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

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(54) ***COLOCASIA* PLANT NAMED 'HAWAIIAN EYE'**

(50) Latin Name: ***Colocasia***
Varietal Denomination: **Hawaiian Eye**

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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 5/00 (2006.01)

(52) **U.S. Cl.** **Plt./373**

(58) **Field of Classification Search** Plt./373
See application file for complete search history.

Primary Examiner—S. B McCormick Ewoldt

(57) **ABSTRACT**

A new cultivar of cultivar of *Colocasia* plant named 'HAWAIIAN EYE' that is characterized by a combination of a medium to large size plant with large purple-green leaves, light purple veins, undulating purple margin, a matte finish and dark purple colored petioles. In combination these characteristics distinguish 'HAWAIIAN EYE' from all other varieties of *Colocasia* known to the inventor.

5 Drawing Sheets

Genus: *COLOCASIA*.
Species: *esculenia*.
Denomination: 'HAWAIIAN EYE'.

BACKGROUND OF THE INVENTION

The present invention relates to a new and distinct variety of *Colocasia* commonly known as the taro plant or elephant ears. *Colocasia* is grown as a food crop or for use as an ornamental for container or the landscape. The new cultivar is known botanically as *Colocasia esculenia* and will be referred to hereinafter by the cultivar name 'HAWAIIAN EYE'. 'HAWAIIAN EYE' is one of is one of five co-pending applications by the inventor relating to new cultivars of *Colocasia*. The other four co-pending applications are titled *Colocasia*. plant named 'Blue Hawaii' (U.S. application Ser. No. 12/006,576), *Colocasia* plant named 'Hilo Bay' (U.S. application Ser. No. No. 12/006,474) *Colocasia* plant named 'Diamond Head' (U.S. application Ser. No. 12/006,579) and *Colocasia* plant named 'Pineapple Princess' (U.S. application Ser. No. 12/006,581).

Colocasia is a tuberous rooted perennial which is native to tropical Asia and Polynesia. It grows to 1.5–2 m in height from starchy tubers. The leaves of *Colocasia* are heart-shaped and very large in size. The tuberous roots are cooked and eaten as a starchy staple in many tropical areas. It is also grown as ornamental plants for the landscape in warmer climates or as a container plant in colder areas.

The new *Colocasia* variety named 'HAWAIIAN EYE' is the product of a formal breeding program carried out in a cultivated area in Kula, Hi. The purpose of the breeding program is to develop new commercial varieties by combining attributes not found in currently commercially available varieties.

'HAWAIIAN EYE' is a seedling selection from the controlled pollination between the female parent an F1 hybrid line (not patented) from a cross between breeding line '2001-52' (not patented) and breeding line '2002-41' (not patented) and male parent, F1 hybrid line (not patented) from a cross between breeding line '2000-132' (not

patented) and breeding line '2000-139' (not patented). Initially designated as '2005-23', 'HAWAIIAN EYE' was derived from a single plant selected in 2005.

The new variety 'HAWAIIAN EYE' has large dark purple-green colored matte finish leaves with light purple colored venation and purple undulating leaf margin. 'HAWAIIAN EYE' produces uniform dark purple colored petioles when mature; young petioles are green to light burgundy in color. The leaves are ⅓ to ½ times larger than its female and male parents. The male parent exhibits greenish-purple colored leaves with a matte finish, a smooth margin, and light purple venation. The petioles are dark purple in color with a matte finish. The female parent exhibits smaller violet leaves with a purple spot on the upper leaf surface at the point of leaf and petiole attachment and an undulating margin. The petioles are of a dark purple in color. In these aspects, this new variety differs from its parents.

The closest comparison variety known to the inventor is 'Pineapple Princess' (patent application submitted), its closest commercial variety. 'HAWAIIAN EYE' produces large purple green colored, matte finish leaves with light purple colored venation and a purple slightly undulating leaf margin compared to 'Pineapple Princess' that produces a large yellow-green colored leaves with light purple veins, a matte finish, undulating purple leaf margins. 'HAWAIIAN EYE' produces uniform semi-glossy, dark purple colored petioles when mature compared with the light burgundy colored petioles of 'Pineapple Princess'. 'HAWAIIAN EYE' is a medium to medium-large size plant compared with 'Pineapple Princess' which is a small to medium sized compact plant.

The most commonly employed means of asexual propagation of the genus *Colocasia* is the excision and replanting of a plant shoot which consists of the apical 1 cm–2 cm portion of the plant corm with the attached basal 15 cm–20 cm portion of the petiole. In regions of the world where *Colocasia* is grown, this plant shoot is known as a "huli", and the means of propagation is known as "huli propagation". Asexual propagation of hulis of 'HAWAIIAN EYE' began in 2005 in Hawaii by the inventor using huli propaga-

tion whereby the apical shoots are separated from the plant by cutting the shoot at the top of the corm immediately above the newest leaf scar and planted. Evaluation in field and pot studies have shown the unique features of 'HAWAIIAN EYE' to be stable, uniform, and reproduces true to type in successive generations of asexual propagation.

SUMMARY OF THE INVENTION

The following traits have been repeatedly observed and represent the distinguishing characteristics of the new *Colocasia* variety named 'HAWAIIAN EYE'. In combination these traits set 'HAWAIIAN EYE' apart from all other varieties of *Colocasia* known to the inventor. 'HAWAIIAN EYE' has not been tested under all possible conditions and phenotypic differences may be observed with variations in environmental, climatic and cultural conditions, however, without any variance in genotype:

1. 'HAWAIIAN EYE' exhibits large saggitate-shaped purple-green colored leaves with light purple colored venation and a purple undulating leaf margin.
2. The surface of the leaves of 'HAWAIIAN EYE' is a matte finish.
3. 'HAWAIIAN EYE' produces uniform dark purple colored petioles when mature.

BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying color drawings FIGS. **1** to **5** illustrate the overall appearance of 'HAWAIIAN EYE' showing the colors as true as it is reasonably possible to obtain in colored reproductions of this type. Colors in the drawing may differ from the color values cited in the detailed botanical description, which accurately describe the actual colors of the new variety 'HAWAIIAN EYE'.

The drawing labeled as FIG. **1** shows 'HAWAIIAN EYE' grown from a huli after approximately 5 months.

The drawing labeled as FIG. **2** shows the semi glossy dark purple colored petioles of 'HAWAIIAN EYE'.

The drawing labeled FIG. **3** illustrates a sagittate 'HAWAIIAN EYE' mature leaf blade with light purple venation and slight undulating purple margin. Lamina is purple green with a matte finish. This drawing also illustrates that part of the leaf which is known as the "piko" namely the area of upper leaf surface which is present at the junction of the leaf blade with the petiole and from which three principal veins radiate.

The drawing labeled as FIG. **4** shows the underside of a mature leaf of 'HAWAIIAN EYE' with light purple lamina and purple primary and secondary venation.

The drawing labeled as FIG. **5** shows the spathe (sheath) that normally encloses the spadix.

The drawing labeled as FIG. **6** shows the spadix (inflorescence) of 'HAWAIIAN EYE'.

All drawings have been made from plants which were approximately 3 months old from a division and which have been grown out-of-doors. No growth regulators have been applied.

BOTANICAL DESCRIPTION OF THE PLANT

The following is a detailed description of the new *Colocasia* plant named 'HAWAIIAN EYE'. Data was collected front plants that were 3–6 months of age grown outside in Kula, Hi. as indicated. The color determinations are in accordance with the 2001 edition of The Royal Horticultural Society Colour Chart, London, England, except where general color terms of ordinary dictionary significance are used. The growing requirements are similar to other *Colocasia*.

Botanical classification:
Genus: *Colocasia.*
Species. *esculenta.*
Denomination: 'HAWAIIAN EYE'.
Common name: Taro or elephant ears.
Plant use: Food, container or landscape plant.
Cultural requirements: Cultural requirements are well draining soil or growing media, full sun to partial shade.
Root system: Fibrous.
Plant vigor: Vigorous.
Parentage:
Female parent.—An F1 hybrid plant from a cross between '2001-52' and '2002-41'.
Male parent.—An F1 hybrid plant from a cross between '2000-132' and '2000-139'.
Plant description: The plant has 4–6 suckers closely attached to the mother plant. A "mother plant" is the plant material which is first introduced into the soil to begin production. Typically, this plant material contains part of the huli and 2–3 leaf blades. This produces a "mother corm" which produces lateral shoots called 'cormels' which give rise to daughter plants. Daughter plants begin to appear above soil level about 2–3 months after planting of the mother plant.
Plant dimensions: 89 cm to 107 cm in height and 96.5 cm to 127 cm in width.
Plant hardiness: USDA Zone 7b.
Propagation: Propagation is accomplished by huli propagation and by tissue culture.
Huli Propagation: Root formation occurs immediately after transplanting. Propagation is complete when fully rooted Daughter plants appear above soil level around 2–3 months after huli planting.
Tissue Culture: Time to develop a new plant capable of growing on its own roots: 3 weeks.
Crop time (from propagation to a saleable 1 gallon container): 6–10 weeks at temperatures of 75 degrees Fahrenheit –65 degrees Fahrenheit.
Pest or disease susceptibility and resistance: No more or less susceptible to disease or pests than other cultivars.
Tuberous Roots:
Dimensions.—4.8 inches in length, 2.9 inches in diameter.
Color.—62D.
Foliage:
Number.—On average, a 5 to 6 month old mother plant maintains 5 functional leaves at a time, each new leaf is produced approximately every 10 days until the corm natures.
Petioles.—Length: Up to 93 cm in length. Width: 10 mm (just below attachment to lamina)×20 mm (at the upper sinus)×30 mm (at the middle of the sinus). Color: N187A. Sap color: red.
Leaf.—Dimensions at maturity (5–6 months old): 217 mm in length and 161 mm in width Aspect: Erect with apex down. Shape: Sagittate lamina. Margins: Entire, undulating. Apex: Pointed. Base: Peltate. Lamina appendages: Absent. Attachment: Petiolate with characteristic tissue formed at junction of leaf blade with the upper termination of the petiole. This area of leaf tissue is also known as the "piko" and is evident by virtue of its upper surface being the same

color as the veins or darker. The principal veins radiate from the piko. Piko color: N186B merging into the laminar venation. Leaf sheaf: Open. Texture: Matte. Leaf color (adaxial surface): Young leaves are 147A and mature leaves are 147B. Leaf color (abaxial surface): N77A. Venation: Palmate. Veins: Three principal veins radiating from the piko. The largest a midrib extending from the piko to the tip of the lamina with up to 12 pairs of secondary veins radiating from it. Vein color (adaxial surface): N186B. Vein color (abaxial surface): N186C.

Flowers and reproductive organs: The inflorescence arises from the leaf axils. The inflorescence is made up of a short peduncle, a spadix, and spathe. The spadix is botanically a spike, with a fleshy central axis to which the small sessile flowers are attached. The spadix is 105 mm to 120 mm long, with female flowers at the base, male flowers towards the tip, and sterile flowers in between, in the region compressed by the neck of the spathe. The extreme tip or appendage of the spadix has no flowers at all. The spathe is a large yellowish bract, 235 mm to 260 mm long, which sheathes the spadix. The lower part of the spathe is purple (N187A) in color and wraps tightly around the spadix and completely occludes the female flowers from view. The top portion of the spathe is yellow (14C) in color and is rolled inward at the apex, but is open on one side to reveal the male flowers on the spadix. The top and bottom portions of the spadix are separated by a narrow neck region, corresponding to the region of the sterile flowers on the spadix.

Seed: Seed is not produced naturally since male and female flowers within each inflorescence do not mature at the same time. Pollination can be achieved manually or, in nature, only with the presence of small insect pollinators which are found in regions of genetic origin of the species, and not in Hawaii.

What is claimed is:

1. A new and distinct cultivar of *Colocasia* plant named 'HAWAIIAN EYE' as described and illustrated herein.

* * * * *

FIG. 1

FIG. 2

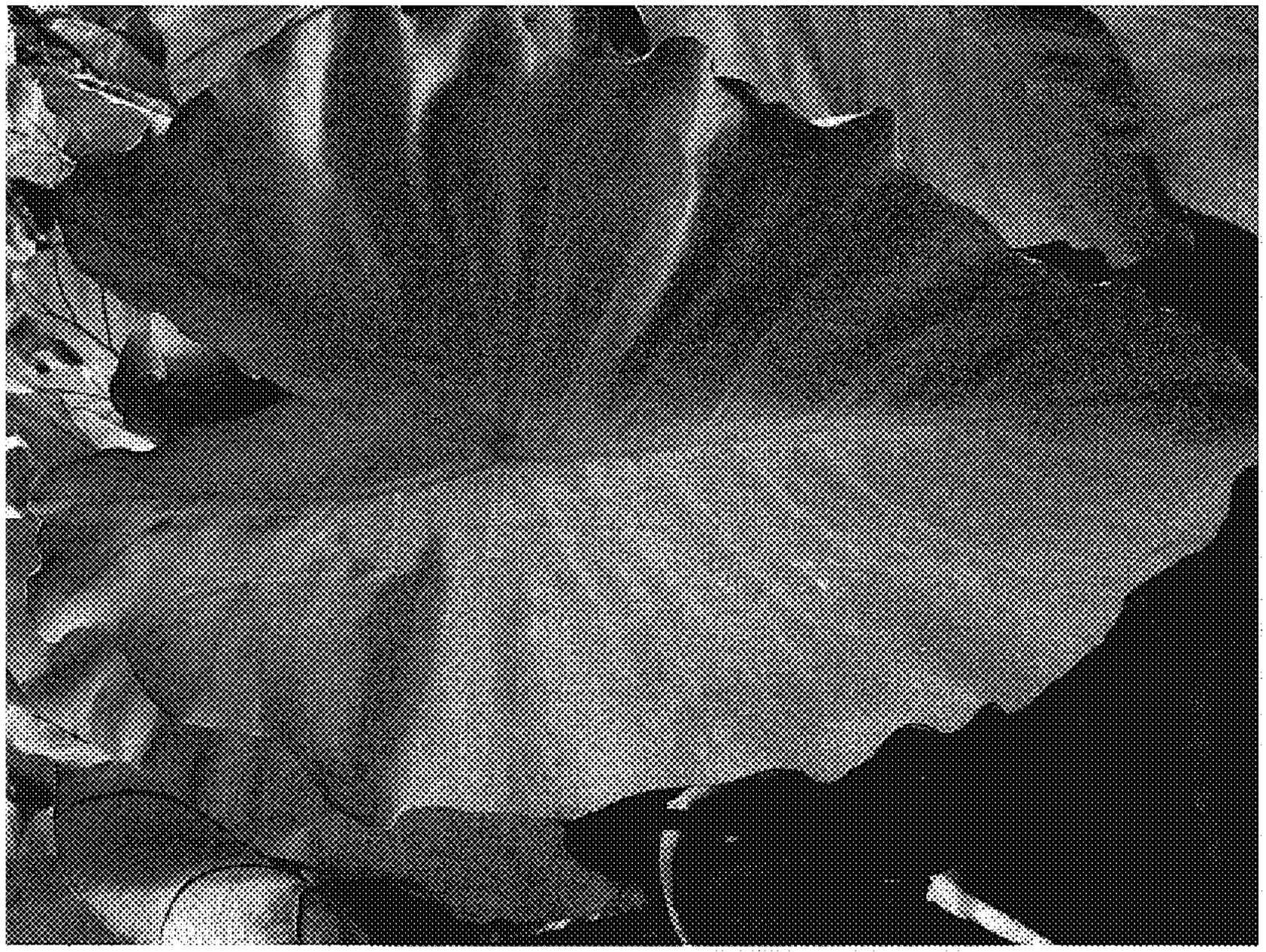


FIG. 3

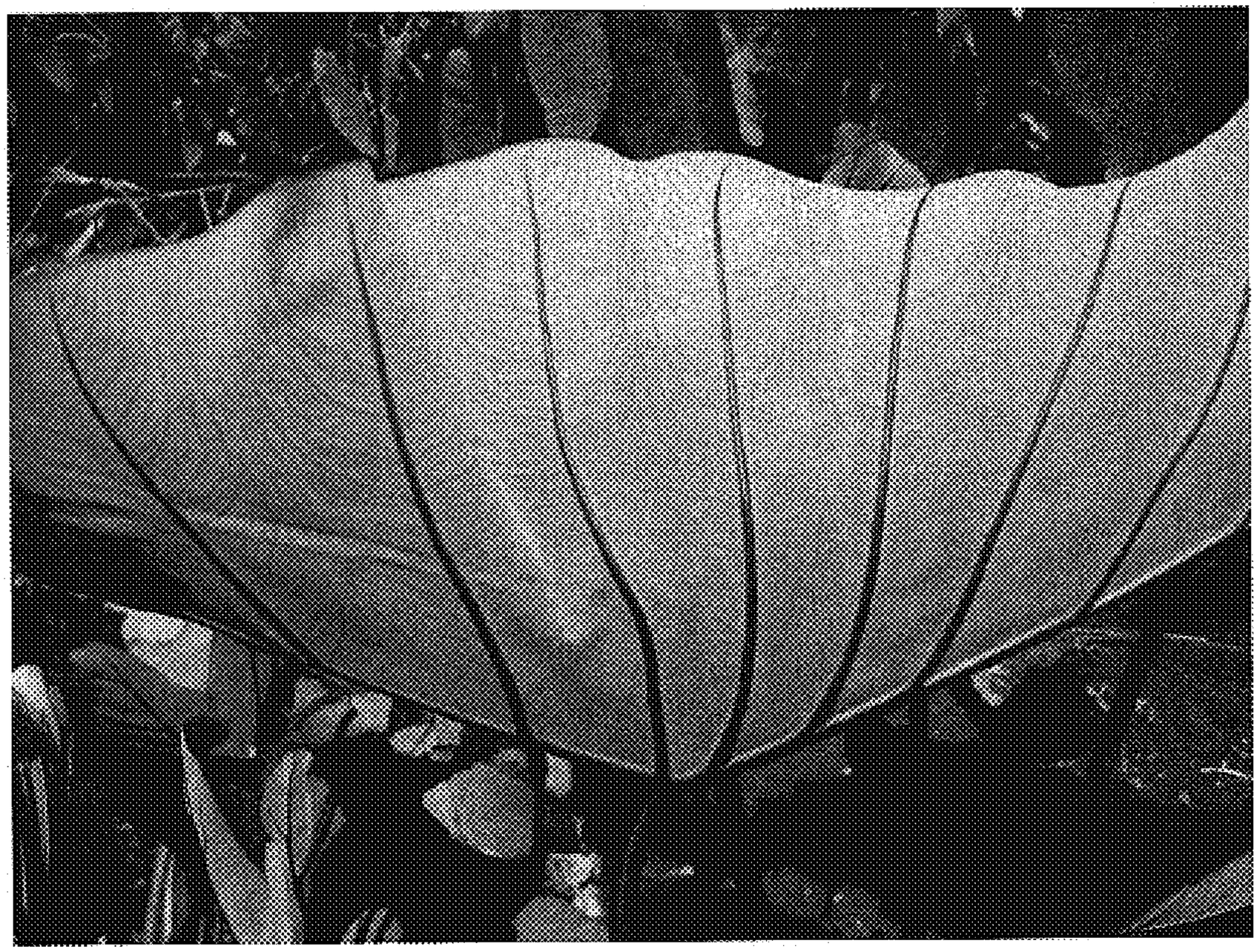


FIG. 4

FIG. 5

FIG. 6

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : PP19,884 P2
APPLICATION NO. : 12/006580
DATED : March 31, 2009
INVENTOR(S) : John Cho

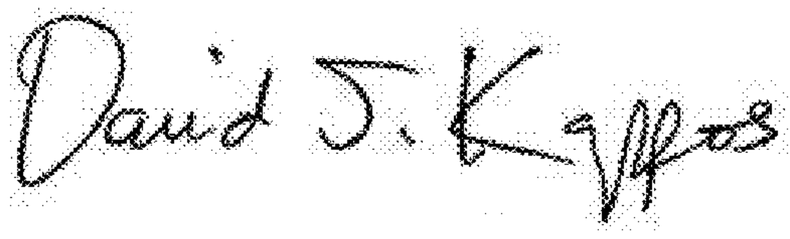
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On Column 1, line 4, please insert the following header and paragraph:

--Statement of Government Interest

This invention was made with Government support under Grant No. 2005-31100-06015/HAW00948H awarded by the U.S. Department of Agriculture. The Government has certain rights in this invention.--

Signed and Sealed this
Twenty-ninth Day of November, 2011



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