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Ackerman et al.

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(54) **STRAWBERRY PLANT NAMED ‘PS-5096’**

(50) Latin Name: *Fragaria ananassa*
Varietal Denomination: **PS-5096**

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(57) **ABSTRACT**

This invention relates to a new and distinct variety of strawberry plant named ‘PS-5096’. This new strawberry plant named ‘PS-5096’ is primarily adapted to the growing conditions of the central coast of California, and is characterized by medium to small sized fruit which are orange-red to red in color; medium to small calyx diameter; conical, glossy fruit with the calyx which tends to be slightly reflexed; medium green foliage, which is slightly concave to slightly convex in shape with medium interveinal blistering and gloss; and position of fruiting truss tends to be more level with to above the plant with weak pubescence.

4 Drawing Sheets

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Latin name of the genus and species of the plant claimed:
Fragaria ananassa.
Variety denomination: ‘PS-5096’.

BACKGROUND OF THE INVENTION

The present invention relates to a new and distinct strawberry variety designated as ‘PS-5096’. This new variety is a result of a controlled cross made by the inventors Stephen M. Ackerman, Steven D. Nelson, and Michael D. Nelson, in 1997 between strawberry variety ‘PS-592’ (patented, U.S. Plant Pat. No. 9,903) and strawberry variety designated ‘PS-1150’ (patented, U.S. Plant Pat. No. 10,780). It is unknown as to which parent variety is the seed parent and which parent variety is the pollen parent. The variety is botanically known as *Fragaria ananassa*.

The seedling resulting from the aforementioned cross was asexually propagated by stolons in a nursery located in Siskiyou County, California, and was subsequently selected by the inventors from a controlled breeding plot in Salinas, Calif., in 1999. After its selection, the new variety was further asexually propagated by stolons in both Siskiyou County, California and San Joaquin County, California. The new variety was extensively tested over the next several years in fruiting fields of Salinas, Calif. This propagation has demonstrated that the combination of traits disclosed herein as characterizing the new variety are fixed and remain true to type through successive generations of asexual reproduction.

BRIEF SUMMARY OF THE INVENTION

‘PS-5096’ is primarily adapted to the climate and growing conditions of the central coast of California. This region

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provides the necessary winter temperatures required for it to produce a strong vigorous plant and to remain in fruit production from April through November. The nearby Pacific Ocean provides the needed humidity and moderate temperatures to maintain fruit quality during the spring and summer production months.

The following traits have been repeatedly observed and are determined to be unique characteristics of ‘PS-5096’, which in combination distinguish this strawberry plant as a new and distinct variety:

1. Medium to small sized fruit;
2. Orange-red to red fruit color;
3. Medium to small calyx diameter;
4. Conical, glossy fruit with the calyx which tends to be slightly reflexed;
5. Medium green foliage; slightly concave to slightly convex in shape with medium interveinal blistering and gloss; and
6. Position of fruiting truss tends to be more level with to above the plant with weak pubescence.

The strawberry varieties that are believed to be most closely related to the new strawberry variety ‘PS-5096’ are the parental cultivars, strawberry variety ‘PS-592’ (patented, U.S. Plant Pat. No. 9,903) and strawberry variety ‘PS-1150’ (patented, U.S. Plant Pat. No. 10,780).

In side-by-side comparisons to the similar strawberry varieties ‘PS-592’ and ‘PS-1150’, the new strawberry variety ‘PS-5096’ differs by the following combination of characteristics as described in Table 1:

TABLE 1

Characteristic	'PS-5096'	'PS-592' (U.S. Plant Pat. No. 9,903)	'PS-1150' (U.S. Plant Pat. No. 10,780)
1. Average berry weight (gm)	19.3	23.1	17.6
2. Achenes per berry	254	304	293
3. Distribution of red color of the internal flesh	Only marginal	Marginal & central	Marginal & central
4. Number of crowns per Plant	5.5	5.0	5.0
5. Plant Size	Medium to large	Large	Medium
6. Stolon anthocyanin intensity	Absent or very weak	Medium	Medium to strong
7. Stolon pubescence	Weak to medium	Medium	Medium to strong
8. Foliage Color (upper surface)	Medium green	Medium green	Medium green
9. Foliage interveinal blistering	Medium	Medium to strong	Weak to medium
10. Foliage gloss	Medium	Strong	Weak
11. Fruiting truss position relative to foliage	Level with to above	Level with to beneath	Above
12. Fruiting truss pubescence	Weak	Medium	Medium

For identification a series of AFLP molecular markers have been determined for this new variety.

BRIEF DESCRIPTIONS OF THE DRAWINGS

The accompanying color photographs illustrate the overall appearance of typical specimens of the new strawberry variety 'PS-5096', at various stages of development as true as it is reasonably possible with color reproductions of this type. Color in the photographs may differ slightly from the color value cited in the botanical description which accurately describe the color of 'PS-5096'. The depicted plant and plant parts of the new strawberry variety 'PS-5096' were taken in Salinas, Calif., and are approximately 8 to 9 months old.

FIG. 1 shows typical fruiting field characteristics taken in the month of June, 2006.

FIG. 2 shows a close-up view of typical leaf structure taken in the month of June, 2006.

FIG. 3 shows typical mature and immature field fruit taken in the month of June, 2006.

FIG. 4 shows a close-up view of fruit taken in the month of July, 2006.

DETAILED BOTANICAL DESCRIPTION

'PS-5096' has not been observed under all possible environmental conditions. The characteristics of the new variety may vary in detail, depending upon variations in environmental factors, including weather (temperature, humidity and light intensity), day length, soil type and location.

The aforementioned photographs, together with the following description of the new variety 'PS-5096', unless otherwise noted, is based on observations taken during the 2006 growing season in Salinas, Calif. These measurements and ratings were taken from plants of 'PS-5096' dug from a high-elevation nursery located in Siskiyou County, California during the middle of October 2005 and planted approxi-

mately 3 weeks later in Salinas, Calif. The approximate age of the observed plants is 7 to 10 months. Yield observations and fruit quality characteristics are averaged from four years of data collected from the 2003 through 2006 growing seasons. Flower measurements and characteristics are from secondary flowers unless otherwise noted. Fruit characteristics and measurements are from secondary fruit unless otherwise noted.

Color terminology where noted follows the Munsell Book of Colors, Munsell Color, Baltimore, Md. (1976).

The following Tables 2-8 describe fruit, plant, stolon, foliage, fruiting truss, flower and pest/disease characteristics of the new strawberry 'PS-5096' in comparison to the similar strawberry varieties 'PS-592' and 'PS-1150'.

TABLE 2

Characteristic	FRUIT CHARACTERISTICS		
	'PS-5096'	'PS-592' (U.S. Plant Pat. No. 9,903)	'PS-1150' (U.S. Plant Pat. No. 10,780)
Color of mature fruit	7.5R 3/12-4/12 Orange red to red	7.5R 3/12-4/12 Orange red to red	7.5R 4/10-3/8 Red
Color of internal flesh	7.5R 4/10-4/12 Medium red	7.5R 5/10-4/10 Light red	7.5R 4/10-4/12 Medium red
Length (cm)	4.39	4.83	4.20
Width (cm)	3.68	4.26	3.69
Ratio length/width	1.19	1.13	1.14
	Slightly longer than broad	Slightly longer than broad	Slightly longer than broad
Calyx diameter (cm)	4.0	5.0	4.2
Average weight (gm)	19.3	23.1	17.6
Achene color	5Y 6/8-7.5R 3/8	5Y 6/8-7.5R 3/8	5Y6/8-7.5R 3/8
Achenes per berry	254	304	293
Achene weight (mg)	0.59	0.61	0.56
Marketable yield (gm/plt)	1,219	1,392	1,010
Size	Medium to small	Medium to large	Small
Predominant shape	Conical	Conical	Conical
Difference in shapes between primary and secondary fruit	None or very slight	Moderate	Slight
Band without achenes	Absent or very narrow	Absent or very narrow	Absent or very narrow
Unevenness of surface	Absent or very weak	Weak	Absent or very weak
Evenness of color	Even	Slightly uneven to even	Even
Glossiness	Strong	Medium to strong	Strong
Insertion of achenes	Level with surface	Level with surface	Level with surface
Insertion of calyx	In the basin to level	Level to above fruit	In the basin to level
Attitude of the calyx	Spreading to reflexed	Spreading to reflexed	Collapsing to reflexed
Size of calyx in relation to fruit diameter	Slightly larger	Slightly larger	Slightly larger
Adherence of calyx	Strong	Strong	Strong
Firmness of skin	Strong	Medium	Strong
Firmness of flesh	Firm	Medium	Medium to firm
Keeping quality:	Excellent	Moderate	Excellent
Distribution of red color of the flesh	Only marginal	Marginal and central	Marginal and central
Hollow center expression	Moderate	Moderate to strong	Moderate to strong
Flavor	Good	Very good	Fair
Soluble solids (% Brix)	8.3	8.0	7.4
Time of first flowering	Medium	Early	Late

TABLE 2-continued

FRUIT CHARACTERISTICS			
Characteristic	'PS-5096'	'PS-592' (U.S. Plant Pat. No. 9,903)	'PS-1150' (U.S. Plant Pat. No. 10,780)
Flowering period	Early March	Late February to early March	Mid March
Time of first harvesting	Medium	Early	Late
Harvest period	Early April to early December	Late March to early December	Mid April to early December
Type of bearing	Partially remontant	Partially remontant	Partially remontant

TABLE 3

PLANT CHARACTERISTICS			
Characteristic	'PS-5096'	'PS-592' (U.S. Plant Pat. No. 9,903)	'PS-1150' (U.S. Plant Pat. No. 10,780)
Height of plant (cm)	29.7	31.0	30.0
Spread of plant (cm)	31.7	35.1	28.8
Crowns/plant	5.5	5.0	5.0
Size	Large to medium	Large	Medium
Habit	Globose	Globose	Globose
Density	Medium	Open to medium	Medium
Vigor	Medium to strong	Strong	Medium

TABLE 4

STOLON CHARACTERISTICS			
Characteristic	'PS-5096'	'PS-592' (U.S. Plant Pat. No. 9,903)	'PS-1150' (U.S. Plant Pat. No. 10,780)
Average stolon number per plant from the fruiting field	Few	Few to medium	Few
Anthocyanin coloration	7.5R 6/6-6/4	7.5R 5/6-5/4	7.5R 4/6-5/6
Anthocyanin intensity	Absent or very weak	Medium	Medium to strong
Diameter at bract (mm)	4.0 Thin to medium	4.4 Thick	4.2 Thin to medium
Pubescence	Weak to medium	Medium	Medium to strong

TABLE 5

FOLIAGE CHARACTERISTICS			
Characteristic	'PS-5096'	'PS-592' (U.S. Plant Pat. No. 9,903)	'PS-1150' (U.S. Plant Pat. No. 10,780)
<u>Foliage:</u>			
Color of upper surface	7.5GY 4/4-3/4 Medium green	7.5GY 4/4-3/4 Medium green	7.5GY 4/4-3/4 Medium green
Color of under side	5GY 5/4-6/4 Light to medium grey green	5GY 5/4-6/4 Light to medium grey green	5GY 5/4-6/4 Light to medium grey green

TABLE 5-continued

FOLIAGE CHARACTERISTICS			
Characteristic	'PS-5096'	'PS-592' (U.S. Plant Pat. No. 9,903)	'PS-1150' (U.S. Plant Pat. No. 10,780)
Shape in cross section	Slightly concave to slightly convex	Slightly concave	Slightly concave to slightly convex
Interveinal blistering	Medium	Medium to strong	Weak to medium
Glossiness	Medium	Strong	Weak
Number of leaflets	3	3	3 to 4
<u>Terminal Leaflet:</u>			
Length (cm)	9.2	9.5	7.2
Width (cm)	6.6	8.0	6.4
Length/width ratio	1.39	1.19	1.13
Serrations/leaf	20.7	20.7	19.3
Size	Much longer than broad	Much longer than broad	Longer than broad
Shape of base	Acute	Acute	Obtuse
Shape of teeth	Obtuse	Obtuse	Obtuse
<u>Petiole:</u>			
Length (cm)	20.8	21.1	19.0
Diameter (mm)	3.6	4.7	3.1
Petiolule length (mm)	13.0	15.7	9.3
Pubescence	Moderate to sparse	Moderate to sparse	Moderate to sparse
Attitude of hairs	Slightly outward	Strongly outward	Strongly outward
Size bract leaflets	Small	Small to medium	Small
<u>Stipules:</u>			
Length (mm)	15.4	20.8	14.5
Width (mm)	8.3	8.5	8.4
Anthocyanin coloration	Medium	Medium	Absent or very weak
Color	Light to medium green	Light to medium green	Light to medium green

TABLE 6

FRUITING TRUSS CHARACTERISTICS			
Characteristic	'PS-5096'	'PS-592' (U.S. Plant Pat. No. 9,903)	'PS-1150' (U.S. Plant Pat. No. 10,780)
Length at maturity (cm)	35.5	37.3	38.1
Position relative to foliage	Level with to above	Beneath to level with	Above
Pubescence	Weak	Medium	Medium
Anthocyanin intensity	Light	Light	Moderate
Attitude at first pick	Prostrate to erect	Prostrate to erect	Prostrate to erect

TABLE 7

FLOWER CHARACTERISTICS			
Characteristic	'PS-5096'	'PS-592' (U.S. Plant Pat. No. 9,903)	'PS-1150' (U.S. Plant Pat. No. 10,780)
Petal color	N9.5/90.0% R to N9.25/84.2% R White	N9.5/90.0% R to N9.25/84.2% R White	N9.5/90.0% R to N9.25/84.2% R White
Corolla diameter (mm)	28.0	30.6	30.5
Calyx diameter (mm)	32.0	38.8	34.0

TABLE 7-continued

FLOWER CHARACTERISTICS			
Characteristic	'PS-5096'	'PS-592' (U.S. Plant Pat. No. 9,903)	'PS-1150' (U.S. Plant Pat. No. 10,780)
Petal length (mm)	11.0	12.1	12.5
Petal width (mm)	10.1	11.5	10.8
Petal length/width ratio	1.09	1.05	1.15
Petals/flower	6.0	6.0	6.2
Sepal length (mm)	12.8	15.7	13.1
Sepal width (mm)	4.8	6.2	5.4
Sepal length/width ratio	2.69	2.54	2.42
Sepals/flower	12.1	11.9	12.4
Size of calyx relative to corolla	Larger	Larger	Larger
Size of inner calyx relative to outer calyx	Same	Smaller to same	Smaller to same
Relative position of petals	Overlapping	Overlapping	Overlapping

TABLE 8

PEST AND DISEASE REACTIONS			
Characteristic	'PS-5096'	'PS-592' (U.S. Plant Pat. No. 9,903)	'PS-1150' (U.S. Plant Pat. No. 10,780)
Two spotted spider mite	Moderately susceptible	Moderately susceptible	Moderately susceptible
Lygus bug	Susceptible	Susceptible	Susceptible
Flower thrips	Moderately susceptible	Moderately susceptible	Moderately susceptible
Powdery mildew	Moderately susceptible	Moderately susceptible	Moderately susceptible
Botrytis fruit rot	Moderately susceptible	Moderately susceptible	Moderately susceptible
Angular leaf spot	Moderately susceptible	Moderately susceptible	Moderately susceptible
Virus complex	Unknown	Unknown	Unknown

We claim:

1. A new and distinct strawberry plant named 'PS-5096', as herein described and illustrated by the characteristics set forth above.

* * * * *

FIG. 1



FIG. 2



FIG. 3

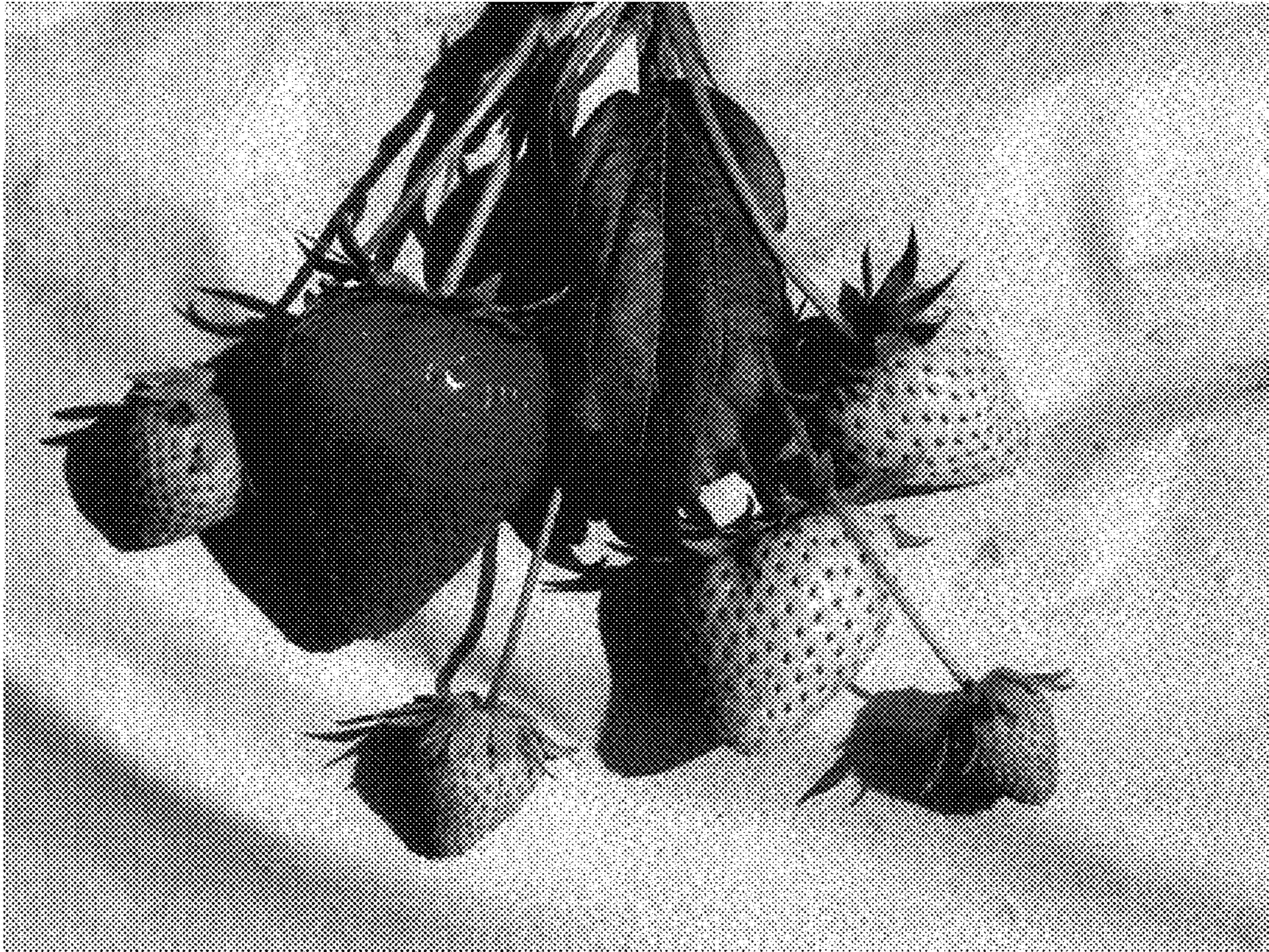


FIG. 4

