

US00PP16558P3

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

(10) **Patent No.:** **US PP16,558 P3**

(45) **Date of Patent:** **May 23, 2006**

(54) **STRAWBERRY PLANT NAMED ‘SABROSA’**

(50) Latin Name: *Fragaria ananassa*  
Varietal Denomination: **Sabrosa**

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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 224 days.

(21) Appl. No.: **10/128,894**

(22) Filed: **Apr. 24, 2002**

(65) **Prior Publication Data**

US 2003/0204886 P1 Oct. 30, 2003

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

(52) **U.S. Cl.** ..... **Plt./208**

(58) **Field of Classification Search** ..... Plt./208,  
Plt./209

See application file for complete search history.

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(57) **ABSTRACT**

A new variety of strawberry plant characterized by its inflorescence that appears level with the foliage, as well as its abundant production of red colored, conical-shaped, very firm, medium-sized fruit.

**9 Drawing Sheets**

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Classification: The present invention relates to a new *Fragaria ananassa* plant.

Variety denomination: The new plant has the varietal denomination ‘Sabrosa’.

**BACKGROUND OF THE INVENTION**

The new variety of strawberry was created in a breeding program by crossing two parents; in particular, by crossing as seed plants, an undistributed strawberry variety designated 9238 and as pollen parent, an undistributed strawberry variety designated 86-032. Both parental varieties are proprietary and have not been commercialized and undistributed and unpatented.

The resulting seedling of the new variety was grown and asexually propagated by runners in Soria, Spain, 3° W., 41° N., 3000 feet elevation. Clones of the new variety were further asexually propagated and extensively tested. This propagation and testing has demonstrated that the combination of traits disclosed herein which characterize the new variety are fixed and retained true to type through successive generations of asexual reproduction.

**SUMMARY OF THE INVENTION**

The present invention relates to a new and distinct strawberry variety. The varietal denomination of the new variety is ‘Sabrosa’. Among the characteristics which are believed to distinguish the new variety from other varieties are a combination of traits which include inflorescence that appears level with the foliage and abundant production of red colored, conical-shaped, and very firm, medium size fruit.

**COMPARISON TO CLOSEST VARIETY**

The new variety is closest to the variety ‘Cartuno’ (U.S. Plant Pat. No. 8,623), but is distinguished therefrom by the following characteristics possessed by ‘Sabrosa’ which are different than, or not possessed by, ‘Cartuno’.

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1. ‘Cartuno’ exhibits less plant vigor than ‘Sabrosa’.
  2. Length/width ratio of the terminal leaflet in ‘Cartuno’ is longer than broad, whereas in ‘Sabrosa’ it is as long as broad.
  3. Shape of base of the terminal leaflet in ‘Cartuno’ is rounded, whereas in ‘Sabrosa’ it is acute.
  4. In ‘Cartuno’ the position of the inflorescence is above the foliage, whereas in ‘Sabrosa’, it is level with the foliage.
  5. The flower size in ‘Cartuno’ is large and in ‘Sabrosa’, the flower size is medium.
  6. Band without achenes in the fruit of ‘Cartuno’ is absent or very narrow, whereas in ‘Sabrosa’ it is medium.
  7. ‘Cartuno’ has orange-red to red fruit color (near 33A to 40A), whereas in ‘Sabrosa’, the fruit color is red (near 43B to 41A).
  8. Insertion of calyx in the fruits of ‘Cartuno’ is level, whereas in ‘Sabrosa’ it is set above fruit.
  9. Size of calyx in relation to fruit diameter is larger in ‘Cartuno’, whereas it is same size in ‘Sabrosa’.
- The differences in the fruits of ‘Cartuno’ and the new variety are shown in FIG. 9. These differences are maintained during the harvest season.
10. ‘Cartuno’ produces firm fruit that is smaller than ‘Sabrosa’ fruit.
  11. Precocity in ‘Cartuno’ is smaller than in ‘Sabrosa’.

**BRIEF DESCRIPTION OF ILLUSTRATIONS**

The accompanying photographs show typical specimens of the new variety (designated 97.10.030 in the illustrations), including fruit, foliage and flower, in color as nearly true as it is reasonably possible to make in color illustrations of this character. The plants depicted in the drawings were planted October 2000 in a farm of La Mogalla in Cartaya (Huelva), Spain. The photos were taken in March 2001.



FIG. 1 shows the upper side of a typical terminal leaflet of the new variety (designated 97.10.030), with an acute base shape and in which the length/width ratio is as long as broad, compared with the upper side of a typical terminal leaflet of 'Cartuno' that has a rounded base shape and in which the length/width ratio is longer than broad.

FIG. 2 shows a complete leaflet of the new variety (designated 97.10.030) and in which it can be seen the shape of base is acute in the terminal leaflet.

FIGS. 3 and 4 show the fruit against a background of the top surface of the foliage of the new variety (designated 97.10.030).

FIG. 5 shows the flower and reproductive organs of the new variety (designated 97.10.030).

FIG. 6 shows a typical flower of the new variety (designated 97.10.030) in which the flower size is medium, and a typical flower of 'Cartuno' in which the flower size is larger.

FIG. 7 shows typical fruit of the new variety (designated 97.10.030) in cross section illustrating the typical flesh and flesh coloration, conspicuous core and core cavity and conical shape.

FIG. 8 shows whole and sliced, detached fruit of the new variety (designated 97.10.030) with the typical red color.

FIG. 9 shows a typical fruits of the new variety (designated 97.10.030) in which band without achenes is medium and the insertion of calyx is set above fruit, and a typical fruits of 'Cartuno' in which band without achenes is absent or very narrow and the insertion of calyx is level.

#### DESCRIPTION OF THE NEW VARIETY

The following detailed description of the new variety is based upon observations taken of plants and fruits grown "underglass", i.e. undertunnel, in the farm of La Mogalla in Cartaya (Huelva), Spain, 7° W., 37° N., 45 feet elevation.

The following description is in accordance with UPOV terminology and the color terminology herein is in accordance with The Royal Horticultural Society Colour Chart (R.H.S.C.C.). The color descriptions and other phenotypical descriptions may deviate from the stated values and descriptions depending upon variation in environmental, seasonal, climatic and cultural conditions.

#### PROPAGATION

The new variety is principally propagated by way of runners. Although propagation by runners is presently preferred, other know methods of propagating strawberry plants may be used. Strawberries root well after transplanting.

The term "blistering" used herein refers to the texture or rugosity or surface ondulation inherent to leaves and is generally a constant characteristic.

#### GENERAL

'Sabrosa' is a short day variety that needs an induction to flowering by chilling, such as occurs at a high elevation nursery (fresh plant) or with cold storage (referred to as a frigo). Usually a short time is sufficient. 'Sabrosa' is self-fertile. It produces large quantity of pollen throughout the seasons and pollination is generally good as there are very few malformed fruit.

Production: Plants described are from high elevation nursery.

Trials pursued in Cartaya (Huelva), Spain.

Date of planting: 23<sup>rd</sup> Oct. 2000.

Number of repetitions: 2.

Plants per repetition: 150.

Comparison with 'Cartuno': The new variety is compared with 'Cartuno' in FIG. 1 and FIG. 6 and FIG. 9.

TABLE 1

Accumulated production of 1 <sup>st</sup> quality fruit (g/plant)				
Variety	23-Fb	28-Mr	24-Apr	15-May
CARTUNO	2	135	528	719
CAMAROSA	8	181	624	861
TUDNEW	26	198	544	676
SABROSA	38	193	533	766

Variety	1 <sup>st</sup> + 2 <sup>nd</sup> Quality Fruit	TOTAL	Weight (g/fruit)
CARTUNO	719 + 111	830	22 - 21
CAMAROSA	861 + 157	1018	24 - 23
TUDNEW	676 + 86	762	24 - 23
SABROSA	766 + 88	854	23 - 22

TABLE 2

Production total, to 15 May, of First Quality Fruit(1 <sup>st</sup> quality) and Second Quality Fruit(2 <sup>nd</sup> quality) in g/plant				
Variety	1 <sup>st</sup> quality	2 <sup>nd</sup> quality	TOTAL (1 <sup>st</sup> quality + 2 <sup>nd</sup> quality)	% 2 <sup>nd</sup> quality
CARTUNO	719	111	830	13
CAMAROSA	861	157	1018	15
TUDNEW	676	86	762	11
SABROSA	766	88	854	10

$$\% \text{ 2}^{\text{nd}} \text{ quality} = \frac{\text{2}^{\text{nd}} \text{ quality}}{\text{TOTAL}} \times 100$$

TABLE 3

Weight (g/fruit) at two dates: 28 March and 15 May		
Weight (g/fruit)	28 March	15 May
CARTUNO	22	21
CAMAROSA	24	23
TUDNEW	24	23
SABROSA	23	22

Weight is shown as the average weight per fruit in First Quality Fruits.

TABLE 4

	FRUIT ANALYSIS			
	CAMAROSA	SABROSA (97.10.030)	CARTUNO	TUDNEW
Firmness (KG)	1.20	1.50	.70	.90
Humidity & Volatile Matter (%)	92.80	90.10	93.30	88.00
Dry Matter (%)	7.20	9.90	6.70	12.00
PH (to 20°)	3.50	3.70	3.90	3.60
Acidity as Anhydride Citric (%)	.80	.70	.51	.90



TABLE 4-continued

	FRUIT ANALYSIS			
	CAMAROSA	SABROSA (97.10.030)	CARTUNO	TUDNEW
Soluble Solids (°Brix)	9.50	11.50	10.90	8.60
Maturity Index	11.90	16.70	21.40	9.60
Content in Ascorbic Acid (ppm)	500	620	560	820
Dominant Tonality(nm)	495	495	495	495
Luminosity: Transmittance to 460 nm	26.50	22.10	30.70	16.70

The following definitions apply:

**Firmness:** It is the fruit's resistance to penetration measured in Kilograms (Kg). The measure given has been obtained by the penetrometer ROZE Mod. Arbelette, with a 50 mm<sup>2</sup> section head.

**Dry matter:** It is the weight of the residual left from the trituration of the fruit after the drying process at a temperature of 103° C.+2° C. until reaching constant weight.

$$(\%) \text{ Dry Matter} = \frac{\text{Weight Dry Matter}}{\text{Weight Fresh Matter}} \times 100$$

**Humidity & volatile matter:** Represents the content in volatile matters and water of the fruits.

$$(\%) \text{ Humidity \& Volatile Matter} = 100 - \% \text{ Dry Matter}$$

**Maturity index:** Relation between Soluble solids and Acidity as Anhydride Citric.

$$\text{Maturity Index} = \frac{\text{Soluble solids}}{\text{Acidity as Anhydride Citric}}$$

The following additional information is provided to further describe the new variety:

Variety: 'Sabrosa' Breeder Ref. 97.10.030.

Classification: *Fragaria ananassa*.

Plant:

*Habit.*—Globose.

*Density.*—Medium.

*Vigor.*—Strong.

*Height.*—About 23 cm.

*Width.*—About 25 cm.

Leaf:

*Color.*—Upper side near 137C to 137B; underside near 138D to 138C.

*Length.*—About 11 cm.

*Width.*—About 13 cm.

*Cross section.*—Slightly concave.

*Leaf surface undulation or blistering.*—Medium.

*Number of leaflets.*—Three (3) only.

Petiole characteristics:

*Color.*—Near 138D.

*Position of hairs.*—Upwards.

*Length.*—About 12 cm.

*Terminal leaflet.*—Length/width ratio: As long as broad. Length: About 6.5 cm. Width: About 6.5 cm. Shape of apex: Rounded. Shape of base: Acute. Shape of teeth: Obtuse.

*Stipule.*—Anthocyanin coloration — weak, near 179C to 179B. Anthocyanin coloration: Medium. Thickness: Medium, about 3 mm. Pubescence: Medium. Color: Near 138D to 142D.

Inflorescence:

*Position relative to foliage.*—Level with.

*Flower.*—Size: Medium. Size of calyx relative to corolla: Same size. Size of inner calyx relative to outer: Larger. Spacing of petals: Overlapping.

*Flower characteristics diameter.*—Primary flowers: About 2.5 to 3 cm. Secondary flowers: About 2.5 cm. Number of petals: Normally about 6 — no significant fragrance. Petal shape: Almost rounded. Petal apex shape: Rounded. Petal base shape: Rounded. Petal margin: Entire. Petal color (both surfaces): 155B to 155D. Time from bloom to mature fruit (in Huelva, Spain): About 35 to 40 days. Petal length/width ratio: Broader than long, approximately 9–10 mm in length and approximately 10–11 mm in width.

*Reproductive organs.*—Stamens: Numerous stamens when pollen is present, fertile and abundance, length about 4 to 5 mm, color near 155D to 155C. Anthers: Numerous, color near 12A to 13B. Pollen: Near 14B to 15B. Pistils: Color near 12B to 13C.

Fruiting truss:

*Attitude.*—Erect.

Fruit:

*Ration of length/maximum width.*—Longer than broad. *Color.*—Near 43B to 41A.

*Peduncle length of inflorescence stem.*—Primary fruit about 9 cm to 11 cm, secondary fruit about 6 cm to 7 cm, color near 138D, 1–2 mm in diameter.

*Primary fruit.*—Length: About 5.5 cm. Width: About 4 cm. Predominant shape: Conical.

*Secondary fruit.*—Length: About 4.5 cm. Width: About 3 cm. Size: Medium. Predominant shape: Conical.

*Band without achenes.*—Medium approximately 5–7 mm in width.

*Unevenness of surface.*—Weak.

*Color.*—Near 43B to 41A.

*Evenness of color.*—Even.

*Glossiness.*—Strong.

*Achene color.*—Near Orange-Red Group 33B to 33C.

*Insertion of achenes.*—Level with surface.

*Insertion of calyx.*—Set above fruit.

*Pose of the calyx segments.*—Reflexed.

*Sepals.*—Number of sepals: Approximately 11–14.

Sepal shape: Lanceolate. Sepal length: Approximately 10–13 mm. Sepal width: Approximately 4–6 mm. Shape of apex: Acuminate. Color of upper surface: Near Green Group 137C to 138B. Color of lower surface: Near Green Group 138D.

*Size of calyx in relation to fruit diameter.*—Same size.

*Adherence of calyx.*—Strong.

*Firmness.*—Very firm.

*Color of flesh.*—Medium red, near 43B; lightening toward center.

*Evenness of color of flesh.*—Even.

*Sweetness.*—Strong.

*Acidity.*—Medium.

*Time of flowering.*—Medium.

*Time of ripening.*—Medium.

*Type of bearing.*—Not remonstrant.

*Chilling.*—Weak.

Planting date: Oct. 23, 2000.  
 10% Flowering: Dec. 23, 2000.  
 First mature fruits: Jan. 31, 2001.  
 Maturity (15–20 gms/plant): Feb. 15, 2001.

Time of flowering date: Date of planting: Oct. 23, 2000 in the farm of La Mogalla, in Cartaya (Huelva), Spain, about 7 W., 37 N., 45 feet elevation. Ten percent (10%) flowering occurs about Dec. 23, 2000 with first mature fruit about Jan. 31, 2001 and maturity (15–20 g/plant) about Feb. 15, 2001.

Time of flowers (50% of plants at first flower): about Jan. 2, 2001.

Storage Qualities: ‘Sabrosa’ fruit maintain their quality characteristics when keeping them in a frigo chamber at temperatures of about 2° C. during 48 hours. The fruit’s color remains substantially the same.

Time of ripening: After planting as aforesaid, plants are grown in raised beds under tunnel (small tunnel with small holes in plastic walls). Water and fertilizer were applied

through drip irrigation. Time of ripening (50% of plants with ripe fruit) is about February 4<sup>th</sup>. First mature fruit is about January 31<sup>st</sup> and maturity (15–20 gms/plant) is about February 15<sup>th</sup>.

General: The growing period in Huelva, Spain, where the observations were made is between about December 10<sup>th</sup> and May 15<sup>th</sup> of each year, with a maximum production at about mid-April. ‘Sabrosa’ is a short variety that benefits from induction to flowering by chilling, usually a few hours are sufficient, preferably at temperatures of 7° C. or less. Normally, the minimum number of hours is accumulated in the field during several days.

Disease resistance: No sensitivity to any disease or parasite has been observed for ‘Sabrosa.’

I claim:

1. A new and distinct strawberry plant of the variety substantially as shown and described.

\* \* \* \* \*



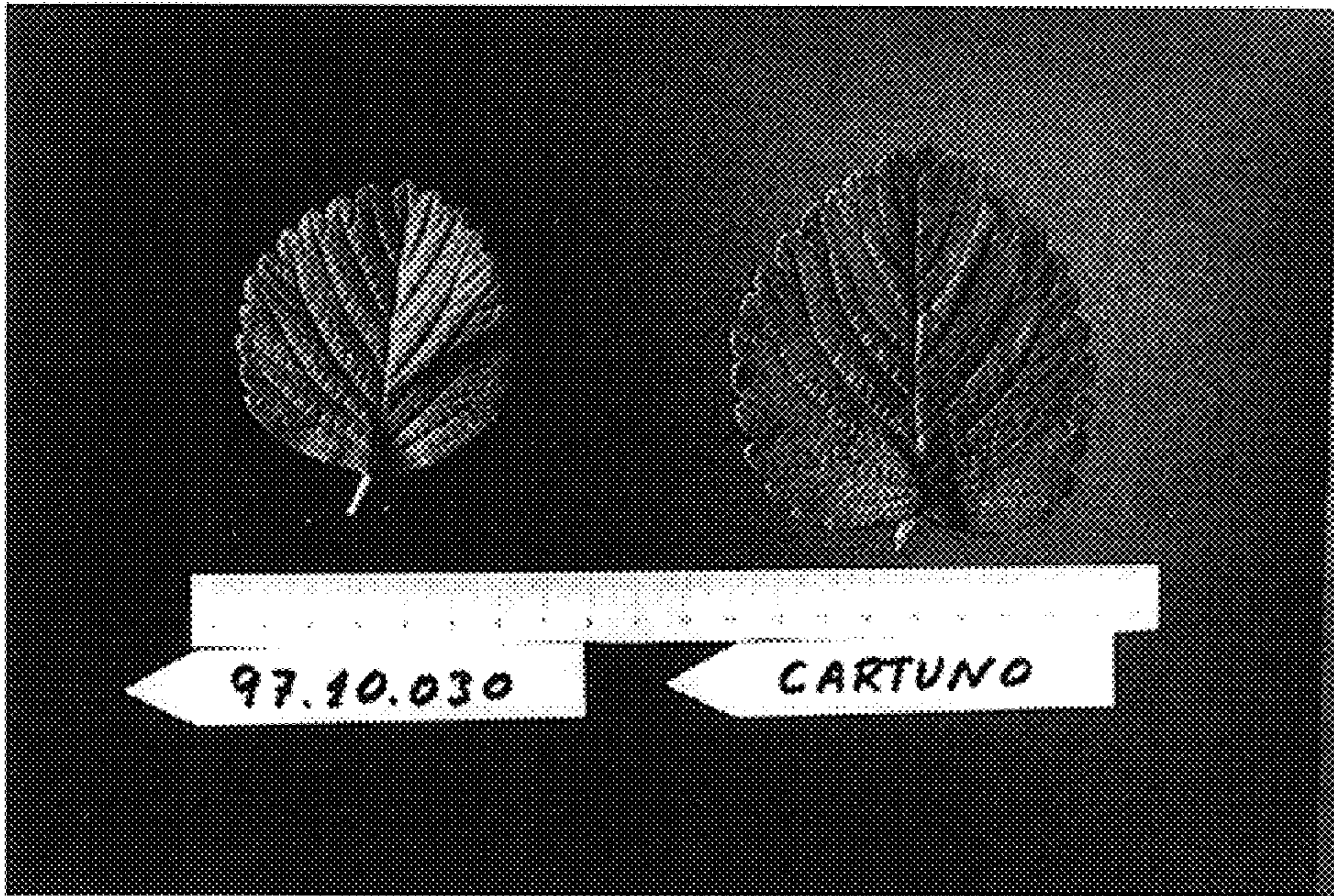


FIG. 1



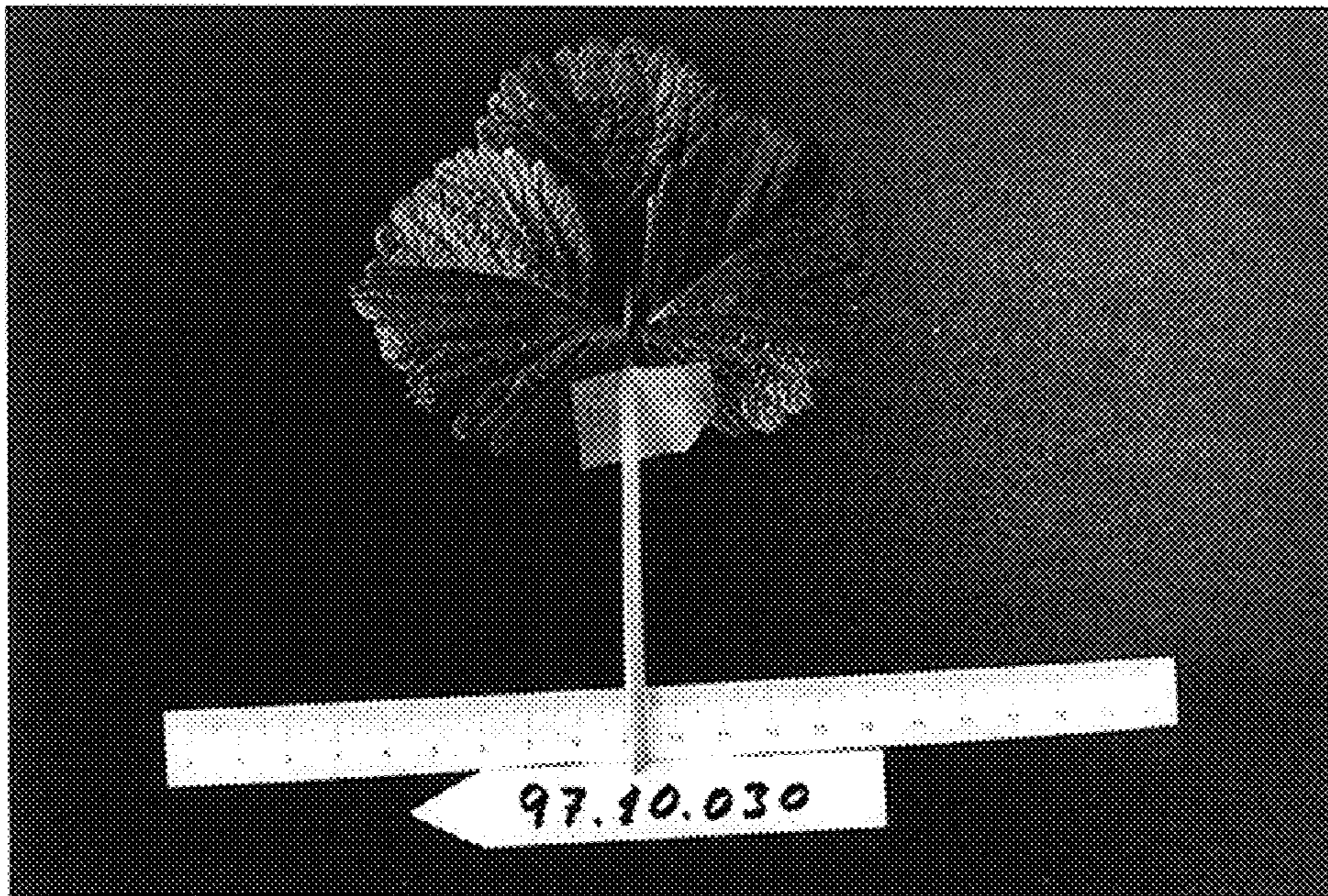


FIG. 2





FIG. 3





FIG. 4



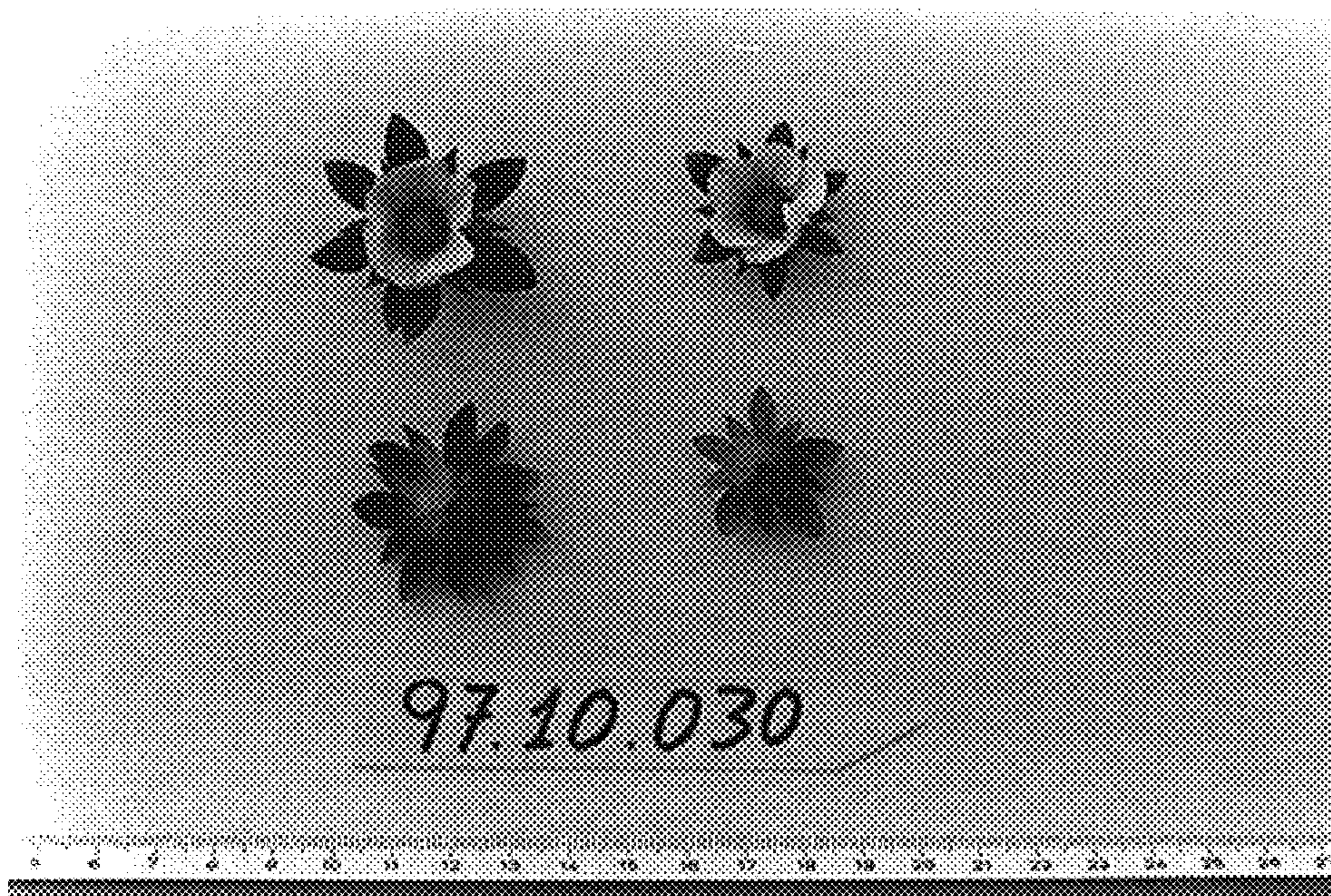


FIG. 5



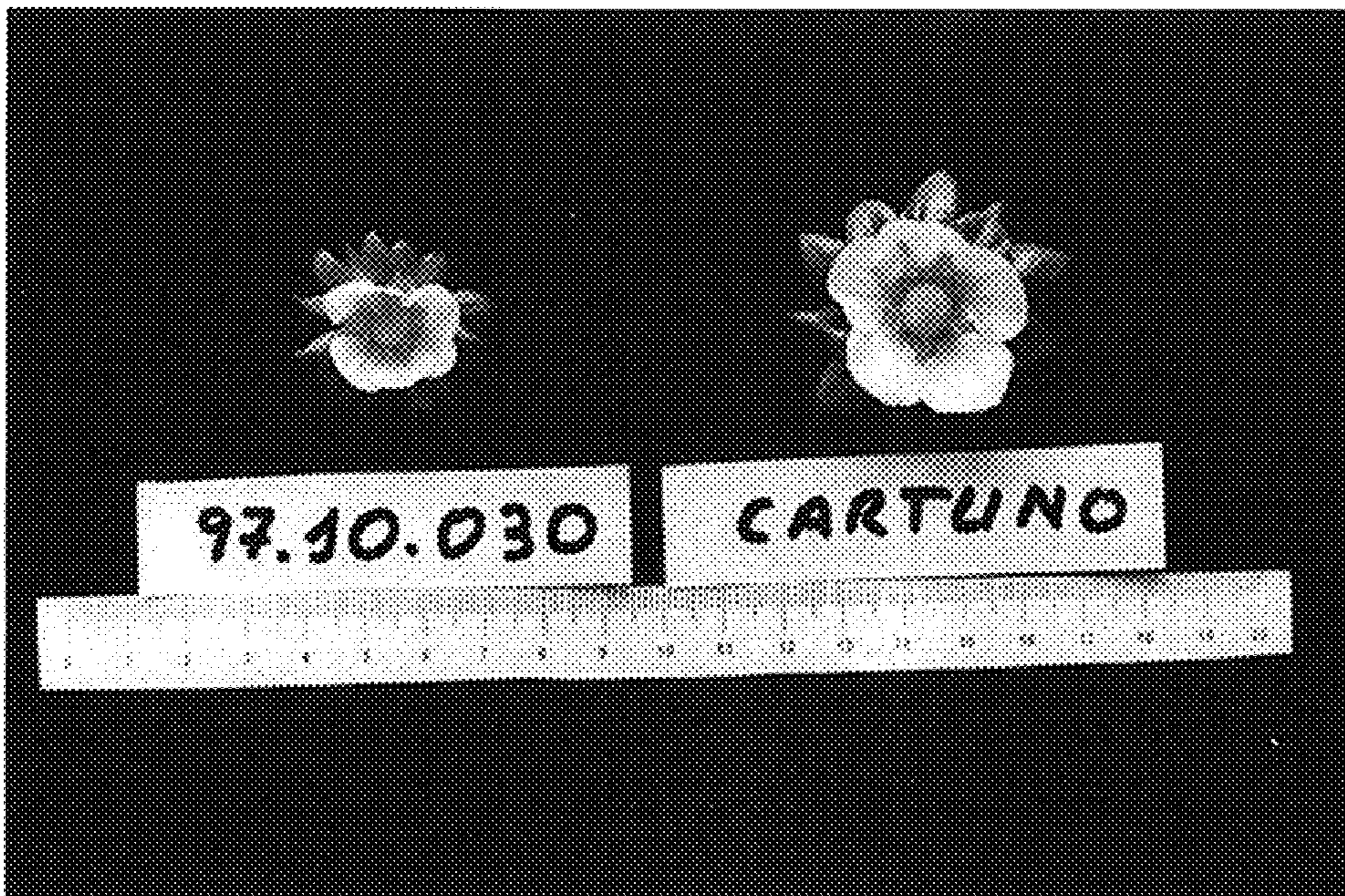


FIG. 6



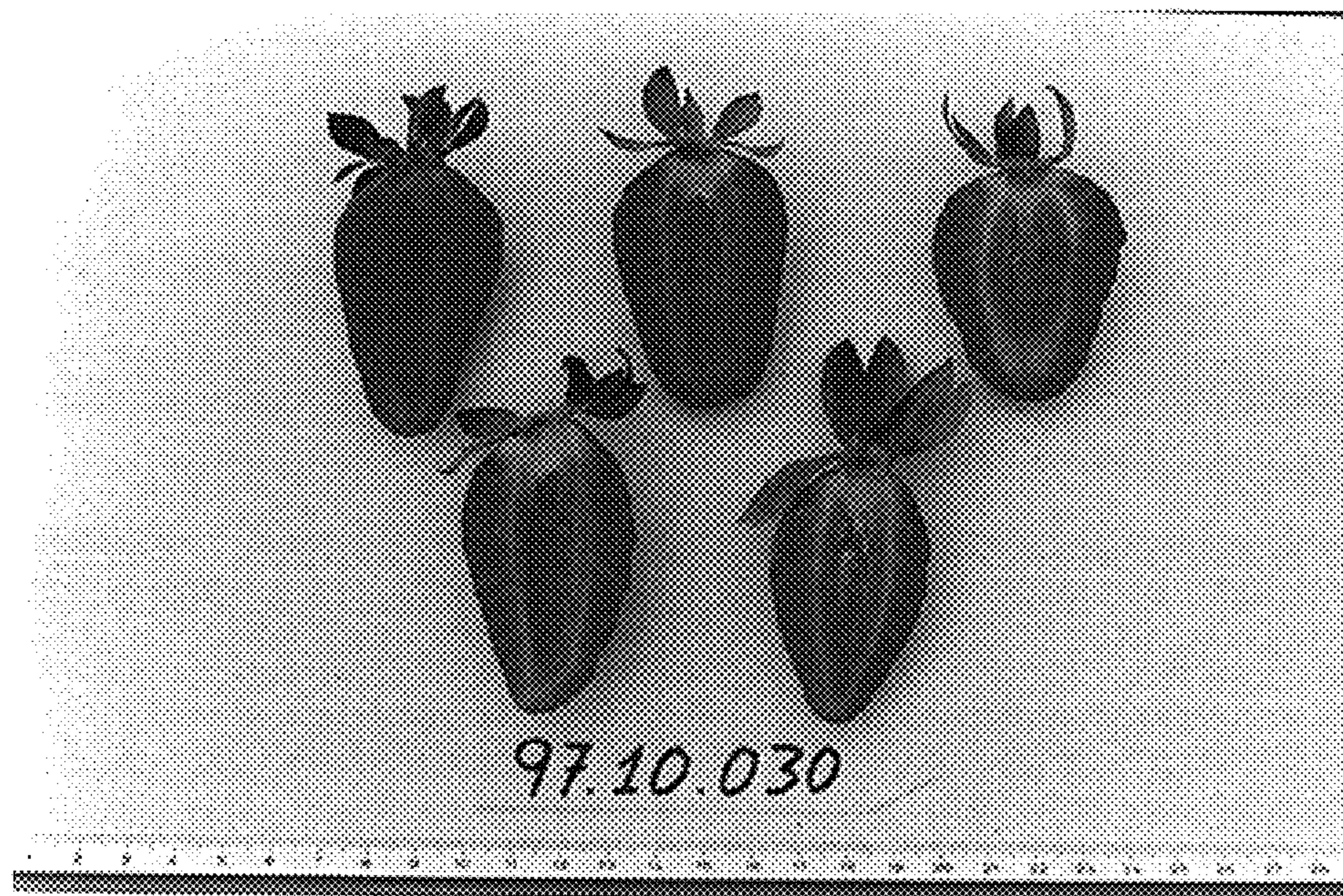


FIG. 7



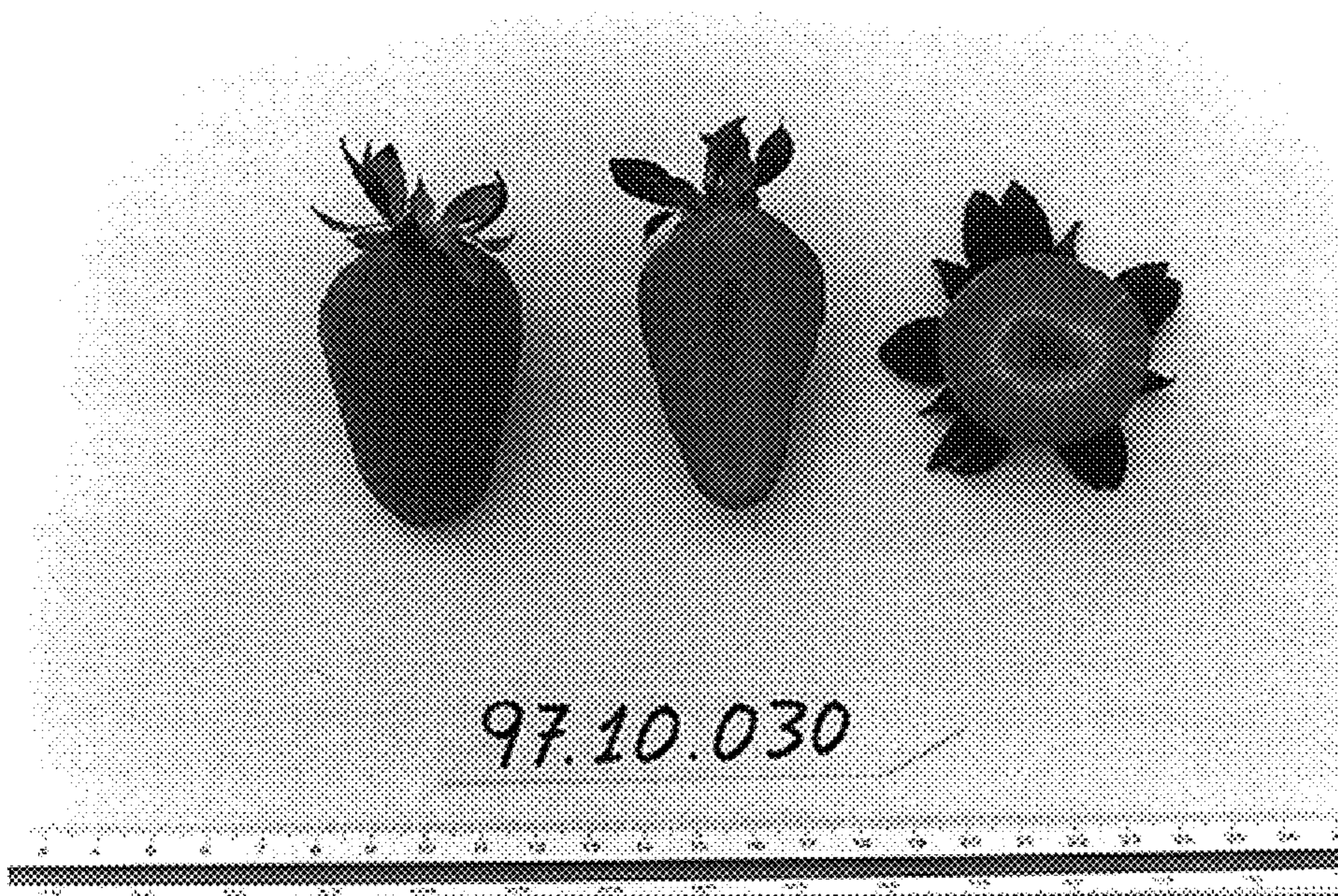


FIG. 8



# FIG. 9

