



US00PP31296P3

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

(10) **Patent No.:** **US PP31,296 P3**
(45) **Date of Patent:** **Dec. 31, 2019**

(54) **STRAWBERRY PLANT NAMED ‘DR. DUNCAN’**

(50) Latin Name: *Fragaria x ananassa*
Varietal Denomination: **Dr. Duncan**

(71) Applicant: **Sweet Darlings Sales, Inc.**, Aptos, CA (US)

(72) Inventor: **John Larse**, Watsonville, CA (US)

(73) Assignee: **Sweet Darling Sales, Inc.**, Aptos, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **15/932,840**

(22) Filed: **May 4, 2018**

(65) **Prior Publication Data**
US 2019/0343029 P1 Nov. 7, 2019

(51) **Int. Cl.**
A01H 5/08 (2018.01)
A01H 6/74 (2018.01)

(52) **U.S. Cl.**
USPC **Plt./208**
CPC *A01H 6/7409* (2018.05)

(58) **Field of Classification Search**
USPC Plt./208, 209
CPC A01H 5/0893
See application file for complete search history.

Primary Examiner — Kent L Bell
(74) Attorney, Agent, or Firm — Cooley LLP

(57) **ABSTRACT**

The present invention provides new and distinct strawberry plant designated as ‘Dr. Duncan’ (a.k.a. ‘108637’).

8 Drawing Sheets

Latin name of the genus and species: *Fragaria x ananassa*.
Varietal denomination: ‘Dr. Duncan’ (a.k.a. ‘108637’).

BACKGROUND OF THE INVENTION

The present invention relates to new and distinct strawberry plant designated as ‘Dr. Duncan’ (a.k.a. ‘108637’). ‘Dr. Duncan’ (a.k.a. ‘108637’) is the result of a controlled-cross made in Nov. 18, 2010 between a female parent cultivar designated ‘107801’ (a.k.a. ‘Akira’) and a male parent cultivar designated ‘1038578’ made by the Inventor and was first fruited in Watsonville, Calif. growing fields. Following selection and during testing, the plant was originally designated ‘108637’ and subsequently named ‘Dr. Duncan’. ‘Dr. Duncan’ is a day-neutral plant.

This new strawberry plant was asexually reproduced via runners (stolons) by the inventor at Watsonville, Calif. Asexual propagules from the original source have been tested in Watsonville growing fields and to a limited extent, grower fields in high elevation. The properties of this plant were found to be transmissible by such asexual reproduction. The plant is stable and reproduces true to type in successive generations of asexual reproduction.

BRIEF SUMMARY OF THE INVENTION

This invention relates to new and distinctive strawberry plant designated as ‘Dr. Duncan’ (a.k.a. ‘108637’). The plant is primarily adapted to the climate and growing conditions of the central coast of California. This region provides the necessary temperatures required for it to produce a strong vigorous plant and to remain in fruit production from March through October. The nearby Pacific Ocean provides the needed humidity and moderate day temperatures and evening chilling to maintain fruit quality for the production months.

‘Dr. Duncan’ has not been observed under all possible environmental conditions, and the phenotype may vary significantly with variations in environment, however with no variance in genotype. The following observations, measurements, and comparisons describe this plant as grown under normal conditions in Watsonville, Calif. unless otherwise noted.

The following traits and photographs in combination distinguish strawberry plant ‘Dr. Duncan’ from known strawberry plants. Plants for the botanical measurements in the present application were grown as annuals. Any color references are made to The Royal Horticultural Society Colour Chart, 1995 Edition, except where general terms of ordinary dictionary significance are used. The plants were 8-month old when the observation was made.

TABLE 1

‘Dr. Duncan’ Characteristics		
	Characteristic	Description
General	Plant Habit	Perennial
	Plant Growth Habit	Semi-upright
	Day length	Day Neutral
	Planting season	Fall
	Height	29 cm
	Width	44 cm
	Density of foliage	Medium
	Plant vigor	Moderate
	Rain/weather tolerance	Low to Moderate
	Harvest Ease	Easy
	Crown diameter	4 cm
	Fertility	Self-fertile
Leaf	Freezing quality	moderate
	Leaf Shape	Concave
	Leaf blistering	weak
	Leaf glossiness	medium
	Leaf variegation	absent
	Leaflets per leaf	3
	Number of leaflets	113

TABLE 1-continued

‘Dr. Duncan’ Characteristics		
Characteristic	Description	
Limbs	Terminal leaflet width	72 mm
	Terminal leaflet length	84 mm
	Terminal leaflet length/width ratio	1.17
	Teeth per terminal leaflet	18 to 23
	Shape of terminal leaflet	Orbicular
	Shape of the terminal leaflet base	Acute
	Shape of terminal leaflet in cross-section	Concave
	Shape of the terminal leaflet margin	Serrate
	Color of upper side of leaflet	RHS 137A
	Color of lower side of leaflet	RHS 137C
	Terminal leaflet margin	flat
	Leaf blistering	Weak
	Leaf glossiness	Medium
	Leaf variegation	Absent
	Number of leaflets	113
	Terminal Leaflet margin	Flat
	Terminal Leaflet shape	Orbicular
	Terminal Leaflet shape of base	Acute
	Terminal Leaflet shape of apex	Rounded
	Leaflets per Leaf	3
	Shape of terminal leaflet	Orbicular
	Shape of the terminal leaflet apex	Rounded
	Petiole length	21 cm
	Petiole diameter	3.42 mm
	Petiole pubescence	Sparse
	Petiole pose of hairs	Horizontal
	Petiole color	RHS 144A
	Petiolule length	1.3 cm
	Petiolule diameter	2.56 mm
	Petiolule color (color code)	RHS 145B
	Stipule length	3.7 cm
	Stipule width	1.7 cm
	Stipule pubescence	Medium to Dense
	Stipule anthocyanin	Present
	Stipule color (color code)	RHS 145A
	Stipule anthocyanin color (color code)	RHS 184D
	Pedicel color (color code)	RHS 145A
	Pedicel length	10.5 cm
	Pedicel diameter	2.66 mm
	Attitude of hairs on petiole and pedicel	Slightly Outwards to Horizontal
	Peduncle size	Medium to Large
	Peduncle length	25.5 cm
	Peduncle diameter	3.71 mm
	Peduncle color (color code)	RHS 145B
	Peduncle pubescence	medium
	Attitude of hairs on peduncle and pedicel	Slightly outwards to horizontal
Inflorescence	Inflorescence position relative to foliage	Above
	Time of flowering (50% of plants in bloom)	April
	Flower arrangement of petals	Touching
	Flower size	Medium to Large
	Flower diameter	2.5 cm
	Number of Flowers per Truss	3 to 10
	Petal shape	Orbicular
	Petal apex	Rounded
	Petal margin	Entire
	Petal base shape	Concave
	Petal spacing	Touching
	Petal length	1.6 cm
	Petal width	1.5 cm
	Petal length/width ratio	1.07
	Petal number per flower	5 to 7
	Number of flowers	21 to 34
	Upper Petal color	RHS 155C
	Lower Petal color	RHS 155D

TABLE 1-continued

‘Dr. Duncan’ Characteristics		
Characteristic	Description	
Calyx diameter	3.1 to 4.2 cm	
Corolla diameter	2.5 cm	
Calyx diameter relative to corolla	Larger	
Inner Calyx diameter relative to outer	Equal	
Sepal shape	Elliptical	
Sepal apex	Convex	
Sepal margin	Entire	
Sepal number per flower	9 to 15	
Sepal length	2 to 2.5 cm	
Sepal width	1.0 to 1.1 cm	
Receptacle color	RHS 145B	
Self Fertility	Not Tested	
Time of flowering (50% of plants in bloom)	April	
Shape of stigma	Capitate	
Color of stigma	RHS 4A	
Length of style	2 mm	
Color of style	RHS 12A	
Color of the ovary	RHS 145A	
Receptacle color	RHS 145B	
Number of stamen	21 to 25	
Length of the stamens	2.0 to 3.5 mm	
Shape of anther	Dorsifixed	
Size of anther	1.5 to 2.0 mm	
Color of anther	RHS 22A	
Anther diameter	1.2 mm	
Anther length	1.6 mm	
Amount of pollen	Moderate	
Color of pollen	RHS 13B	
Color of filament	RHS 145C	
Length of filament	2.0 to 5.0 mm	
Stolon number	2 to 3	
Stolon anthocyanin	RHS 183A	
Stolon thickness	Thin to Moderate	
Stolon pubescence	Heavy	
Stolon Length	72 cm	
Widest diameter of stolon at leaf attachment	3.30 mm	
Stolon color	145B	
Fruiting truss length	7.0 to 13.0 cm	
Fruiting truss diameter	3.76 mm	
Number of fruit per truss	1 to 7	
Shape difference between primary & secondary fruits	No difference	
Fruit calyx diameter	5.9 cm	
Fruiting truss attitude	Horizontal to Slightly Outwards	
Truss color	RHS 145A	
Fruit length	4.92 cm	
Fruit width	4.22 cm	
Fruit skin color	RHS 145A	
Fruit flesh color excluding core	RHS 44A	
Fruit core color	RHS 41B	
Fruit length/width ratio	1.17	
Fruit weight	23 g	
Relative fruit size	Medium	
Predominant fruit shape	Globose Conic	
Shape difference between primary & secondary fruits	No Shape Difference	
Width of band without of achenes	Medium	
Fruit glossiness	Medium to Strong	
Position of achenes	Even to Below Surface	
Achene color	RHS 145A	
Achenes per fruit	325	
Achene weight	0.19 g	
Position of calyx	Even	
Level of adherence of calyx	Medium to Strong	
Color of calyx	RHS 136A	
Pose of calyx segments	Spreading to Reflexed	
Fruit calyx diameter	5.9 cm	

TABLE 1-continued

‘Dr. Duncan’ Characteristics	
Characteristic	Description
Size of calyx in relation to fruit	Equal to Larger
Firmness of flesh	Medium
Color of the flesh	RHS 45A
Evenness of flesh color	Nearly Even
Fruit hollow core length	2.4 cm
Fruit hollow core width	0.8 cm
Fruit hollow length/width ratio	3.00
Hollow center	Medium
Sweetness (Brix)	8
Acidity (pH)	3.78
Texture when tasted	Fine
Time of flowering	April
Time of fruit ripening	May
Harvest maturity (50% of plants with ripe fruit)	May
Type of bearing	Day Neutral
Grams of fruit per plant (June)	907 g
Firmness	Firm
Surface Texture	Smooth
Appearance Score (1 to 5 with 4 = best)	
Storage longevity	5 to 10 Days
Cull rate: 1- % Usable	10%
Yield per plant per season	2.6 kg

‘Albion’ (U.S. Plant Pat. No. 16,228) is a commercial strawberry variety that is similar to, but distinguished from ‘Dr. Duncan’. The fruit yield of ‘Dr. Duncan’ exceeds the yield of ‘Albion’ in multiple annual testing cycles performed at the breeders test location in Watsonville Calif. ‘Dr. Duncan’ does not produce large quantities of stolon (runners) during the fruiting period after propagation in California nurseries and Watsonville fruiting field, which saves labor of about \$1,500 per acre because stolon must be removed in order to effect efficient harvest and continued

flowering. ‘Albion’ produces abundant quantities of stolon that must be cut by hand labor in the fruiting field.

The fruit ‘Dr. Duncan’ is darker in redness coloration than its parent ‘Akira’. The foliage of “Akira” is very dark green compared to the medium green coloration of the foliage of ‘Dr. Duncan’. The foliage and plant structure of parent ‘Akira’ was observed to be more dense than the foliage of ‘Dr. Duncan’.

The foliage and plant structure of the male parent of ‘Dr. Duncan’ was observed to be denser than the foliage of ‘Dr. Duncan’. ‘Dr. Duncan’ has a significantly higher yield and a significantly higher percentage of marketable fruit compared to its male parent. The fruit of ‘Dr. Duncan’ is a much darker red and slightly smaller than the fruit of its female parent.

DESCRIPTION OF THE DRAWINGS

The accompanying color photographs depict various characteristics of the cultivars as nearly true as possible to make color reproductions.

FIG. 1 shows ‘Dr. Duncan’ plants growing in the field with inflorescences in mid June about 8-month old.

FIG. 2 shows ‘Dr. Duncan’ plants growing in the field with multiple fruits.

FIG. 3 shows the front side of inflorescences of ‘Dr. Duncan’ plants.

FIG. 4 shows the back side of inflorescences of ‘Dr. Duncan’ plants.

FIG. 5 shows the front side of a leaf of ‘Dr. Duncan’ plants.

FIG. 6 shows the back side of a leaf of ‘Dr. Duncan’ plants.

FIG. 7 shows fruits of ‘Dr. Duncan’ plants.

FIG. 8 shows fruits of ‘Dr. Duncan’ plants cut in half.

The invention claimed is:

1. A new and distinct cultivar of strawberry plant named ‘Dr. Duncan’, substantially as shown and described herein.

* * * * *



Figure 1



Figure 2

Figure 3



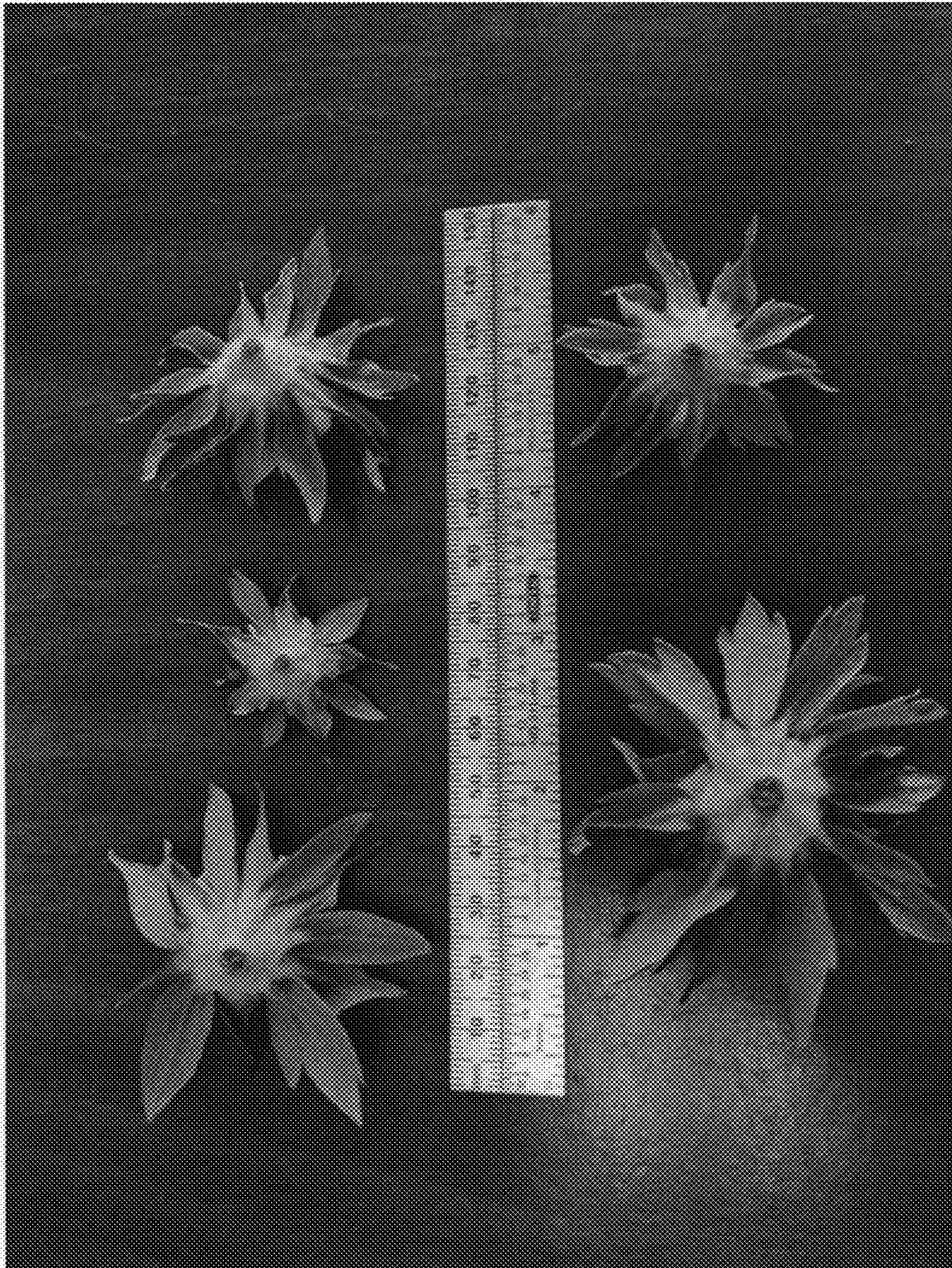


Figure 4



Figure 5



Figure 6



Figure 7

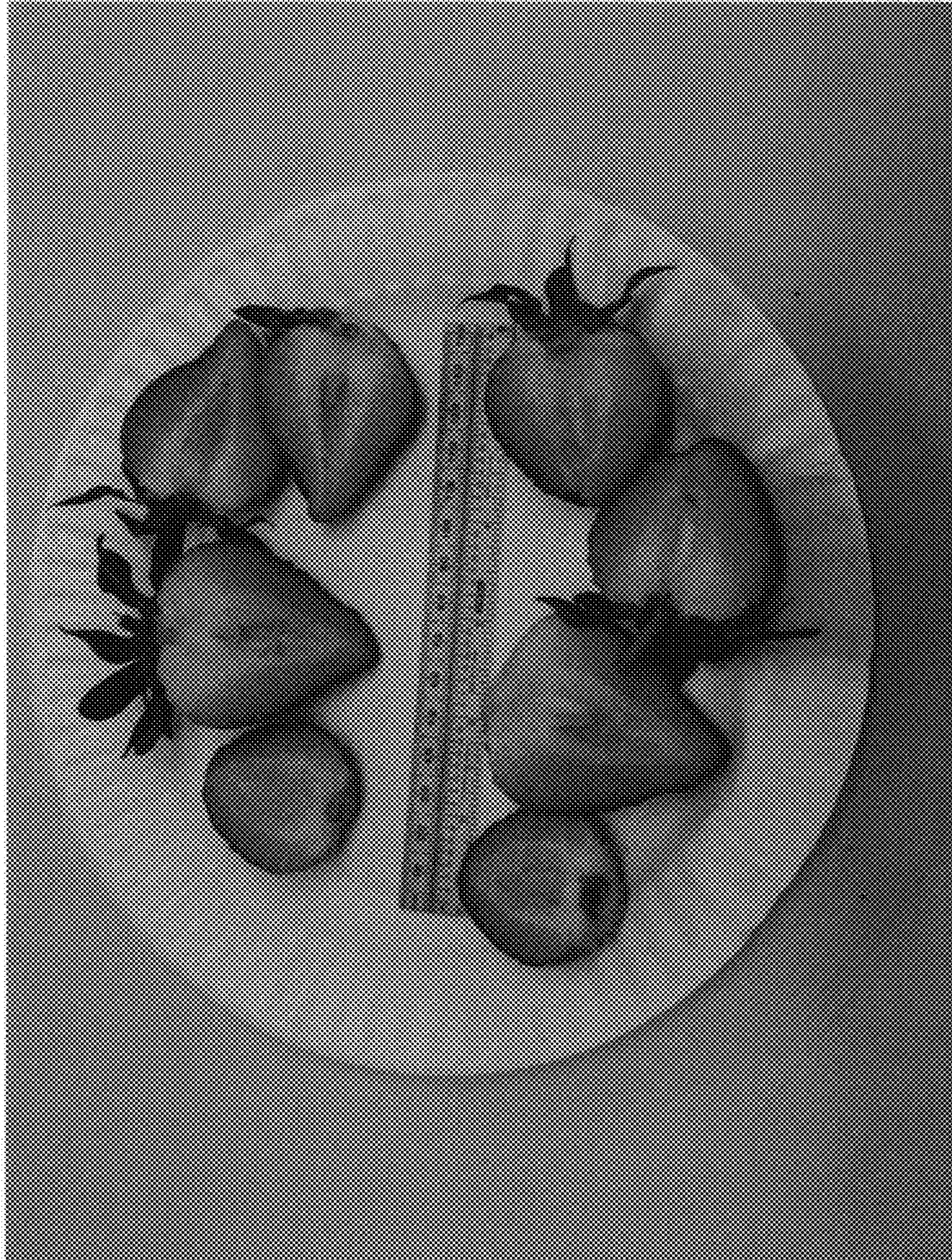


Figure 8