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

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(54) **RED RASPBERRY PLANT NAMED 'KOKANEE'**

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

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(52) **U.S. Cl.**
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(58) **Field of Classification Search**
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See application file for complete search history.

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(57) **ABSTRACT**

A new and distinct red raspberry cultivar distinguished by its moderate to high yields of large, bright-red-colored, firm, conic, sweet, flavorful fruit with excellent fresh fruit quality borne on primocanes in late summer

3 Drawing Sheets

Latin name of the genus and species of the plant claimed: 'KOKANEE' is a new red raspberry plant that is a *Rubus idaeus* L.

Variety denomination: The new red raspberry plant claimed is of the variety denominated 'KOKANEE' containing *Rubus idaeus* germplasm.

BACKGROUND OF THE INVENTION

The present invention relates to a new and distinct raspberry cultivar designated 'Kokanee' and botanically known as *Rubus idaeus* L.

This new raspberry cultivar was discovered in Corvallis, Oreg. in September 2009 and originated from cross of ORUS 1173-2 (unpatented) and 'Vintage' (U.S. Plant Pat. No. 24,198); (herein incorporated by reference in its entirety). The new cultivar is firmer and more uniformly shaped than its maternal parent, and later ripening and more conically shaped than the paternal parent. 'Kokanee's closest comparison cultivars are its paternal parent 'Vintage' (supra) and 'Heritage' (supra). 'Kokanee' is later ripening and more vigorous than 'Vintage' (supra) and earlier ripening and bears large and lighter colored fruit than 'Heritage' (supra). The new cultivar has been asexually reproduced annually since 2009 by the use of root cuttings in Corvallis Oreg. The new cultivar was established in vitro from a cane cutting and microcuttings have been rooted from this sort of culture. The new raspberry plant has been found to be stable and reproduce true to type through successive asexual propagations.

SUMMARY OF THE INVENTION

The following are the most outstanding and distinguishing characteristics of this new cultivar when grown under normal horticultural practices in Oreg.: 1. firmer and more uniformly shaped than the maternal parent ORUS 1173-2; 2. later ripening and more conically shaped than the paternal

parent 'Vintage'; and 3. moderate to high yields of large, bright-red-colored, firm, conic, sweet, flavorful fruit with excellent fresh fruit quality borne on primocanes in late summer.

BRIEF DESCRIPTION OF THE PHOTOGRAPHS

The accompanying color photographs show typical specimens of the new cultivar at various stages of development as nearly true as it is possible to make in color reproductions.

FIG. **1**. Shows a section of young cane showing glaucosity and sparseness of prickles.

FIG. **2**. Shows the upperside and underside of the plant leaves.

FIG. **3**. Shows a range of developmental stages including unopened flower buds, mature open flowers, an immature fruit, a mature fruit without the receptacle, a receptacle with the fruit removed, and a fruiting lateral with ripe fruit.

The colors shown are as true as can be reasonably obtained by conventional photographic procedures.

DETAILED DESCRIPTION OF THE NEW CULTIVAR

The following is a detailed description of the botanical and pomological characteristics of the subject raspberry 'Kokanee' based on observations taken from 2010 to 2015 growing seasons in trials in Corvallis and Aurora, Oreg. 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. 'Kokanee' has not been observed under all possible environmental conditions. Color terminology follows The Royal Horticultural Society Colour chart. London (R.H.S.) (5th edition, 2007).

The descriptions reported herein are from 2-4 year-old specimens grown in Corvallis and Aurora, Oreg. with the

measurements/observations for one trait always being made on samples from the same location. The plants used for these observations were planted in 2009-2012.

Table 1 shows plant characteristics of the new cultivar. Characteristics include plant size, plant diameter/density/vigor, and number of canes per hill.

TABLE 1

Characteristic	'Kokanee'
Plant size	Large
Plant height (cm)	119.2
Plant diameter/density/vigor	Medium to dense, tall, slender
Number of canes per hill	100.1

Table 2 shows primocane characteristics of the new cultivar. Cane characteristics include new cane habit, timing of young shoots emergence from soil, number of young shoots, very young shoots intensity of anthocyanin coloration, diameter at 1.2 m from base, cane cross-section, length at time of fruit formation, number of nodes, internode length—node 2 to 3 from base, internode length—midpoint, internode length—node 5 to 6 from terminus, cane color, pubescence on canes, percent of cane length flowering as primocane, primocane strength: full-grown after picking, and glaucosity of primocane full-grown after picking.

TABLE 2

Characteristic	'Kokanee'
New cane habit	Erect
Timing of young shoots emergence from soil	Mid-April
Number of young shoots	51.3
Very young shoots intensity of anthocyanin coloration	Absent
Diameter at 1.2 m from base (cm)	0.79
Cane cross-section	Round
Length at time of fruit formation (m)	1.94
Number of nodes	33.17
Internode length—node 2 to 3 from base (cm)	3.47
Internode length—midpoint (cm)	7.77
Internode length—node 5 to 6 from terminus (cm)	7.28
Cane color	N144D yellow-green with occasional blush of 183D greyed-purple and occasional glaucosity of N155A white
Pubescence on canes	Absent
Percent of cane length flowering as primocane (%)	36.20
Primocane strength: full-grown after picking	Strong
Glaucosity of primocane full-grown after picking	Weak

Table 3 shows prickle characteristics of the new cultivar. Prickle characteristics include presence of prickles on young shoots, prickle size, length of prickles (1 m from ground at end of growing season), and density of prickles—central ⅓ of cane, prickle texture, attitude of spine tips, and prickle color.

TABLE 3

Characteristic	'Kokanee'
Prickles on young shoots	Present
Prickle size	Medium
Length of prickles (1 m from ground at end of growing season) (cm)	0.16
Number of prickles on 10 cm section of mature primocane taken at midpoint of cane (dense/medium/sparse/absent)	Medium, 352
Prickle texture	Soft, stout
Attitude of spine tips	Horizontal
Prickle color	N144D yellow-green

Table 4 shows primocane leaf characteristics of the new cultivar. Primocane leaf characteristics include primocane leaves: time of budbreak, petiole length (range), petiole length, petiole color—upper surface, petiole color—lower surface, petiole diameter, petiole color—upper surface, petiole color—lower surface, prickle distribution on petioles, rachis length, rachis color, stipule length, stipule orientation, leaf arrangement, number of leaves per node, entire leaf length, entire leaf width, number of leaflets per leaf, terminal leaflet length, terminal leaflet width, terminal leaflet shape, terminal leaflet tip/apex, terminal leaflet base, terminal leaflet cross section—plane, terminal leaflet shape of teeth, terminal leaflet margin, terminal leaflet petiolule length, terminal leaflet petiolule width, distal lateral leaflet length, distal lateral leaflet width, distal lateral leaflet petiolule length, basal lateral leaflet length, basal lateral leaflet width, basal lateral leaflet petiolule length, color of upper surface of leaflet, color lower surface of leaflet, and glossiness.

TABLE 4

Characteristic	'Kokanee'
Petiole length (cm) (range)	2.92-3.86
Petiole length (cm)	3.37
Petiole diameter (cm)	0.19
Petiole color—upper surface	144C yellow-green with blush of 183D greyed-purple
Petiole color—lower surface	144D yellow-green
Prickle distribution on petioles	Sparse
Rachis length (cm)	1.42
Rachis diameter (cm)	0.17
Rachis color	144C yellow-green
Stipule length (cm)	0.65
Stipule width (cm)	3.7
Stipule orientation	Erect
Leaf arrangement	Compound, alternate
Number of leaves per node	One
Entire leaf length (cm)	23.15
Entire leaf width (cm)	22.82
Number of leaflets per leaf	Usually three; ranges from one to five
Terminal leaflet length (cm)	13.17
Terminal leaflet width (cm)	7.73
Terminal leaflet shape	Ovate
Terminal leaflet tip/apex	Broadly acuminate
Terminal leaflet base	Ovate
Terminal leaflet cross section-plane	Convex
Terminal leaflet shape of teeth	Acute
Terminal leaflet margin	Serrate
Terminal leaflet petiolule length (cm)	1.64
Terminal leaflet petiolule width (cm)	0.19
Distal lateral leaflet length (cm)	9.82
Distal lateral leaflet width (cm)	4.77
Distal lateral leaflet petiolule length	Sessile
Basal lateral leaflet length (cm)	11.78
Basal lateral leaflet width (cm)	7.23
Basal lateral leaflet petiolule length (cm)	Sessile
Color of upper surface of leaflet	137A green
Color lower surface of leaflet	191B greyed-green
Glossiness	Matte

Table 5 shows flower characteristics of the new cultivar. Flower characteristics include timing of flower bud burst—

primocane, bud shape—top view, bud shape—side view, bud length, bud diameter, bud color, flower diameter sepal—sepal, flower diameter petal—petal, diameter of calyx relative to corolla, flower depth (base to top of stigmas), number of nodes/lateral (all nodes are flowering nodes), number of nodes per lateral with >one flower, number of buds, flowers, fruit per lateral, number of buds, flowers, fruits per node of lateral, petal number, petal length, petal width, petal shape, petal apex, petal base, petal margin, color petals, sepal number, sepal length, sepal width, sepal shape, sepal apex, sepal margin, color sepals—inner surface, color sepals—outer surface, pedicel length, pedicel diameter, pedicel texture, color pedicels, stamen number, filament color, anther length, anther width, anther color—fresh, anther color—dry, pollen color, pistil number, stigma color, stigma shape, style length, style color, and ovary color, as well as measurements related to flowering laterals including peduncle length, peduncle diameter, peduncle texture, and peduncle color.

TABLE 5

Characteristic	'Kokanee'
Timing of flower bud burst—primocane	1Aug.
Bud shape—top view	Pentagonal to rounded and undulate
Bud shape—side view	Deltoid
Bud length (cm)	0.085
Bud diameter (cm)	0.068
Bud color	144B yellow-green
Flower diameter sepal-sepal (cm)	2.00
Flower diameter petal-petal (cm)	1.35
Diameter of calyx relative to corolla	0.15
Flower depth (base to top of stigmas) (cm)	0.71
Number of nodes/lateral (all nodes are flowering nodes)	3.67
Number of nodes per lateral with > one flower	2.33
Number of buds, flowers, fruit per lateral	8.67
Number of buds, flowers, fruits per node of lateral	3.83
Petal number	5.83
Petal length (mm)	6.89
Petal width (mm)	3.64
Petal shape	Oblanceolate
Petal apex	Rounded and undulate
Petal base	Cuneate
Petal margin	Entire
Color petals	NN155B
Sepal number	5.83
Sepal length (mm)	9.31
Sepal width (mm)	4.69
Sepal shape	Ovoid
Sepal apex	Cuspidate
Sepal margin	Entire
Color sepals—inner surface	145B yellow-green
Color sepals—outer surface	144B yellow-green at base fading to 144D yellow-green at edges
Pedicel length (mm)	23.29
Pedicel diameter (mm)	0.93
Pedicel texture	Sparsely prickly
Color pedicels	144B yellow-green
Stamen number	94.00
Filament color	196C greyed-green
Anther length (mm)	0.62
Anther width (mm)	0.41
Anther color—fresh	157D green-white
Anther color—dry	158C yellow-white
Pollen color	NN155D white
Amount of pollen produced	Abundant
Pistil number	92.00
Stigma color	155C white
Stigma shape	Frayed, ragged
Style length (mm)	3.24
Style color	157C green-white
Ovary color	144C yellow-green
Lateral measurements	
Peduncle length (mm)	18.97
Peduncle diameter (mm)	1.33
Peduncle texture	Sparsely prickly
Peduncle color	144B yellow-green

Table 6 shows primocane fruit characteristics of the new cultivar. Fruit characteristics include length, width, length/width ratio, receptacle length, receptacle diameter, drupelet length, drupelet width, number of drupelets per fruit, fruit weight, drupelet weight, individual seed weight, total seed weight per fruit, seed length, seed width, seed color, fruit glossiness, separation from receptacle, drupelet cohesion, firmness, flavor, fruit color, fruit color—immature, fruit color—maturing, fruit color—mature, titratable acidity, soluble solids, pH, anthocyanin content, harvest season, length of season, yield, and productivity.

TABLE 6

Characteristic	'Kokanee'
Length (mm)	22.50
Width (mm)	19.33
Length/width ratio (mm)	1.16
Receptacle length (mm)	12.19
Receptacle diameter (mm)	5.85
Drupelet length (mm)	3.30
Drupelet width (mm)	3.20
Number of drupelets per fruit	132
Weight (g)	3.35
Drupelet weight (mg)	25.98
Individual seed weight (mg)	1.27
Total seed weight per fruit (mg)	165.65
Seed length (mm)	2.30
Seed width (mm)	1.33
Seed color (dry)	156A white
Glossiness	Medium
Separation from receptacle	Very easy
Drupelet cohesion	Coherent
Firmness	Firm
Flavor	Very good
Fruit color	Bright
Fruit color—immature	164C greyed-orange
Fruit color—maturing	47A red
Fruit color—mature	53A red
Titratable acidity (% as citric acid)	14.58
Soluble solids (%; in Brix)	12.44
pH	3.28
Anthocyanin content (mg of cyanidin-3-glucoside/100 g)	35.30
Harvest season	9 Aug-18 Sept
Length of season	Medium
Yield (actual kg · plant^{-1})	2.30
Productivity	Medium-high

We claim:

1. A new and distinct cultivar of red raspberry plant, substantially as illustrated and described, characterized by its moderate to high yields of large, bright-red-colored, firm, conic, sweet, flavorful fruit with excellent fresh fruit quality borne on primocanes in late summer.

* * * * *

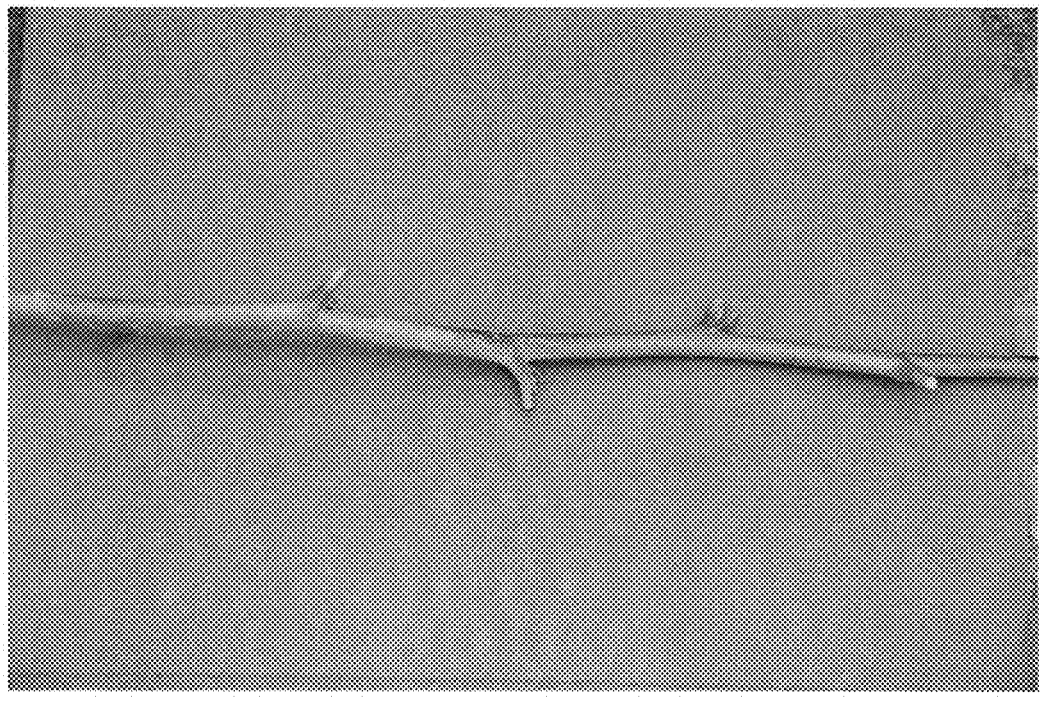

FIG. 1

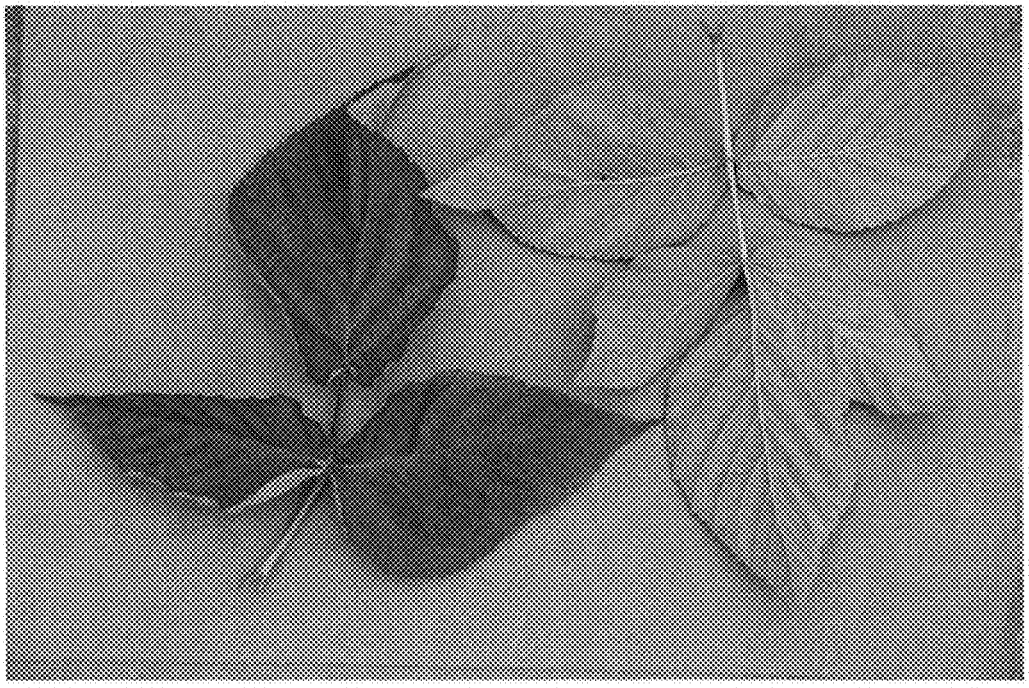

FIG. 2

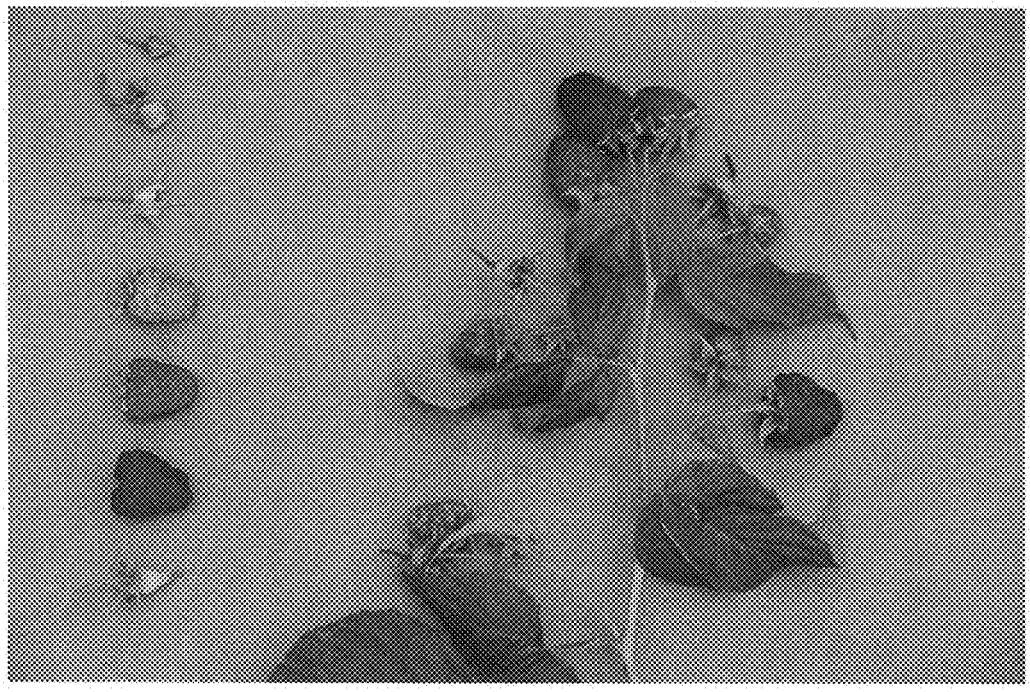

FIG. 3