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

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(54) **THUJA PLANT NAMED ‘SMTOTM’**

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

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patent is extended or adjusted under 35
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(51) **Int. Cl.**
A01H 5/00 (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

Springmeadownursery.com/plant/83940, Thin Man ‘SMTOTM’
arborvitae, © 2010.*

* cited by examiner

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(57) **ABSTRACT**

A new and distinct cultivar of *Thuja* plant named
‘SMTOTM’, characterized by its upright plant habit; narrow
columnar plant form; vigorous growth habit; moderate
growth rate; dense and bushy form; bright green-colored
leaves; bright green coloration maintained during the winter;
and good winter hardiness and wind resistance.

1 Drawing Sheet

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Botanical designation: *Thuja occidentalis*.
Cultivar denomination: ‘SMTOTM’.

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 ‘SMTOTM’.

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* ‘Ada’, not
patented, as the female, or seed parent and an unknown selec-
tion 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 envi-
ronment 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 environ-
mental conditions such as temperature and light intensity
without, however, any variance in genotype.

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

1. Upright plant habit; narrow columnar plant form.
2. Vigorous growth habit; moderate growth rate.
3. Dense and bushy form.
4. Bright green-colored leaves; bright 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, ‘Ada’. Plants of the new *Thuja* differ primarily
from plants of ‘Ada’ in the following characteristics:

1. Plants of the new *Thuja* are narrower than plants of
‘Ada’.
 2. Plants of the new *Thuja* grow faster than plants of ‘Ada’.
- Plants of the new *Thuja* can be compared to plants of *Thuja*
occidentalis, ‘DeGroot’s Spire’, not patented. In side-by-side
comparisons conducted in Grand Haven, Mich., plants of the
new *Thuja* differed primarily from plants of ‘DeGroot’s
Spire’ in the following characteristics:
1. Plants of the new *Thuja* were narrower than plants of
‘DeGroot’s Spire’.
 2. Plants of the new *Thuja* grew faster than plants of
‘DeGroot’s Spire’.
 3. Plants of the new *Thuja* maintained were more winter
hardy than plants of ‘DeGroot’s Spire’.

BRIEF DESCRIPTION OF THE PHOTOGRAPH

The accompanying colored photographs illustrate the over-
all appearance of the new *Thuja* plant showing the colors as
true as it is reasonably possible to obtain in colored reproduc-
tions 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 comprises a side perspective view of a typical plant of 'SMTOTM'.

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 photographs 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* 'SMTOTM'.

Parentage:

Female, or seed, parent.—*Thuja occidentalis* 'Ada', 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; upright plant habit and narrowly columnar plant form; vigorous growth habit; moderate growth rate.

Plant height.—About 70 cm.

Plant diameter, base.—About 16 cm.

Branching habit.—Freely branching habit with about six primary lateral branches developing per plant with numerous secondary and tertiary branches; dense and bushy habit.

Lateral branch description.—Length: About 16 cm. Diameter: About 3 mm. Internode length: About 3 cm.

Aspect: Main branch, upright; lateral branches about 10° from stem axis. Strength: Strong. Texture, developing branches: Scaly; glabrous. Texture, main trunk: Woody. Color, developing branches: Close to 166D. Color, developed branches: Close to 165A.

Leaf description.—Appearance and arrangement: Flattened and closely appressed, scale-like; opposite, simple; sessile. Length: About 3 mm. Width: About 2 mm. Shape: Ovate. Apex: Acute. Base: Obtuse. Margin: Entire. Venation pattern: Parallel. Texture: Smooth, glabrous. Fragrance: Aromatic and cedar-like. Color: Developing leaves, upper and lower surfaces: Close to 143A; bright green coloration is maintained during the winter. Fully expanded leaves, upper and lower surfaces: Close to 141A; venation, close to 141A.

Cone description:

Female flowers.—Arrangement: Solitary, terminal. Diameter: About 1 mm to 2 mm. Shape: Spherical. Color: Initially light green becoming closer to pinkish red with development.

Male flowers.—Arrangement: Solitary, axillary. Length: About 1 cm. Shape: Ellipsoidal. Color: Reddish brown.

Seeds.—Length: About 1 cm. Diameter: About 5 mm. Color: Close to 144A.

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 -31° C. to about 38° 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 'SMTOTM' as illustrated and described.

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