

**(12) United States Plant Patent**
Khanizadeh**(10) Patent No.: US PP20,105 P3**
(45) Date of Patent: Jun. 16, 2009**(54) RASPBERRY PLANT NAMED ‘JEANNE D’ORLEANS’****(50)** Latin Name: *Rubus idaeus L.*
Varietal Denomination: **Jeanne d’Orléans****(75)** Inventor: **Shahrokh Khanizadeh, Quebec (CA)****(73)** Assignee: **Her Majesty The Queen In Right of Canada, as represented by the Minister of Agriculture and Agri-Food, Lacombe, Alberta (CA)****(*)** 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.: **11/787,954****(22)** Filed: **Apr. 17, 2007****(65) Prior Publication Data**

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(51) Int. Cl.
A01H 5/00 (2006.01)**(52) U.S. Cl. Plt./204****(58) Field of Classification Search Plt./204**
See application file for complete search history.**(56) References Cited**

PUBLICATIONS

Raintree Nursery print out, dated Oct. 22, 2007—“Chill Hours Chart”.*

* cited by examiner

Primary Examiner—Annette H Para*Assistant Examiner*—Georgia Helmer**(74) Attorney, Agent, or Firm**—Klarquist Sparkman, LLP**(57) ABSTRACT**A new and distinct variety of *Rubus idaeus L.* plant, distinguished by greater fruit size, longer shelf life and fruit quality. The candidate variety also has high Soluble Solids (SS) content and high total of Hydrophobic and Crude antioxidant activities.**5 Drawing Sheets****1**Latin name of the genus and species of the plant claimed:
Rubus idaeus L.

Variety denomination: ‘Jeanne d’Orléans’.

BACKGROUND OF THE INVENTION

The present invention relates to a new and distinct variety of raspberry named ‘Jeanne d’Orléans’. The parents of the new and distinct cultivar of the present invention are ‘Chilli-wack’ (unpatented) and ‘Meeker’ (unpatented).

The instant plant, ‘Jeanne d’Orléans’, originated from a cross between ‘Chilli-wack’ and ‘Meeker’, made in 1994 at the Agriculture and Agri-Food Canada, St-Jean-sur-Richelieu, research centre in Quebec. The new cultivar has been found to undergo asexual propagation at L’Acadie, Quebec, Canada by in vitro tissue culture.

Asexual reproduction of this new variety shows that the foregoing and other characteristics come true to form, are firmly fixed, and are established and transmitted through succeeding asexual propagations.

SUMMARY OF THE INVENTION

The ‘Jeanne d’Orléans’ variety may be distinguished from other raspberry varieties due to the following combination of characteristics: greater fruit size, longer shelf life and fruit quality. The candidate variety also has high Soluble Solids (SS) content and high total of Hydrophobic and Crude antioxidant activities.

The cross was made in 1994 at Agriculture and Agri-Food Canada, St-Jean-sur-Richelieu, research centre in Quebec. Several characteristics including winter hardiness, yield, fruit size and shelf life have been closely monitored since 1995.

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BRIEF DESCRIPTION OF THE DRAWINGS

The ‘Jeanne d’Orléans’ raspberry is illustrated by the accompanying color photographs, taken when the plants were three years old, in which:

FIG. 1 shows ‘Jeanne d’Orléans’ fruit;

FIG. 2 shows the upper surface of a leaf of ‘Jeanne d’Orléans’;

FIG. 3 shows a ‘Jeanne d’Orléans’ plant;

FIG. 4 shows a ‘Jeanne d’Orléans’ plant in spring; and

FIG. 5 shows a ‘Jeanne d’Orléans’ stem with spines.

The colors of an illustration of this type may vary with lighting and other conditions and therefore, color characteristics of this new variety should be determined with reference to the observations described herein, rather than from these illustrations alone.

DETAILED DESCRIPTION

The original variety and progeny have been observed growing in a cultivated area in Québec, Canada. Certain characteristics of this variety, such as growth and color, may change with changing environmental conditions (e.g., light, temperature, moisture, nutrient availability, or other factors). Color descriptions and other terminology are used in accordance with their ordinary dictionary descriptions, unless the context clearly indicates otherwise. Color designations are made with reference to The Royal Horticultural Society (R.H.S.) Colour Chart. All color characteristics were determined using the 1986 version of the Royal Horticultural Society (R.H.S.) Colour charts and measured characteristics were based on ten plan measurements. It should be understood that the colors may vary, depending on factors such as growing and lighting conditions.

Scientific Name: *Rubus idaeus* L. 'Jeanne d'Orléans'.

Parentage: 'Meeker' is the seed/female parent. 'Chilliwick' is the pollen/male parent.

Plant characteristics:

Main fruit bearing type.—Only on previous year's cane in summer.

Habit.—Semi-upright.

Number of current season's canes observed at the beginning of the second year.—Few.

Young shoot characteristics: (observed when shoots are 15 cm long).

Very young shoots.—Anthocyanin coloration of apex during rapid growth: absent.

Cane characteristics: (observed when the cane is about 1 meter to 1.5 meter long).

Time of vegetative bud burst.—Late.

Current season canes.—Glaucosity: weak to medium.

Anthocyanin coloration: weak. Length of internode: medium. Length of vegetative bud: short.

Dormant cane length.—Mean: 113 cm. Range: 64–158 cm. Standard deviation: 34 cm. Number measured: 18.

Dormant cane color.—Greyish orange-brown (R.H.S. 199C).

Spines.—Density: sparse to medium; spares in central third of 1 year old canes. Size at base: medium. Spine length: medium to long. Spine color: purple (RHS 77A).

Leaf characteristics: (observed fully developed leaves from middle third of the cane).

Yellow-Green color of upper side.—RHS 144A.

Predominant number of leaflets.—Equally three and five.

Relief between the veins (rugosity).—Strong to very strong.

Relative position of lateral leaflets.—Slightly overlapping.

Terminal leaflet length.—Mean: 20.9 cm. Range: 17.4–23.7 cm. Standard deviation: 1.7 cm. Number measured: 10.

Terminal leaflet width.—Mean: 19.3 cm. Range: 17.1–21.0 cm. Standard deviation: 1.3 cm. Number measured: 10.

Flower characteristics:

Time of beginning of flowering on previous year's cane (10% of flowers have opened).—Very late.

Pedice number of spines.—Few to medium.

Peduncle.—Anthocyanin coloration: present. Intensity of anthocyanin coloration: strong to very strong.

Fruit characteristics: Time of beginning of fruit ripening on previous year's cane — when the fruit is most easily removed from the plug: late

Fruiting lateral.—Attitude: erect to semi erect. Length: long.

Fruit.—Length: long. Width: broad. Length/width ratio: longer than broad. General shape lateral view: broad conical to conical. Size of single drupe: large. Fruit color: dark red (RHS 53A). Fruit glossiness: weak. Fruit firmness: firm. Adherence to plug: weak to medium.

Chilling requirement.—About 900 hours.

Raspberries of 'Jeanne d'Orléans' were compared to 'Boyne' and 'Killarney' raspberry varieties, referred to herein as the "reference varieties." 'Jeanne d'Orléans' can be

readily distinguished from 'Boyne' and 'Killarney' by the characteristics listed in Table 1. 'Jeanne d'Orléans' shape is long and conic where as the reference variety's shape is globose. 'Jeanne d'Orléans' fruit size is very large compared to 'Boyne' and 'Killarney'. 'Jeanne d'Orléans' glossiness is weak compared to the reference varieties. The shelf life of 'Jeanne d'Orléans' is significant longer compared to 'Boyne' and 'Killarney'. Soluble Solids and Antioxidants are significant higher compared to the reference varieties.

TABLE I : Comparison of Physical Characteristics of 'Jeanne d'Orléans' to Reference Varieties 'Killarney' and 'Boyne'.

	'Jeanne d'Orléans'	'Killarney'	'Boyne'
Shape of Fruit	long conic	globose	globose
Size of Fruit	very large	small to medium	small
Shelf life	significant longer than reference varieties		
Glossiness	weak	Strong	medium
Soluble Solids	Significant higher than reference varieties		
Antioxidant	Significant higher than reference Varieties		
Number of current season canes	few	medium-many	many
Anthocyanin coloration of apex of very young shoots during rapid growth	absent	Present	present
Intensity of Anthocyanin coloration of apex of very young shoots during rapid growth	absent or weak	weak-medium	weak
Time of vegetative bud burst	late	Early	early
Current season's cane glaucosity	weak-medium	—	medium
Current season's cane anthocyanin coloration (when present)	weak (when present)	—	medium (when present)
Current season's cane length of internode	medium	Short	medium
<u>Dormant cane length:</u>			
Mean:	113 cm	110 cm	106 cm
Range:	64-158 cm	62-162 cm	60-158 cm
Standard deviation:	34 cm	27 cm	33 cm
Dormant cane color:	brown (RHS 199C)	Greyed-orange (RHS 166A)	Greyed-orange (RHS 166A)
Spine density	sparse-medium	dense	dense
Spine length	medium-long	—	medium
Spine color	Purple (RHS 77A)	Purple (RHS 77A)	Purple (RHS 77A)
Green color of upper side of leaf	Yellow-Green (RHS 144A)	Green (RHS 137A)	Green (RHS 137A)
Predominant number of leaflets	equally three and five	usually three	equally three and five
Relief between the veins of leaf	strong-very strong	very strong	medium-strong
Relative position of lateral leaflets	overlaps with terminal leaflet	overlaps with terminal leaflet	overlaps with terminal leaflet
<u>Terminal leaflet length:</u>			
Mean:	20.9 cm	20.6 cm	21.5
Range	17.4-23.7 cm	17.4-23.7 cm	19.1-25.3 cm

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	'Jeanne d'Orleans'	'Killarney'	'Boyne'
Standard deviation	1.7 cm	2 cm	1.8 cm
Terminal leaflet width:			
Mean:	19.3 cm	18.82 cm	19.8 cm
Range:	17.1-21.0 cm	17.3-21.2 cm	17.7-24.8 cm
Standard deviation:	1.3 cm	2.1 cm	2.3 cm
Time of beginning of flowering on previous year's cane	very late	very early	very early
Pedice number of spines	few-medium	many	many
Intensity of anthocyanin coloration of peduncle	strong-very strong	medium-very strong	very strong
Time of beginning of fruit ripening on previous year's cane	late	medium	early
Fruiting lateral length	long	medium	medium

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	'Jeanne d'Orleans'	'Killarney'	'Boyne'
Fruit length:	long	medium	medium
Fruit width:	broad	medium	medium
Fruit length/width ratio:	longer than broad	slightly broader than long	as long as broad
General shape of fruit in lateral view	broad conical- conical	circular	circular-broad conical
Size of single drupe of fruit	large	medium	medium
Fruit color	dark red (RHS 53A)	medium red (RHS 46A)	dark red (RHS 53A)
Adherence of fruit to plug	weak-medium	weak	very weak- weak

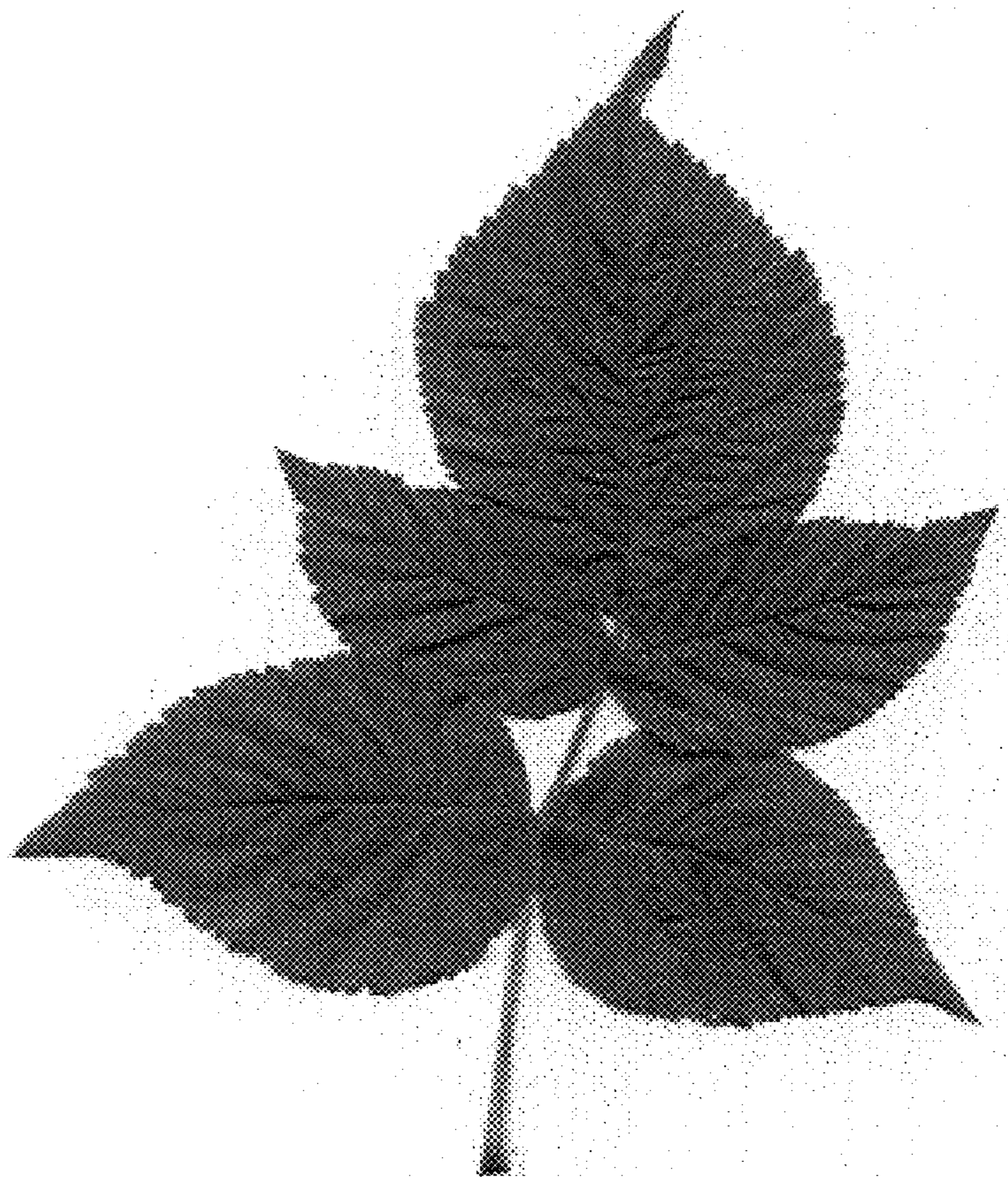
I claim:

1. A new and distinct variety of raspberry plant, substantially as shown and described herein.

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FIG.1



Jeanne d'Orléans

FIG.2



FIG.3



FIG.4



FIG 5