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

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(54) **ECHINACEA PLANT NAMED**
'BALSOMSOLST'

(50) Latin Name: *Echinacea x hybrida*
Varietal Denomination: **Balsomsolst**

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(52) **U.S. Cl.**
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(57) **ABSTRACT**

A new and distinct cultivar of *Echinacea* plant named
'Balsomsolst', characterized by its single-type, dark and
light yellow-colored inflorescences that first open yellow-
orange and with senescence fade to light yellow, medium
green-colored foliage, and moderately vigorous, compact-
upright growth habit, is disclosed.

1 Drawing Sheet

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Latin name of genus and species of plant claimed: *Echi-
nacea x hybrida*.

Variety denomination: 'Balsomsolst'.

BACKGROUND OF THE INVENTION

The present invention relates to a new and distinct cultivar
of *Echinacea* plant botanically known as *Echinacea x*
hybrida and hereinafter referred to by the cultivar name
'Balsomsolst'.

The new cultivar originated in a controlled breeding
program in Elburn, Ill. during October 2011. The objective
of the breeding program was the development of *Echinacea*
cultivars with a single inflorescence form having imbricate
ray florets and a well-branched, compact-upright growth
habit.

The new *Echinacea* cultivar is the result of cross-pollina-
tion. The female (seed) parent of the new cultivar is the
proprietary *Echinacea x hybrida* breeding selection coded
E98-4, not patented, characterized by its single-type, light
yellow-colored ray florets, medium green-colored foliage,
and moderately vigorous, upright growth habit. The male
(pollen) parent of the new cultivar is from a bulk pollen mix
of four proprietary *Echinacea x hybrida* breeding selections
coded E98-1 through E98-4, not patented, characterized by
their single-type, light yellow-colored ray florets, medium
green-colored foliage, and moderately vigorous, upright
growth habit. The new cultivar was discovered and selected
as a single flowering plant within the progeny of the above
stated cross-pollination during June 2012 in a controlled
environment in Elburn, Ill.

Asexual reproduction of the new cultivar by in vitro shoot
propagation since June 2012 in West Chicago, Ill. has
demonstrated that the new cultivar reproduces true to type
with all of the characteristics, as herein described, firmly
fixed and retained through successive generations of such
asexual propagation.

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SUMMARY OF THE INVENTION

The following characteristics of the new cultivar have
been repeatedly observed and can be used to distinguish
'Balsomsolst' as a new and distinct cultivar of *Echinacea*
plant:

1. Single-type, dark and light yellow-colored inflores-
cences that first open yellow-orange and with senes-
cence fade to light yellow;
2. Medium green-colored foliage; and
3. Moderately vigorous, compact-upright growth habit.

Plants of the new cultivar differ from plants of the female
and male parents primarily in having white coloration on the
ray floret color.

Of the many commercially available *Echinacea* cultivars,
the most similar in comparison to the new cultivar is
SOMBRERO Lemon Yellow 'Balsomemyim', U.S. Plant
Pat. No. 30,116. However, in side-by-side comparisons,
plants of the new cultivar differ from plants of 'Balsome-
myim' in at least the following characteristics:

1. Plants of the new cultivar have a ray floret color that
includes a lighter shade of yellow when fully open
differing from plants of 'Balsomemyim' having a solid
ray floret color;
2. Plants of the new cultivar have inflorescences with a
smaller disc diameter and fewer disc florets per inflo-
rescence than plants of 'Balsomemyim'; and
3. Plants of the new cultivar are taller than plants of
'Balsomemyim'.

BRIEF DESCRIPTION OF THE PHOTOGRAPHS

The accompanying photographs show, as nearly true as it
is reasonably possible to make the same in color illustrations
of this type, typical inflorescence and foliage characteristics
of the new cultivar. Colors in the photographs may differ
slightly from the color values cited in the detailed descrip-

tion, which accurately describes the colors of 'Balsomsolst'. The plants were approximately five months old. The plants were grown as three plants per pot in one-gallon containers for approximately 13 weeks in a greenhouse in Elburn, Ill. followed by 3 weeks in an open-sided polyhouse in West Chicago, Ill.

FIG. 1 illustrates a side view of the overall growth and flowering habit of 'Balsomsolst'.

FIG. 2 illustrates a close-up view of an individual inflorescence of 'Balsomsolst'.

DETAILED BOTANICAL DESCRIPTION

The new cultivar has not been observed under all possible environmental conditions to date. Accordingly, it is possible that the phenotype may vary somewhat with variations in the environment, such as temperature, light intensity, and day length, without, however, any variance in genotype.

The chart used in the identification of colors described herein is The RHS Colour Chart of The Royal Horticultural Society, London, England, 2015 edition, except where general color terms of ordinary significance are used. The color values were determined in July 2019 under natural light conditions in West Chicago, Ill.

The following descriptions and measurements describe approximately five-month old plants produced from *in vitro* plantlets and grown utilizing a soilless growth medium under conditions comparable to those used in commercial practice. The plants were grown as three plants per pot in one-gallon containers for approximately 13 weeks in a greenhouse in Elburn, Ill. followed by 3 weeks in an open-sided polyhouse in West Chicago, Ill. Greenhouse temperatures in Elburn, Ill. were maintained at approximately 65° F. to 70° F. (18.3° C. to 21.1° C.) during the day and approximately 55° F. to 60° F. (12.8° C. to 15.6° C.) during the night. No supplemental lighting was provided. Measurements and numerical values represent averages of typical plants.

Botanical classification: *Echinacea x hybrida* 'Balsomsolst'.
Parentage:

Female parent.—Proprietary *Echinacea x hybrida* breeding selection coded E98-4, not patented.

Male parent.—A bulk pollen mix of four proprietary *Echinacea x hybrida* breeding selections coded E98-1 through E98-4, not patented.

Propagation:

Type.—*In vitro* propagation is preferred, divisions are possible.

Time to initiate roots in vitro.—Approximately 30 days at 18° C.

Time to produce a rooted plantlet in summer.—Approximately 30 days at 18° C.

Root description.—Fine, fibrous; grey to light brown in color.

Rooting habit.—Moderate density, moderate branching.

Plant description:

Commercial crop time.—Approximately 10 to 12 weeks from a rooted tissue culture plantlet to finish in a 15 cm container.

Growth habit and general appearance.—Herbaceous perennial, moderately vigorous, compact-upright.

Hardiness.—USDA Zone 5a (−20° F. to −15° F./−28.9° C. to −26° C.).

Size.—Height from soil level to top of plant plane: Approximately 47.0 cm. Width: Approximately 40.0 cm.

Branching habit.—No lateral branching, flowering stems grow from base. Quantity of main stems per plant: Approximately 4.

Stems.—Strength: Very strong. Aspect: Nearly erect. Shape: Rounded. Length to base of inflorescence: Approximately 37.0 cm. Diameter: Approximately 5.0 mm to 1.0 cm. Length of central internode: Approximately 5.5 cm. Texture: Densely pubescent with short strigose hairs. Color of young and mature stems: 145A to 145B.

Foliage description:

General description.—Form: Simple. Arrangement: Alternate.

Leaves.—Aspect: Perpendicular to stem, subtending with age. Shape: Narrowly ovate to lanceolate. Margin: Entire to shallowly serrate, slightly undulate. Apex: Acute. Base: Attenuate. Venation pattern: Pinnate. Length of mature leaf: Approximately 11.0 cm. Width of mature leaf: Approximately 4.5 cm. Texture of upper surface: Dull, moderately pubescent with short strigose hairs. Texture of lower surface: Moderately pubescent with short strigose hairs. Color of upper surface of young and mature foliage: Closest to NN137A with venation of 145C. Color of lower surface of young and mature foliage: Closest to 147B with venation of 145C.

Petiole.—Shape: V-shaped. Length: Approximately 5.5 cm to 16.0 cm. Diameter: Approximately 2.0 mm to 3.0 mm. Texture of upper surface: Glabrous. Texture of lower surface: Sparsely covered with very short strigose hairs. Color of upper and lower surfaces: 145B to 145C.

Flowering description:

Flowering habit.—'Balsomsolst' is a long-day obligate, freely flowering blooming from late spring through late summer under outdoor growing conditions.

Lastingness of individual inflorescence on the plant.—Approximately 3 weeks.

Inflorescence description:

General description.—Type: Solitary, composite. Persistent. Shape: Conical. Aspect: Facing upward. Arrangement: Terminal, held upright on strong peduncles. Fragrance: Faintly sweet. Quantity per plant: Approximately 4. Height: Approximately 3.0 cm. Diameter: Approximately 9.0 cm.

Peduncle.—Strength: Strong. Aspect: Erect to approximately 45° from vertical. Length: Approximately 8.0 cm. Diameter: Approximately 4.0 mm to 5.0 mm. Texture: Densely pubescent with short strigose hairs. Color: 145A to 145B.

Bud.—Quantity per plant: Approximately 5. Shape: Flattened globular with immature ray florets nearly erect. Length: Approximately 1.5 cm. Diameter: Approximately 1.7 cm. Color: Outer ray florets of 154D with bud center of 143A.

Ray florets.—Quantity per inflorescence: Approximately 20. Arrangement: In a single whorl, imbricate. Aspect: Perpendicular to disc, subtending slightly with age. Shape: Elliptic. Appearance: Dull. Margin: Entire. Apex: Emarginate to notched. Base: Attenuate. Length: Approximately 4.3 cm. Width: Approximately 1.2 cm. Texture of upper surface:

Glabrous, ribbed longitudinally. Texture of lower surface: Sparsely pubescent, ribbed longitudinally. Color of upper surface when first open: 15A to 15B tinted with 137C at base. Color of lower surface when first open: 12D. Color of upper surface when fully open: 12A to 12B with 12D at base and tips, with senescence fade to 12C to 12D. Color of lower surface when fully open: 11D.

Disc florets.—Disc diameter: Approximately 3.0 cm. Quantity per inflorescence: Approximately 225. Arrangement: Spirally arranged in center of inflorescence. Shape: Tubular. Margin of free portion: Entire. Apex: Five acute tips. Base: Fused into a tube. Length: Approximately 1.0 cm. Diameter: Approximately 2.0 mm. Texture: Glabrous. Color of upper or inner surface when first and fully open: 144B. Color of lower or outer surface when first and fully open: 144B with base of NN155D.

Receptacle.—Shape: Conical. Height: Approximately 8.0 mm. Diameter: Approximately 1.3 cm. Color: 155D.

Phyllaries.—Quantity per inflorescence Approximately 60. Arrangement: In multiple whorls. Appearance: Dull, stiff. Shape: Narrowly ovate to lanceolate, strongly curved towards the peduncle. Margin: Entire, ciliate. Apex: Acute. Base: Truncate. Length: Approximately 8.0 mm to 1.3 cm. Width: Approximately 2.0 mm to 3.0 mm. Texture of upper or inner surface: Glabrous. Texture of lower or outer surface:

Sparsely pubescent with short strigose hairs. Color of upper surface: 137A. Color of lower surface: 137B.

Receptacle spines.—Number of spines per disc: Approximately 225. Shape: Acicular. Length: Approximately 1.3 cm. Width at widest point: Approximately 2.0 mm. Apex: Acute. Base: Truncate. Texture: Glabrous. Color: Apex of 23A, mid-section of 144A, and base of NN155D.

Reproductive organs.—Androecium: Present on disc florets only. Stamen quantity: 5 per floret. Anther shape: Oblong, basifixed. Anther length: Approximately 3.0 mm. Anther color: Closest to 199A. Filament length: Approximately 3.0 mm. Filament color: NN155D. Pollen amount: Abundant. Pollen color: 13A. Gynoecium: Present on disc florets only. Pistil quantity: 1 per floret. Pistil length: Approximately 1.0 cm. Stigma shape: Bifid. Stigma length: Approximately 2.0 mm. Stigma color: 145D. Style length: Approximately 6.0 mm. Style color: 145D. Ovary length: Approximately 2.0 mm. Ovary color: NN155D.

Seed and fruit production: Neither seed nor fruit production has been observed.

Disease and pest resistance: Resistance to pathogens and pests common to *Echinacea* has not been observed.

What is claimed is:

1. A new and distinct cultivar of *Echinacea* plant named 'Balsomsolst', substantially as herein illustrated and described.

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FIG. 1



FIG. 2