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

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(54) ***THUJA* PLANT NAMED 'SMTOYB'**

(50) Latin Name: ***Thuja occidentalis***
Varietal Denomination: **SMTOYB**

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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 0 days.

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(51) **Int. Cl.**
A01H 7/00 (2006.01)

(52) **U.S. Cl.**
USPC **Plt./213**

(58) **Field of Classification Search**
USPC Plt./213
See application file for complete search history.

(56) **References Cited**

PUBLICATIONS

UPOV hit on SMTOYB, PLUTO: Plant Variety Database, Oct. 31, 2012.*

* cited by examiner

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(57) **ABSTRACT**

A new and distinct cultivar of *Thuja* plant named 'SMTOYB', characterized by its relatively compact and upright plant habit; narrow pyramidal plant form; vigorous growth habit; moderate to fast growth rate; dense and bushy form; bright yellow green-colored leaves; bright yellow green coloration maintained during the winter; and good winter hardiness and wind resistance.

2 Drawing Sheets

Botanical designation: *Thuja occidentalis*.
Cultivar denomination: 'SMTOYB'.

BACKGROUND OF THE INVENTION

The present invention relates to a new and distinct cultivar of *Thuja* plant, botanically known as *Thuja occidentalis*, commonly known as American Arborvitae and hereinafter referred to by the name 'SMTOYB'.

The new *Thuja* plant is a product of a planned breeding program conducted by the Inventor in Grand Haven, Mich. The objective of the breeding program was to develop new *Thuja* plants with a compact plant habit.

The new *Thuja* plant originated from an open-pollination during the spring of 2003 of the *Thuja occidentalis* 'Brandon', not patented, as the female, or seed parent and an unknown selection of *Thuja occidentalis* as the male, or pollen, parent. The new *Thuja* plant was discovered and selected by the Inventor during the spring of 2007 as a plant within the progeny of the stated open-pollination in a controlled outdoor nursery environment in Grand Haven, Mich.

Asexual reproduction of the new *Thuja* plant by hardwood cuttings in a controlled environment in Grand Haven, Mich. since November, 2007, has shown that the unique features of this new *Thuja* plant are stable and reproduced true to type in successive generations.

SUMMARY OF THE INVENTION

Plants of the new *Thuja* have not been observed under all possible environmental conditions and cultural practices. The phenotype may vary somewhat with variations in environmental conditions such as temperature and light intensity without, however, any variance in genotype.

The following traits have been repeatedly observed and are determined to be the unique characteristics of 'SMTOYB'. These characteristics in combination distinguish 'SMTOYB' as a new and distinct *Thuja* plant:

1. Relatively compact and upright plant habit; narrow pyramidal plant form.
2. Vigorous growth habit; moderate to fast growth rate.
3. Dense and bushy form.
4. Bright yellow green-colored leaves; bright yellow green coloration maintained during the winter.
5. Good winter hardiness and wind resistance.

Plants of the new *Thuja* can be compared to plants of the female parent, 'Brandon'. Plants of the new *Thuja* differ primarily from plants of 'Brandon' in leaf color.

Plants of the new *Thuja* can be compared to plants of *Thuja occidentalis*, 'Sunkist', not patented. In side-by-side comparisons conducted in Grand Haven, Mich., plants of the new *Thuja* differed primarily from plants of 'Sunkist' in the following characteristics:

1. Plants of the new *Thuja* grew faster than plants of 'Sunkist'.
2. Plants of the new *Thuja* and 'Sunkist' differed in leaf color.
3. Plants of the new *Thuja* were more winter hardy and wind resistant than plants of 'Sunkist'.

BRIEF DESCRIPTION OF THE PHOTOGRAPHS

The accompanying colored photographs illustrate the overall appearance of the new *Thuja* plant showing the colors as true as it is reasonably possible to obtain in colored reproductions of this type. Colors in the photographs may differ

slightly from the color values cited in the detailed botanical description which accurately describe the colors of the new *Thuja* plant.

The photograph on the first sheet comprises a side perspective view of a typical plant of 'SMTOYB'.

The photograph on the second sheet is a close-up view of a typical plant of 'SMTOYB'.

DETAILED BOTANICAL DESCRIPTION

The aforementioned photographs and following observations, measurements and values describe plants grown during the spring and summer in ground beds in an outdoor nursery in Grand Haven, Mich. and under cultural practices typical of commercial *Thuja* plant production. Plants were four years old when the photograph and description were taken. In the following detailed description, color references are made to The Royal Horticultural Society Colour Chart, 2001 Edition, except where general terms of ordinary dictionary significance are used.

Botanical classification: *Thuja occidentalis* 'SMTOYB'.

Parentage:

Female, or seed, parent.—*Thuja occidentalis* 'Brandon', not patented.

Male, or pollen, parent.—Unknown selection of *Thuja occidentalis*, not patented.

Propagation:

Type.—By hardwood cuttings.

Time to initiate roots, summer.—About 45 days at temperatures about 10° C. to 27° C.

Time to produce rooted young plants, summer.—About six months at temperatures about 10° C. to 27° C.

Root description.—Thick to fine, somewhat fibrous.

Rooting habit.—Freely branching; dense.

Plant description:

Plant and growth habit.—Perennial evergreen shrub; relatively compact and upright plant habit and narrowly pyramidal plant form; vigorous growth habit; moderate to fast growth rate.

Plant height.—About 2 meters.

Plant diameter, base.—About 1.25 meters.

Branching habit.—Freely branching habit with numerous lateral branches developing per plant; dense and bushy habit.

Lateral branch description.—Length: About 35 cm. Diameter: About 3.5 mm. Internode length: Less than 1 mm. Aspect: Main branch, upright; lateral branches about 19° from stem axis. Strength: Strong. Texture, developing branches: Scaly; glabrous. Texture, main trunk: Woody. Color, developing branches: Close to 167B. Color, developed branches: Close to 178A.

Leaf description.—Appearance and arrangement: Flattened and closely appressed, scale-like; opposite, simple; sessile. Length: About 1 mm. Width: About 0.5 mm. Shape: Ovate to lanceolate. Apex: Acute. Base: Obtuse. Margin: Entire. Venation pattern: Parallel. Texture: Smooth, glabrous. Fragrance: Aromatic and cedar-like. Color: Developing and fully expanded leaves, upper surface: Close to 151C; venation, close to 151C; bright yellow green coloration is maintained during the winter. Developing and fully expanded leaves, lower surface: Close to 151A; venation, close to 151A.

Cone description: Cone development has not been observed on plants of the new *Thuja*.

Garden performance: Plants of the new *Thuja* have been observed have good garden performance, good winter hardiness, to be wind-tolerant and to tolerate temperatures ranging from about −29° C. to about 39° C.

Pathogen & pest resistance: Plants of the new *Thuja* have been observed to be resistant to root rot pathogens. Plants of the new *Thuja* have not been observed to be resistant to pests and other pathogens common to *Thuja* plants.

It is claimed:

1. A new and distinct *Thuja* plant named 'SMTOYB' as illustrated and described.

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