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Nielsen

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(54) ***DAHLIA* PLANT NAMED 'DASEKSTEN'**

(50) Latin Name: ***Dahlia* sp.**
Varietal Denomination: **DASEKSTEN**

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(52) **U.S. Cl.** **Plt./321**

(58) **Field of Classification Search** Plt./321
See application file for complete search history.

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(57) **ABSTRACT**

A new and distinct cultivar of *Dahlia* plant named 'DASEKSTEN' characterized by ray floret color (fully opened): upper side: near base, yellow, RHS 9A transitioning to orange-red, RHS N30C; capitulum (composite flower head): 8.5 cm in diameter, with a large number of ray florets (about 110 to 150); foliage: mature leaves are up to 12 cm in length, mostly compound, with 2 to 3 elliptic leaflets; and plant vigor and growth habit: Moderately vigorous, grows upright and is globular in shape.

5 Drawing Sheets

Latin name of the genus and species of the claimed plant: *Dahlia* sp.

Variety denomination: 'DASEKSTEN'.

BACKGROUND OF THE INVENTION

The present invention relates to a new and distinct cultivar of *Dahlia* plant, botanically known as *Dahlia* sp. of the *Compositae* (*Asteraceae*) family, hereinafter referred to by the cultivar name 'DASEKSTEN'.

The new *Dahlia* cultivar is a product of a planned breeding program conducted by the inventor, Rune Harboe Nielsen, in Fyn, Denmark. The objective of the breeding program is to develop a new *Dahlia* variety with an upright, strong and healthy growth habit, suitable for large scale container production; fully double flowers creating globular-shaped flower head (composite flower heads with many ray florets).

The new *Dahlia* cultivar originated from a cross made in a controlled breeding program by the inventor in 2003 in Fyn, Odense, Denmark. The female or seed parent is the *Dahlia* Cav. designated '99.A188 Hawaii' (unpatented). The male or pollen parent is the *Dahlia hortensis* Guillaumin designated '01.130B' (unpatented). The new *Dahlia* 'DASEKSTEN' was discovered and selected by the inventor as a single flowering plant within the progeny of the stated cross in June of 2003 in a controlled environment in Fyn, Denmark.

Asexual reproduction of the new *Dahlia* cultivar by vegetative cuttings was first performed in February of 2004 in Fyn, Denmark, and has demonstrated that the combination of characteristics as herein disclosed for the new cultivar are firmly fixed and retained through successive generations of asexual reproduction. The new cultivar reproduces true to type.

BRIEF SUMMARY OF THE INVENTION

The following traits have been repeatedly observed and are determined to be unique characteristics of 'DASEKSTEN', which in combination distinguish this *Dahlia* as a new and distinct cultivar:

1. Ray floret color (fully opened): upper side: near base, yellow, RHS 9A transitioning to orange-red, RHS N30C;
2. Capitulum (composite flower head): 8.5 cm in diameter, with a large number of ray florets (about 110 to 150);
3. Foliage: Mature leaves are up to 12 cm in length, mostly compound, with 2 to 3 elliptic leaflets; and
4. Plant Vigor and Growth Habit: Moderately vigorous, grows upright and is globular in shape.

Plants of the new *Dahlia* 'DASEKSTEN' differ from the parental plants, *Dahlia* Cav. designated '99.A188 Hawaii' (unpatented) and *Dahlia hortensis* Guillaumin designated '01.130B' (unpatented), in the characteristics described in Table 1.

TABLE 1

Characteristic	New Cultivar 'DASEKSTEN'	Female Parent '99.A188 Hawaii' (unpatented),	Male Parent '0.1.130B' (unpatented)
Flower Color	Orange Red	Red	Orange
Capitulum Diameter:	About 8.5 cm	About 7.5 cm	About 8 cm
Mature Leaf Length:	Up to 12 cm	About 11 cm	About 12 cm
Plant Height:	About 14.5 cm	About 14 cm	About 18 cm
Plant Diameter:	About 17.5 cm	About 16 cm	About 19 cm

Of the many commercial cultivars known to the present inventor, the most similar in comparison to the new *Dahlia* 'DASEKSTEN' are the *Dahlia* sp. 'DAFEMTEN' (patented, U.S. Plant Pat. No. 19,185) and *Dahlia* sp. 'DA12' (patented, U.S. Plant Pat. No. 19,632) in the characteristics described in Table 2:

TABLE 2

Characteristic	New Cultivar 'DASEKSTEN'	Comparison 'DAFEMTEN' (patented, U.S. PP19,185)	Comparison Dahlia sp. 'DA12' (patented, U.S. PP19,632)
Mature Ray Floret Color (upper surface):	Yellow to Orange-Red	Yellow-orange	Red
Capitulum Diameter:	About 8.5 cm	About 8 cm	About 10.25 cm
Mature Leaf Length:	Up to 12 cm 7 cm	About 4 to	About 6 to 15 cm
Plant Vigor:	Moderately vigorous	Vigorous	Vigorous
Plant Height:	About 14.5 cm	About 16.5 cm	About 42.5 cm
Plant Diameter:	About 17.5 cm	About 19 cm	About 40 cm

BRIEF DESCRIPTION OF THE PHOTOGRAPHS

The accompanying photographs illustrate the overall appearance of the new *Dahlia* 'DASEKSTEN' showing the colors as true as is reasonably possible with colored reproductions of this type. Colors in the photographs may differ slightly from the color value cited in the detailed botanical description which accurately describes the color of 'DASEKSTEN'.

FIG. **1** shows a side view perspective of a typical flowering plant of 'DASEKSTEN' in a 11 cm pot, at 13 weeks of age after planting.

FIG. **2** shows a top view perspective of a typical flowering plant of 'DASEKSTEN' in a 11 cm pot, at 13 weeks of age after planting.

FIG. **3** shows a close-up top and bottom view of the typical foliage, as well as, a fully opened capitulum of 'DASEKSTEN', at 13 weeks of age after planting.

FIG. **4** shows a close-up view of the detailed floral parts of a fully opened capitulum of 'DASEKSTEN'.

FIG. **5** shows a comparison view of a typical mature flowering plant of the new cultivar 'DASEKSTEN' (top) in a 11 cm pot compared to a typical mature flowering plant of the comparison cultivar 'DAFEMTEN' in a 11 cm pot (bottom).

DETAILED BOTANICAL DESCRIPTION

The new *Dahlia* 'DASEKSTEN' has not been observed under all possible environmental conditions. The phenotype of the new cultivar may vary with variations in environment such as temperature, light intensity, and day length without any change in the genotype of the plant.

The aforementioned photographs, together with the following observations, measurements and values describe the new *Dahlia* 'DASEKSTEN' as grown in a protected environment in a glasshouse in Fyn, Odense, Denmark, under conditions which closely approximate those generally used in commercial practice. During propagation, conducted in a glasshouse, vegetative cuttings were planted in small propagation pots with peat as substrate, and then placed in a plastic tunnel averaging about 21° C. and received photoperiodic treatments of 18 hours. Supplementary light was given when natural light fell below 3000–4000 Lux. Rooting occurred about 12 days after planting. In third week after planting, young plants were potted in an 11 cm pot in a glasshouse maintained at 18° C. to 22° C. during the day, and at 17° C. to 19° C. during the night. Photoperiodic treatments were continued at 18 hours, and supplementary light was given when natural light fell below 3000–4000 Lux. Irrigation was done with water. The EC measured in the soil was maintained between 2.0 to 3.0. One week after potting, the first growth regulation was given: a spray with 85% daminozide, 0.2%, 40–100 ml/m^2. During the production time, 9 additional sprayings were given with 85% daminozide, 0.2%, 40–100 ml/m^2.

Color references are made to The Royal Horticultural Society Colour Chart (R.H.S.), 2001 edition, except where general colors of ordinary significance are used. Color values were taken under daylight conditions at approximately 12:00 PM and 2:00 PM in Fyn, Odense, Denmark. The age of the 'DASEKSTEN' plants described is 13 weeks (including propagation time).

Classification:

Botanical.—Dahlia sp.

Parentage:

Female or seed parent.—Dahlia Cav. designated '99.A188 Hawaii' (unpatented).

Male or pollen parent.—Dahlia hortensis Guillaumin designated '01.130B' (unpatented).

Propagation:

Type.—Vegetative cuttings.

Rooting description.—Fine, fibrous; may develop tubers in late fall.

Height of rooting structure.—Depends on container, can grow to about 20 to 30 cm.

Diameter of rooting structure.—Depends on container, can grow to about 20 to 30 cm.

Color of roots.—White, RHS 155B.

Time to initiate roots.—About 12 days at 21° C.

Time to produce a rooted cutting.—About 28 days at 21° C. during rooting phase, followed by 18° C.

Tubers.—Will form under short day conditions, 12 hours of darkness. Tubers may develop in late fall when planted outdoors.

Plant:

Crop time.—After rooting, about 7 to 9 weeks are required to produce finished flowering plants in 11 cm pots, provided daylength is 18 hrs.

Plant vigor.—Moderately Vigorous, about 2 cm per week.

Form.—Globular, upright and slight spreading.

Size.—Height (from soil level to top of plant plane): About 13 to 16 cm. Spread: About 15 to 20 cm.

Stem.—Appearance/Shape: Circular, hollow, glabrous. Diameter: About 6 to 14 mm. Aspect: Upright to outward. Strength: Strong. Texture: Glaucous. Pubescence: None. Color: Brown, RHS 200A on older stems, and yellow-green, RHS 146A, on younger stems or stems exposed to less light.

Lateral branches.—Quantity per plant: About 3 to 5 (when pinching over 3 pair of leaves). Length (including inflorescences): About 9 to 14 cm. (including break to base of peduncle): About 6 to 9 cm. Diameter: About 5 to 12 mm. Color: Brown, RHS 200A on older branches, and yellow-green, RHS 146A, on younger stems or stems exposed to less light.

Habit.—Freely branching. Basal Branching: Yes. Pinching: Pinching recommended. Internode length: About 1 to 2 cm.

Foliage.—Type: Lower leaves: Single. Upper leaves: compound, 3–5 lobed. Quantity of leaves per lateral branch: About 6 to 8. Quantity of leaflets per compound leaf: 1 to 3. Color (leaves and leaflets): Color

(mature): Upper side: Green, RHS 139A. Under side: Grayed-green, RHS 191B. Color (immature): Upper side: Green, RHS 139A. Under side: RHS, RHS 138A.

Venation (*leaves and leaflets*).—Pattern: Pinnatilobate. Color: Upper side: Yellow green, RHS 148A. Under side: Yellow-green, RHS 146A.

Simple leaves.—Arrangement: Opposite, decussate. Length: About 6 to 12 cm. Width: About 2.5 to 8 cm. Shape: Elliptical, cuspidate tip, rounded to cordate base. Margin: Erose. Texture (both sides): Rugose. Petiole: Shape: Semi circular, with deep furrow on adaxial side. Length: About 1 to 3 cm. Diameter: About 2 to 5 mm. Color: Upper side: Brown, RHS 200C. Under side: Yellow-green, RHS 146A.

Compound leaves.—Arrangement and shape: Opposite, decussate. Length: Up to 10 cm. Width: Up to 9 cm. Shape: Elliptical, cuspidate tip, rounded to cordate base. Margin: Erose. Texture (both sides): Rugose. Petiole: Shape: Semi circular. Length: About 1 to 3 cm. Diameter: About 2 to 5 mm. Color: Upper side: Brown, RHS 200C. Under side: Yellow-green, RHS 146A.

Leaflets of compound leaf.—Terminal: Quantity: 1. Length: About 6.5 cm. Width: About 5 cm. Rachis: Length: Up to 1 cm. Diameter: About 2 to 3 mm. Color: Yellow-green, RHS 146A. Lateral: Quantity: About 1 to 2. Length: About 5 cm. Width: About 3 cm.

Flowering description:

Natural flowering season.—Grown outside as a bedding plant, flowering occurs continuously during growing season from spring to autumn. (In Denmark, from June to beginning of October). Plants can be brought to flower anytime when grown under the recommended greenhouse conditions.

Time to first flower.—About 7 to 9 weeks from potting of a rooted cutting.

Lastingness of individual blooms on plant.—Depending on weather conditions, about 6 to 10 days.

Fragrance.—None.

Inflorescence description:

Type.—Capitulum (composite flower head).

Arrangement.—Persistent, single, composite inflorescences from leaf axils. Disc and ray florets arranged acropetally on a capitulum.

Flowering aspect.—Upright, slightly spreading. Young flower head/buds initially 30° to 90° turning to 0° to 30° when flower head opens.

Quantity of flowers and buds per lateral branch.—About 2 open capitulum and 4 buds.

Fragrance.—None.

Bud.—Quantity: Up to 4 per lateral stem (buds continue to develop when the dead composite flower heads are removed). Rate of Opening: About 1 to 3 buds per week. About 4 to 10 days for bud to progress from first color to fully opened inflorescence. Shape: Globular. Length (when color shows): About 1.2 to 1.5 cm. Diameter (when color shows): About 1.4 to 1.8 cm. Texture: Glabrous, shining. Color: Yellow-green, RHS 144A.

Peduncle.—Length: About 3 to 6 cm. Diameter: About 3 to 4 mm. Strength: Strong. Aspect (angle to vertical): First flower: About 0° to 10°. Second flower: About 20° to 30°. Texture: Glabrous. Color: Mature: Brown, RHS 200B; Immature: Yellow-green, RHS 146A.

Inflorescence.—Inflorescence depth (height): About 8 to 9 cm. Inflorescence diameter: About 4 to 5 cm. Disc diameter: About 5.5 cm. Receptacle diameter: About 8 mm. Receptacle height: About 4 to 6 mm.

Ray florets.—Arrangement: Imbricate, in about 11 to 15 whorls of ray florets, each with 9 to 11 florets to equal a total of about 110–150 ray florets per capitulum, depending on light and temperature conditions. Overall shape: Obovate, involute with a rounded tip. Apex shape: Obtuse. Base shape: Acuminate, fused to form tube. Length: About 30 to 40 mm. Diameter (width): About 20 to 30 mm. Margin: Entire. Texture: Upper and under surfaces: Glabrous. Orientation: Initially 10° from vertical, with development, to 80° from vertical. Color: Development and tones of color for florets may change slightly depending on light and temperature conditions. When opening: Upper surface: Near base, yellow-orange, RHS 14A, transitioning to orange-red, RHS N30B, at tip. Under surface: Primarily, orange-red, RHS 31A, with longitudinal stripes of yellow-orange, RHS 14A. When fully opened: Upper surface: Near base, yellow, RHS 9A, transitioning to orange-red, RHS N30C, at tip. Under surface: Primarily, orange-red, RHS 31A, with longitudinal stripes of yellow, RHS 9C. Just before senescence: Upper surface: Orange-red, RHS N30D. Under surface: Orange-red, RHS 31B.

Disc florets.—Arrangement: Massed at center of capitulum, about 30–50 disc florets per capitulum, which are yellow-orange in color. Appearance: Tubular to single, fused corolla. Overall shape: Tubular. Apex shape: Star with 5 triangular tips. Base shape: Fused to tube. Length: About 5 to 6 mm. Diameter: About 1 mm. Margin: Entire. Texture (both surfaces): Glabrous, translucent. Color: Transparent, yellow-orange, RHS 14A.

Phyllaries.—Quantity: One subtending each floret. About 110 to 150 phyllaries per capitulum. Overall shape: Thin translucent, papery. Phyllaries, arranged acropetally on the capitulum. Overall shape: Rounded. Apex shape: Acute with rounded tip. Base shape: Fused. Length: About 9 to 14 mm. Width: About 4 to 6 mm. Margin: Entire. Color: Mature: Yellow-green, RHS 151B. Immature: Primarily yellow-green, RHS 151D, to green, RHS 144A, near base.

Bracts.—Quantity: About 6 to 8. Appearance and arrangement: Reflexed, involucral bracts. Overall shape: Subulate. Apex shape: Acute. Base shape: Sessile. Length: About 12 to 18 mm. Width: About 4 to 7 mm. Margin: Entire. Texture (both sides): Glabrous. Color: Mature: Upper side: Green, RHS 139A. Under side: Primarily, yellow-green, RHS 151D, to yellow-green, RHS 144A, near base. Immature: Upper side: Green, RHS 139A. Under side: Green, RHS 139B.

Reproductive organs:

Androecium.—Stamen: Number: 5, fused into synandrous tube around style. Disc florets fertile, ray florets sterile. Length: About 6 to 8 mm. Anther: Shape: Tubular. Length: About 3 to 4 mm. Color: Yellow-orange, RHS 20A. Pollen: Amount: Scarce. Color: Yellow-orange, RHS 20A.

Gynoecium.—Pistil: Quantity: One per disc floret. Length: About 4 to 6 mm. Stigma: Shape: Bifurcate.

Length: About 3 to 6 mm. Color: Yellow-orange, RHS 20A. Style: Length: About 2 to 3 mm. Color: Yellow-orange, RHS 20D. Ovary: Shape: Globular. Diameter: About 1 mm. Color: Yellow-green, RHS 151C.

Seed/fruit: None observed.

Disease/pest resistance: Resistance to pathogens and pests common to *Dahlia* has not been observed.

Disease/pest susceptibility: Susceptibility to pathogens and pests common to *Dahlia* has not been observed.

Temperature tolerance: Tolerant to a low temperature of about 2° C. (but flowering ceases at constant temperature below 12° C.) and tolerant to a high temperature of about 35° C. Optimum flowering occurs only between 12° C. and 30° C. High temperatures might reduce flowering.

Growth regulators: Daminozide (85% water soluble dry concentrate formulation).

I claim:

1. A new and distinct cultivar of *Dahlia* plant named 'DASEKSTEN', as described and illustrated herein.

* * * * *

FIG. 1

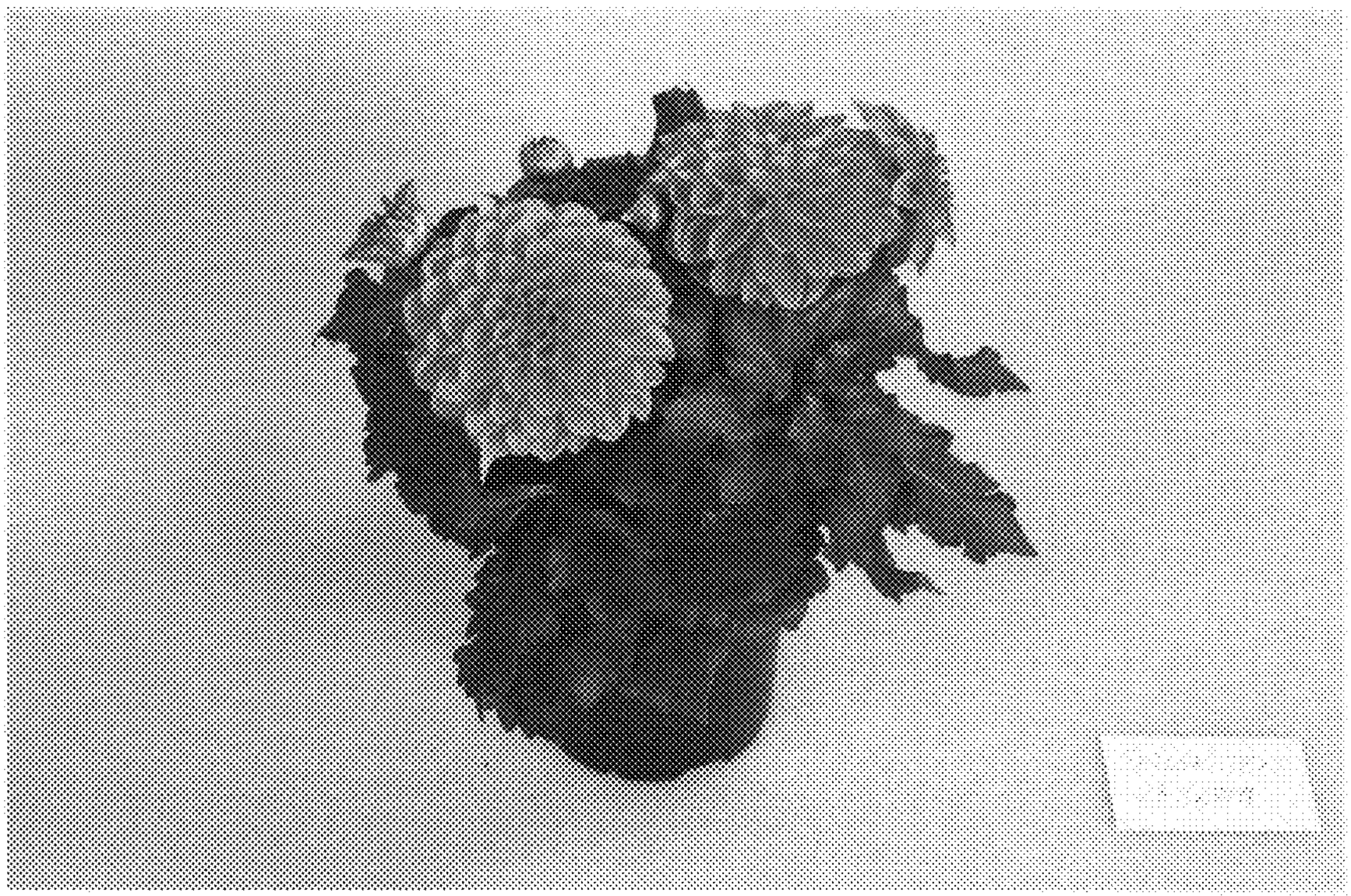


FIG. 2

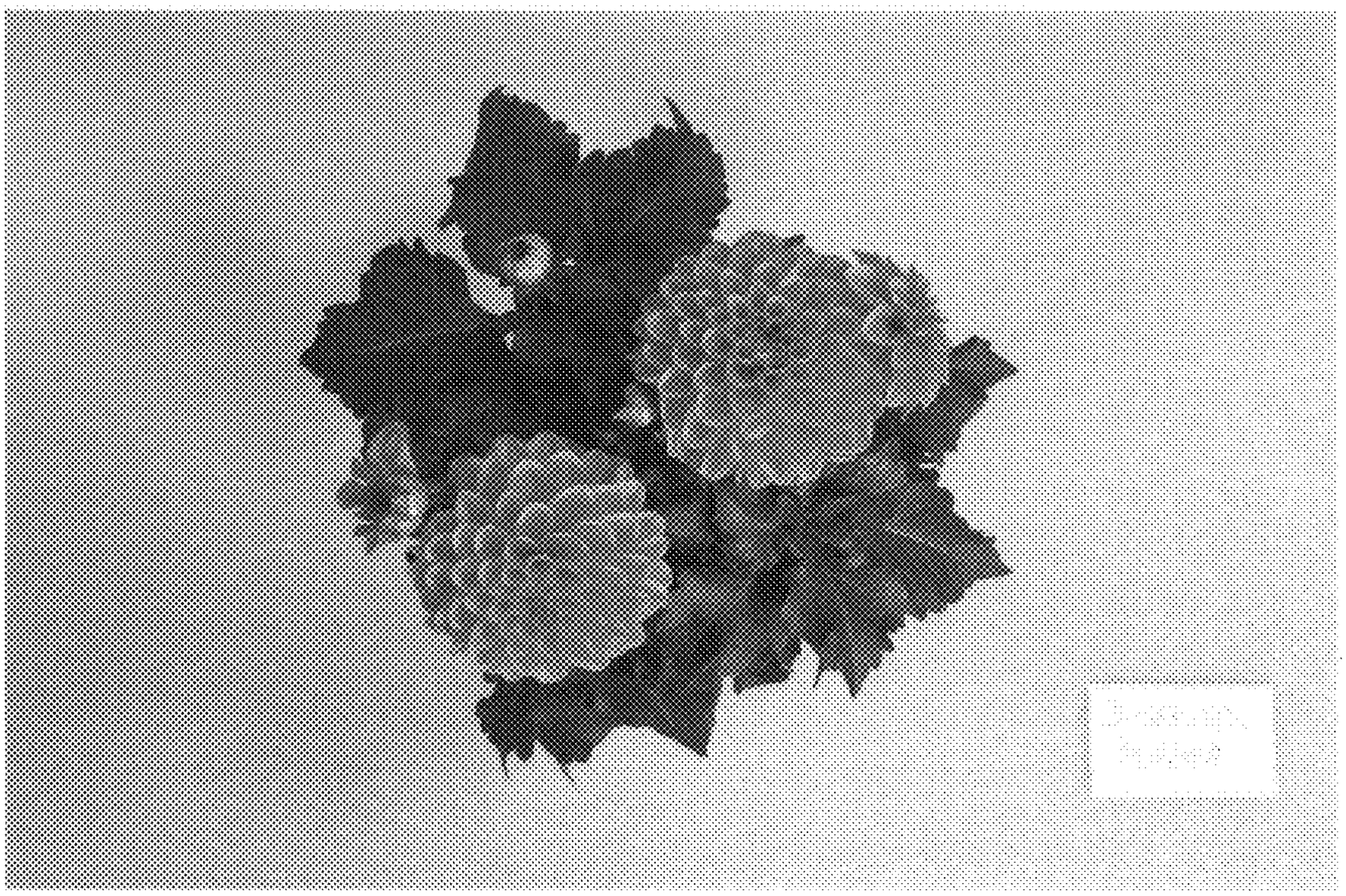


FIG. 3

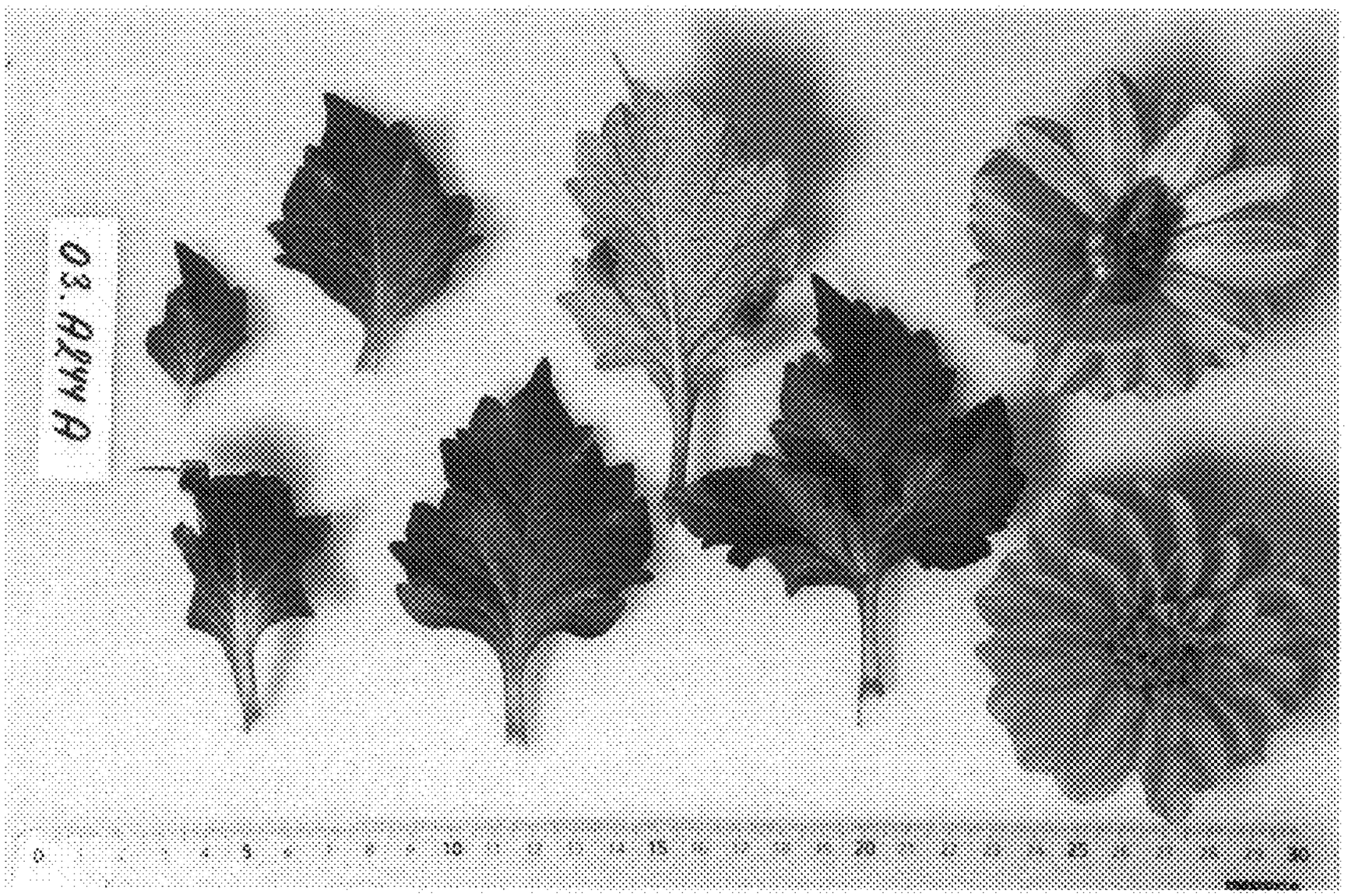


FIG. 4

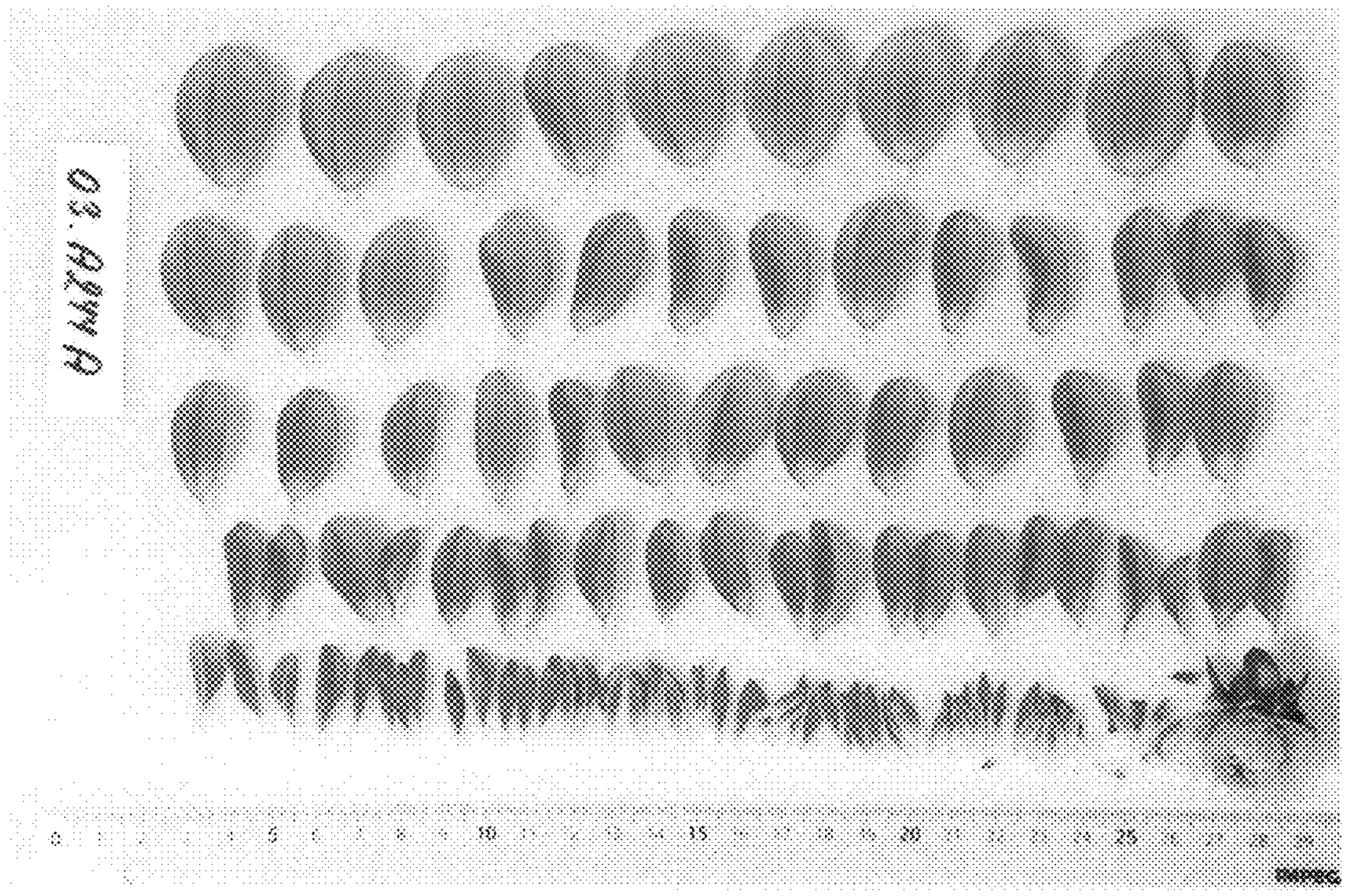
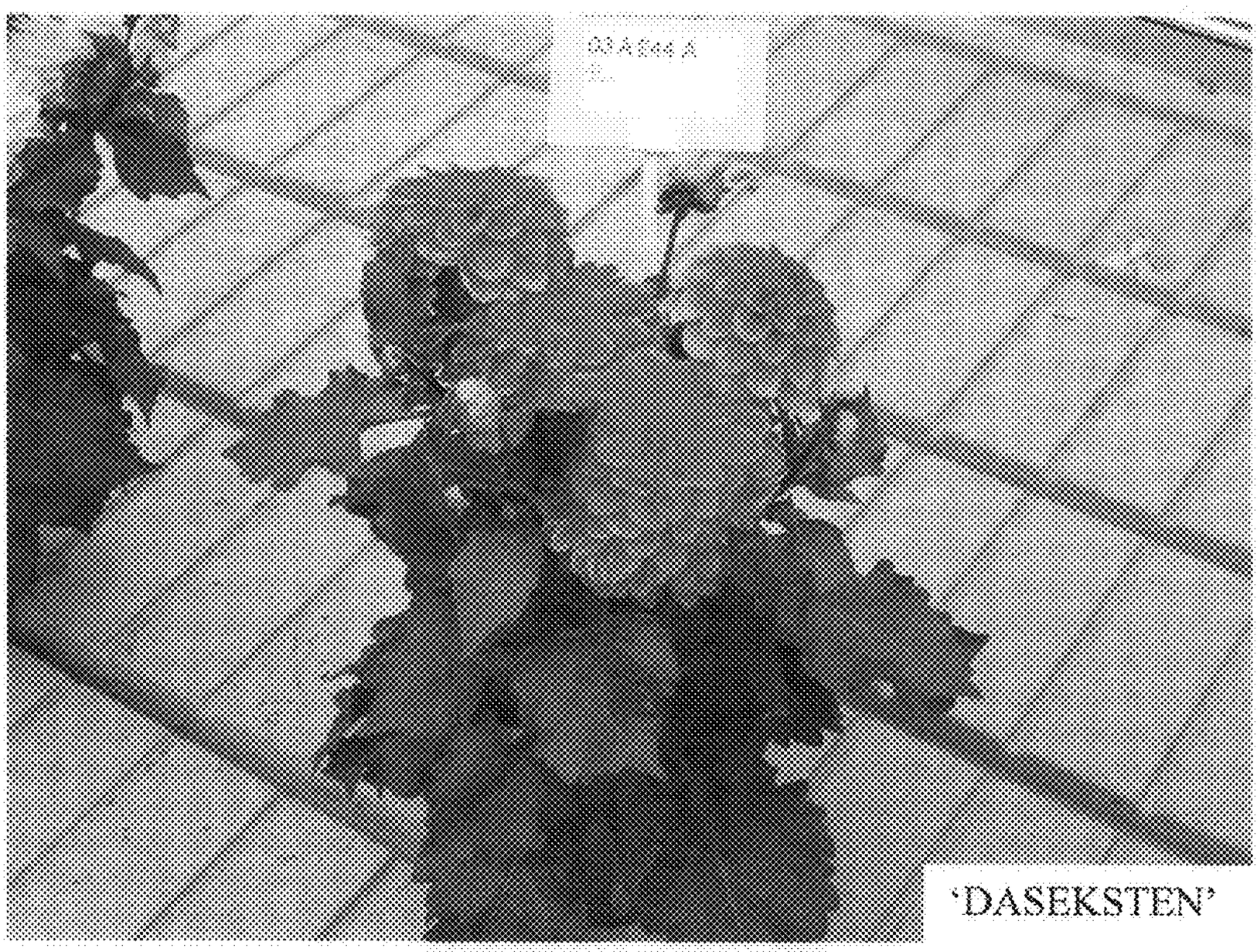


FIG. 5



'DASEKSTEN'

'DAFEMTEN'