



(12) **United States Plant Patent**  
**Dozier, Jr. et al.**

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(54) **CHESTNUT PLANT NAMED ‘AU GOBBLER I’**

(50) Latin Name: *Castanea mollissima* Blume  
Varietal Denomination: **AU Gobbler I**

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patent is extended or adjusted under 35  
U.S.C. 154(b) by 0 days.

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US 2009/0193549 P1 Jul. 30, 2009

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

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

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

(56) **References Cited**

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(57) **ABSTRACT**

‘AU Gobbler I’ is a new and distinct Chinese chestnut culti-  
var that is precocious and produces a large crop annually of  
small nuts that mature early and start dropping about August  
25. Nut drop continues for a 4 to 5 week period. The nuts  
mature and start dropping 3–4 weeks before most cultivars.  
The early nut drop and small nut size of ‘AU Gobbler I’  
makes it ideal for use as a food source for turkey and other  
wildlife species. ‘AU Gobbler I’ is an excellent companion  
cultivar to ‘AU Gobbler II’ as nut drop begins about 10 days  
earlier than nut drop of ‘AU Gobbler II’ and extends the  
season of available food supply for turkey and other wildlife.  
The major nut drop period of ‘AU Gobbler I’ occurs before  
the major nut drop period of ‘AU Gobbler II’.

**3 Drawing Sheets**

**1**

Latin name of the genus and species of the plant claimed:  
*Castanea mollissima* Blume.

Variety denomination: ‘AU Gobbler I’.

#### BACKGROUND OF THE INVENTION

A Chinese chestnut planting was established at Auburn  
University, Auburn, Ala., from nuts collected in China. The  
planting was established on the United States Department of  
Agriculture Horticulture Farm which in later years became  
the Mainstation Horticulture Farm. Precocious and prolific-  
bearing, blight resistant seedlings were selected for nut  
appearance, size and quality. Each generation of seedlings  
were the product of controlled mass pollination from the  
most promising seedlings selected from the previous genera-  
tion. ‘AU Cropper’, ‘AU Leader’ and ‘AU Homestead’ were  
released from a second generation of approximately 2000  
seedlings. A planting of third generation seedlings from con-  
trolled mass pollination of ‘AU Leader’, ‘AU Homestead’  
and ‘AU Cropper’ was established at the Auburn University  
Piedmont Substation at Camp Hill, Ala.

#### SUMMARY OF THE INVENTION

‘AU Gobbler I’ is an open pollinated seedling of ‘AU  
Leader’.

**2**

The present invention relates to a new and distinct Chi-  
nese chestnut cultivar that is precocious, produces a heavy  
crop annually, average nut size is small (7.7 g) and begins  
nut drop about August 25 and continues for a 4 to 5 week  
period. The nuts mature and start dropping 3–4 weeks before  
most chestnut cultivars. The large crop of small nuts pro-  
duced by ‘AU Gobbler I’ chestnut is an excellent food source  
for turkey and other wildlife. Its small nut size is ideal for  
consumption by turkey. The plant has not been affected by  
chestnut gall wasp or chestnut blight.

‘AU Gobbler I’ is an excellent companion cultivar to ‘AU  
Gobbler II’ as nut drop begins about 10 days earlier than nut  
drop of ‘AU Gobbler II’ and extends the season of available  
food supply for turkey and other wildlife. ‘AU Gobbler II’ is  
disclosed in U.S. patent application Ser. No. 12/012,111,  
filed on Jan. 30, 2008, and entitled “CHESTNUT PLANT  
NAMED ‘AU GOBBLER II’”, which is hereby incorporated  
by reference.

The new cultivar is able to be asexually reproduced by  
budding or grafting onto a seedling Chinese chestnut root-  
stock. The unique characteristics come true to form and are  
established and transmitted through asexual propagation.



BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a photograph of nuts of the ‘AU Gobbler I’ cultivar.

FIG. 2 is a photograph of nuts of the ‘AU Gobbler I’ cultivar.

FIG. 3 is a photograph of a tree of the ‘AU Gobbler I’ cultivar.

DETAILED BOTANICAL DESCRIPTION

The Chinese chestnut, *Castanea mollissima* Blume, is a cold hardy temperate zone species native to China. It can be grown between 30' and 50' latitudes. The Chinese chestnut is resistant to chestnut blight fungus *Cryphonectria parasitica*. Generally, Chinese chestnuts are grown on a wide range of soils, but well-drained, deep and fertile soils are considered the best. Soils should be slightly acidic with pH 5.6–6.5. The name *mollissima* means soft hair and this species is recognized by dense hair on young leaves and downy yellow terminal parts of the shoots in winter. The leaf blade is thicker, and, in general, mature leaves are broader than those of other species. The nuts have a small scar or hilum. The pellicle of thin membranous skin on the nuts is thin and peels readily from the kernel. The trees are spreading type and long lived with a round top. The trees have bark with furrows and buds with 3–4 scales and leaves are 2 ranked, serrated with numerous parallel veins.

Chestnuts are monoecious and staminate flowers appear on erect cylindrical catkins with 10–20 stamens and 6-parted calyx. Pistillate flowers are borne on the lower part of the upper staminate catkins and rarely on separate catkins, usually 3 in a prickly symmetrical involucre with 7–9 styles and a 6-celled ovary. Nuts are small, brown with a pale scar at the base. Generally, 1–3 nuts per involucre or bur are present.

The ‘AU Gobbler I’ cultivar is a tall upright tree. The overall tree shape is obovate, with diffuse and upright branches. The original 15-year old ‘AU Gobbler I’ tree is 10.97 m tall, has a diameter at breast height of 35.9 cm, canopy width of 10.11 meters and covers an area of 80.24 square meters. The ‘AU Gobbler I’ produces a small nut that has a 5-year average weight of 7.7 grams. The average nut length is 1.04 inches (26.4 mm) and average nut width is 1.22 inches (31.0 mm). The nuts ripen early, start dropping by about August 25 and continue to drop over a 4 to 5 week period. The nuts mature and start dropping 3–4 weeks before most cultivars. The tree started producing nuts the third year after planting, is very prolific and produces annually.

The early nut drop and small nut size of ‘AU Gobbler I’ makes it ideal for use as a food source for turkey and other wildlife. The small nut is excellent for turkeys to use as a high energy food source at a time when food is scarce in native woodlands.

In the planting at the Piedmont Substation, Camp Hill, Ala., accurate yields could not be obtained due to extremely heavy wildlife (deer and turkey) feeding. Therefore, the trees were rated for crop load each year and ‘AU Gobbler I’ has been rated as annual bearer of large crops each season. In the fall of 2006, individual trees were caged with 6 foot (1.83 m) tall chicken wire prior to nut drop to exclude wildlife and nuts were picked up daily from the beginning through completion of nut drop. The original 15-year old ‘AU Gobbler I’ tree produced 127 pounds (57.73 kg) of nuts in 2006. This is a higher yield than that reported by similar aged trees.

The table below illustrates the specific differences between the ‘AU Gobbler I’ cultivar and the ‘Revival’ cultivar.

The botanical details of this new and distinctive variety of chestnut tree - with color definitions (except those in common color terms) referenced to Royal Horticultural Society’s Colour Chart (RHS) and color was also determined using an electronic spectrophotometer to determine hue angle and Chroma (spectrophotometer model CM-2002; Minolta Camera Co., Japan). ‘AU GOBBLER 1’ CHESTNUT	
Tree:	
Size (at maturity) - large - fifteen year old original tree is 10.97 meters tall with a canopy width of 10.11 meters and a canopy area of 80.24 sq. meters	
Tree shape is obovate.	
Vigor - very vigorous	
Trunk:	
Form - upright, with branches high and diffuse	
Texture - relatively smooth	
Color of bark - greyed-green RHS 197A	
Chroma C* 13.16, hue angle 77.24	
Branches:	
Form - upright	
Texture - relatively smooth	
Lenticels - few, small	
Branching habit - high and diffuse, spreading in upper regions of tree.	
Color - new wood: brown, RHS N200A, Chroma C* 10.21, hue angle 72.40; mature wood: greyed-green RHS 197A	
Chroma C* 12.01, hue angle 88.37	
Foliage:	
Quantity - abundant	
Density - dense	
Leaves:	
Size - large. Length (cm) 17.6 (14.2-24.3) [20]	
width (cm) 6.5 (4.9-8.7) [20]	
leaf ratio 2.8 (2.2-3.7) [20]	
Shape - broadly elliptic to oblong	
leaf tip- acute to occasionally acuminate	
leaf base- rounded; oblique	
Thickness- thick. Leaf venation 1* pinnate: 2* ± parallel, prominent abaxially	
Texture - moderately coriaceous (thick)	
Margin - coarsely serrate; teeth spreading	
Petiole - length 0.8 cm (0.6-1.1) [20]	
Petiole pubescence- glabrous to sparsely hairy	
Color- adaxial surface, glabrous blade; glabrous veins, rarely with sparse simple hairs, dark green; moderately shiny, RHS 147A,	
Chroma C* 13.63, hue angle 122.39	
abaxial surface, densely stellate hairs on blade; glabrous veins, light green RHS 147B, Chroma C* 17.47, hue angle 112.24	
Bloom:	
Amount of bloom - heavy	
Color - at anthesis, RHS 161D greyed-yellow group, RHS 157D green-white group, RHS 155C white group	
Blooming period - mid-May. After foliation in April.	
Age at which tree starts flowering - early, 2-3 years after graft replacement.	
The botanical details of this variety of chestnut tree-with color definitions (except those in common color terms) referenced to Maerz and Paul Dictionary of Color - are as follows: ‘REVIVAL’	
Tree:	
Size (at maturity) - large	
Vigor - very vigorous	
Trunk:	
Form - upright with branches spreading in upper reaches of tree.	



-continued
Texture - relatively smooth Color of bark - Silvergray (13-A-1) <u>Branches:</u>  Form - strong Texture - relatively smooth Lenticels - few, small Branching habit - spreading in upper region of tree Color - new wood: reddish brown and glossy, mature wood: silver gray <u>Foliage:</u>  Quantity - abundant Density - dense <u>Leaves:</u>  Size - large. Average length - 5-7" (including petiole). Average width - 2" Shape - oblong with acute tip and rounded base Thickness - thick Texture - smooth Margin - dentate Petiole - length: medium. Thickness: medium. Color - Top side - glossy dark green (22-L-12). Under side - lighter green (21-D-7). <u>Bloom:</u>  Amount of bloom - heavy Color - cream white (17-B-1) Blooming period - late. After leaf out in April Age at which tree starts flowering - early; 2-3 years years after graft replacement. Male flower - Catkin length (cm) - 12.4 (9.4-15.4) [10] Male flower - stamen number per catkin - 11.3 (10-13) [10] Female flower - flower number per bur - 2.8 Female flower - style number per flower 8.4 (7-10) [11] <u>Crop:</u>  Bearing - regular annual, bearer Productivity - prolific Ripening period - long, nuts begin dropping about August 25 and continue for a 4-5 week period. Distribution of nuts on tree - well distributed, fruits on terminals with 2-4 burs per terminal. Tenacity - burs crack while on tree and nuts release and drop from bur. <u>Hull:</u>  Description - spiny, round bur Size - 1.8-2.3" in diameter Number of nuts - 2-3 per bur Dehiscence - splits easily when still on tree Color - yellow-green at dehiscence, RHS N144C <u>Nut:</u>  Size - small; average size - 1.04" × 1.22" × 0.65". Average weight - 7.7 grams - 59 (53-90) nuts per pound. Form - flattened on 1 side, occ.2; mostly hemispheric on other side; broadly rounded basally; rounded apically with a small tip. Blossom end - small pointed tip Basal end - flattened Color - dark brown, lustrous; RHS 200B, Chroma C* 12.96, hue angle 38.86 Pubescence - mixed long and short, fine white hairs densely covering the distal ½ end of the nut, glabrous elsewhere Shell - thin Hardness of shell - relatively hard, yet not rigid Texture of shell - smooth Percentage of kernel to nut - very high - 90-95% <u>Kernel:</u>  Size - almost as large as nut size Form - same as nut shape Pellicle - thin Flavor - excellent, very sweet Color - light straw color, RHS 153D, Chroma C* 53.46, hue angle 82.55 Resistance to insects: no unusual susceptibilities noted Resistance to disease: no susceptibilities to disease noted

-continued
The chestnut tree and its nuts herein described may vary in slight detail due to climatic and soil conditions under which the variety may be grown; the present description being of the variety as grown in Camp Hill, Ala. <u>Crop:</u>  Bearing - regular (yearly) bearer Productivity - prolific Ripening period - short. September 15-October 1. Distribution of nuts on tree - well distributed Tenacity - burrs crack while on tree and nuts easily release, many falling by themselves <u>Hull:</u>  Description - spiny, round burr Size - 3-4" in diameter Number of nuts - 2-3 per burr Dehiscence - splits easily when still on tree. Some entire burrs split and fall to ground Color - brown (15-A-8) <u>Nut:</u>  Size - large. Average size - 1 ½" × 1 ½" × 1" thick. Average weight - 24-32 nuts per pound Form - broad and ovoid on one side, flat on other side Blossom end - pointed tip Basal end - flattened Color - India Red (7-L-6). Shell - thin Hardness of shell - relatively hard, yet not rigid Texture of shell - smooth Percentage of kernel to nut - very high (95%) <u>Kernel:</u>  Size - almost as large as nut size Form - same as nut shape Pellicle - thin Flavor - excellent. Very sweet. Color - Oyster white (10-B-1) Resistance to insects: no unusual susceptibilities noted Resistance to disease: very high inherent resistance to chestnut bark fungus ( <i>Endothia parastica</i> ), no other susceptibilities to any other disease The chestnut tree and its nuts herein described may vary in slight detail due to climatic and soil conditions under which the variety may be grown; the present description being of the variety as grown in Alachua, Fla.

‘AU Buck I’ is different from ‘AU Gobbler I’ in several ways. For example, the size of the trees, the trunk forms and colors, the branches, the leaves and the nuts have differences. Specifically, the ‘AU Buck I’ tree is shorter with a canopy width and canopy area much smaller than the ‘AU Gobbler I’ tree. The ‘AU Buck I’ branches are spreading, dense, low and grey-brown; whereas, the ‘AU Gobbler I’ branches are upright, high, diffuse and brown (new) or greyed-green (mature). The leaves differ in size, shape, texture, margin, petiole and color. The average weight of the nuts of ‘AU Buck I’ is 9.3 grams versus 7.7 grams for ‘AU Gobbler I’. Furthermore, ‘AU Buck I’ has roughly 49 nuts per pound, and ‘AU Gobbler I’ has roughly 59 nuts per pound.

‘AU Buck II’ is different from ‘AU Gobbler I’ in several ways. For example, the size of the trees, the trunk forms and colors, the branches, the leaves, the crop and the nuts have differences. Specifically, the ‘AU Buck II’ tree is shorter with a canopy area larger than the ‘AU Gobbler I’ tree. The ‘AU Buck II’ branches are upright/spreading, low/spreading and brown (new) or grey-brown (mature); whereas, the ‘AU Gobbler I’ branches are upright, high, diffuse and brown (new) or greyed-green (mature). The leaves differ in size,

shape, margin, petiole and color. The ripening period for the 'AU Buck II' is around September 14 and continues for a 4–5 week period, but the 'AU Gobbler I' ripening period is around August 25 and continues for 4–5 weeks. The average weight of the nuts of 'AU Buck II' is 16.6 grams versus 7.7 grams for 'AU Gobbler I'. Furthermore, 'AU Buck II' has roughly 27 nuts per pound, and 'AU Gobbler I' has roughly 59 nuts per pound.

'AU Buck III' is different from 'AU Gobbler I' in several ways. For example, the size of the trees, the trunk forms and colors, the branches, the leaves, the crop and the nuts have differences. Specifically, the 'AU Buck III' tree is shorter with a canopy area smaller than the 'AU Gobbler I' tree. The 'AU Buck III' branches are spreading and brown (new) or grey-brown (mature); whereas, the 'AU Gobbler I' branches are upright and brown (new) or greyed-green (mature). The leaves differ in size, petiole and color. The ripening period for the 'AU Buck III' is around September 25 and continues for a 4–5 week period, but the 'AU Gobbler I' ripening period is around August 25 and continues for 4–5 weeks. The average weight of the nuts of 'AU Buck III' is 10.9 grams versus 7.7 grams for 'AU Gobbler I'. Furthermore, 'AU Buck III' has roughly 42 nuts per pound, and 'AU Gobbler I' has roughly 59 nuts per pound.

'AU Buck IV' is different from 'AU Gobbler I' in several ways. For example, the size of the trees, the trunk forms and colors, the branches, the leaves, the crop and the nuts have differences. Specifically, the 'AU Buck IV' tree is shorter with a canopy width and a canopy area smaller than the 'AU Gobbler I' tree. The 'AU Buck IV' branches are upright to spreading and grey-brown (new) or greyed-green (mature); whereas, the 'AU Gobbler I' branches are upright and brown (new) or greyed-green (mature). The leaves differ in size, shape, texture, margin and color. The ripening period for the 'AU Buck IV' is around October 10 and continues for a 5–6 week period, but the 'AU Gobbler I' ripening period is around August 25 and continues for 4–5 weeks. The average weight of the nuts of 'AU Buck IV' is 15.5 grams versus 7.7

grams for 'AU Gobbler I'. Furthermore, 'AU Buck IV' has roughly 29 nuts per pound, and 'AU Gobbler I' has roughly 59 nuts per pound.

'AU Premier' is different from 'AU Gobbler I' in several ways. For example, the size of the trees, the branches, the leaves, the crop and the nuts have differences. Specifically, the 'AU Premier' tree is shorter with a canopy width and a canopy area smaller than the 'AU Gobbler I' tree. The 'AU Premier' branches are strong and low/dense/spreading; whereas, the 'AU Gobbler I' branches are upright and high/diffuse. The leaves differ in size, shape, thickness, texture, margin and color. The ripening period for the 'AU Premier' is early September through mid-November, but the 'AU Gobbler I' ripening period is around August 25 and continues for 4–5 weeks. The average weight of the nuts of 'AU Premier' is 1.26 grams versus 7.7 grams for 'AU Gobbler I'. Furthermore, 'AU Premier' has roughly 360.3 nuts per pound, and 'AU Gobbler I' has roughly 59 nuts per pound.

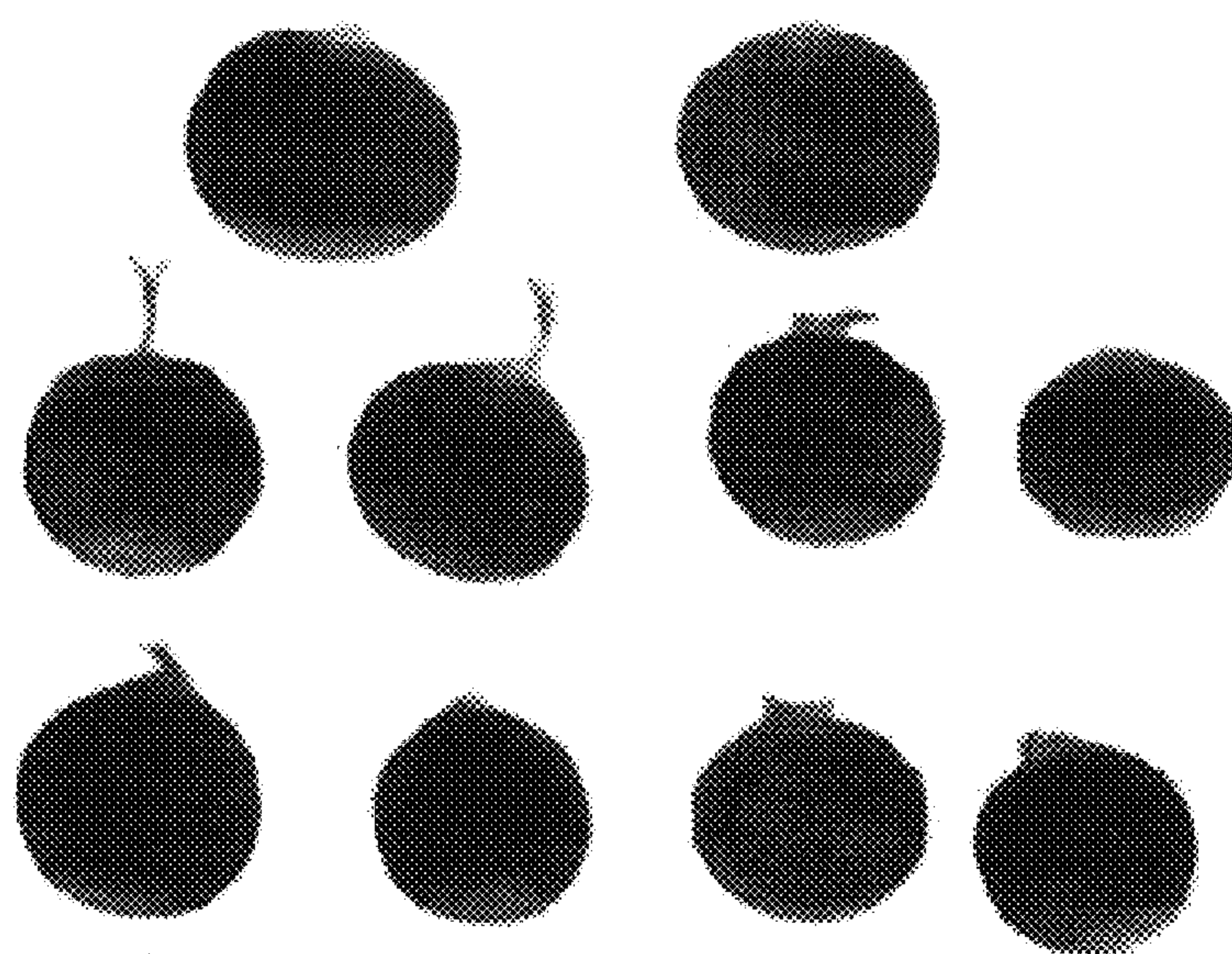
'AU Encore' is different from 'AU Gobbler I' in several ways. For example, the size of the trees, the branches, the leaves, the crop and the nuts have differences. Specifically, the 'AU Encore' tree is shorter with a canopy width and a canopy area smaller than the 'AU Gobbler I' tree. The 'AU Encore' branches are strong and low/dense/spreading; whereas, the 'AU Gobbler I' branches are upright and high/diffuse. The leaves differ in size, shape, thickness, texture, margin and color. The ripening period for the 'AU Encore' is late September through late November, but the 'AU Gobbler I' ripening period is around August 25 and continues for 4–5 weeks. The average weight of the nuts of 'AU Encore' is 2.4 grams versus 7.7 grams for 'AU Gobbler I'. Furthermore, 'AU Encore' has roughly 189.2 nuts per pound, and 'AU Gobbler I' has roughly 59 nuts per pound.

What is claimed is:

1. A new and distinct cultivar of the species *Castanea mollissima* Blume named 'AU Gobbler I' as described and illustrated herein.

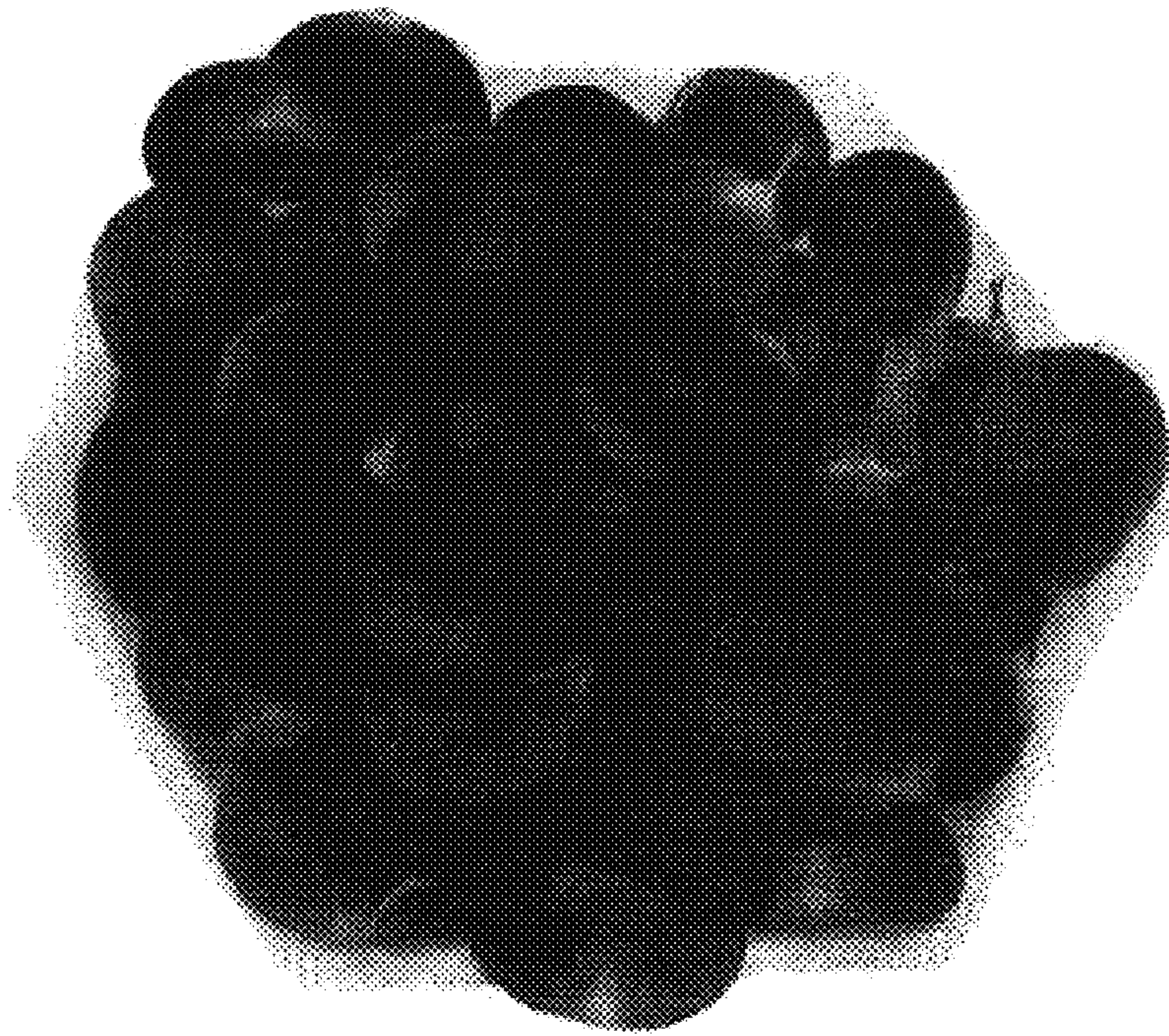
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**‘AU Gobbler I’**

**Fig. 1**



**‘AU Gobbler I’**

**Fig. 2**





**Fig. 3**



UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO. : PP 20,338 P3  
APPLICATION NO. : 12/012030  
DATED : September 22, 2009  
INVENTOR(S) : Dozier, Jr. et al.

Page 1 of 1

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

At column 3, third line under the heading "DETAILED BOTANICAL DESCRIPTION", please replace "32" and "50" with "32°" and "50°" so that the sentence reads

-- It can be grown between 30° and 50° latitudes. --

At column 4, under the heading "Leaves:", please replace "1" and "2" with "1°" and "2°" so that the sentence reads

-- Thickness- thick. Leaf venation 1° pinnate: 2° ± parallel, prominent abaxially --

At column 5, under the heading "Nut:", please remove the line break after the word "distal" so that the sentence reads

-- Pubescence - mixed long and short, fine white hairs densely covering the distal 1/8 of the nut, glabrous elsewhere --

Signed and Sealed this

Third Day of November, 2009

A handwritten signature in black ink that reads "David J. Kappos". The signature is written in a cursive, flowing style with a large initial 'D' and 'K'.

David J. Kappos  
*Director of the United States Patent and Trademark Office*