed Weight (mg)	2.1	1.5
Number druplets/fruit	83	72
Adherence to plug (1-9)	Medium	Medium
Firmness	Firm	Firm
Yield	High	Medium

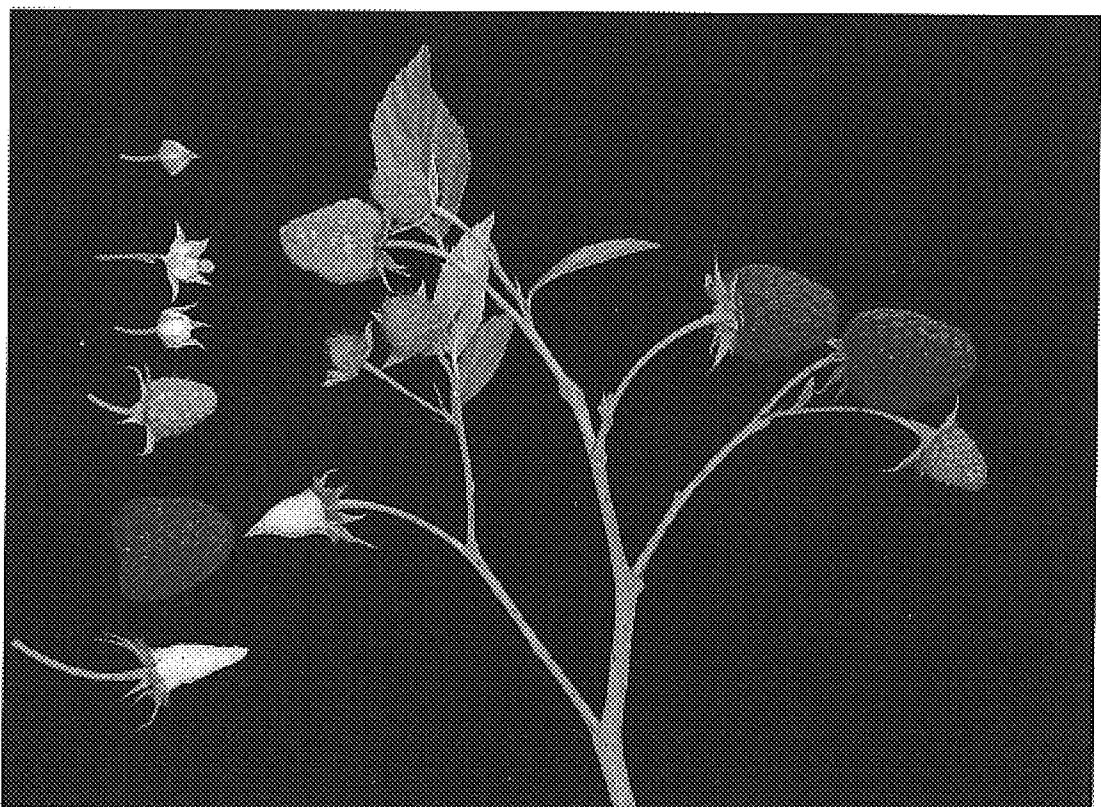
## 4.2 NUCLEIC ACID FINGERPRINTING

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 produced 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 Driscoll Maravilla and Heritage yielded DNA fragment patterns that uniquely distinguish each of these genetically distinct genotypes.

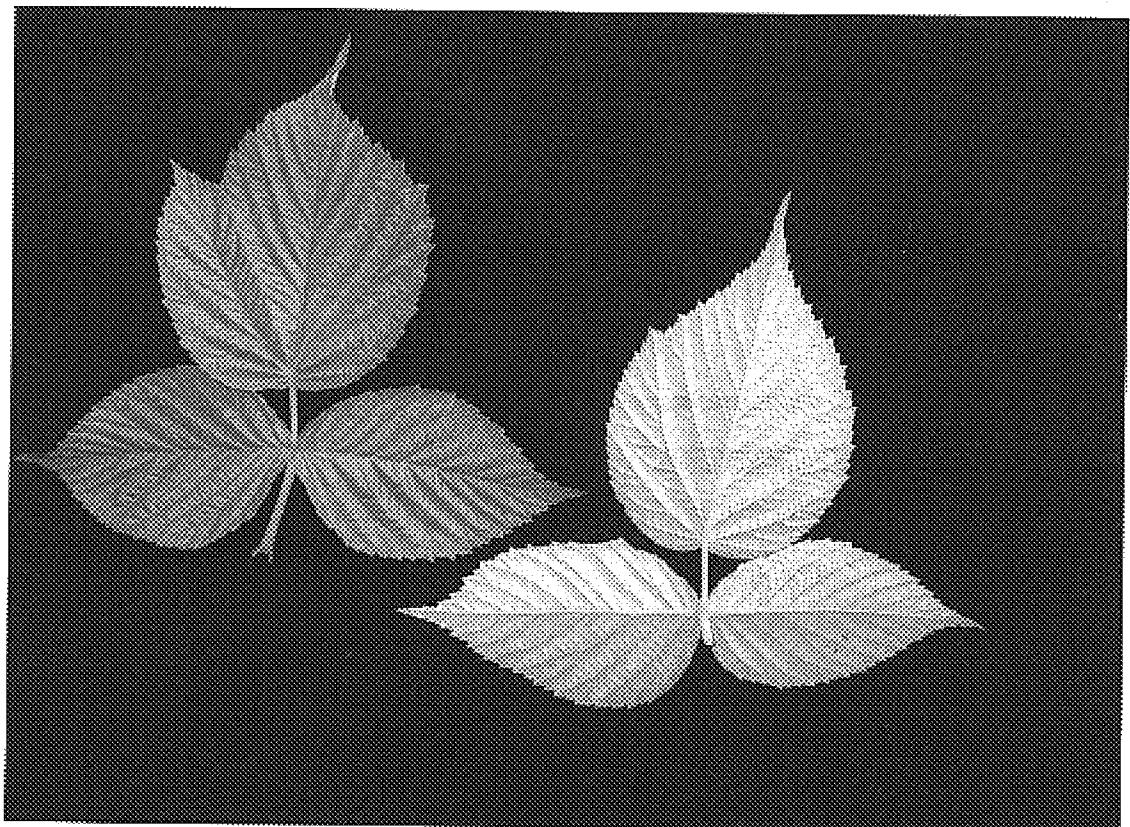
We claim:

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

\* \* \* \* \*



**FIG. 1**



**FIG. 2**



**FIG. 3**

UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO. : PP 14, 804 P2

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DATED : May 18, 2004

INVENTOR(S) : Carlos D. Fear, Richard E. Harrison, Fred M. Cook and Gavin Sills

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 5,

Line 12, change "1.36" to -- 10.8 --

Line 12, change "1.58" to -- 10.8 --

Line 13, change "8.5" to -- 1.36 --

Line 13, change "9.9" to -- 1.58 --

Signed and Sealed this

First Day of February, 2005



JON W. DUDAS  
*Director of the United States Patent and Trademark Office*