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(54) **BRUNNERA PLANT NAMED ‘FROSTBITE’**

(50) Latin Name: *Brunnera macrophylla*
Varietal Denomination: **Frostbite**

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USPC **Plt./373**

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

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(57) **ABSTRACT**

A new and distinct cultivar of *Brunnera* plant named ‘Frostbite’, characterized by its light blue and white colored flowers, silvery-colored foliage having dark green venation and margins, and moderately vigorous, compact-mounded growth habit, is disclosed.

1 Drawing Sheet

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Latin name of genus and species of plant claimed: *Brunnera macrophylla*.

Variety denomination: ‘Frostbite’.

BACKGROUND OF THE INVENTION

The present invention relates to a new and distinct cultivar of *Brunnera* plant botanically known as *Brunnera macrophylla* and hereinafter referred to by the cultivar name ‘Frostbite’.

The new cultivar originated in a controlled breeding program in Hem, The Netherlands during May 2016. The objective of the breeding program was the development of *Brunnera* cultivars with smaller-sized leaves having unique foliage coloration.

The new *Brunnera* cultivar is the result of cross-pollination. The female (seed) parent of the new cultivar is ‘Henry’s Eyes’, not patented, characterized by its blue colored flowers with white margins, medium green colored foliage with darker green venation, and a moderately vigorous, mounded growth habit. The male (pollen) parent of the new cultivar is ‘Silver Heart’, U.S. Plant Pat. No. 24,685, characterized by its blue and white colored flowers, large, round-cordate shaped foliage heavily mottled with silver and having very thin green veins and margins, and a moderately vigorous, open-mounded growth habit. The new cultivar was selected as a single flowering plant within the progeny of the above stated cross-pollination during July 2017 in a controlled environment in Hem, The Netherlands.

Asexual reproduction of the new cultivar by in vitro propagation since July 2017 in Tenjo, Colombia 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.

SUMMARY OF THE INVENTION

The following characteristics of the new cultivar have been repeatedly observed and can be used to distinguish ‘Frostbite’ as a new and distinct cultivar of *Brunnera* plant:

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1. Light blue and white colored flowers;
2. Silvery-colored foliage with dark green venation and margins; and
3. Moderately vigorous, compact-mounded growth habit.

Plants of the new cultivar differ from plants of the female parent primarily in having silvery-colored foliage with dark green venation and margins unlike the green-colored foliage of the female parent. Plants of the new cultivar differ from plants of the male parent primarily in having smaller-sized foliage and in retaining a white coloration in fully opened flowers.

Of the many commercially available *Brunnera* cultivars, the most similar in comparison to the new cultivar is ‘Jack Frost’, U.S. Plant Pat. No. 13,859. However, in side-by-side comparison, plants of the new cultivar differ from plants of ‘Jack Frost’ in at least the following characteristics:

1. Plants of the new cultivar have smaller-sized foliage than plants of ‘Jack Frost’; and
2. Plants of the new cultivar are more compact, as measured by plant height and width, than plants of ‘Jack Frost’.

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 flower and foliage characteristics of the new cultivar. Colors in the photographs differ slightly from the color values cited in the detailed description, which accurately describes the colors of ‘Frostbite’. The plants were approximately seven months old and grown in 1.7-gallon containers for approximately three months in an outdoor shade nursery environment in West Chicago, Ill. Plants were given one pinch at approximately two weeks before transplant and another one week after transplant.

FIG. 1 illustrates a side view of the overall growth habit of ‘Frostbite’.

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

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 R.H.S. 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 August 2022 under natural light conditions in Naperville, Ill.

The following descriptions and measurements describe approximately seven-month-old plants produced from in vitro plantlets and grown under conditions comparable to those used in commercial practice. The plants were grown in 1.7-gallon containers for approximately three months in an outdoor shade nursery in West Chicago, Ill. Plants were given one pinch at approximately two weeks before transplant and another one week after transplant. Prior to transplant plantlets were grown in liners in a polycarbonate greenhouse in West Chicago, Ill. Greenhouse temperatures were maintained at approximately 70° F. to 75° F. (21.1° C. to 23.9° C.) during the day and approximately 60° F. to 65° F. (15.6° C. to 18.3° C.) during the night. Supplemental lighting was used. Measurements and numerical values represent averages of typical plants.

Botanical classification: *Brunnera macrophylla* 'Frostbite'.
Parentage:

Female parent.—'Henry's Eyes', not patented.

Male parent.—'Silver Heart', U.S. Plant Pat. No. 24,685.

Propagation:

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

Time to initiate roots in vitro.—Approximately 10 days.

Time to produce a rooted plantlet in summer.—Approximately 7 to 8 weeks.

Root description.—Rhizomatous with fine, fibrous secondary roots.

Rooting habit.—Freely 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.—Clump-forming herbaceous perennial, compact-mounded growth habit.

Growth rate.—Moderately vigorous.

Hardiness.—USDA Zone 4a (−30° F. to −25° F./−34.4° C. to −31.7° C.).

Size.—Height from soil level to top of foliage: Approximately 15.0 cm. Width: Approximately 38.0 cm.

Branching habit.—No branching, basal rosettes. Number of rosettes per plant: Approximately 5.

Foliage description:

General description.—Quantity of leaves per rosette: Approximately 6. Fragrance: None detected. Form: Simple. Arrangement: Basal.

Leaves.—Aspect: Blade is at an acute angle to nearly perpendicular to petiole. Shape: Deltoid. Margin: Entire, often with one or two undulations. Apex: Acute. Base: Cordate. Venation pattern: Pinnate. Length of mature leaf: Approximately 12.5 cm. Width of mature leaf: Approximately 11.0 cm. Texture of upper surface: Densely pubescent, setose. Texture of lower surface: Densely pubescent setose on venation. Color of upper surface of young foliage: Closest to 190D with margins and venation of 138A. Color of lower surface of young foliage: 146C with venation of 146D. Color of upper surface of mature foliage: Closest to 190D with margins and venation of 137A. Color of lower surface of mature foliage: 146B with venation of 146C.

Petiole.—Length: Approximately 12.0 cm. Diameter: Approximately 3.0 mm. Texture: Densely pubescent. Color: 146B with an overlay of N186A.

Flowering description:

Flowering habit.—'Frostbite' requires vernalization for spring flowering. Can flower sporadically during late summer under outdoor conditions.

Lastingness of individual flower on the plant.—Approximately 3 to 5 days.

Inflorescence description:

General description.—Type: Panicle cyme emerging from the base of the rosette. Fragrance: None detected. Length: Approximately 31.0 cm. Width: Approximately 8.0 cm. Quantity of inflorescences per plant: Approximately 0 to 1.

Peduncle.—Strength: Moderate. Aspect: Erect to approximately 45° angle from vertical. Length: Approximately 20.5 cm. Diameter at midpoint: Approximately 3.0 mm. Texture: Densely pubescent setose. Color: 146B with an overlay of N186A.

Flower description:

General description.—Type: Single, actinomorphic.

Bud.—Rate of opening: Generally takes 4 days for bud to progress from first color to fully open flower.

Bud just before opening.—Shape: Globose. Diameter: Approximately 2.0 mm. Texture: Sparsely pubescent. Color: 146C.

Corolla.—Shape: Rotate. Diameter: Approximately 4.0 mm. Depth: Approximately 3.0 mm.

Petals.—Quantity: 5. Shape: Obovate. Appearance: Dull. Margin: Entire. Apex: Obtuse. Base: Fused. Length: Approximately 2.0 mm. Width: Approximately 1.5 mm. Texture of upper and lower surfaces: Glabrous. Color of upper surface when first and fully open: 101C with small irregular patches of NN155D, primarily evident in sporadic fall flowering. Color of lower surface when first and fully open: NN155D.

Calyx.—Shape: Cup-like. Diameter: Approximately 2.5 mm. Depth: Approximately 2.0 mm.

Sepals.—Quantity per flower: 5. Shape: Ovate. Margin: Entire. Apex: Acute. Base: Fused. Length: Approximately 2.0 mm. Width: Approximately 1.0 mm. Texture of upper (inner) surface: Glabrous. Texture of lower (outer) surface: Sparsely pubescent. Color of upper (inner) surface: 146C. Color of lower (outer) surface: 146C.

Pedicel.—Strength: Moderate. Length: Approximately 4.0 mm. Diameter: Approximately 1.0 mm. Texture: Moderately pubescent. Color: 146B.

Reproductive organs.—Androecium: Quantity: 5 per flower, adnate to corolla. Anther shape: Winged. Anther length: Less than 1.0 mm. Anther color: N199C. Filament length: Approximately 1.0 mm. Filament color: NN155D. Pollen amount: Abundant. Pollen color: NN155D. Gynoecium: Pistil quantity: 1 per flower. Pistil length: Approximately 1.0 mm. Stigma shape: Rounded. Stigma color: 145D. Style length: Approximately 6.0 mm. Style color: 145D. Ovary shape: 4 lobed, deeply divided. Ovary color: N144C.

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

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

What is claimed is:

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

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FIG. 1

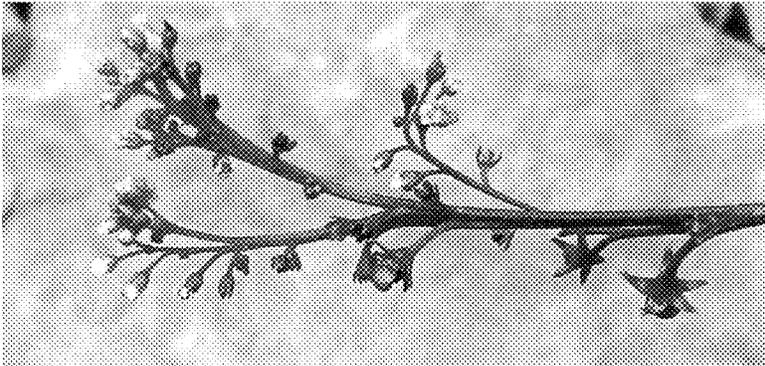


FIG. 2