

(12) **United States Plant Patent**
Perl et al.

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(54) **GRAPEVINE NAMED ‘AMBER HONEY’**

(50) Latin Name: *Vitis vinifera* L.
Varietal Denomination: **AMBER HONEY**

(75) Inventors: **Avichai Perl**, Rishon Lezion (IL);
Nachman Sahar, Rehovot (IL); **Oded Degani**, Moshav Sde Moshe (IL);
Tatiana Okun, Rehovot (IL); **Arie Sarfian**, Nes-Ziona (IL); **Hanan Bazak**,
Carnei Yossef (IL); **Refael Eliassi**, Neve Yamin (IL); **Ahuva Daos**, Ganey
Hmoshava Mazkeret Batia (IL)

(73) Assignee: **State of Israel, Ministry of Agriculture & Rural Development, Agricultural Research Organization**, Bet Dagan (IL)

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(52) **U.S. Cl.** **Plt./207**

(58) **Field of Classification Search** **Plt./207**
See application file for complete search history.

Primary Examiner — Annette Para

(74) *Attorney, Agent, or Firm* — Foley & Lardner LLP

(57) **ABSTRACT**

This invention relates to a new and distinct variety of grapevine named ‘AMBER HONEY’. The new early ripening, very fertile grapevine variety is particularly characterized by an attractive berry color, a very uniform bunch and a firm berry with tender crunchy skin.

5 Drawing Sheets

1

Botanical name of the genus and species of the plant claimed: *Vitis vinifera* L.

Variety denomination: ‘AMBER HONEY’.

PRIORITY CLAIM

This application claims priority under 35 U.S.C. §119(f) of the Israeli Plant Breeders’ Rights Application No. 4231 filed Jan. 4, 2010.

BACKGROUND OF THE INVENTION

The present invention relates to a new and distinct grapevine variety, botanically known as *Vitis vinifera* L., and hereinafter referred to by its variety denomination ‘AMBER HONEY’.

The new grapevine ‘AMBER HONEY’ is a product of a controlled breeding program conducted by the inventors, Avichai Perl, Nachman Sahar, Oded Degani, Tatiana Okun, Arie Sarfian, Hanan Bazak, Refael Eliassi and Ahuva Daos at The Volcani Center, located in Bet Dagan, Israel. The objective of the breeding program was to develop a new early ripening, very fertile grapevine variety particularly characterized by attractive berries with yellowish green color which are uniform in size and shape and are firm with tender crunchy skin.

The new grapevine ‘AMBER HONEY’ originated from a cross made by the inventors in 2004 at The Volcani Center. The female or seed parent is the grapevine *Vitis vinifera* L. indicated as ‘ARO 2117’ (unpatented), in the inventors’ collection located in Bet Dagan, Israel, and the male or pollen parent is the grapevine *Vitis vinifera* L. indicated as ‘ARO 1717’ (unpatented), in the inventors’ collection.

2

The new grapevine ‘AMBER HONEY’ was observed and selected by the inventors within the progeny of the stated cross in a controlled environment in 2007 at The Volcani Center.

Asexual propagation of the new grapevine variety by bud grafting was first performed in January 2008 at The Volcani Center, and has demonstrated that the combination of characteristics as herein disclosed for the new variety is firmly fixed and retained through successive generations of asexual propagation. The new cultivar propagates true-to-type.

SUMMARY OF THE INVENTION

‘AMBER HONEY’ can be grown in various climates and growing conditions. The variety produces and maintains a strong vigorous plant and consistent fruit production from end June through end July in Bet Dagan, Israel.

The following traits have been repeatedly observed and are determined to be characteristics of ‘AMBER HONEY’, which in combination distinguish this grapevine as a new, unique and distinct variety.

1. Very fertile;
2. Early ripening;
3. Firm berry with tender crunchy skin;
4. Attractive yellow green berry color; and
5. Berries which are uniform in size and shape.

Plants of the new grapevine ‘AMBER HONEY’ differ from plants of the parents, *Vitis vinifera* L. ‘ARO 2117’ (unpatented) and *Vitis vinifera* L. ‘ARO 1717’ (unpatented), in the following characteristics described in Table 1.

TABLE 1

Comparison with parent varieties.			
Characteristic	New Variety 'AMBER HONEY'	Female Parent 'ARO 2117' (unpatented)	Male Parent 'ARO 1717' (unpatented)
Berry shape	broad elliptic	rounded	elongated
Berry color of skin	yellowish green	yellow green	yellow green
Berry thickness of skin	thin	very thick	medium
Seeds	absent	absent	absent

Of the many commercial varieties known to the present inventors, the most similar to the new grapevine 'AMBER HONEY' are *Vitis vinifera* L. 'SUGRAONE' (U.S. Plant Pat. No. 3,106) and *Vitis vinifera* L. 'PRIME' (registered for Israeli Plant Breeders' Rights No. 1467), which differ from the new grapevine 'AMBER HONEY' in the characteristics described in Table 2:

TABLE 2

Comparison with similar varieties.			
Characteristic	New Variety 'AMBER HONEY'	Comparison Variety 'SUGRAONE' (patented)	Comparison Variety 'PRIME' (registered)
Berry shape	broad elliptic	obtuse ovate	oblong
Berry color of skin	yellowish green	yellow green	yellow green
Berry thickness of skin	thin	medium	medium
Seeds	absent	absent	absent

BRIEF DESCRIPTION OF THE PHOTOGRAPHS

The accompanying photographs illustrate the overall appearance of the new grapevine 'AMBER HONEY' showing the colors as true as is reasonably possible with colored reproductions of this type. Colors in the photographs may differ slightly from the color values cited in the detailed morphological description, which accurately describe the color of 'AMBER HONEY'.

FIG. 1 shows a typical bunch of 'AMBER HONEY' on the plant.

FIG. 2 shows a typical mature leaf of 'AMBER HONEY'.

FIG. 3 shows a typical inflorescence of 'AMBER HONEY'.

FIG. 4 shows a typical growth tip of 'AMBER HONEY'.

FIG. 5 shows a typical berry of 'AMBER HONEY'.

DETAILED MORPHOLOGICAL DESCRIPTION

The new *Vitis vinifera* L. 'AMBER HONEY' has not been observed under all possible environmental conditions. The phenotypical descriptions and color designations stated for the new variety may vary, depending on variations in environmental factors, including weather (temperature, humidity and light intensity), day length, soil type, location and cultural conditions, without any change in the genotype of the grapevine.

The following description of 'AMBER HONEY' unless otherwise noted, is based on observations and measurements taken during 2010 and 2011 at The Volcani Center, on plants grown in the vineyard located in Bet Dagan, Israel under conditions which closely approximate those generally used in

commercial practice. The described plants were grafted on 'Richter110' (unpatented) and planted at a distance of 1.5 m in sandy red loam soil at an elevation of about 30 meter above sea level with drip-irrigation up to 40 m³ per hectare in the peak season in the summer and Shefer 737+micro-elements 1.5 ltr. fertilizers in each 5 m³ of water. Average annual rainfall is about 550 mm, with an average of 350 mm rainfall in winter (December through February). Mean diurnal minimum temperature in January is 7.2° C., and mean diurnal maximum temperature in July is 30.8° C.

Unless otherwise stated, the detailed morphological description includes observations, measurements and values based on three-year-old 'AMBER HONEY' plants grown in the vineyard at The Volcani Center, located in Bet Dagan, Israel from 2010 to 2011. Quantified measurements are expressed as an average of measurements taken from a number of plants of 'AMBER HONEY'. The measurements of any individual plant, or any group of plants, of the new variety may vary from the stated average.

Color references are made to The Royal Horticultural Society Colour Chart (R.H.S.), 1986 edition, except where general colors of ordinary significance are used. Color values were taken under daylight conditions in full sunlight in Bet Dagan, Israel.

All of the plants of 'AMBER HONEY', insofar as they have been observed, have been consistent in all the characteristics described below.

Classification:

Botanical.—*Vitis vinifera* L.

Parentage:

Female or seed parent.—*Vitis vinifera* L. 'ARO 2117' (unpatented).

Male or pollen parent.—*Vitis vinifera* L. 'ARO 1717' (unpatented).

Propagation: Grafting onto 'Richter110' (unpatented), Interspecific Cross, *V. berlandieri* Planch×*V. rupestris* Scheele.

Growing conditions:

Light intensities.—Full sunlight.

Temperature.—Bet Dagan — 30 meters above sea level.

	Jan- uary	Feb- ruary	March	April	May	June
Mean maximum air temperature (° C.)	17.8	18.1	20.1	24.5	27	29.2
Mean minimum air temperature (° C.)	7.2	7.1	8.8	11.5	14.6	17.9
Mean rainfall (mm)	140.5	96.9	66.1	17.5	2.2	—
	July	Aug- ust	Sep- tember	Oct- ober	Nov- ember	Dec- ember
Mean maximum air temperature (° C.)	30.8	31.2	30.4	28.3	24.1	19.7
Mean minimum air temperature (° C.)	20.6	21.2	19.4	16	11.8	8.6
Mean rainfall (mm)	—	—	0.4	20.4	76.2	130.3

Fertilization.—A balanced fertilizer with level of Shefer 737+microelements 1.5 ltr. in each 5 m³ of water. Growth regulators: None applied. Pruning: as in commercial practice. Training: Y trailing cordon.

Table of characteristics:

Plant.—Time of vegetative bud burst: beginning of March.

Young shoot.—Openness of tip: closed. Density of prostrate hairs on tip: dense. Anthocyanin coloration of prostrate hairs on tip: weak. Green color: green RHS 144 A. Green color of upper side of undeveloped leaf

blade: medium green RHS 144 A with over color medium red brown between RHS 166 A and 166 B. Green color of lower side of undeveloped leaf blade: medium green RHS 144 B with over color medium red brown RHS 166 C. Anthocyanin coloration: medium to strong.

Young leaf.—Density of hairs between main veins on lower side of blade: dense. Glossiness of upper side: strong. Glossiness of lower side: weak.

Shoot.—Length of internode: 8-14 cm. Thickness of internode: 6-8 mm. Color of dorsal side of internode: green RHS 144 A. Anthocyanin coloration of dorsal side of internode: medium to strong, RHS 178 B. Distribution of anthocyanin coloration of dorsal side of internode: striped and blushed. Color of ventral side of internode: green RHS 144 A. Anthocyanin coloration of ventral side of internode: absent. Distribution of anthocyanin coloration of ventral side of internode: not relevant. Erect hairs on internodes: absent. Height of node: about 2 cm. Swelling at node: less than 1 mm. Diameter of node: 12-16 mm. Color of dorsal side of node: green RHS 144 A. Anthocyanin coloration of dorsal side of node: medium to strong, RHS 178 B. Distribution of anthocyanin coloration of dorsal side of node: striped and blushed. Color of ventral side of node: green RHS 144 A. Anthocyanin coloration of ventral side of node: absent. Distribution of anthocyanin coloration of ventral side of node: not relevant. Pubescence of node: absent. Length of tendril: 19-34 cm. Diameter of tendril at base: 3-4 mm. Diameter of tendril at tip: about 1 mm. Pubescence of tendril: absent. Number of bifurcations per tendril: 4-5. Color of tendril: green RHS 144 B. Anthocyanin coloration of tendril: medium to strong, at lower part brown red RHS 178 B. Number of consecutive tendrils: 2.

Inflorescence.—Length: 22-26 cm. Maximum diameter: 6-8 cm. No. of side branches: 9-13. Attitude of side branches: horizontal. Length of longest side branch: 4-5 cm. Thickness of main axis: 3-4 mm. Green color of main axis: light yellow green RHS 145 B. Anthocyanin coloration of main axis: weak. Pubescence of main axis: absent.

Flower.—Sexual organs: fully developed stamen and fully developed gynoecium.

Pedicel.—Length: 5-7 mm. Thickness: less than 1 mm. Green color: light yellow green RHS 145 B. Pubescence: absent.

Stamen.—Number: five. Length of filament: 2-3 mm. Thickness of filament: minuscule. Pubescence of filament: absent. Surface: smooth. Color: light green RHS 145 C.

Anther.—Shape: transverse elliptic. Length: minuscule. Color: light green RHS 145 C.

Pollen.—Color: yellow RHS 150 B.

Ovary.—Shape: broad elliptic. Color: green between RHS 144 A and 144 B. Length: 2-3 mm. Diameter: about 2 mm. Surface: smooth.

Style.—Length: minuscule.

Stigma.—Size: minuscule. Color: yellow RHS 150 B.

Mature leaf.—Blade length: 15-19 cm. Blade width: 15-20 cm. Shape of blade: pentagonal. Green color of upper side: dark green RHS 139 A. Green color of lower side: dark green RHS 137 B. Glossiness of upper side: absent. Glossiness of lower side: absent.

Profile in cross section: undulated. Blistering of upper side: weak. Number of lobes: five. Central lobe length: 9-10 cm. Central lobe width: 10-11 cm. Upper, side lobe length: 6-8 cm. Upper, side lobe width: 6-7 cm. Pubescence of veins on upper side: sparse to medium. Pubescence of veins on lower side: medium. Green color of veins on upper side: green RHS 137 C. Green color of veins on lower side: yellow green RHS 145 A. Anthocyanin coloration of veins on upper side: absent. Anthocyanin coloration of veins on lower side: absent. Depth of upper lateral sinus: deep. Arrangement of lobes of upper leaf sinus: slightly overlapping. Arrangement of lobes of petiole sinus: open. Petiole sinus limited by veins: absent. Length of distal tooth: 10-15 mm. Width of distal tooth: 11-16 mm. Ratio length/width of distal tooth: medium. Shape of tooth: straight on both sides. Anthocyanin coloration of main veins on upper side of blade: absent. Density of hairs between veins on upper side of blade: medium. Density of hairs between veins on lower side of blade: medium. Length of petiole compared to main vein: similar. Length of petiole: 8-11 cm. Petiole thickness: 3-4 mm.

Petiole.—Green color of upper side: not visible. Anthocyanin coloration of upper side: red between RHS 59 B and 59 C. Green color of lower side: green yellow RHS 145 A. Anthocyanin coloration of lower side: red between RHS 59 B and 59 C. Pubescence: medium to strong.

Fruit.—Time of beginning of berry ripening: N/R.

Bunch.—Length (peduncle included): 25-35 cm. Maximum diameter: 11-16 cm. Weight: 400-600 gr. General shape: narrow triangular. Peduncle length: 5-8 cm. Peduncle thickness: 5-10 mm. Peduncle color: yellowish green RHS 144 B with brown red overcolor RHS 183 B. Peduncle lignification: present. Density: dense.

Pedicel.—Length: 8-11 mm. Thickness: about 2 mm. Color: green RHS 144 B with anthocyanin coloration RHS 183 B.

Berry.—Detachment: easy. Length: about 26 mm. Diameter: about 20 mm. Weight: about 6.4 gr. Shape in profile: broad elliptic. Shape in cross section: rounded. Depression at distal end: present. Color of skin (without bloom): yellowish green RHS 145 B. Amount of bloom: absent. Surface: smooth. Thickness of skin: thin. Adherence of skin to flesh: strong. Flesh color: light green RHS 145 C. Flesh anthocyanin coloration: absent. Firmness of flesh: medium to firm. Juiciness of flesh: medium. Particular flavor: absent. Formation of seeds: absent.

Woody shoot.—Length of node: variable. Main color (without bloom): brown RHS 177 B. Relief of surface: rough. Shape in cross section: round. Diameter: about 9 mm. Lenticels: not visible.

Usage: Table grape.

Disease/pest resistance: No atypical resistance has been noted.

What is claimed is:

1. A new and distinct grapevine variety, referred to as 'AMBER HONEY', as herein described and illustrated by the characteristics set forth above.

* * * * *

Fig. 1

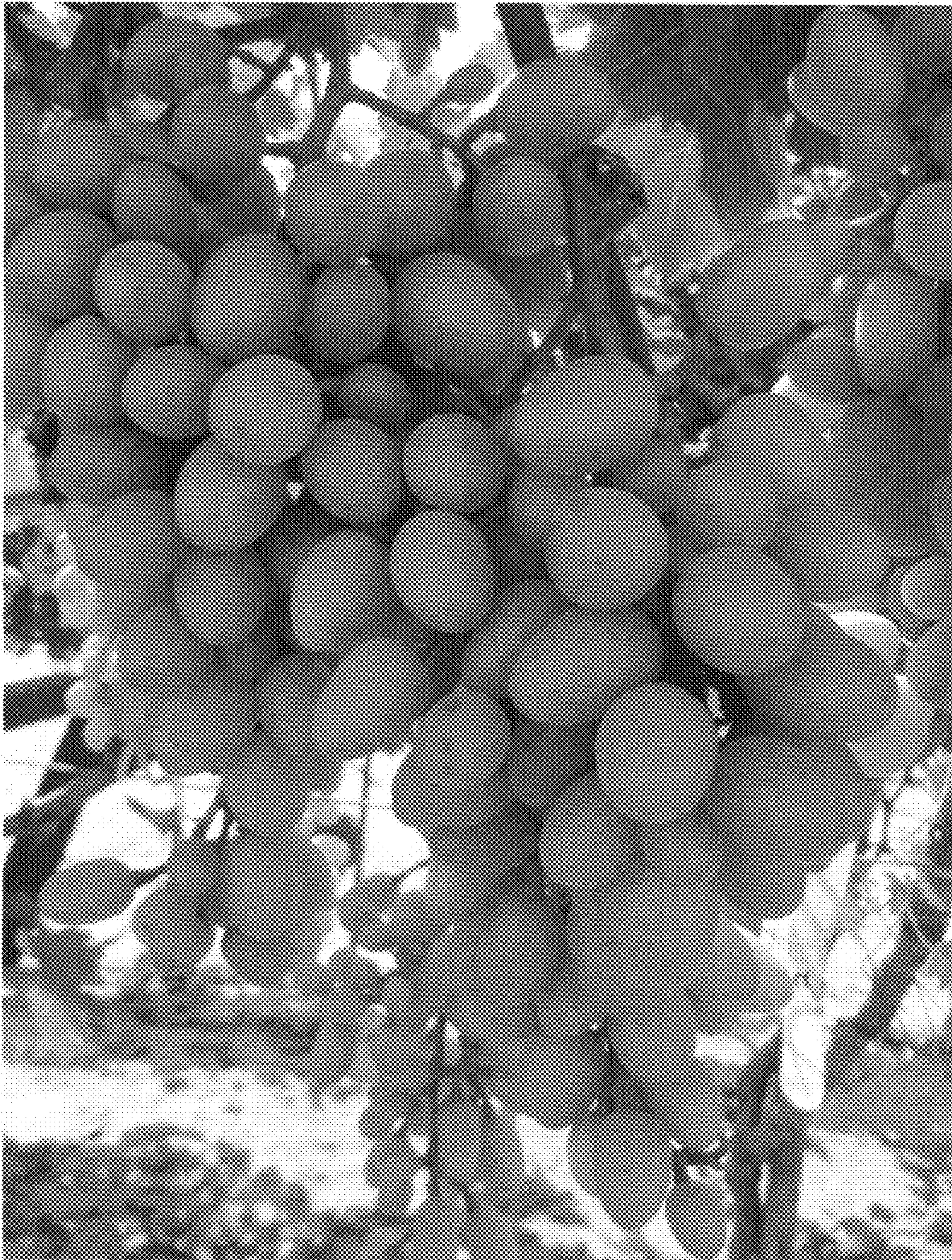


Fig. 2

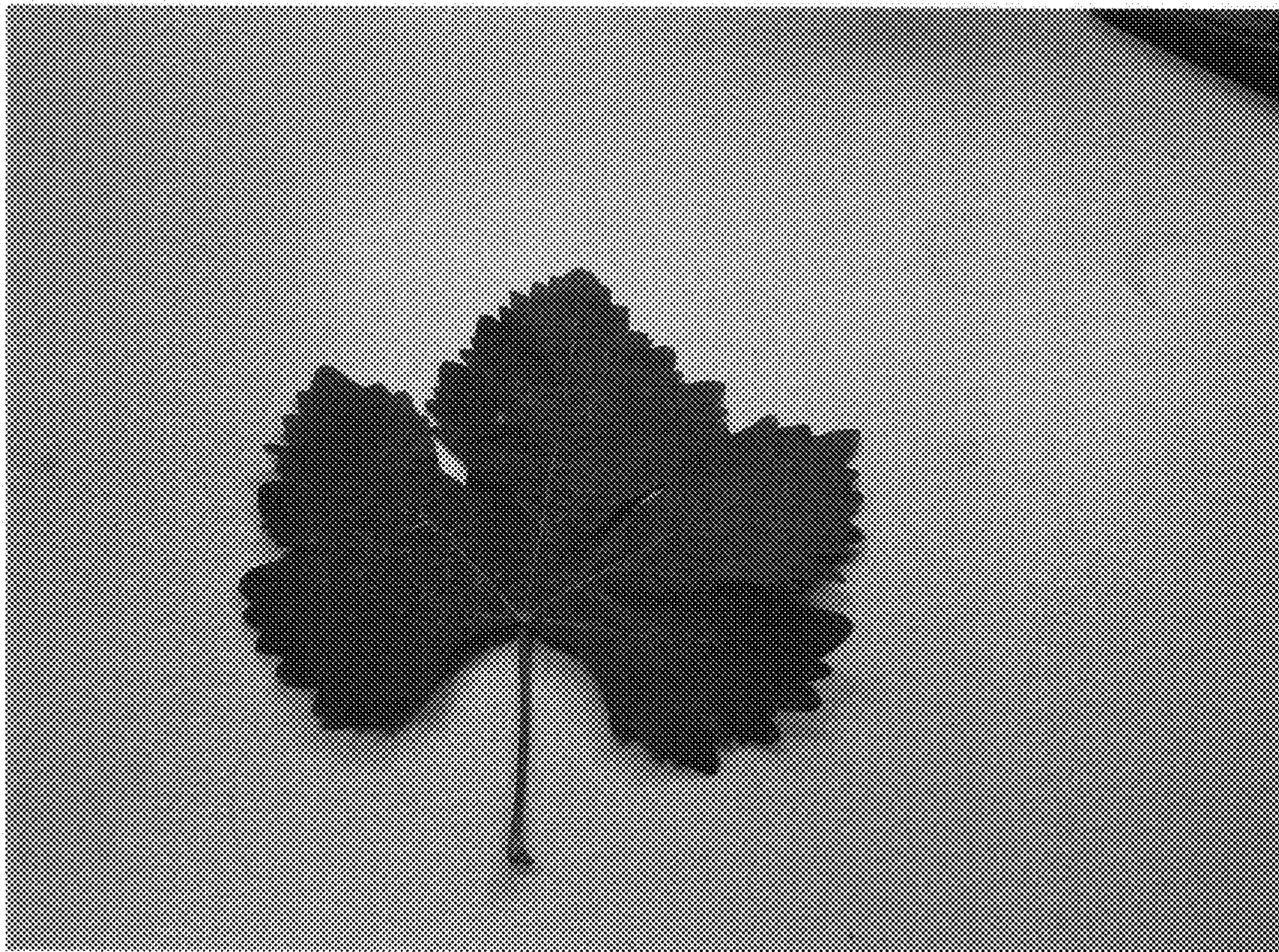


Fig. 3

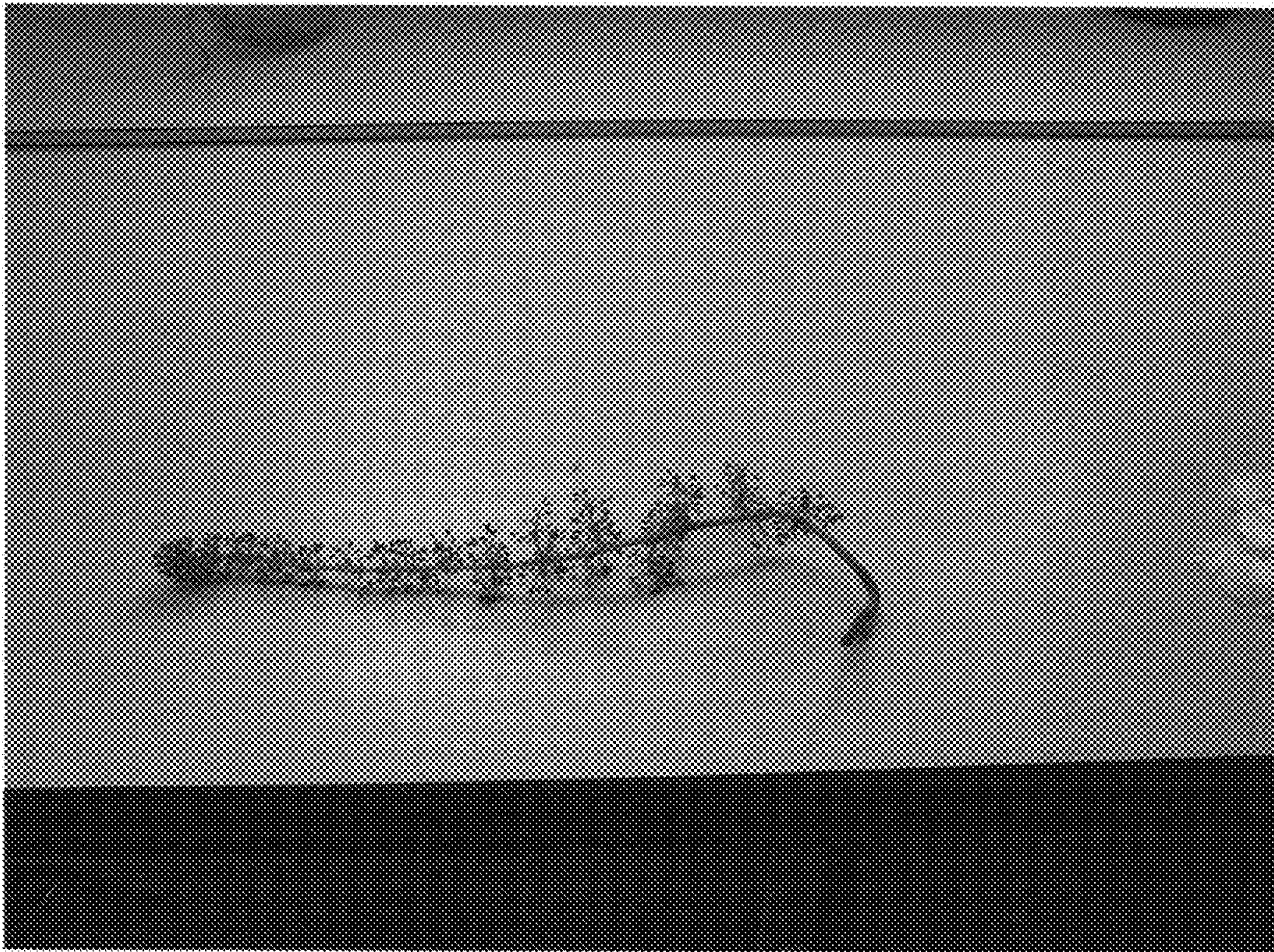


Fig. 4

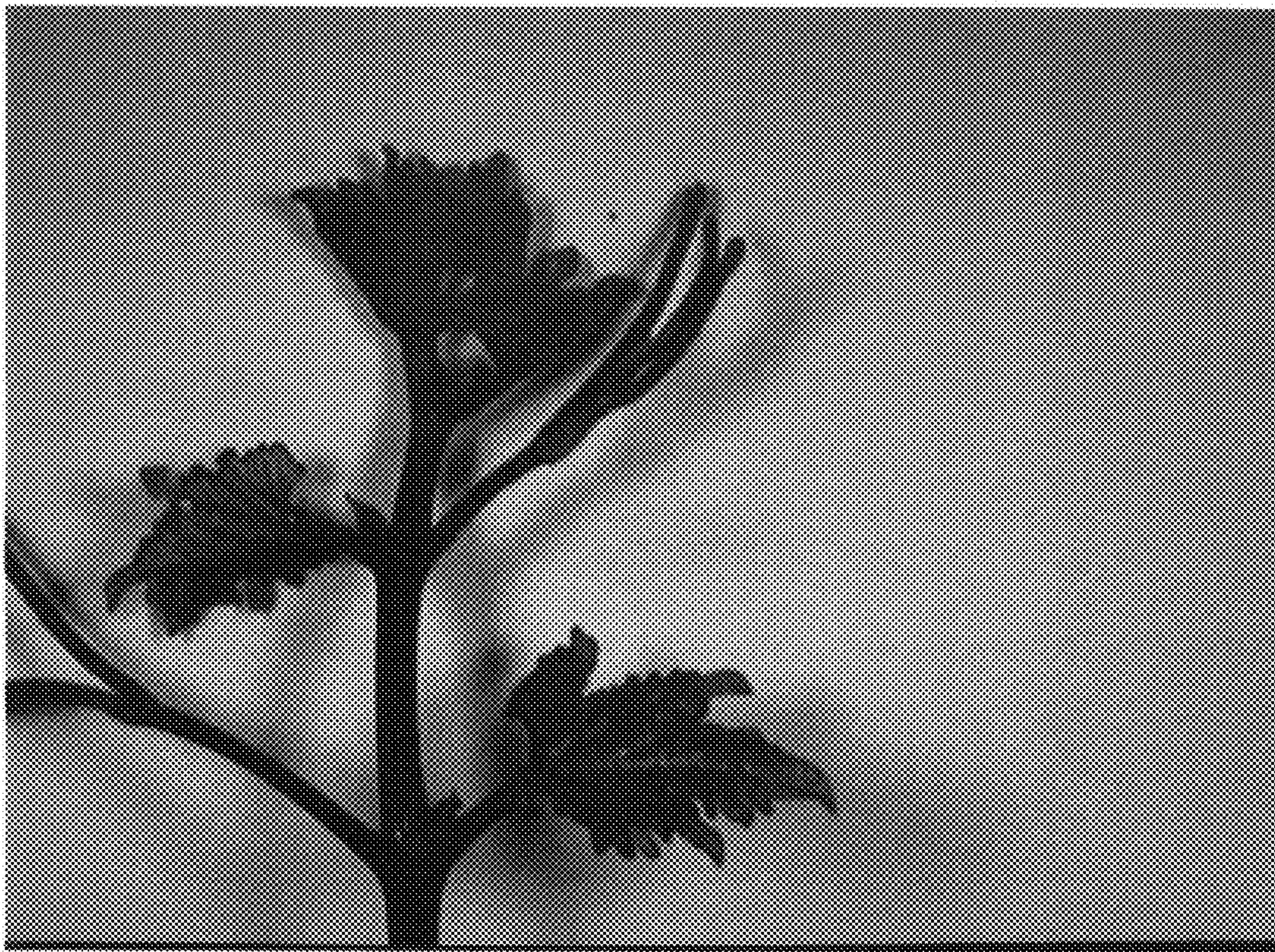


Fig. 5

