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Nelson et al.

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(54) **STRAWBERRY PLANT NAMED ‘BG-4316’**
(50) Latin Name: *Fragaria ananassa*
Varietal Denomination: **BG-4316**
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patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.
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A01H 5/00 (2006.01)
(52) **U.S. Cl.** **Plt./209**
(58) **Field of Classification Search** **Plt./209**
See application file for complete search history.

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(57) **ABSTRACT**
This invention relates to a new and distinct variety of straw-
berry plant named ‘BG-4316’. This new strawberry plant
named ‘BG-4316’ is primarily adapted to the growing condi-
tions of the central coast of California, and is primarily char-
acterized by its acute terminal leaflet base, medium to strong
anthocyanins on the fruiting truss, orange red fruit color,
medium-sized fruit, and calyx is slightly to much larger than
the fruit.

4 Drawing Sheets

1

Latin name of the genus and species of the plant claimed:
Fragaria ananassa.
Variety denomination: ‘BG-4316’.

BACKGROUND OF THE INVENTION

The present invention relates to a new and distinct straw-
berry variety named ‘BG-4316’. This new variety is a result of
a controlled cross made in 2002 in an ongoing breeding
program between strawberry variety designated ‘BG-633’
(patented, U.S. Plant Pat. No. 13,320) and strawberry variety
designated ‘BG-1445’ (a non-patented selection). Due to the
combining of the reciprocal seed lots, 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
selected from a controlled breeding plot in Ventura County,
Calif. in the winter of 2004. After its selection, the new variety
was asexually propagated by stolons in both San Joaquin
County, Calif. and Siskiyou County, Calif. The new variety
was extensively tested over the next several years in fruiting
fields in Ventura County, Calif. This propagation has demon-
strated that the combination of traits disclosed herein as char-
acterizing the new variety are fixed and remain true to type
through successive generations of asexual reproduction.

BRIEF SUMMARY OF THE INVENTION

‘BG-4316’ is primarily adapted to the climate and growing
conditions of the central coast of California. The nearby
Pacific Ocean provides the needed humidity and moderate
temperatures to produce a strong vigorous plant and maintain
fruit quality during the winter and spring production months.

The following traits have been repeatedly observed and are
determined to be unique characteristics of ‘BG-4316’, which
in combination distinguish this strawberry plant as a new and
distinct variety:

- 1. Acute terminal leaflet base;
- 2. Medium to strong anthocyanins on the fruiting truss;

2

- 3. Orange red fruit color;
- 4. Medium-sized fruit; and
- 5. Calyx is slightly to much larger than the fruit.

The strawberry variety that is believed to be most closely
related to the new variety ‘BG-4316’ is ‘BG-1975’ (patented,
U.S. Plant Pat. No. 17,725). In side-by-side comparisons to
the similar strawberry variety ‘BG-1975’, ‘BG-4316’ differs
by the following combination of characteristics as described
in Table 1.

TABLE 1

COMPARISON TO THE SIMILAR VARIETY		
Characteristic	‘BG-4316’	‘BG-1975’ (U.S. Plant Pat. No. 17,725)
Marketable yield (gm/plant)	1,134	1,080
Fruit predominant shape	Conical	Ranges from conical to almost cylindrical
Insertion of achenes	Level with the surface	Ranges from level with to below the surface
50% of plants with ripe fruit	Medium	Ranges from medium to early
Plant size	Medium	Ranges from medium to large
Foliage color	Medium green	Ranges from medium to light yellow green
Petiole pubescence	Moderate	Heavy
Fruiting truss anthocyanin intensity	Ranges from medium to strong	Weak
Expression of hollow center	Ranges from weak to moderate	Moderate
Fruit color	Orange red	Ranges from orange red to red

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

‘BG-4316’ differs from its parents, ‘BG-633’ and ‘BG-
1445’ by the following combination of characteristics as
described in Table 2.

TABLE 2

COMPARISON WITH PARENT VARIETIES			
Characteristic	'BG-4316'	'BG-633' (U.S. Plant Pat. No. 13,320)	'BG-1445'
Marketable yield (gm/plant)	1,134	964	692
Fruit gloss	Medium	Weak	Medium
Fruit size	Medium	Ranges from medium to large	Large
Plant size	Medium	Ranges from medium to small	Medium

BRIEF DESCRIPTIONS OF THE PHOTOGRAPHS

The accompanying color photographs illustrate the overall appearance of typical specimens of the new strawberry variety 'BG-4316', 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 descriptions which accurately describe the color of 'BG-4316'. The depicted plant and plant parts of the new strawberry variety 'BG-4316' are approximately six months old. The photographs were taken in Ventura County, Calif.:

FIG. 1 shows typical fruiting field characteristics of 'BG-4316', taken in the month of April 2011;

FIG. 2 shows a close-up view of the typical leaf structure of 'BG-4316', taken in the month of April 2011;

FIG. 3 shows typical mature and immature field fruit of 'BG-4316', taken in the month of April 2011; and

FIG. 4 shows typical internal and external mature fruit characteristics of 'BG-4316', taken in the month of April 2011.

DETAILED BOTANICAL DESCRIPTION

The new variety 'BG-4316' has not been observed under all possible environmental conditions. The characteristics of the new variety 'BG-4316' may vary in detail, depending upon variations in environmental factors, including weather (temperature, humidity and light intensity), day length, soil type and location. In addition, the characteristics of any parental variety or comparison variety included in Tables 1-9 of the present invention 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 'BG-4316', unless otherwise noted, are based on observations taken during the 2011 growing season in Ventura County, Calif. These measurements and ratings were taken from plants of 'BG-4316' dug from a high-elevation nursery located in Siskiyou County, Calif. during early October 2010 and planted approximately four to five days later in Ventura County, Calif. The approximate age of the observed plants is six months. Yield observations and fruit quality characteristics are averaged from six years of data collected from the 2006 through 2011 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 Royal Horticultural Society Colour Chart, London (2007).

The following tables 3-9 describe fruit, plant, stolon, foliage, fruiting truss, flower and pest disease characteristics of the new strawberry 'BG-4316' in comparison to the similar strawberry variety 'BG-1975'.

TABLE 3

FRUIT CHARACTERISTICS			
Characteristic	'BG-4316'	'BG-1975' (U.S. Plant Pat. No. 17,725)	
Color of mature fruit	RHS 34A Orange red	RHS 45A Ranges from orange red to red	
Color of internal flesh	RHS 34C Light red	RHS 44A Medium red	
Fruit length (cm)	4.3	4.5	
Fruit width (cm)	3.8	3.9	
Fruit length/width ratio	1.15	1.14	
	Slightly longer than broad	Slightly longer than broad	
Calyx diameter (cm)	5.5	5.2	
Average fruit weight (gm)	24.9	26.6	
Achene color, shaded side	RHS 153D Yellow green group	RHS 152D Yellow green group	
Achene color, sun-exposed side	RHS 182A Greyed purple group	RHS 183A Greyed purple group	
Achenes per berry	331	300	
Achene weight (mg)	0.50	0.67	
Marketable fruit yield (gm/plant)	1,134	1,080	
Fruit size	Medium	Ranges from medium to large	
Predominant fruit shape	Conical	Ranges from conical to almost cylindrical	
Difference in shapes between primary and secondary fruit	Slight	Ranges from slight to moderate	
Band without achenes	Absent or very narrow	Absent or very narrow	
Unevenness of fruit surface	Absent or very weak	Weak	
Evenness of fruit color	Even	Ranges from slightly uneven to even	
Fruit glossiness	Medium	Ranges from medium to strong	
Insertion of achenes	Level with surface	Ranges from below surface to level with surface	
Insertion of calyx	In basin	In basin	
Attitude of calyx	Ranges from collapsing to spreading	Spreading	
Size of calyx in relation to fruit diameter	Ranges from slightly larger to much larger	Ranges from slightly larger to much larger	
Adherence of calyx	Strong	Very strong	
Firmness of fruit skin	Ranges from medium to strong	Ranges from medium to strong	
Firmness of fruit flesh	Firm	Medium	
Keeping quality	Good	Good	
Distribution of red color of the flesh	Marginal and central	Marginal and central	
Hollow center expression	Ranges from weak to moderate	Moderate	
Fruit flavor	Good	Very good	
Soluble solids (% brix)	7.4	8.6	
Time of first flowering	Ranges from early to medium	Ranges from early to medium	
Time of first harvesting	Ranges from early to medium	Ranges from early to medium	
Harvest period	Late December to late May	Early January to late May	
Type of bearing	Not remontant	Not remontant	

TABLE 4

PLANT CHARACTERISTICS		
Characteristic	‘BG-4316’	‘BG-1975’ (U.S. Plant Pat. No. 17,725)
Plant height (cm)	21.3	23.0
Plant spread (cm)	28.5	26.1
Plant size	Medium	Ranges from large to medium
Plant habit	Globose	Globose
Plant density	Medium	Medium
Plant vigor	Ranges from medium to strong	Ranges from medium to strong

TABLE 5

STOLON CHARACTERISTICS		
Characteristic	‘BG-4316’	‘BG-1975’ (U.S. Plant Pat. No. 17,725)
Stolon color	RHS 146C Yellow green group	RHS 146D Yellow green group
Stolon anthocyanin coloration	RHS 184A Greyed red group	RHS 182A Greyed red group
Stolon anthocyanin intensity	Strong	Weak
Average stolon quantity	Ranges from medium to many	Medium
Stolon diameter at bract (mm)	2.8	3.1
Stolon pubescence	Medium	Strong
Attitude of hairs	Upwards	Slightly outward

TABLE 6

FOLIAGE CHARACTERISTICS		
Characteristic	‘BG-4316’	‘BG-1975’ (U.S. Plant Pat. No. 17,725)
Foliage:		
Color of upper surface	RHS 137B Medium green	RHS 146B Ranges from light yellow green to medium yellow green
Color of underside	RHS 147C Yellow green group	RHS 147C Yellow green group
Shape in cross section	Slightly concave to flat	Slightly concave to flat
Interveinal blistering	Ranges from weak to medium	Ranges from weak to medium
Leaf glossiness	Medium	Ranges from weak to medium
Number of leaflets	3	3
Terminal Leaflet:		
Length (cm)	7.0	7.0
Width (cm)	5.8	6.2
Length/width ratio	1.22	1.13
	Longer than broad	Ranges from as long as broad to longer than broad
Serrations/leaf	20.0	20.8
Leaf Size	Ranges from medium to small	Ranges from medium to small
Shape of base	Acute	Acute
Shape of teeth	Rounded	Rounded

TABLE 6-continued

FOLIAGE CHARACTERISTICS		
Characteristic	‘BG-4316’	‘BG-1975’ (U.S. Plant Pat. No. 17,725)
Petiole:		
Petiole color	RHS 144A Yellow green group	RHS 144B Yellow green group
Petiole length (cm)	14.3	15.5
Petiole diameter (mm)	3.4	3.7
Petiolule color	RHS 144A Yellow green group	RHS 144B Yellow green group
Petiolule length (mm)	5.8	11.7
Petiole pubescence	Moderate	Heavy
Attitude of hairs	Ranges from slightly outward to strongly outward	Strongly outward
Stipule:		
Color	RHS 146C Yellow green group	RHS 146C Yellow green group
Anthocyanin coloration	RHS 60B Red purple group	RHS 61B Red purple group
Anthocyanin intensity	Ranges from medium to strong	Weak
Length (mm)	17.8	16.0
Width (mm)	12.7	10.1

TABLE 7

FRUITING TRUSS CHARACTERISTICS		
Characteristic	‘BG-4316’	‘BG-1975’ (U.S. Plant Pat. No. 17,725)
Anthocyanin coloration	RHS 181C Greyed red group	RHS 181C Greyed red group
Anthocyanin intensity	Ranges from medium to strong	Weak
Length at maturity (cm)	23.8	28.6
Position relative to foliage	Level with the foliage	Ranges from level with to above the foliage
Pubescence	Ranges from weak to medium	Strong
Attitude at first pick	Prostrate	Prostrate

TABLE 8

FLOWER CHARACTERISTICS		
Characteristic	‘BG-4316’	‘BG-1975’ (U.S. Plant Pat. No. 17,725)
Petal color	RHS NN155C White group	RHS NN155C White group
Sepal color	RHS N137A Green group	RHS 138A Green group
Corolla diameter (mm)	30.2	27.7
Calyx diameter (mm)	38.0	38.8
Petal length (mm)	11.8	10.7
Petal width (mm)	11.8	10.5

TABLE 8-continued

FLOWER CHARACTERISTICS		
Characteristic	‘BG-4316’	‘BG-1975’ (U.S. Plant Pat. No. 17,725)
Petal length/width ratio	1.0	1.02
Petals/flower	5.8	6.3
Sepal length (mm)	15.7	15.5
Sepal width (mm)	4.5	5.5
Sepal length/width ratio	3.46	2.81
Sepals/flower	11.7	12.6
Size of calyx relative to corolla	Larger	Larger
Size of inner calyx relative to outer calyx	Ranges from same to smaller	Ranges from same to smaller
Relative position of petals	Overlapping	Overlapping

TABLE 9

PEST AND DISEASE REACTIONS		
Characteristic	‘BG-4316’	‘BG-1975’ (U.S. Plant Pat. No. 17,725)
Two-spotted spider mite	Moderately susceptible	Moderately susceptible
Powdery mildew	Moderately susceptible	Moderately susceptible
Botrytis fruit rot	Moderately susceptible	Moderately susceptible
Angular leaf spot	Susceptible	Susceptible

We claim:

1. A new and distinct strawberry plant named ‘BG-4316’, as herein described and illustrated by the characteristics set forth above.

* * * * *

FIG. 1



FIG. 2

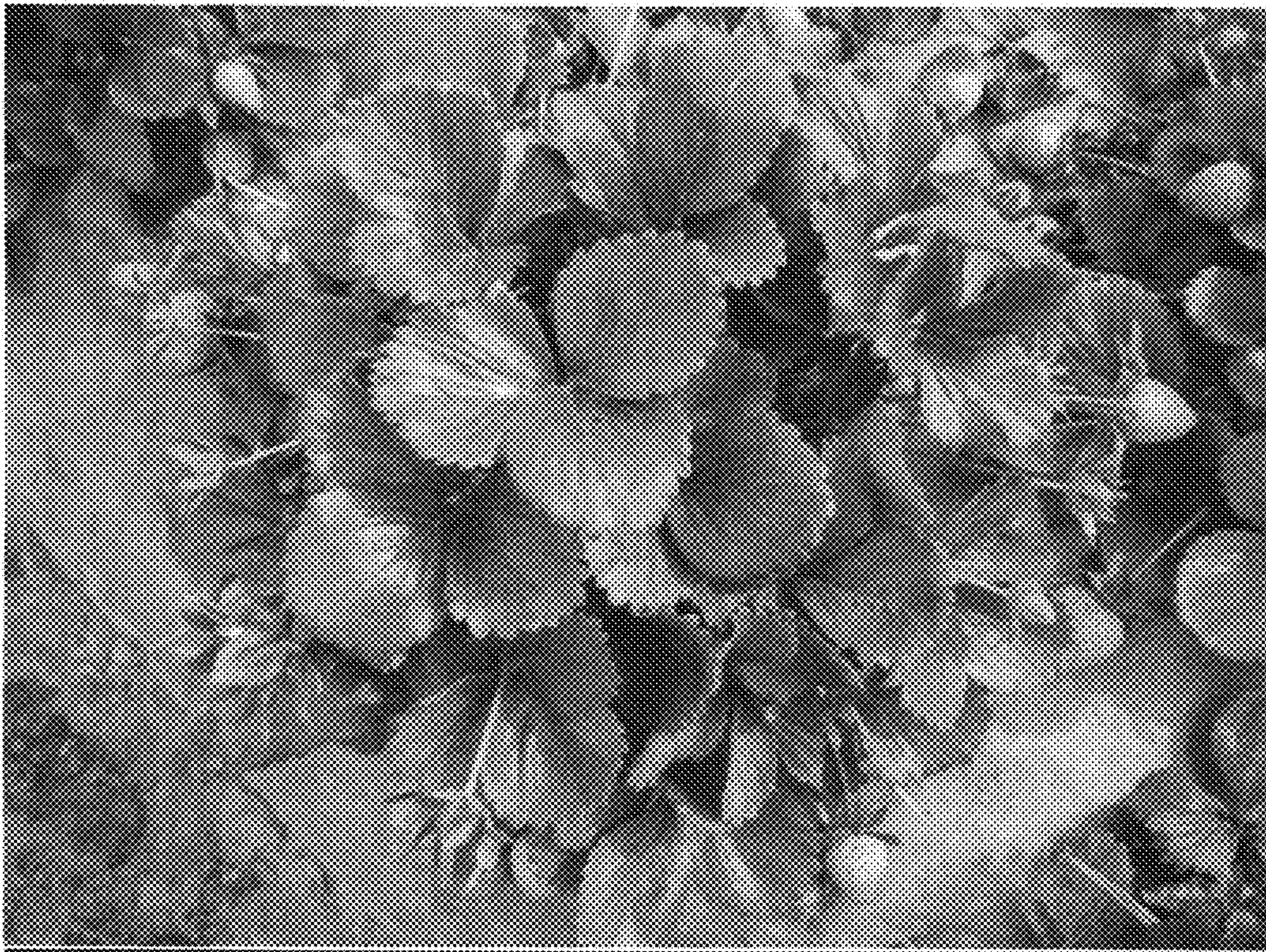


FIG. 3

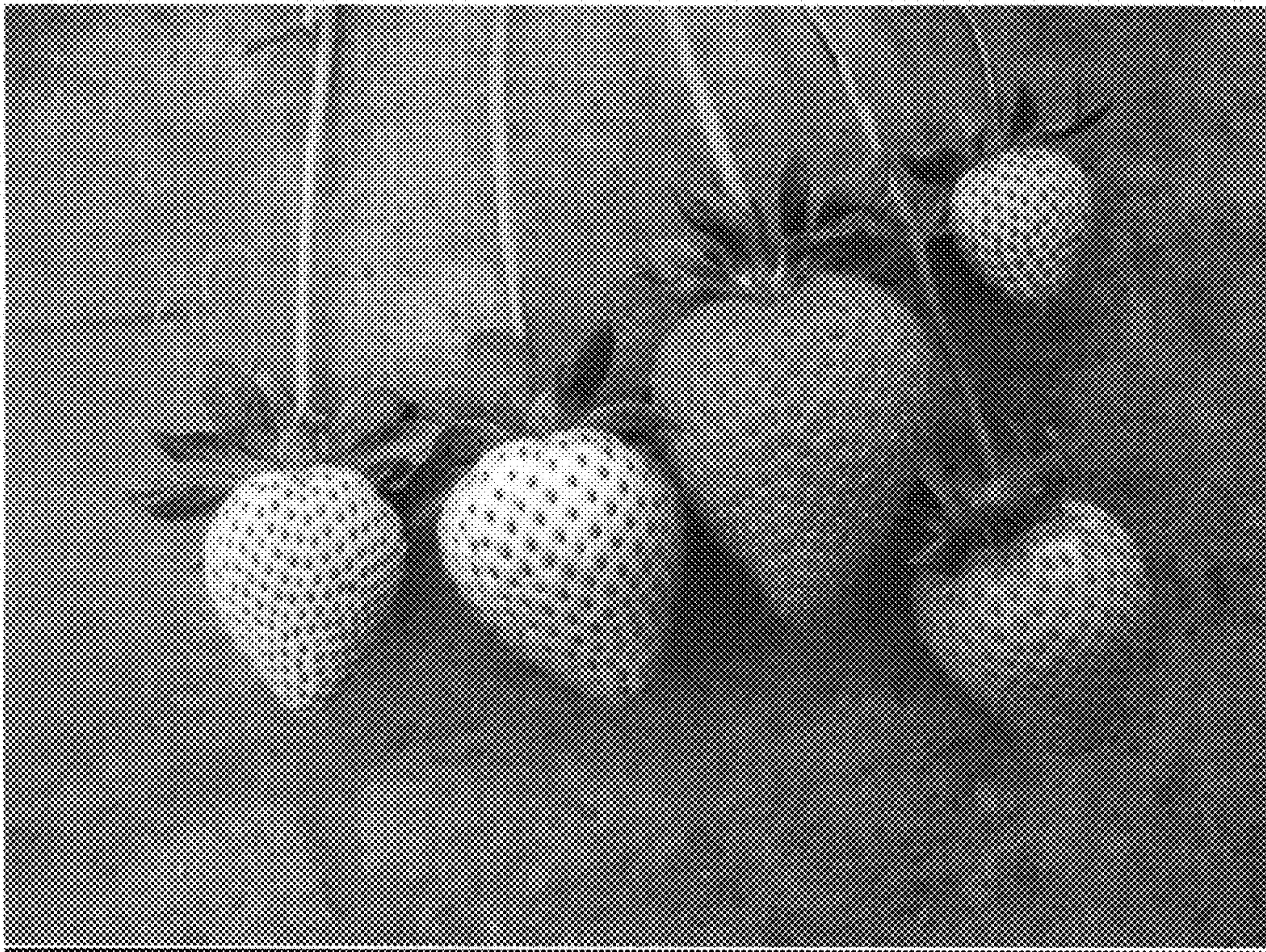


FIG. 4

