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(54) **STRAWBERRY PLANT NAMED 'DRISCOLL AGOURA'**

(50) Latin Name: *Fragaria×ananassa*
Varietal Denomination: **Driscoll Agoura**

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(52) **U.S. Cl.** **Plt./209**
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(57) **ABSTRACT**

This invention relates to a new and distinct variety of strawberry named 'Driscoll Agoura'. The variety is similar to the varieties 'El Capitan' and 'San Miguel'. The variety is distinguished from 'El Capitan' and 'San Miguel', in particular, by its weak vigor, obtuse to slightly oblique terminal leaflet base, few stolons, dense stolon pubescence, flat fruiting truss at first picking, strong unevenness of fruit surface, and medium sweetness of the fruit.

5 Drawing Sheets

Latin name of the genus and species of the plant claimed: The variety is botanically identified as *Fragaria×ananassa*.

1. BACKGROUND OF THE INVENTION

The new variety originated as a result of a controlled cross between the strawberry plants '61C117' (unpatented Driscoll variety) and '19A268' (unpatented Driscoll variety) in an ongoing breeding program, and was discovered as a seedling in a controlled breeding plot in, Ventura County, Calif. in February, 1998. The original seedling of the new cultivar was asexually propagated by stolons at a nursery in Shasta County, Calif. Propagules were transplanted to a controlled breeding plot in Ventura County, Calif., where it was identified and selected for further evaluation. 'Driscoll Agoura' was subsequently asexually propagated and underwent further testing at various locations in Ventura County, Calif. for four years. 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.

2. SUMMARY OF THE INVENTION

The present invention relates to a new and distinct variety of strawberry named 'Driscoll Agoura'. The variety is botanically identified as *Fragaria×ananassa*. The new variety is distinguished from other varieties by a number of characteristics as set forth in Tables 1–6.

3. COMPARISON TO SIMILAR VARIETIES

The varieties which we believe to be similar to 'Driscoll Agoura' from those known to us are 'El Capitan' (U.S. Plant Pat. No. P.P. 14,005 P3), and 'San Miguel' (U.S. Plant Pat. No. P.P. 10,642, issued Oct. 13, 1998). There are several characteristics of the new variety that are different from, or not possessed by 'El Capitan', and 'San Miguel'. The new variety has a weak vigor, obtuse to slightly oblique terminal leaflet base, few stolons, dense stolon pubescence, flat

fruiting truss at first picking, strong unevenness of fruit surface, and medium sweetness of the fruit.

'Driscoll Agoura' differs from its parent '61C117' (unpatented Driscoll variety) in several characteristics, including, but not limited to, having greater berry size and greater early season production. 'Driscoll Agoura' differs from its parent '19A268' (unpatented Driscoll variety) in several characteristics, including, but not limited to, having less creaing on the primary berries.

4. BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying photographs show typical specimens of the new variety, including fruit, foliage and flowers, in color as nearly true as it is reasonably possible to make in color illustrations of these characteristics. The plants of 'Driscoll Agoura' characterized in the botanical descriptions and depicted in the figures were grown outdoors in an annular production system. Measurements were taken during the spring in the second half of the production season, approximately seven months after planting.

FIG. **1** shows leaves of the plant with three leaflets.

FIG. **2** shows leaves of the plant with four leaflets.

FIG. **3** shows the upper side and under side of the flowers.

FIG. **4** shows a close-up of the strawberry.

FIG. **5** shows the strawberry in longitudinal cross-section.

5. DESCRIPTION OF THE NEW VARIETY

The following detailed description of the new variety is based upon observations taken of plants and fruit grown in Ventura County, Calif., U.S.A. Observations of 'Driscoll Agoura', 'El Capitan' and 'San Miguel' were taken in side by side comparison in 2002. This description is in accordance with UPOV terminology. Color designations, color descriptions, and other phenotypical descriptions may deviate from the stated values and descriptions depending upon variation in environmental, seasonal, climatic and cultural conditions. Colors are described and the most similar color

designations are provided from The Royal Horticultural Society (R.H.S.) Colour Chart.

5.1 PROPAGATION

The new variety is principally propagated by way of stolons. Although propagation by stolons is presently preferred, other known methods of propagating strawberry plants may be employed.

5.2 CHARACTERISTICS OF THE NEW VARIETY

Information on the new variety is presented in Tables 1, 2 and 3. In the tables, the flowers described are secondary flowers except where indicated. The fruit described is the secondary fruit on one year old plants. Fruit and flower measurements are an average of both primary and secondary fruit and flowers. In particular, the reproductive structures of 'Driscoll Agoura' are fully self-fertile and typical of the species. Anther color is yellow, 14A and receptacle color is 9A yellow.

Table 1 provides information on the plant and fruit characteristics of the new variety 'Driscoll Agoura' compared with characteristics of 'El Capitan' and 'San Miguel'. Table 2 provides additional information of the plant and fruit characteristics of the new variety 'Driscoll Agoura' compared with characteristics of the varieties 'El Capitan' and 'San Miguel'. Table 3 provides reactions of the new variety to stresses as compared to the varieties 'El Capitan' and 'San Miguel'. Tables 4 and 5 provide information of the new variety's reaction to pests and diseases, respectively, compared to the varieties 'El Capitan' and 'San Miguel'. Table 6 provides isozyme characteristics of the new variety as compared to the varieties 'El Capitan' and 'San Miguel'.

TABLE 1

DETAILED COMPARISON OF 'DRISCOLL AGOURA', 'EL CAPITAN' AND 'SAN MIGUEL'

	Driscoll Agoura	El Capitan	San Miguel
Plant Characteristics			
Height of Plant (cm)	19.1	25.9	23.3
Spread of Plant (cm)	30.1	35.2	32.5
Number of Crowns	2.8	4.0	3.3
Leaf Characteristics			
Terminal Leaflet Width (cm)	6.6	6.7	6.2
Terminal Leaflet Length (cm)	6.0	5.7	6.6
Terminal Leaflet Length/Width Ratio	1.10	1.17	0.94
Number of Teeth/Terminal Leaflet	22.0	17.1	23.3
Color of upper side of leaf	dark green 147A	dark green 147A	medium to dark green 147A
Color of under side of leaf	light to medium green 138B	light to medium green 147C	light to medium green 138B
Petiole Length (cm)	15.5	19.0	17.1
Petiole color	149A	149A	149A
Bract Frequency	25% typically single	8% typically single	8% typically paired
Stipule Length (cm)	3.3	3.8	3.3
Stipule Width (cm)	1.1	1.1	1.1
Flower Characteristics			
Petal Width (cm)	1.27	1.43	1.37
Petal Length (cm)	1.15	1.48	1.35

TABLE 1-continued

DETAILED COMPARISON OF 'DRISCOLL AGOURA', 'EL CAPITAN' AND 'SAN MIGUEL'

	Driscoll Agoura	El Capitan	San Miguel
Petal Length/Width Ratio	1.10	0.97	1.01
Petal Color	155C	155C	
Flower Diameter (cm)	2.26	2.75	2.65
Calyx Diameter (cm)	3.44	3.75	2.90
Fruit Characteristics			
Fruit Width (cm)	4.09	4.59	4.67
Fruit Length (cm)	3.97	4.01	4.18
Fruit Length/Width Ratio	1.03	1.14	1.12
Average Berry Size (g)	25.7	23.0	24.0
Fruit Skin Color	dark red 53A	dark red 53A	dark red 53A
Fruit Flesh Color	orange red 41A	red 43A	dark red 45A
Average % brix	7.92	7.68	7.24
Brix/Acid Ratio	10.12	9.70	9.51
Achene Coloration	dark red to yellow 59A to 151A	dark red to yellow green 60A to 151A	dark red to yellow green 53A to 151B
Total Yield (g/plant)	621	665	650

TABLE 2

CHARACTERISTICS OF 'DRISCOLL AGOURA', 'EL CAPITAN' AND 'SAN MIGUEL'

	Driscoll Agoura	El Capitan	San Miguel
Plant			
Habit	flat globose	globose	flat globose
Density	open	medium dense	open
Vigor	weak	medium	medium
Leaf			
Shape in cross section	slightly concave to flat	slightly concave	concave
Interveinal blistering	strong	strong	strong
Glossiness	medium	strong	strong
Number of leaflets	more than 3 leaflets on approx. 17% of leaves	three only	three only
Terminal leaflet margin profile	flat	flat	flat to revolute
Terminal leaflet shape of base	obtuse to slightly oblique	rounded	rounded
Terminal leaflet shape of teeth	rounded	obtuse	rounded
Stipule pubescence	sparse	sparse to medium	sparse
Petiole pubescence	dense	dense	sparse to medium
Petiole pose of hairs	outwards	outward to downward	outward
Stolon			
Number	few	many	many
Anthocyanin coloration	weak to medium	medium to strong	weak to medium
Thickness	medium thick	thin	thin to medium
Pubescence	dense	sparse to medium	sparse to medium
Inflorescence			
Position relative to foliage	above	above	above

TABLE 2-continued

CHARACTERISTICS OF 'DRISCOLL AGOURA', 'EL CAPITAN' AND 'SAN MIGUEL'

	Driscoll Agoura	El Capitan	San Miguel
Diameter of calyx relative to corolla	larger	larger	larger
Diameter of inner calyx relative to outer	same size	smaller to same size	same size
Spacing of petals	overlapping	overlapping	overlapping
Fruiting Truss			
Attitude at first picking	Flat	prostrate	prostrate
Average Length (cm)	12.3	18.4	17.4
Fruit			
Predominant shape	wedged to cordate	cordate	conical to cylindrical
Difference in shapes between primary and secondary fruits	marked, primaries are more creased	marked	moderate
Bands without achenes	very narrow	very narrow	very narrow
Unevenness of surface	strong	weak to medium	weak to medium
Evenness of color	slightly uneven	slightly uneven to even	even
Glossiness	strong	strong	medium
Insertion of achenes	level with surface	below to level with the surface	below surface
Insertion of calyx	set above fruit	in a basin to level	set above
Pose of the calyx segments	reflexed	reflexed	spreading to reflexed
Size of calyx in relation to fruit	smaller to same size	larger	same size
Adherence of calyx	weak to medium	strong	strong
Firmness of flesh	firm	firm	firm
Evenness of flesh color	slightly uneven	even	even
Distribution of flesh color	marginal and central	marginal and central	marginal and central
Hollow center size	medium	large	medium
Sweetness	medium	strong	strong
Texture when tasted	medium	fine	fine
Acidity	medium	medium	medium
Time of Flowering	mid-December	mid-December	early-January
Harvest Interval	late-January to mid-June	late-January to mid-June	early-February to mid-June
Type of Bearing	partially everbearing	partially everbearing	partially everbearing

5.3 REACTION TO STRESS

TABLE 3

	Driscoll Agoura	El Capitan	San Miguel
Reaction to Stress			
high pH	moderately resistant	moderately resistant	moderately resistant
high soil salt levels	moderately resistant	moderately resistant	moderately resistant

5.4 PEST AND DISEASE RESISTANCE AND SUSCEPTIBILITY

TABLE 4

	Driscoll Agoura	El Capitan	San Miguel
Reaction to Pests			
Tetranychus urticae	moderately resistant	moderately resistant	moderately resistant
Lygus hesperus	susceptible	susceptible	susceptible

TABLE 5

	Driscoll Agoura	El Capitan	San Miguel
Reaction to Diseases			
Botrytis fruit rot	moderately susceptible	moderately susceptible	moderately susceptible
Powdery mildew	moderately resistant	moderately resistant	moderately resistant
Verticillium wilt	susceptible	susceptible	susceptible
Strawberry Mottle Virus	moderately resistant	moderately resistant	moderately resistant
Xanthomonas fragariae	moderately susceptible	moderately susceptible	moderately susceptible

5.5 ISOZYME ANALYSIS

In addition to the morphological description above, the new cultivar 'Driscoll Agoura' has been analyzed to obtain an indication of its genetic makeup to provide further means for identifying the new variety and distinguishing it from some other somewhat similar and/or related strawberry varieties. Specifically, leaf samples of 'Driscoll Agoura', 'El Capitan' and 'San Miguel' were analyzed by electrophoresis for isozyme patterns of the enzymes phosphoglucoisomeras (PGI), lecuine aminopeptidase (LAP) and phosphoglucomutase (PGM). See *J. Amer. Soc. Hort. Sci.* 106:684–687. Isozyme characterization of the three varieties is presented in Table 4, with the letters representing the banding patterns for each enzyme as designated in the above-identified article.

TABLE 6

ISOZYME ANALYSIS FOR 'DRISCOLL AGOURA', 'EL CAPITAN' AND 'SAN MIGUEL'

Locus	Driscoll Agoura	El Capitan	San Miguel
PGI	A4	A4	A2
LAP	B3	B3	B3
PGM	C2	C2	C4

What is claimed is:

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

* * * * *

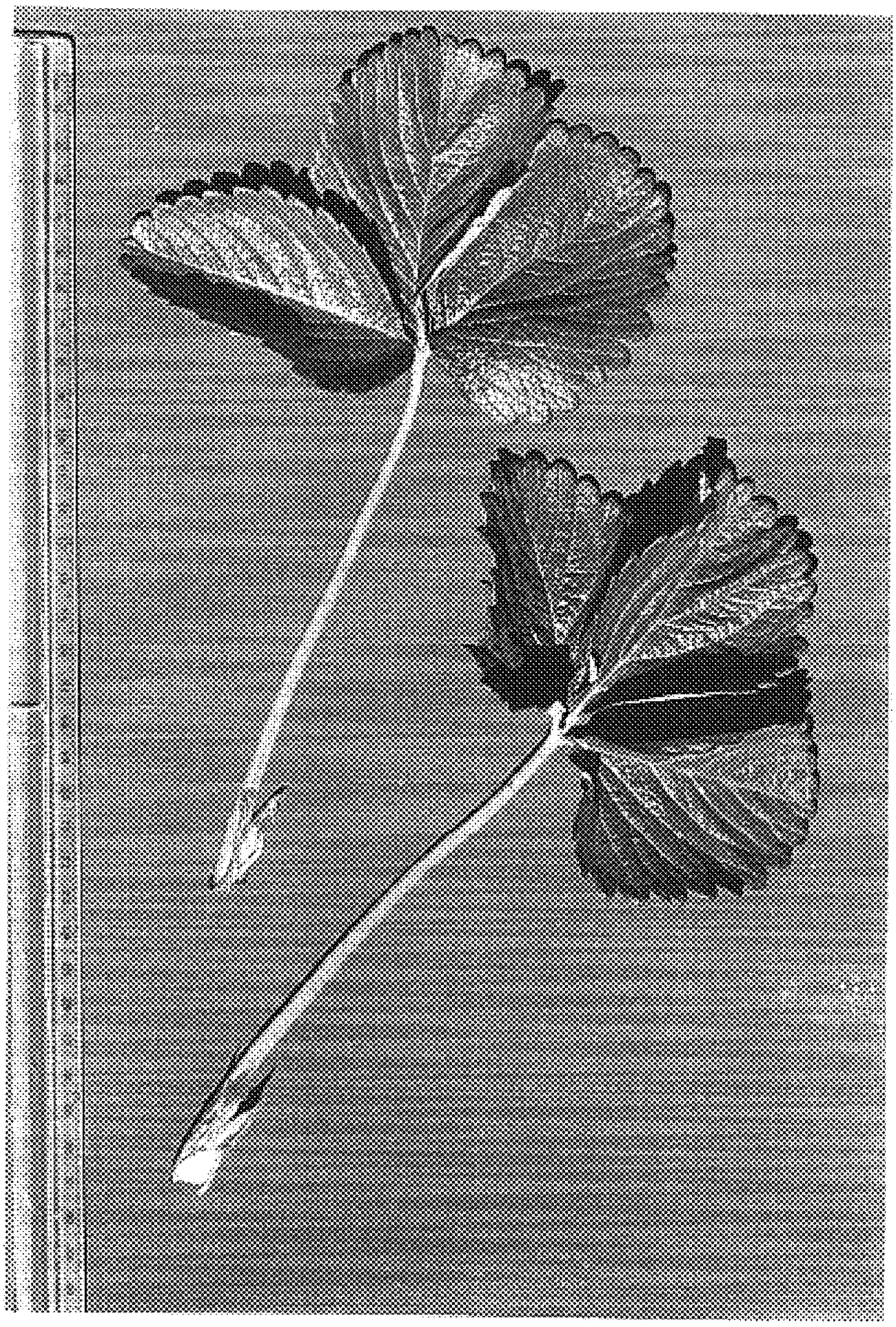

FIG. 1

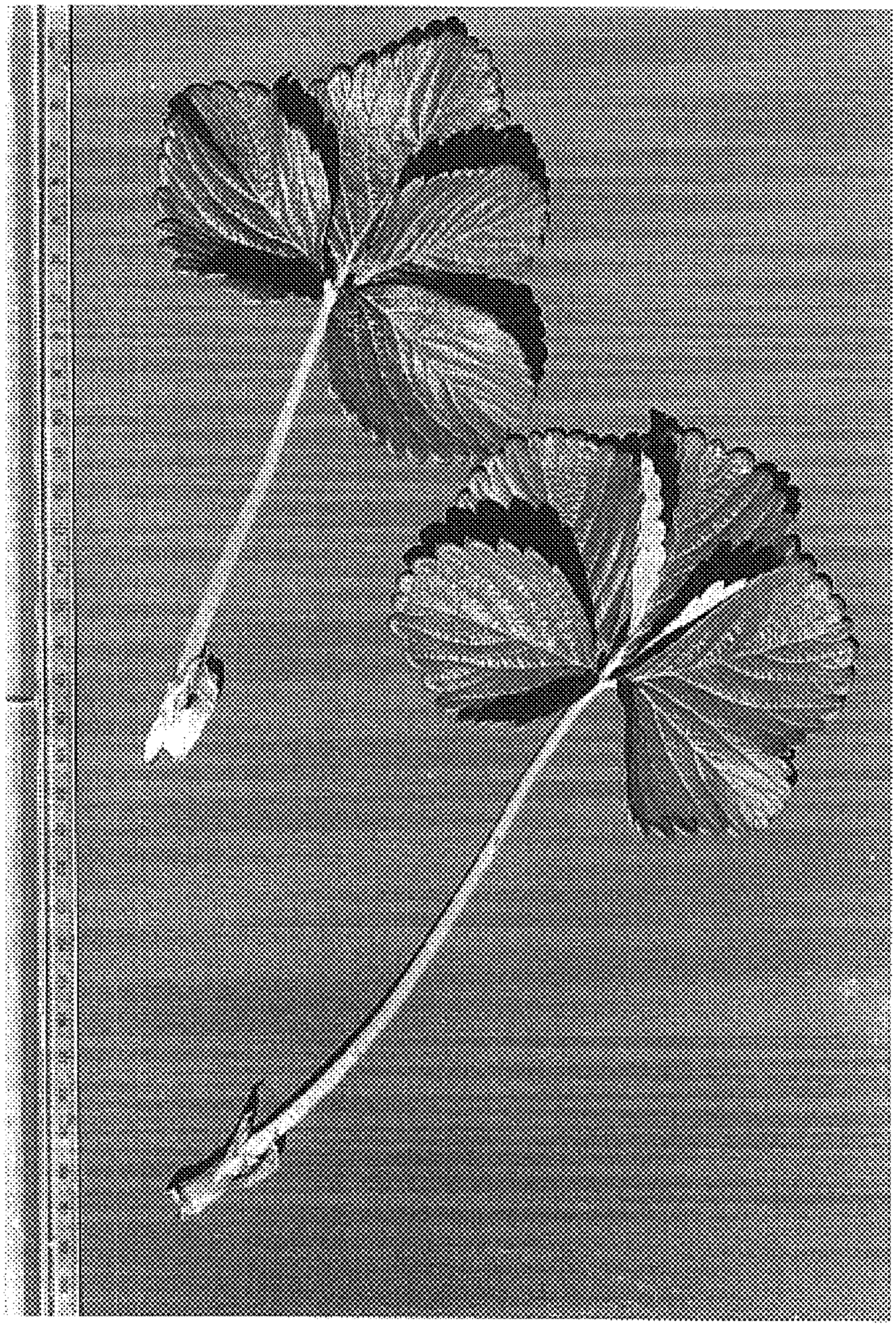

FIG. 2

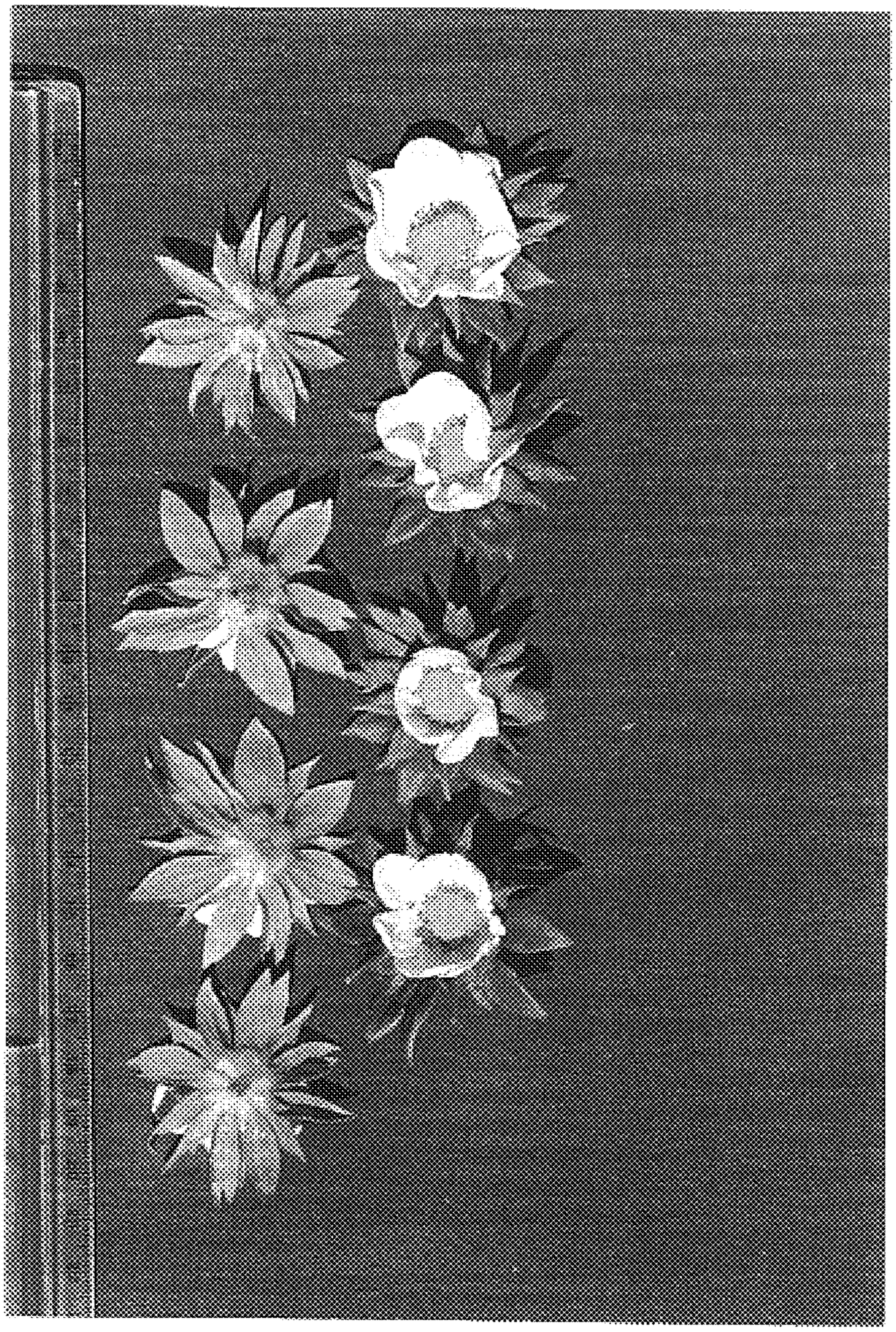

FIG. 3

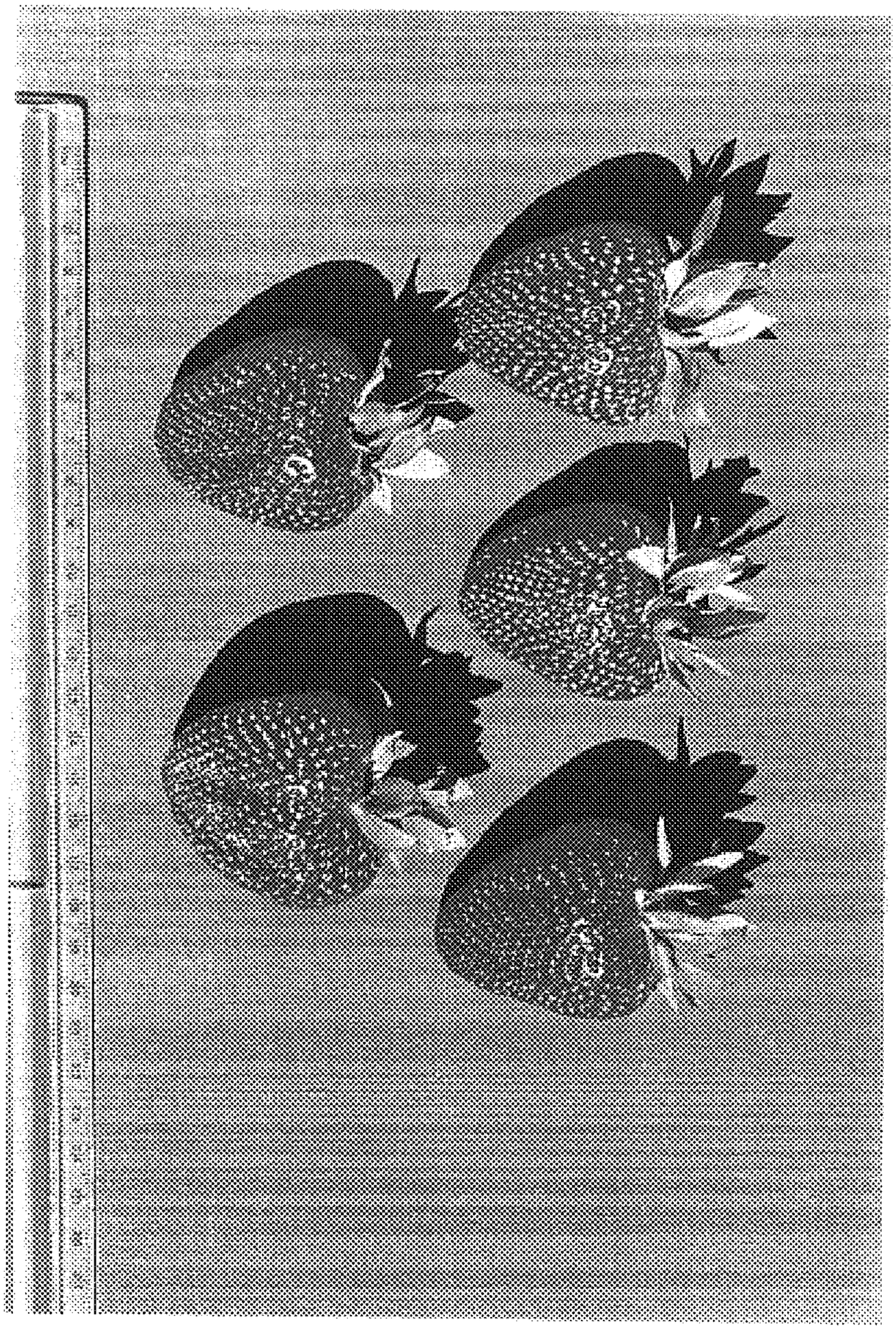

FIG. 4

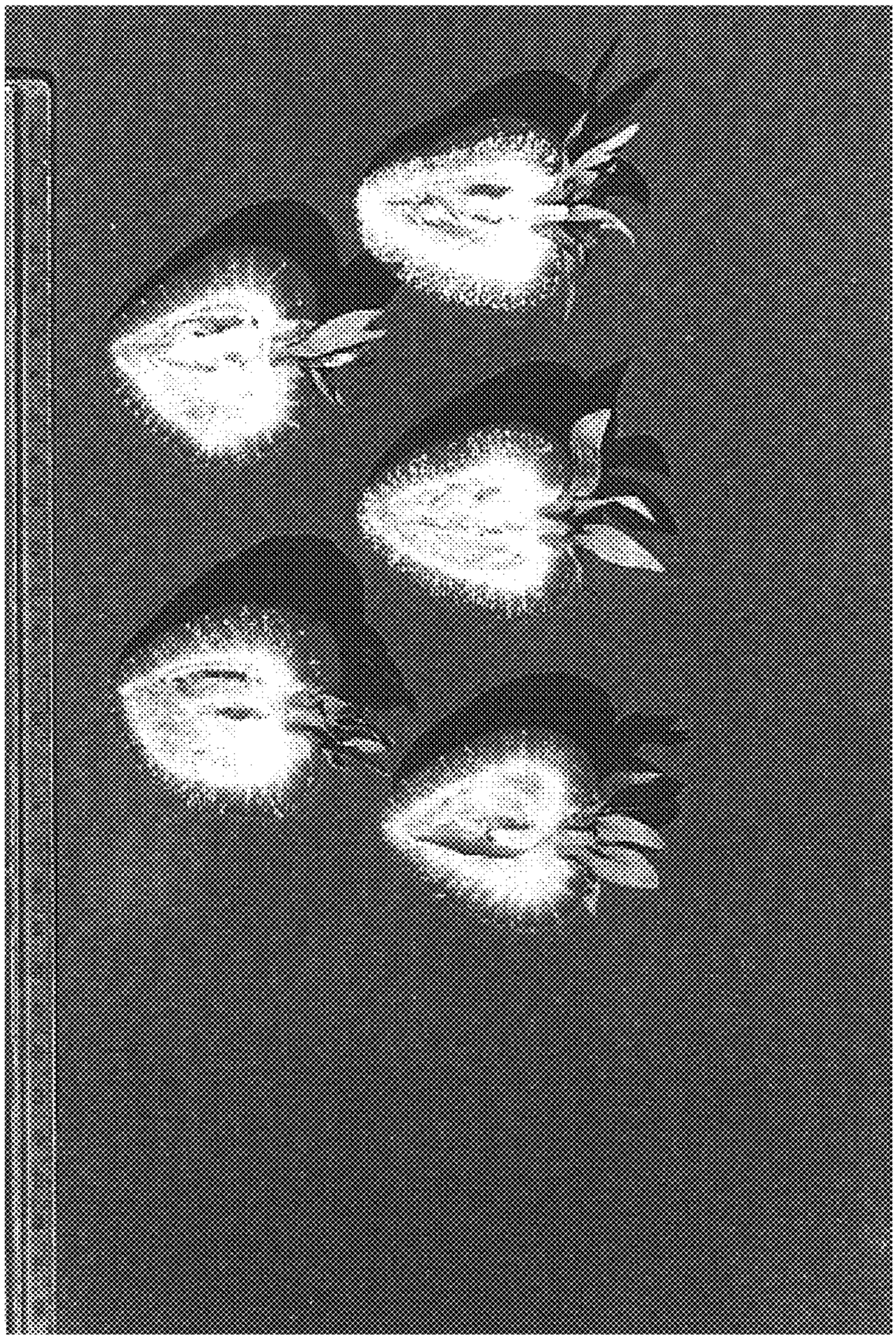

FIG. 5