

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

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(54) **VARIETY OF *RUBUS* PLANT NAMED  
'SUGANA'**

(50) Latin Name: *Rubus idaeus*  
Varietal Denomination: **Sugana**

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(73) Assignee: **Lubera AG**, Buchs (CH)

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

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**Related U.S. Application Data**

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8, 2008.

(51) **Int. Cl.**  
**A01H 5/00** (2006.01)

(52) **U.S. Cl.** ..... **Plt./204**

(58) **Field of Classification Search** ..... Plt./204  
See application file for complete search history.

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(57) **ABSTRACT**

A new and distinct cultivar of *Rubus* plant named 'Sugana'  
having bright colored and large fruits with a long shelf life.

**16 Drawing Sheets**

**1**

Botanical classification: *Rubus idaeus*.  
Varietal denomination: 'Sugana'.

**BACKGROUND OF THE INVENTION**

The present invention comprises a new and distinct cultivar  
of *Rubus idaeus* known by the varietal name 'Sugana'.

The new cultivar was discovered in October of 1999 in  
Buchs, Switzerland as part of a planned breeding program.  
The purpose of the breeding program was to develop better  
primocane raspberries with big fruits and a good shelf life.  
The new variety is the result of a cross between raspberry  
variety 'Autumn Bliss' (female parent, U.S. Plant Pat. No.  
6,597) and raspberry variety 'Tulameen' (male parent, unpat-  
ented). The new variety's upright habit and high level of  
apical dominancy are traits that are similar to 'Autumn Bliss'.  
However, the new variety has brighter colored fruits and a  
better rooting habit than its female parent. The new variety  
exhibits a similar fruit size and rooting habit to 'Tulameen'.  
The new variety was first asexually reproduced by placing  
roots of motherplants in bags, cutting upcoming shoots, and  
rooting the cuttings under mist in Buchs, Switzerland in April  
of 2000. Continued observations of asexual reproductions of  
the new variety have confirmed that the distinguishing fea-  
tures of this new cultivar come true, remain stable, and are  
retained through successive propagations.

The following traits are determined to be basic character-  
istics of this new cultivar which distinguish this raspberry  
plant as new and distinct when compared to other varieties  
known to the breeder:

1. Large fruit;
2. Big drupelets;
3. Very bright, colored fruits that maintain their color well;
4. Excellent shelf life, the fruit of 'Sugana' can be marketed  
up to ten days after harvest;
5. Extremely high multiplication rate for a primocane vari-  
ety (up to 280 young plants from one motherplant); and
6. Very high level of apical dominancy, making only 3-4  
lateral shoots.

**2**

The following characteristics also distinguish 'Sugana'  
from other raspberry varieties known to the breeder. The  
characteristics are described with comparative reference to  
raspberry varieties 'Erika' (unpatented), 'Polka' (unpat-  
ented), and 'Himbotop' (unpatented).

1. 'Sugana' is much more upright than 'Erika' with a higher  
level of apical dominancy;
2. The shoots of 'Sugana' are more stable than the shoots of  
'Erika';
3. 'Sugana' exhibits fewer and smaller laterals than 'Erika'.  
'Sugana' exhibits 3-4 laterals while 'Erika' exhibits 6-8  
laterals;
4. The branches of 'Sugana' have less anthocyanins than  
'Erika' and, therefore, they are not as red as the branches  
of 'Erika' (see FIGS. 7 and 8);
5. In Autumn, 'Sugana' produces more new shoots from the  
ground than 'Erika' (see FIG. 3);
6. After propagating both varieties with roots and compar-  
ing the upcoming shoots, the propagation rate of  
'Sugana' is about 20% higher than 'Erika';
7. Especially in northern climates, 'Sugana' has about 10%  
fewer blooms than 'Erika';
8. The fruits of 'Sugana' are about 10 to 15% bigger than  
the fruits of 'Erika' (see FIG. 5);
9. The color of 'Sugana' fruit is brighter than the fruit color  
of 'Erika' (see FIG. 5), 'Polka', and 'Himbotop';
10. 'Sugana' fruit has bigger drupelets than 'Erika';
11. 'Erika' has a higher number of, and more aggressive,  
thorns than 'Sugana'; and
12. 'Sugana' has fewer lateral shoots than 'Polka', 'Erika',  
and 'Himbotop'.

**DESCRIPTION OF THE DRAWINGS**

The accompanying photographic drawings illustrate the  
new cultivar and comparison varieties, with the colors being  
as nearly true as possible with color illustrations of this type:  
FIG. 1 is a photograph of an entire plant of the new variety;  
FIG. 2 is a photograph of 'Sugana' fruit one day after  
harvest;



FIG. 3 illustrates the new shoots of 'Sugana' in October;  
 FIG. 4 is a close-up photograph of a flower of 'Sugana';  
 FIG. 5 illustrates the fruits of 'Sugana' in comparison with  
 the fruits of 'Erika';

FIG. 6 illustrates the fruits of 'Sugana' (top) in comparison  
 with the fruits of 'Polka' (bottom);

FIG. 7 illustrates the thorns and color of 'Sugana' canes;

FIG. 8 illustrates the thorns and color of 'Erika' canes;

FIG. 9 illustrates the color of 'Sugana' shoots;

FIG. 10 illustrates the color of 'Polka' shoots;

FIG. 11 is a photograph of the thorns of 'Sugana' and  
 'Autumn Bliss';

FIG. 12 is a photograph of the thorns of 'Sugana';

FIG. 13 illustrates the upper surface of young leaflets of  
 'Sugana';

FIG. 14 illustrates the lower surface of young leaflets of  
 'Sugana';

FIG. 15 illustrates the upper surface of mature leaflets of  
 'Sugana'; and

FIG. 16 illustrates the lower surface of mature leaflets of  
 'Sugana'.

#### DESCRIPTION OF THE NEW PLANT

'Sugana' has not been observed under all possible environ-  
 mental conditions. The phenotype may vary somewhat with  
 variations in environment, such as temperature, day length,  
 and light intensity. However, there is no variance in genotype.

In the following description, color references are made to  
 The Royal Horticultural Society Colour Chart, except where  
 general terms of ordinary dictionary significance are used.  
 Plants of the new variety were planted in a 10 liter pot at the  
 end of March in Buchs, Switzerland, and the descriptions  
 herein were observed in the middle of October of the same  
 year, so the plants were approximately 7 months old when  
 described. The plants were grown in their containers under  
 field conditions. The measurements were taken under natural  
 light in a greenhouse.

#### PLANT

Primary use: 'Sugana' is primarily grown for its primocane  
 fruit.

Time to initiate roots: 14 days at 18-19° C., under mist.

Time to produce a rooted plant: 40-45 days, including accli-  
 matization/hardening time.

Rooting habit: Very good; young plants typically produce 3-5  
 roots that branch and fill a 5 cm. container.

Form: Very upright plant with 3-4 fruiting laterals.

Height (from soil to top of plant): 170-200 cm.

Plant diameter: 70-80 cm.

Vigor: Medium to high.

Disease/pest resistance: Medium tolerance to *Phytophthora*,  
 especially when planted in the field. When planted with a  
 row of 'Polka' which died from *Phytophthora*, the  
 'Sugana' plant is still growing and fruiting for 2 years now.  
 On the other hand, some *Phytophthora* losses have  
 occurred when 'Sugana' was cultivated in pots.

Weather tolerance: Tolerance to rain is better than 'Autumn  
 Bliss', but not very good. In windy locations there can be  
 some fruit damage because of the spines/thorns of  
 'Sugana'.

Primocane:

*Average number of canes per plant.*—A one-year old  
 culture has 1-2 canes per plant. Later on, there are at

least 3-5 canes. Late in the season, especially,  
 'Sugana' produces many new shoots from the ground.

*Average length.*—170-200 cm. (1 year old culture).

*Average diameter.*—0.8-1.0 cm.

*Fruiting cane color.*—142C, with some red coloration on  
 the sunny side of the canes (see FIG. 9), but less red  
 than 'Polka' (see FIG. 10) and 'Erika' and about the  
 same as 'Autumn Bliss'.

*Dormant cane color.*—Brownish-grey.

*Number of fruiting laterals per cane.*—3-4.

*Internode length.*—5.3 cm.

*Young shoot color.*—142C.

Thorn:

*Density.*—Medium, less than 'Autumn Bliss' (see FIG.  
 11) and 'Erika'.

*Length.*—2-2.5 mm.

*Color.*—Dark red to violet.

*Texture.*—Relatively hard, but the tips soon break.

*Tip attitude.*—Pointing slightly backwards (see FIG.  
 12).

Foliage:

*Arrangement.*—Compound.

*Number of leaves per stem.*—Usually 3, sometimes 5.

*Fragrance.*—None present.

Petiole:

*Length.*—7-8 cm.

*Diameter.*—2.5 mm.

*Color.*—Pale green.

*Texture.*—Very thin hairs present.

Young leaflet color:

*Upper surface.*—142A (see FIG. 13).

*Lower surface.*—143B and the veins are green. Between  
 the veins there are thin grey hairs which provide a  
 greyish impression (see FIG. 14).

Mature leaflet color:

*Upper surface.*—142A (see FIG. 15).

*Lower surface.*—143B and the veins are green. Between  
 the veins there are thin grey hairs which provide an  
 overall grey impression (see FIG. 16).

Lateral leaflets:

*Length.*—9.5-10.5 cm.

*Width.*—5.5-6.8 cm.

*Shape of leaf (generally).*—Ovate.

*Shape of apex.*—Cuspidate.

*Shape of base.*—Cordate.

*Texture.*—Soft.

*Margin type.*—Doubly serrate.

Terminal leaflets:

*Length.*—13.5-14.5 cm.

*Width.*—9-12.5.

*Shape of leaf (generally).*—Rather irregular; ovate.

*Shape of apex.*—Cuspidate.

*Shape of base.*—Cordate.

*Texture.*—Harder and firmer than lateral leaflets.

*Margin type.*—Doubly serrate.

Veins:

*Upper surface color.*—145C.

*Lower surface description.*—145C in color, with some  
 small thorns present.

Fruit (see FIGS. 1 and 6):

*Harvest season.*—The third week of August until Octo-  
 ber on primocanes; in June on floricanes.

*Number of fruit per fruiting lateral.*—13-21.

*Immature color.*—43D.

*Maturing color.*—42B.

*Mature color.*—After storage of about 1 week, the color of ‘Sugana’ is rather stable and a really red color, 41B (not violet like other varieties).

*Taste.*—Agreeable; the same level of sweetness as ‘Polka’, but with more acidity.

*Length.*—2.8-2.9 cm.; in the mountains, such as the province Trento of Italy, the fruit can be more than 3 cm. in length.

*Width.*—2.6-2.7 cm.

*Overall shape.*—Round to conical. In the beginning of the season, the fruits are more conical, and afterwards they become more round. In more northern climates, the fruits are also more conical than in more southern or Mediterranean climates.

*Glossiness.*—Medium; less so than fruits of ‘Erika’ and ‘Polka’.

*Weight.*—6 grams; in the mountains, in more northern climates, and in the beginning of the fruiting season, fruits can be 2-3 grams bigger.

*Drupelet size.*—Big to very big; sometimes more than 3 mm. and much bigger than ‘Polka’.

*Drupelet number.*—100-120 drupelets per fruit.

*Drupelet arrangement.*—Rather irregular.

*Flesh firmness.*—Rather firm; less firm than ‘Polka’, but only because the fruitflesh-seed ratio is much better with ‘Sugana’.

*Skin firmness.*—Very good; much firmer than ‘Autumn Bliss’ and ‘Polka’. The skin of the drupelets seems to be very elastic.

*Receptacle/torus length.*—1.6-2 cm.

*Receptacle/torus width.*—1-1.2 cm.

*Adherence of berry to receptacle.*—The berries can be picked much easier than with ‘Polka’ and ‘Erica’.

Reproductive organs:

*Pistil number per flower.*—70-90.

*Pistil size.*—Medium.

*Stamen number per flower.*—85-105.

*Stamen size.*—Medium.

Flowers (see FIG. 4):

*Natural flowering season.*—In Buchs, Switzerland, the primocanes of ‘Sugana’ flower from the end of June to August/September, and the floricanes flower from the end of April until May.

*Number of flowers per plant.*—150-200.

*Color.*—155D.

*Flower height.*—0.8 cm.

*Flower diameter.*—3.1 cm.

I claim:

1. A new and distinct variety of *Rubus* plant named ‘Sugana’ as herein described and illustrated.

\* \* \* \* \*





Fig. 1



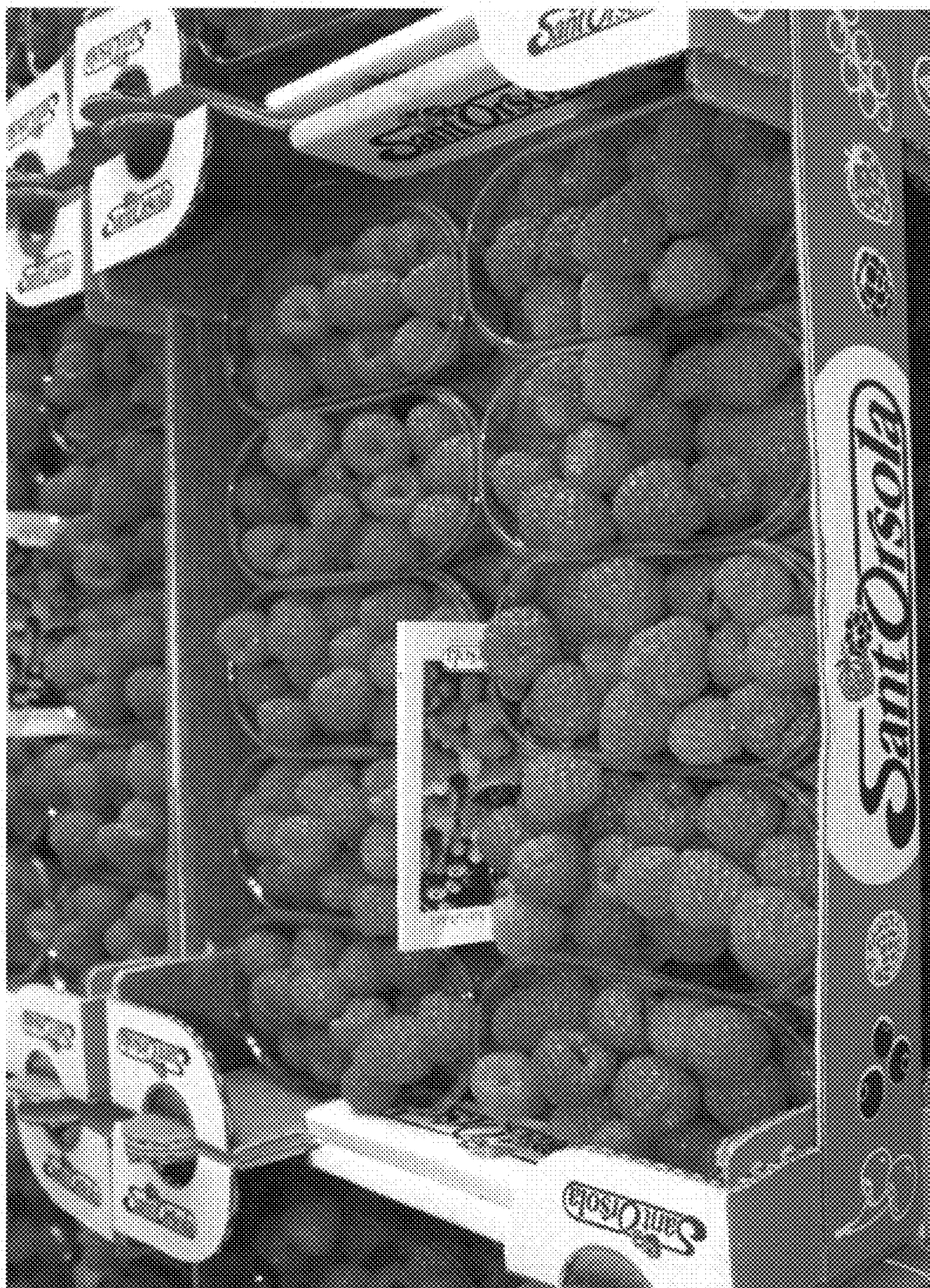


Fig. 2





Fig. 3



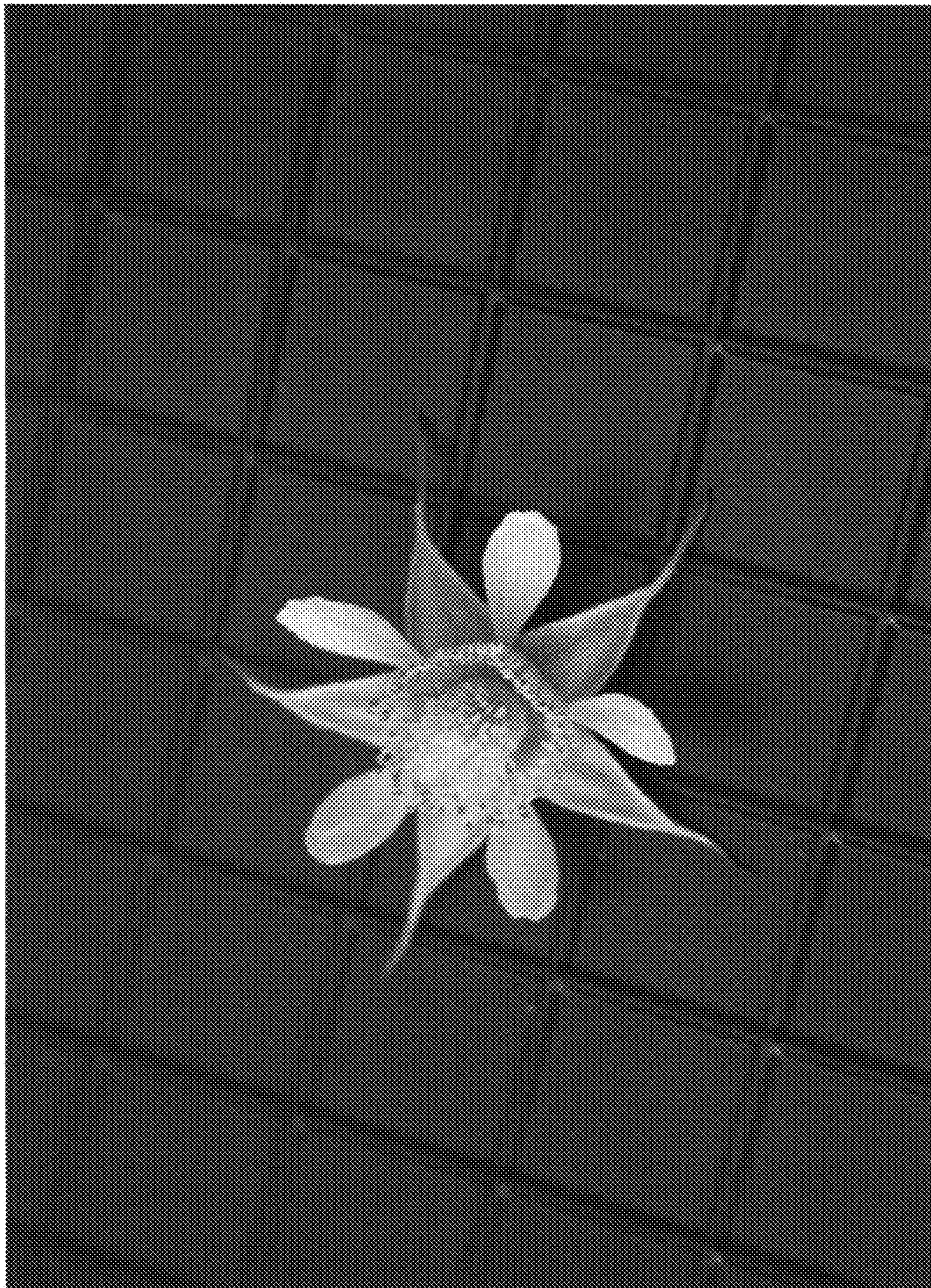


Fig. 4





Fig. 5



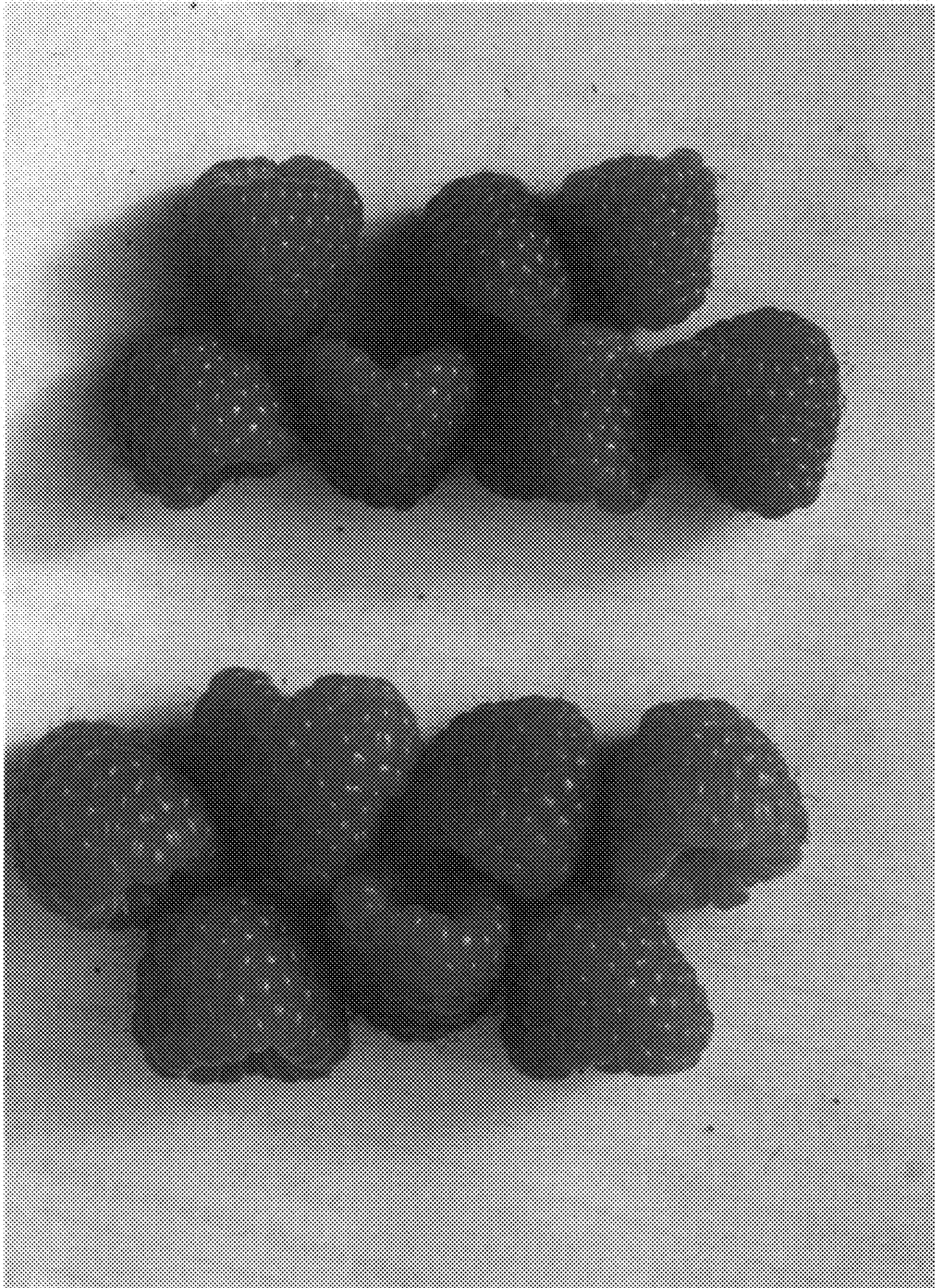


Fig. 6





Fig. 7





Fig. 8





Fig. 9





Fig. 10



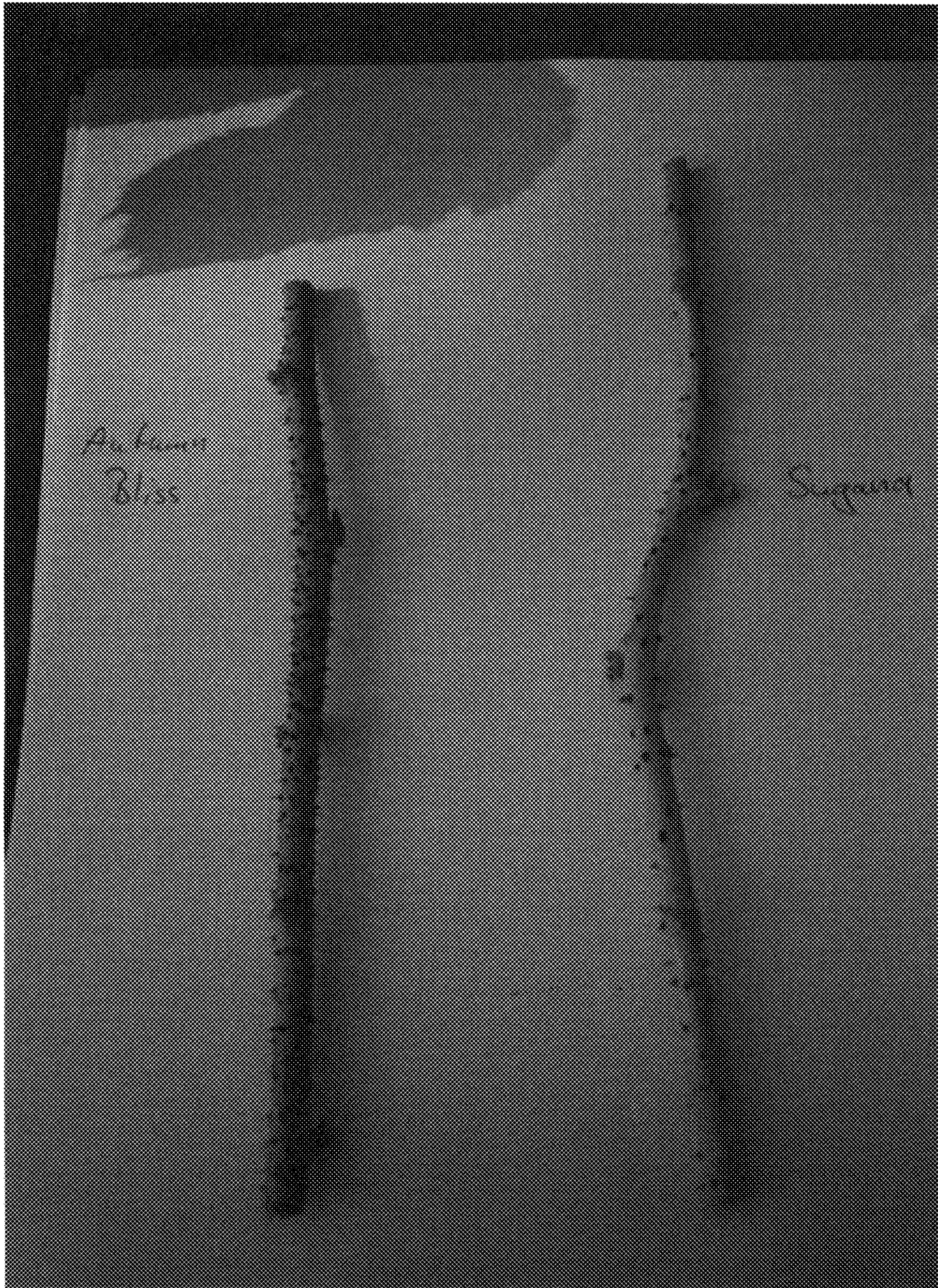


Fig. 11





Fig. 12



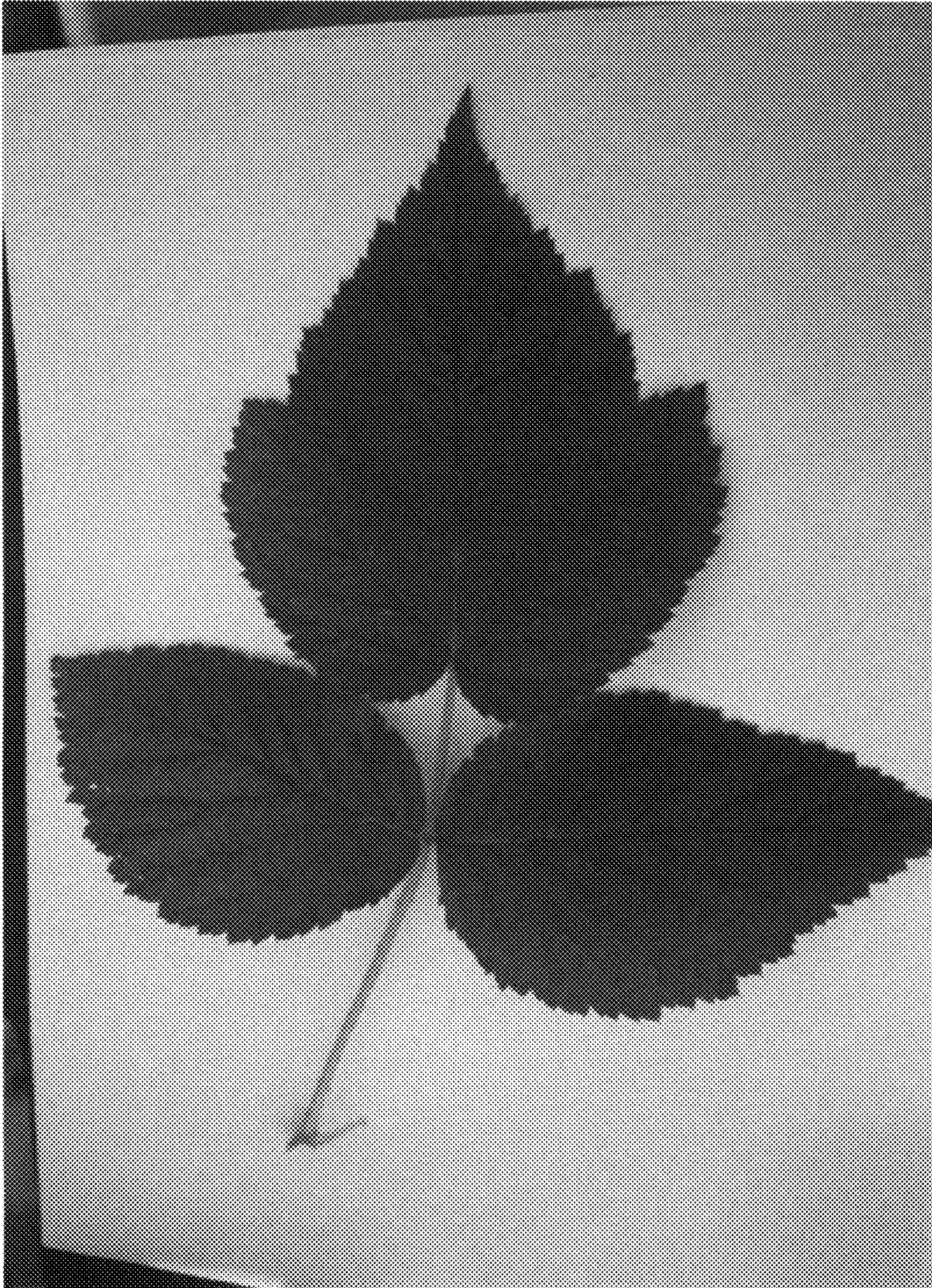


Fig. 13



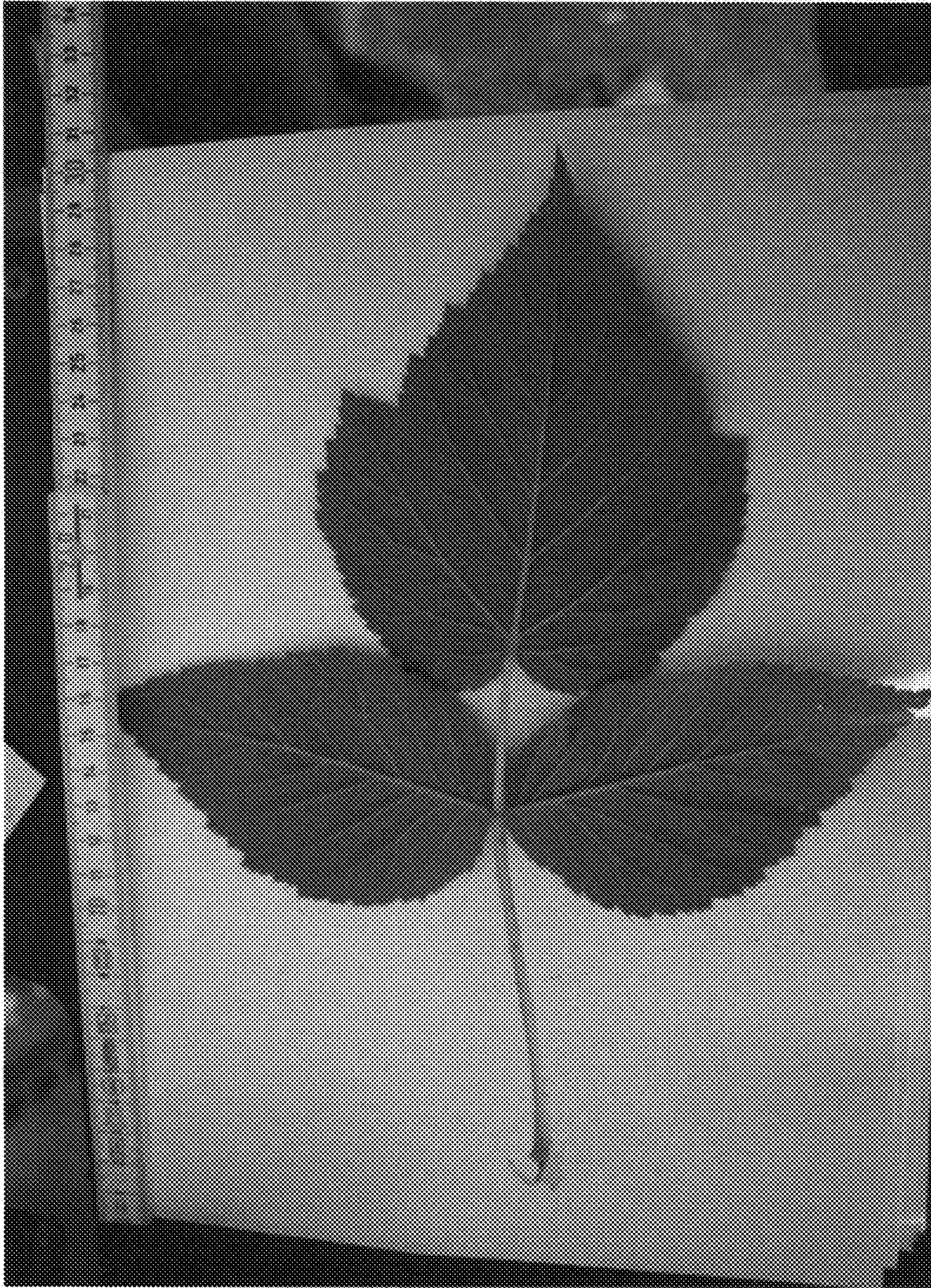


Fig. 14





Fig. 15



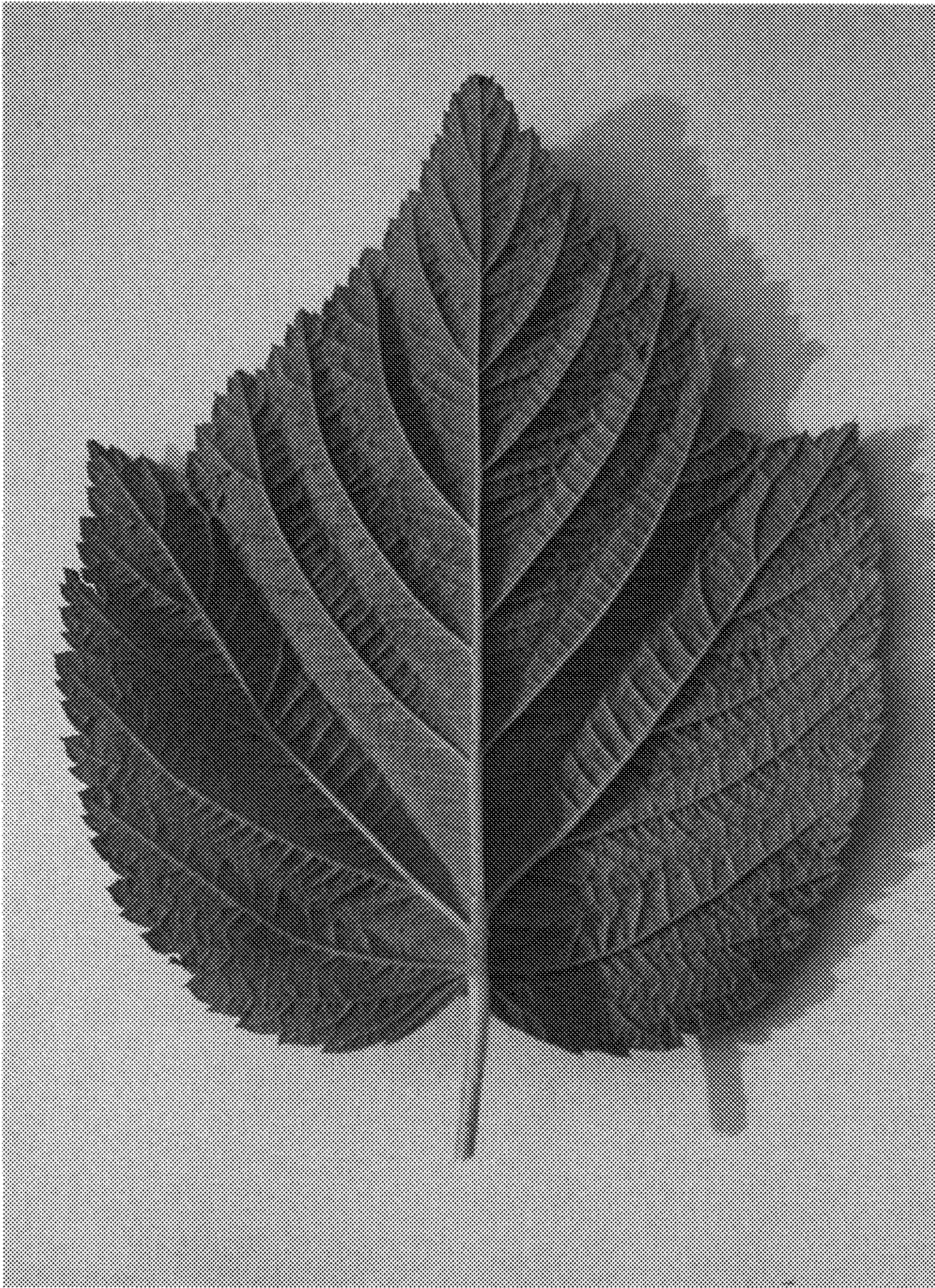


Fig. 16



UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO. : PP21,357 P3  
APPLICATION NO. : 12/386799  
DATED : October 5, 2010  
INVENTOR(S) : Kobelt

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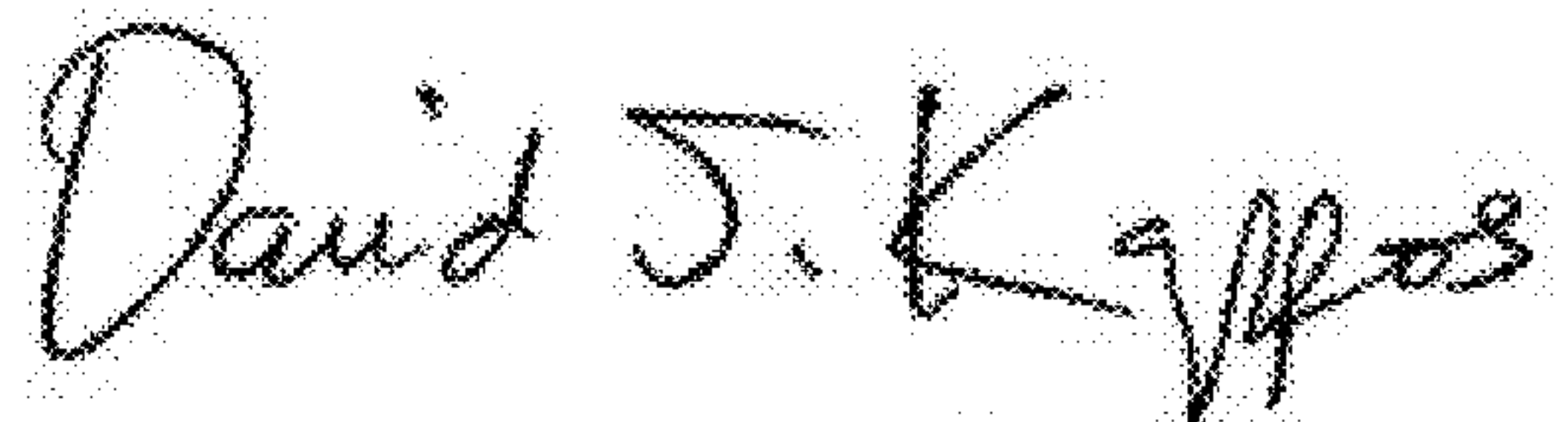
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Title Page, Column 1, after the “Varietal denomination: ‘Sugana’ and before the “BACKGROUND OF THE INVENTION”, insert the following:

--CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims the benefit of U.S. Provisional Plant Patent  
Application No. 61/126,732 filed May 8, 2008, which is hereby incorporated by reference  
in its entirety. --

Signed and Sealed this  
First Day of March, 2011

A handwritten signature in black ink, reading "David J. Kappos". The signature is written in a cursive, flowing style with a large initial "D".

David J. Kappos  
*Director of the United States Patent and Trademark Office*