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

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(54) **PISTACHIO ROOTSTOCK TREE NAMED
WONDERFUL PISTACHIO ROOTSTOCK #4**

(50) Latin Name: *Pistacia atlantica*×*P. integerrima*
Varietal Denomination: **Wonderful Pistacia
Rootstock #4**

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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 83 days.

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(65) **Prior Publication Data**

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(51) **Int. Cl.**
A01H 5/00 (2006.01)

(52) **U.S. Cl.**
USPC **Plt./152**

(58) **Field of Classification Search**
USPC Plt./174, 152
See application file for complete search history.

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& Bear, LLP

(57) **ABSTRACT**

A new and distinct variety of pistachio tree, cv. Paramount
Pistachio Rootstock #4, is characterized by producing large
leaves, reddish-green new foliage, and dark green mature
foliage. The new variety is useful as a rootstock for com-
mercial nut bearing pistachio varieties. A new and distinct
variety of pistachio tree, cv. ‘Wonderful Pistachio Rootstock
#4’, is characterized by producing large leaves, reddish-
green new foliage, and dark green mature foliage. The new
variety is useful as a rootstock for commercial nut bearing
pistachio varieties.

3 Drawing Sheets

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Latin name of the genus and species claimed: *Pistacia
atlantica*×*P. integerrima*.

Variety denomination: ‘WONDERFUL PISTACHIO
ROOTSTOCK #4’.

**BACKGROUND AND SUMMARY OF THE
INVENTION**

This invention relates to the discovery and asexual propa-
gation of a new and distinct variety of Pistachio tree,
Pistachio atlantica (unpatented)×*P. integerrima* (un-
patented), cv. ‘Wonderful Pistachio Rootstock #4’ as herein
described and illustrated. The new variety was first selected
as breeder number ‘SR412-5’. The new variety is a hybrid
of *P. atlantica* and *P. integerrima* which was first discovered
on cultivated land from trees grown from seed produced by
a cross of the two parent varieties. The new variety was
discovered, further characterized, and propagated by Joe
MacIlvaine, Eric Mercure and John Etchamendy in the San
Joaquin Valley, Kern County, Calif.

The new variety ‘Wonderful Pistachio Rootstock #4’ is
characterized by producing large leaves, reddish-green new
foliage, dark green mature foliage and upright habits with
rounded crown. The new variety is useful as a rootstock to
nut bearing pistachio.

The male parent is *P. integerrima* (unpatented) and the
female parent is *P. atlantica* (unpatented). The date of first
planting was 1996, and the date of first flowering was 2000.

The new variety ‘Wonderful Pistachio Rootstock #4’ was
first asexually propagated in 2013 by Eric Mercure by tissue

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culture in the Southern San Joaquin Valley in Kern County,
Calif. and established and transmitted through succeeding
propagation by air-layering.

5 The new variety ‘Wonderful Pistachio Rootstock #4’
differs from its male parent *P. integerrima* in that the leaves
and leaflets are shorter. Also, the leaflet base is more rounded
in the new variety. In addition, the leaves are less red when
emerging and fall off sooner.

10 The new variety ‘Wonderful Pistachio Rootstock #4’
differs from its female parent *P. atlantica* in that new variety
is more vigorous and is believed to be more resistant to
verticillium disease. The leaflets of the new variety are
smaller and less rounded with a faster growth rate. The new
15 variety has an overall larger size canopy.

The new variety can be distinguished from other available
varieties by its yield characteristics. The closest available
varieties are Integerrima ‘Pioneer Gold’ and UCB1, an
20 *atlantica*×*integerrima* hybrid. Yields on *P. vera* have been
observed to be consistently higher on mature trees on the
new rootstock variety when compared to Pioneer Gold and
UCB1. The new variety ‘Wonderful Pistachio Rootstock #4’
has a 65% improved yield over the average yield from *P.*
25 *vera* on UCB1. The yield of the new variety ‘Wonderful
Pistachio Rootstock #4’ was measured from 2004-2013.

The new variety ‘Wonderful Pistachio Rootstock #4’ can
also be distinguished from ‘Pioneer Gold’ by the leaf shape.

30 The new ‘Wonderful Pistachio Rootstock #4’ has been
shown to maintain its distinguishing characteristics through
successive asexual propagations by, for example, tissue
culture and air layering.

Variations of the usual magnitude from the characteristics described herein may occur with changes in growing conditions, irrigation, fertilization, pruning, management and with climatic variation.

BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying color photographic illustration FIG. 1 shows a mature tree, with foliage, of the new variety 'Wonderful Pistachio Rootstock #4'.

FIGS. 2 and 3 show a close up of the foliage. The colors of photographic illustration are as nearly true as is reasonably possible in a color representation of this type.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Throughout this specification, color names beginning with a small letter signify that the name of that color, as used in common speech, is aptly descriptive. Color names beginning with a capital letter designate values based upon The R.H.S. Colour Chart, published by The Royal Horticultural Society, London, England, 5th edition, 2007.

The descriptive matter which follows pertains to 'Wonderful Pistachio Rootstock #4' grown in the vicinity of the Southern San Joaquin Valley in Ken County, Calif. during 2002 to present, and is believed to apply to plants of the variety grown under similar conditions of soil and climate elsewhere.

PLANT

General:

Growth.—Upright tree with a rounded crown reaching 70-100 feet in height.

FOLIAGE

Leaves:

Number of leaflets.—7-9.

Average length.—Long, approximately 8-10 inches.

Average width.—Medium, approximately 5-6 inches.

Leaflets:

Size.—Medium, approximately 3 inches.

Shape.—Lanceolate.

Length.—Medium, approximately 2.5-3 inches.

Color of new leaflets.—About Dark Greyed-purple 183B.

Color of old leaflets.—About Dark Green 137A, Dark Green 137B and Yellow-Green 147B.

Edge.—Entire.

Petiole.—Petiolated.

Arrangement of petiole.—Pinnately compound.

Arrangement of stems.—Opposite.

Shape of leaf at apex.—Acuminate.

Shape of leaf at base.—Acute.

Margin.—Entire.

Venation.—Pinnate.

Vein color.—About Dark Green 137A, Dark Green 137B and Yellow-Green 147B.

Texture of top surface.—Glabrous.

Texture of bottom of surface.—Glabrous.

Ribs:

Length.—Approximately 6-8 inches.

Color.—About Dark Greyed-Purple 183A-B to Medium Yellow-Green 144A-B, and underside color About Medium Yellow-Green 144B.

Petiole:

Length.—Approximately 2 inches.

Color.—About Dark Greyed-Purple 183B to Medium Yellow-Green 144A-B.

Diameter.—Less than 1/8 inch.

Growth:

Trunk shape.—Upright.

Trunk color.—About Dark Brown 200B with fissures About Medium Grey-Brown 199D.

Tree height.—Approximately 4-5 feet prior to budding of the nut producing scion in July-September.

Tree spread.—None, as the rootstock is grown as a single stem.

Trunk diameter.—Large, approximately 1/2 to 3/4 inches prior to budding. Diameter at the time of maturity is unknown.

Bark texture.—Striated when young and slightly furrowed with age.

Vegetative bud size.—Approximately 1/8 "-1/4.

Vegetative bud color.—Reddish-gray.

What is claimed is:

1. A new and distinct variety of pistachio tree as herein illustrated and described.

* * * * *



FIG. 1



FIG. 2



FIG. 3

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : PP27,319 P3
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DATED : November 1, 2016
INVENTOR(S) : Joseph MacIlvaine, Eric Mercure and John Etchamendy

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

In Column 1 at Line 17, Change "Macllvine-" to -- MacIlvaine --.

In Column 3 at Line 26, Change "Ken" to -- Kern --.

In Column 4 at Lines 15 and 16, Change "Globrous-" to -- Glabrous --.

Signed and Sealed this
Ninth Day of October, 2018



Andrei Iancu
Director of the United States Patent and Trademark Office