

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF FLORIDA

MIAMI DIVISION

CASE NO. **07-20200**

SUPERIOR FLORALS, INC., a
Florida Corporation

Plaintiff,

vs.

SHAW ROSE NETS, LLC, a Florida
Limited Liability Company, and
KENNETH P. SHAW, individually,

Defendant.

CIV - UNGARO - BENAGES

**MAGISTRATE JUDGE
O'SULLIVAN**

2007 JAN 25 11:51 AM
U.S. DISTRICT COURT
MIAMI, FLORIDA

COMPLAINT FOR DECLARATORY JUDGMENT

Plaintiff, SUPERIOR FLORALS, INC., a Florida Corporation (hereinafter referred to as "Superior"), by and through its undersigned counsel, hereby sues Defendant, SHAW ROSE NETS, LLC, a Florida Limited Liability Company (sometimes hereinafter individually referred to as "SHAW NETS") and KENNETH P. SHAW, individually (sometimes hereinafter individually referred to as "SHAW"), and as grounds therefor, Superior would state as follows:

NATURE OF THE ACTION

1. This is an action seeking a declaratory judgment under 28 U.S.C. §2201 and §2202 declaring that the importation, sale, marketing and offers to sell certain flowers, and the use of certain methods to grow said flowers, do not constitute patent infringement because the Defendants patent is invalid and unenforceable.

LAW OFFICES OF

MICHAEL SCHIFFRIN & ASSOCIATES, P.A.

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JURISDICTION AND VENUE

2. This action arises under *The Patent Act of 1952*, 35 U.S.C. §1, *et seq.*, as amended, and *The Declaratory Judgment Act*, 28 U.S.C. §2201, *et seq.*

3. This Court has exclusive original jurisdiction over the subject matter of this action. Exclusive jurisdiction for any action arising under any Act of Congress relating to patents is conferred on U.S. district courts pursuant to 28 U.S.C. §1338(a).

4. This Court has personal jurisdiction over Defendants pursuant to F.S. §48.193.

5. Venue is also proper in this judicial district pursuant to 28 U.S.C. §1391(b) and §1391(c) because a substantial part of the events giving rise to the claims alleged herein occurred in this judicial district and the parties, as set forth hereinbelow, are all residents of this judicial district.

THE PARTIES

6. Superior, at all times material hereto, was and continues to be a Florida corporation duly registered with the Secretary of State of the State of Florida, having its principal place of business at 7250 Northwest 35th Terrace, in Miami, Miami-Dade County, Florida. Superior imports, sells and distributes fresh cut flowers, including roses.

7. Shaw Nets, upon information and belief, was at all times material hereto and continues to be a Florida Limited Liability Company duly organized and registered with the

Secretary of State of the State of Florida, having its principal place of business at 7810 Northwest 52nd Street, in Doral, Miami-Dade County, Florida.

8. Shaw, upon information and belief, was at all times material hereto and continues to be a resident of Miami-Dade County, Florida doing business at 7810 Northwest 52nd Street, in Doral, Miami-Dade County, Florida, and is *sui juris*. Upon information and belief, Shaw is an officer, director, manager and principal of Shaw Nets; exercises direct control over Shaw Nets; and has a direct financial interest in Shaw Net.

FACTUAL ALLEGATIONS

9. Upon information and belief, on or about January 16, 1996, Shaw caused to be filed with the United States Patent and Trademark Office (hereinafter referred to as the "USPTO") a U.S. patent application for a Method of Increasing the Size of a Rose Head During Growth (hereinafter referred to as the "U.S. Patent Application").

10. Upon information and belief, on or about June 27, 1997, Shaw caused to be filed with the Colombian Superintendency of Industry and Commerce (hereinafter referred to as the "Colombian Patent Office"), a Colombian patent application for a Method of Increasing the Size of a Rose Head During Growth (hereinafter referred to as the "Colombian Patent Application"), a true and correct copy of which Colombian Patent Application is attached hereto and made a part hereof as **Exhibit "A"**.

11. On or about June 16, 1998, the U.S. Patent Application issued as U.S. Patent Number 5,765,305 (hereinafter referred to as the "305 Patent"), a true and correct copy of which 305 Patent is attached hereto and made a part hereof as **Exhibit "B"**.

12. Upon information and belief, the Colombian Patent Application is, in all material aspects, a verbatim translation of, and claims the same subject matter as, the 305 Patent.

13. On June 9, 1999 and June 28, 1999, opposition proceedings were instituted in the Colombian Patent Office by entities who requested that Shaw be denied a Colombian patent because the method described in the Colombian Patent Application: (a) was not invented by Shaw; and (b) was publicly known, and in widespread public use, for at least ten (10) years prior to Shaw's application therefor.

14. In support of the Colombian opposition proceedings, the opposers submitted substantial evidence, including sworn affidavits and business records, that supported their contentions.

15. On November 30, 2004, the Colombian Patent Office granted the opposition to the Colombian Patent Application on the basis that the method described in the Colombian Patent Application: (a) was not invented by Shaw; and (b) was publicly known, and in widespread public use, for at least ten (10) years prior to Shaw's application thereof. This decision was upheld on appeal on May 31, 2005.

16. Upon information and belief, Shaw did not invent the method claimed in the 305 Patent.

17. Upon information and belief, prior to issuance of the 305 Patent, Shaw knew that he did not invent the method claimed in the 305 Patent and willfully withheld evidence of same from the USPTO.

18. Upon information and belief, the method claimed in the 305 Patent was publicly used to grow flowers that were imported, sold, and offered for sale in the United States more than one year before January 16, 1996, the date of the U.S. Patent Application.

19. Upon information and belief, prior to issuance of the 305 Patent, Shaw knew that the method claimed in the 305 Patent was publicly used to grow flowers that were imported, sold, and offered for sale in the United States more than one year before January 16, 1996, the date of the U.S. Patent Application and willfully withheld evidence of same from the USPTO.

20. On or about December 8, 2006, Defendants caused a letter to be delivered to Superior accusing Superior of infringing the 305 Patent through the importation, marketing, selling or offering for sale of infringing products. A true and correct copy of Defendants' letter is attached hereto and made a part hereof as **Exhibit "C"**.

21. Defendants' December 8, 2006 letter demanded that Superior immediately cease and desist from importing, marketing, selling and or distributing any and all infringing products. Defendants' December 8, 2006 letter states that Shaw zealously protects his intellectual property rights and intends to vigorously enforce his interests in the 305 Patent to the fullest extent of the law.

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22. Defendants' letter alleging patent infringement created for Superior, the importer, distributor and seller of purportedly infringing products, a reasonable apprehension that Defendants would file a lawsuit against Superior alleging patent infringement.

COUNT - I
[DECLARATORY JUDGMENT OF PATENT INVALIDITY
ANTICIPATION UNDER 35 U.S.C. §102(b)]

23. Superior reavers and realleges all of the allegations contained in Paragraphs 1 through 22 above as if hereinafter fully restated.

24. This is an action for a declaratory judgment of patent invalidity under 35 U.S.C. §102(b) against Defendants pursuant to 28 U.S.C. §2201 and §2202.

25. Defendants have alleged that Superiors importation, marketing, sale and/or distribution of roses grown utilizing the method described in the 305 Patent (hereinafter referred to as the "Accused Products") constitutes infringement of the 305 Patent.

26. Defendants' allegations of patent infringement create a reasonable apprehension by Superior that Defendants' will file a lawsuit against Superior asserting claims for patent infringement.

27. Defendants' December 8, 2006 letter creates an actual controversy regarding the rights of Superior to import, use, sell and offer to sell the Accused Products.

28. Defendants' allegations of patent infringement will adversely affect Superior because, until the Court makes a determination of Superiors rights, Superior will be in doubt as to its right to import, use, sell and offer to sell the Accused Products.

29. Pursuant to 35 U.S.C. §102(b), a person shall not be entitled to a patent if the invention was in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States.

30. Upon information and belief, the method claimed in the 305 Patent was publicly used to grow flowers that were imported, sold, and offered for sale in the United States more than one year before January 16, 1996, the date of the U.S. Patent Application.

31. Therefore, the 305 Patent should be declared invalid in accordance with 35 U.S.C. §102(b).

COUNT - II
[DECLARATORY JUDGMENT OF PATENT INVALIDITY
LACK OF INVENTORSHIP UNDER 35 U.S.C. §102(f)]

32. Superior reavers and realleges all of the allegations contained in Paragraphs 1 through 22 above as if hereinafter fully restated.

33. This is an action for a declaratory judgment of patent invalidity under 35 U.S.C. 102(f) against Defendants pursuant to 28 U.S.C. §2201 and §2202.

34. Defendants have alleged that Superiors importation, marketing, sale and/or distribution of roses grown utilizing the method described in the 305 Patent (hereinafter referred to as the "Accused Products") constitutes infringement of the 305 Patent.

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35. Defendants allegations of patent infringement create a reasonable apprehension by Superior that Defendants will file a lawsuit against Superior asserting claims for patent infringement.

36. Defendants' December 8, 2006 letter creates an actual controversy regarding the rights of Superior to import, use, sell and offer to sell the Accused Products.

37. Defendants' allegations of patent infringement will adversely affect Superior because, until the Court makes a determination of Superiors rights, Superior will be in doubt as to its right to import, use, sell and offer to sell the Accused Products.

38. Pursuant to 35 U.S.C. §102(f), a person shall not be entitled to a patent if he did not himself invent the subject matter sought to be patented.

39. Upon information and belief, Shaw did not invent the method claimed in the 305 Patent.

40. Therefore, the 305 Patent should be declared invalid in accordance with 35 U.S.C. §102(f).

COUNT - III
[DECLARATORY JUDGMENT THAT PATENT IS
UNENFORCEABLE INEQUITABLE CONDUCT]

41. Superior reavers and realleges all of the allegations contained in Paragraphs 1 through 22 above as if hereinafter fully restated.

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42. This is an action seeking declaratory judgment pursuant to 28 U.S.C. §2201 and §2202 that the 305 Patent is unenforceable under the doctrine of inequitable conduct. Precision Instrument Mfg. Co. vs. Automotive Maintenance Mach. Co., 324 U.S. 806 (1945).

43. Defendants have alleged that Superiors importation, marketing, sale and/or distribution of roses grown utilizing the method described in the 305 Patent (hereinafter referred to as the "Accused Products") constitutes infringement of the 305 Patent.

44. Defendants' allegations of patent infringement create a reasonable apprehension by Superior that Defendants will file a lawsuit against Superior asserting claims for patent infringement.

45. Defendants' December 8, 2006 letter creates an actual controversy regarding the rights of Superior to import, use, sell and offer to sell the Accused Products.

46. Defendants' allegations of patent infringement will adversely affect Superior because, until the Court makes a determination of Superiors rights, Superior will be in doubt as to its right to import, use, sell and offer to sell the Accused Products.

47. Pursuant to 37 C.F.R. 1.56, each entity associated with the filing or prosecution of a patent application has a duty to deal with the USPTO with candor, good faith, and honesty.

48. The duty of candor under 37 C.F.R. 1.56 imposes on each inventor named in the application, each attorney who prepares or prosecutes the application, and each individual associated with the assignee of the application, the duty to disclose to the USPTO all information

known to the inventor, attorney or individual to be material to patentability of the invention described in the application.

49. Violation of the duty of candor through bad faith or intentional misconduct during or after prosecution of the application subjects any patent issued therefrom to become unenforceable.

50. Upon information and belief, prior to issuance of the 305 Patent, Shaw knew, and had information (hereinafter referred to as the "Prior Art Information") evidencing, that (a) he did not invent the method claimed in the 305 Patent; and (b) the method claimed in the 305 Patent was publicly used to grow flowers that were imported, sold, and offered for sale in the United States more than one year before January 16, 1996, the date of the U.S. Patent Application.

51. The Prior Art Information was material to patentability with respect to the U.S. Patent Application because there is a substantial likelihood that a reasonable examiner would have considered the information important in deciding whether to allow the application to issue as a patent.

52. Defendants had knowledge of the Prior Art Information, and of its materiality to patentability, prior to issuance of the 305 Patent.

53. Defendants failed to disclose the Prior Art Information to the USPTO in violation of 37 C.F.R. 1.56.

54. Defendants' failure to disclose the Prior Art Advertisement to the USPTO was willful and with the intent to mislead the USPTO.

55. Therefore, the 305 Patent should be declared unenforceable for Defendants' inequitable conduct.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff, SUPERIOR FLORALS, INC., a Florida Corporation, prays for entry of a declaratory judgment against Defendants, SHAW ROSE NETS, LLC, a Florida Limited Liability Company and KENNETH P. SHAW, individually, as follows:

(A) That the Court enter judgment declaring that the importation, use, sales of, and offers to sell flowers grown using the method described in U.S. Patent No. 5.765,305 does not constitute patent infringement

(B) That the Court enter judgment declaring that U.S. Patent No. 5.765,305 is invalid pursuant to 35 U.S.C. §102(b) and/or 35 U.S.C. §102(f).

(C) That the Court enter judgment declaring that U.S. Patent No. 5.765,305 is unenforceable under the doctrine of inequitable conduct.

(D) That Defendants be ordered to pay to Superior an award covering Superior's attorneys fees, costs, and other expenses incurred as a result of this controversy.

(E) That this Court grant such further and other relief as this Court deems just and proper.

DEMAND FOR TRIAL BY JURY

Superior hereby further demands a trial by jury of all issues so triable as a matter of law.

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DATED this ⁷24 day of January, 2007.

MICHAEL SCHIFFRIN & ASSOCIATES, P.A.
Attorneys for Superior
Suite 1109 - Two Datan Center
9130 South Dadeland Boulevard
Miami, Florida 33131
Telephone: (305) 539-0000
Telecopier: (305) 539-0013

By: _____

MICHAEL SCHIFFRIN, ESQ.
Fla. Bar No. 178240

EXHIBIT "A"

**[to Complaint for
Declaratory Judgment]**

LAW OFFICES OF

MICHAEL SCHIFFRIN & ASSOCIATES, P. A.

TWO DATRAN CENTER • 9130 SOUTH DADELAND BOULEVARD, SUITE 1109 • MIAMI, FLORIDA 33156 • (305) 539-0000 • FAX (305) 539-0013

Superindustria y Comercio
Indicacion: 97836065 000000
Fecha (AMD): 1997-06-27 15:00:55
Folios: 19
Patente : 002 PATENTES
I REGISTRO 001 SOLICITUD
Dependencia: 2020 DIVISION DE NUEVAS CREACIONES

REPÚBLICA DE COLOMBIA

SOLICITUD DE PATENTE DE INVENCION



SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO

DIVISION DE NUEVAS CREACIONES

V. B. 7/24/97

DATOS DEL SOLICITANTE

(71) Nombres y Apellidos o Razón Social KENNETH P. SHAW y PEDRO SALCEDO

No. de Identificación _____

Representante Legal (Persona Jurídica) _____

País de Domicilio ESTADOS UNIDOS DE AMÉRICA y COLOMBIA

Departamento o Estado FLORIDA y CUNDINAMARCA

Ciudad MIAMI y SANTAFÉ DE BOGOTÁ, D.C.

Dirección _____

(74) DATOS DEL APODERADO

Nombre JIMENA ESCOBAR URIBE

Dirección CRA. 11A No. 94-76, OFICINA 305

DATOS DEL INVENTOR

(72) Nombre del Inventor (es) 1. KENNETH P. SHAW; 2. PEDRO SALCEDO

Dirección y Domicilio 1. MIAMI, FLORIDA, ESTADOS UNIDOS DE AMÉRICA; 2. SANTAFÉ DE BOGOTÁ, COLOMBIA

Identificación _____

DATOS DE LA PATENTE DE INVENCION

(54) Título de la Invención MÉTODOS PARA INCREMENTAR EL TAMAÑO DEL BOTÓN DE LAS ROSAS ANTES DE SU CORTE DE LA PLANTA.

PRIORIDAD REIVINDICADA

SÍ

NO

(33) País _____

(32) Fecha _____

(31) No. Solicitud _____

SUPERINDUSTRIA Y COMERCIO

Radicacion : 97036065 / 000000 Folios: 19
 Fecha (AMD): 1997-06-27 15:00:55
 Tramite : 002 PATENTES 1 REGISTRO 001 SOLICITUD
 Dependencia: 2020 DIVISION DE NUEVAS CREACIONES

6873

NIT : 800176089-2

RECIBO OFICIAL DE CAJA : 31,536
 FECHA : JUNIO 20 DE 1997

***** CONSIGNACION *****

DEPOSITANTE	TIPO PAGO	BANCO	CUENTA	No. PAGO	FECHA PGO	Vr. PAGO
ESCOBAR URIBE ASOCIADOS	CONSIGNACION	BANCO POPULAR	050-00024-9	1586155	20/06/1997	1,660,000.00

***** CONCEPTO *****

CANT.	RENTISTICO	CONCEPTO	TOTAL CONCEPTO
1	50005-05	SERVICIOS ADMINISTRATIVOS	
		99 OTROS SERVICIOS ADMINISTRATIVOS	415,000.00
		TOTAL :	\$ 415,000.00

SON: CUATROCIENTOS QUINCE MIL PESOS



RESPONSABLE : _____

RECIBO DE CAJA APLICADO AL EXPEDIENTE No. _____

ANTECEDENTES DEL INVENTO

El presente invento se refiere a un método para aumentar el tamaño
5 de un botón de rosa antes del corte del botón del tallo y en particular a
un método de al menos prevenir parcialmente al botón de rosa de
abrirse, por medio de la colocación de un material elástico
constriniéndolo sobre y alrededor del botón de rosa por un tiempo
predeterminado antes del corte del botón de rosa del tallo, con el fin de
10 efectuar tal crecimiento incrementado sin que se sufra pérdida de
duración de la rosa en el almacenamiento después del corte.

Las rosas son cultivadas por cultivadores comerciales de rosas y
cortadas de la planta con el propósito de vender las rosas cortadas a
15 los consumidores a través de canales comerciales como son los
distribuidores y las floristerías al por menor. Las rosas con botones
más grandes tienen más valor comercial que aquellas con botones
más pequeños ; por lo tanto ha sido deseado incrementar el tamaño
del botón de rosa antes de venderlo al consumidor. Típicamente, un
20 cultivador de rosas cortará el tallo de rosa de la planta y despachará la
rosa cortada en un cierto tiempo de su etapa de crecimiento para su
mercadeo. El tiempo óptimo de corte del tallo de rosa es cuando el
botón de rosa ha alcanzado el máximo tamaño posible sin apertura
substancial de los pétalos.

Si un tallo de rosa es cortado antes del tiempo óptimo, entonces el tamaño del botón de rosa será más pequeño y la rosa será menos valiosa. En adición, los pétalos del botón de rosa también serán apretados y la rosa no abrirá, para de esta forma hacer la rosa no mercadeable. Sin embargo, la expectativa de vida de la rosa después del corte es generalmente mayor cuando los pétalos son más apretados, así que una rosa cortada antes del tiempo óptimo durará más que una cortada en su etapa de crecimiento. De otra parte, si el tallo de la rosa es cortado mucho después del tiempo óptimo, entonces los pétalos estarán ya abiertos (algunos pueden aún desprenderse) y la flor tendrá una expectativa de vida más corta y de esta forma será menos valiosa.

Por lo tanto hay una gran necesidad sentida en la técnica de aumentar el botón de rosa antes del corte del tallo sin que el botón de rosa se abra y pierda pétalos prematuramente.

RESUMEN DEL INVENTO

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El presente invento es un método para incrementar el tamaño del botón de rosa antes del corte del botón de rosa de su planta, que comprende al menos parcialmente la prevención que el botón de rosa se abra antes de cortar el botón de rosa de la planta. Esto se lleva a cabo por medio de la constricción de la apertura del botón de rosa con un material elástico envuelto alrededor del botón de rosa. El material

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elástico es preferiblemente una manga en malla que tiene al menos un extremo abierto apropiado para colocarlo sobre el botón de rosa, estando la manga de malla compuesta de un material de malla elástica tal como nilón o caucho capaz de estirarse de forma de acomodarse ajustadamente sobre el botón de rosa. En particular, el botón de rosa es al menos parcialmente constreñido por un período de tiempo predeterminado antes de cortarlo de la planta.

Por medio del constreñimiento de la apertura del botón de rosa, la cantidad de luz (y de esta forma el calor) incidente en los pétalos interiores del botón de rosa es reducida y la rata de crecimiento del botón de rosa es consecuentemente incrementada, lo cual da como resultado un botón de rosa mayor hasta ahora inobtenible sin permitir que los pétalos exteriores del botón de rosa comiencen a abrirse.

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BREVE DESCRIPCION DE LOS DIBUJOS

La Figura 1 es una ilustración de una manga de malla de nilón usada en la ejecución preferida con el fin de efectuar el crecimiento aumentado del botón de rosa ;

La Figura 2 es una ilustración de un botón de rosa cubierto con la manga de malla de la Figura 1, de acuerdo con la ejecución preferida del presente invento ; y

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Las Figuras 3A a 3D ilustran las etapas finales de crecimiento del botón de rosa.

5 DESCRIPCION DETALLADA DE LA EJECUCION PREFERIDA

Una manga de malla de nilón 2 como la mostrada en la Figura 1 es utilizada de acuerdo con la ejecución preferida del presente invento. La manga de malla 2 está formada de manera que sea capaz de
10 estirarse y conformarse con el botón de rosa cuando el botón de rosa esté en sus etapas finales de crecimiento, lo cual es anterior al corte normal del tallo. Preferiblemente, la malla 2 en su etapa de reposo, contraída será más pequeña que el botón de rosa, pero se expandirá fácilmente de forma de acomodarse ajustadamente sobre el botón de
15 rosa cuando sea deseado. Por ejemplo, la malla de nilón 2 usada en la ejecución preferida puede estirarse una distancia de seis veces su ancho contraído. Debido a la resiliencia de la malla de nilón, la manga se mantendrá por si sola alrededor del botón de rosa hasta que se desee que sea removida.

20 Para efectuar el aumento del tamaño del botón de rosa del presente invento, la manga de malla 2 es colocada sobre el botón de rosa 3 como se muestra en la Figura 2 de manera que se acomode ajustadamente a la superficie de él. La colocación de la manga de
25 malla deberá ser pocos días antes del tiempo de corte esperado del botón de rosa como será explicado más adelante.

La colocación de la manga de malla 2 de nilón sobre el botón de rosa 3 antes de cortar el tallo de la planta cumple dos funciones interrelacionadas las cuales el solicitante ha determinado que son críticas para el presente invento. Primero, la manga de malla 2 actúa para constreñir físicamente la apertura del botón de rosa 3, para de esta forma ayudar a mantener intactos los pétalos exteriores o protectores 4 de la rosa. Los pétalos protectores 4 normalmente protegerán el resto del botón de rosa (por ejemplo, los pétalos interiores 5) durante el transporte y manipuleo y frecuentemente se desprenderán como resultado del manejo de la planta cortada. Sin embargo, por medio de la colocación de la manga de malla alrededor del botón de rosa antes del corte, se ha determinado que el botón de rosa 3 es ligeramente constreñido de abrirse al tiempo normal y los pétalos protectores 4 conservan una unión natural más fuerte con el botón de rosa 3 como resultado de ella. Ya que los pétalos protectores 4 conservan una unión natural más fuerte, éstos no se desprenden tan fácilmente durante el manipuleo como lo harían de otra forma. Más aún, el apretamiento del botón de rosa 3 es incrementado por el efecto del ligero constreñimiento de la manga de malla 2, que de esta forma actúa para contrarrestar la duración de almacenamiento de un botón de rosa más grande disminuida en otro sentido. El botón también tiene más pétalos debido a la presencia de los pétalos protectores 4. Sin la malla, dos a tres pétalos exteriores 4 se perderán y la apariencia resultante será indeseable.

Segundo, la presencia prolongada de los pétalos protectores 4 debido a la acción de constreñimiento de la manga de malla 2 da como resultado la reducción en la cantidad de luz ambiental que alcanza los pétalos interiores 5 del botón de rosa 3 durante la etapa final de crecimiento. Ya que los pétalos protectores 4 normalmente bloquean la luz para que no alcance los pétalos interiores 5, hay menos luz y por lo tanto menos calor incidente en el interior del botón de rosa. Como resultado se reduce la temperatura del botón de rosa, lo cual a su vez actúa reduciendo la rata de respiración. La rata de respiración reducida disminuye la cantidad de energía consumida, lo cual a su vez disminuye la cantidad de carbohidratos gastados por la flor para la respiración. El resultado de este proceso es que el botón de rosa llega a ser más fuerte y más saludable y crece a un tamaño incrementado, sin que los pétalos protectores se abran debido a que el contenido de carbohidrato dentro de la flor es retenido en el botón debido a la respiración menor. El resultado es una más alta rata de crecimiento del botón de rosa en el mismo tiempo de crecimiento que una planta sin el uso de la malla.

El tiempo de colocación de la manga de malla de nilón sobre el botón de rosa es crítico en el presente invento. Si la manga de malla es colocada sobre el botón de rosa demasiado pronto antes de la etapa de corte, la rosa tenderá a acumular mucha agua en el botón y puede desarrollar pudrimiento por agua o botritis. Esto es el resultado de que los pétalos se mantengan demasiado cercanos unos con otros y no permitan suficiente evaporación en la superficie del pétalo mientras

quedan atrapados en la humedad existente. En adición, el uso prematuro de la manga de malla previene la intercepción de la luz para la mayoría del botón de rosa. Ya que durante las etapas iniciales de crecimiento, los botones necesitan luz para construir los pigmentos de color, entonces el bloqueo prematuro de la luz puede afectar negativamente este proceso. De otra parte, si la manga de malla es colocada sobre el botón demasiado cerca a la etapa de corte, no hay incremento en el tamaño del botón de rosa y las ventajas presentadas por el uso del invento presente no son logradas debido a que los pétalos protectores se abren en el curso normal de crecimiento.

El tiempo óptimo para la colocación de la manga sobre el botón de rosa ha sido determinado para que varíe de acuerdo con la variedad particular de rosa que se esté cultivando. La Tabla A de abajo, enlista el número de días óptimo determinado experimentalmente, antes del tiempo normal de corte del tallo de la rosa, cuando la manga debe ser colocada sobre el botón de rosa.

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TABLA A

VARIEDAD	No. de Días Antes del Tiempo Normal de Corte
Vivaldi, Osiana, Marlyse, Livia, Jacaranda	2
Sonia, Aalsmeer Gold, Slyline, Confetti, Pailene, Lomada, Lorena, Lovely Girl, Ariamna, Harmony, Blue Bird, Paraíba, Diplomat, Lasser, Anna; Prive	3 - 5
Carolla, Madame Delbard, Dallas, First Red	5 - 7

Las Figuras 3A a la 3D ilustran las varias etapas de crecimiento
10 progresivo de un botón de rosa normal. El tiempo entre las etapas
varía, pero es aproximadamente varios días. En el caso normal, la
rosa debe ser cortada de la planta en la etapa de la Figura 3C con el
fin de lograr el tamaño óptimo del botón de rosa. Sin el corte del botón
de rosa es demorado hasta el la etapa mostrada en la Figura 3D, la
15 rosa está sobre desarrollada y la duración en almacenamiento es
severamente acortada debido a la apertura de los pétalos. Cuando la

manga de malla del presente invento es colocada sobre el botón de rosa como se describió aquí, entonces el botón crecerá aproximadamente al tamaño mostrado en la Figura 3D mientras mantiene el apretamiento de los pétalos mostrado en la Figura 3C. De esta forma, por medio de la implementación del presente invento, se logra el mayor tamaño de botón mientras se mantienen los pétalos en relativo apretamiento y se conserva la duración de almacenamiento intacta después del corte.

Aunque el presente invento ha sido descrito aquí con referencia al uso de una mala de nilón, es de anotarse que otros materiales los cuales dan las propiedades deseadas de elasticidad y resiliencia pueden también ser usados dentro del espíritu y alcance de las reivindicaciones presentadas más adelante. Por ejemplo, un material elástico o caucho puede ser usado para constreñir los pétalos exteriores de abrirse. En adición, el presente invento puede ser aplicado a otras flores las cuales pueden tener un ciclo de crecimiento y corte similar con el fin de obtener flores más grandes con una duración de almacenamiento mayor que las que son logrables de otra manera. Además, el número de días para conservar la manga sobre el botón antes del corte puede ser variado como se requiera por la variedad de flor particular, las condiciones del clima y los requerimientos del cultivador mientras esté en operación dentro del alcance del presente invento como se reivindica aquí.

REIVINDICACIONES :

- Desisto
- 5 1. Un método para incrementar el tamaño de un botón de rosa antes del corte del botón de rosa de su planta, que comprende al menos parcialmente el prevenir que el botón de rosa se abra antes del corte del botón de rosa de la planta.
- 10 2. El método de la Reivindicación 1, en donde el botón de rosa es al menos parcialmente prevenido de abrirse por medio del constreñimiento del botón de rosa con un material elástico envuelto alrededor del botón de rosa.
- 15 3. El método de la Reivindicación 2, en donde el material elástico es una manga de malla que tiene al menos un extremo abierto apropiado para colocarla sobre el botón de rosa, la manga de malla está compuesta de un material de malla elástico capaz de estirarse de forma de acomodarse ajustadamente sobre el botón
- 20 de rosa.
4. El método de la Reivindicación 3, en donde dicho material de malla elástico está compuesto de nilón.
- 25 5. El método de la Reivindicación 3, en donde dicho material de malla elástico está compuesto de caucho.

6. El método de la Reivindicación 1, en donde el botón de rosa está al menos parcialmente constreñido por un período de tiempo predeterminado antes de cortarlo de la planta.

5 *Queda como reivind. 1.*

7. Un método para incrementar el tamaño de un botón de rosa antes del corte del botón de rosa de su planta, que comprende la envoltura de un material substancialmente elástico alrededor del botón de rosa, el material elástico tiene contacto substancialmente con dicho botón de rosa de forma de constreñir la apertura de dicho botón de rosa.

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Deristo

8. El método de la Reivindicación 7, en donde dicho material de malla elástico está compuesto de nilón.

15 *Deristo*

9. El método de la Reivindicación 7, en donde dicho material de malla elástico está compuesto de caucho.

Deristo

10. El método de la Reivindicación 7, en donde el botón de rosa está al menos parcialmente constreñido por un período de tiempo predeterminado antes de cortarlo de la planta.

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11. Un método para incrementar el tamaño de un botón de rosa antes del corte del botón de rosa de su planta, que comprende la reducción de la cantidad de luz incidente en los pétalos interiores del botón de rosa antes de cortarlo de la planta.

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12. El método de la Reivindicación 11, en donde el botón de rosa está al menos parcialmente constreñido por un período de tiempo predeterminado antes de cortarlo de la planta.

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13. Un método para incrementar el tamaño de un botón de rosa antes del corte del botón de rosa de su planta, que comprende la reducción de la cantidad de calor incidente en los pétalos interiores del botón de rosa antes de cortarlo de la planta.

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14. El método de la Reivindicación 11, en donde el paso de reducción del calor es llevado a cabo por un período de tiempo predeterminado antes del corte del botón de rosa de la planta.

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ABSTRACTO

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El presente invento es un método para incrementar el tamaño de un botón de rosa antes de cortar el botón de rosa de su planta, que comprende al menos parcialmente la prevención de la apertura del botón de rosa antes de cortarlo de la planta. Esto es llevado a cabo por el constreñimiento del botón de rosa por medio de un material elástico envuelto alrededor del botón de rosa. El material elástico es preferiblemente una manga de malla que tiene al menos un extremo abierto y apropiado para colocarla sobre el botón de rosa, la manga de malla está compuesta por un material de malla elástico como nilón o caucho capaz de estirarse de forma de acomodarse ajustadamente sobre el botón de rosa. En particular, el botón de rosa está al menos constreñido parcialmente por un período de tiempo predeterminado antes de cortarlo de la planta. Por medio de constreñir al menos parcialmente el botón de rosa de abrirse, la cantidad de luz y por lo tanto la cantidad de calor incidente en los pétalos interiores del botón de rosa es reducida y la rata de crecimiento es consecuentemente incrementada, lo cual da como resultado un botón de rosa más grande hasta ahora no obtenible sin permitir que los pétalos exteriores del botón de rosa comenzaran a abrirse.

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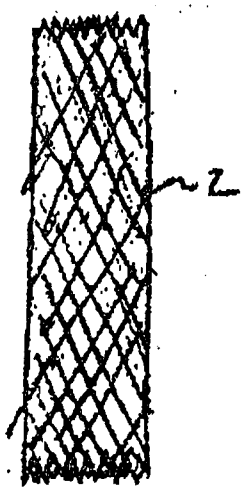


FIG. 1

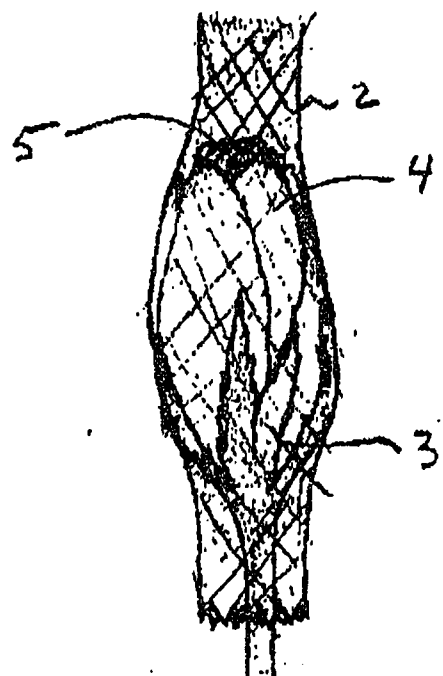


FIG. 2

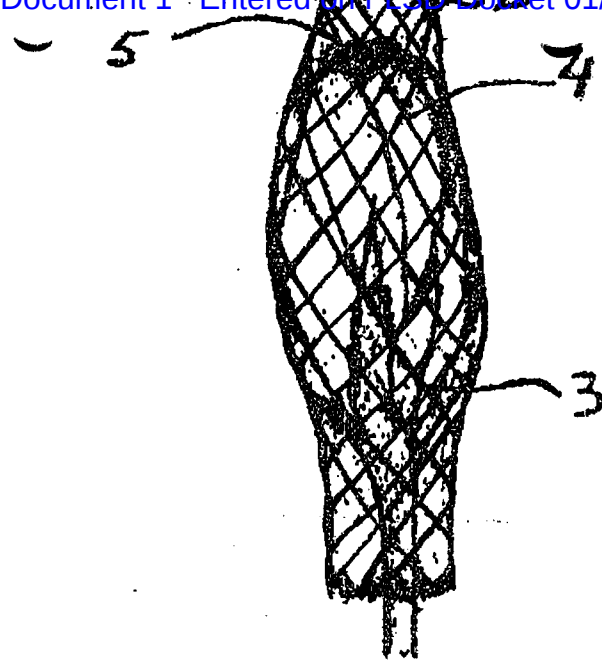


FIG. 2

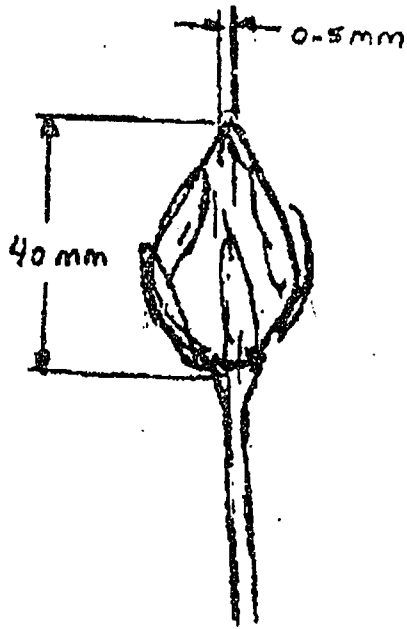


FIG. 3A

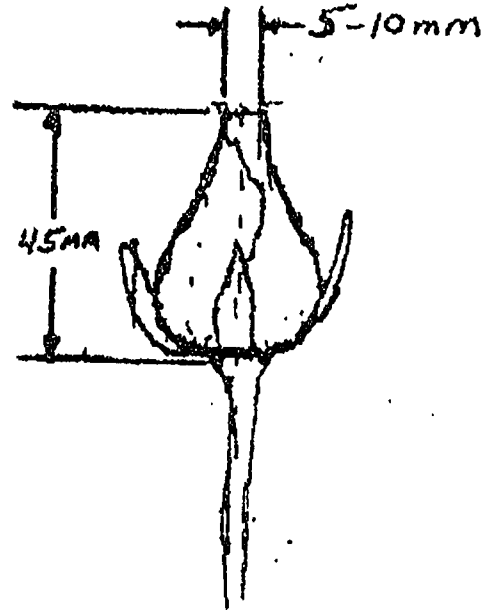


FIG. 3B

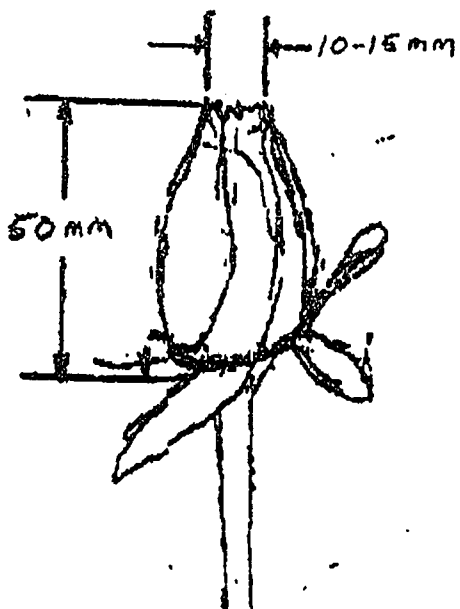


FIG. 3C

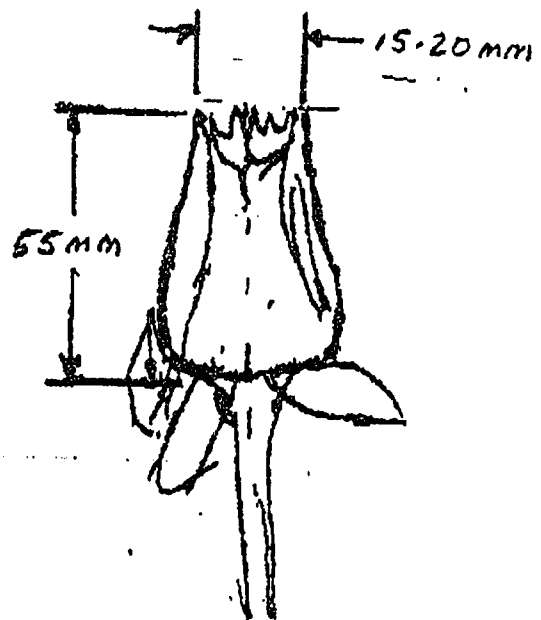


FIG. 3D

EXHIBIT "B"

**[to Complaint for
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US005765305A

United States Patent [19]

[11] **Patent Number:** 5,765,305

Shaw

[45] **Date of Patent:** Jun. 16, 1998

[54] **METHOD OF INCREASING THE SIZE OF A ROSE HEAD DURING GROWTH**

[76] **Inventor:** Kenneth P. Shaw, 570 N. Island Dr., Golden Beach, Fla. 33179

[21] **Appl. No.:** 585,952

[22] **Filed:** Jan. 16, 1996

[51] **Int. Cl.⁶** A01G 9/00; A01G 9/12; A01G 5/06; A01H 3/00

[52] **U.S. Cl.** 47/58; 47/41.1; 800/DIG. 36

[58] **Field of Search** 47/58, 41.01; 800/DIG. 36

[56] **References Cited**

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5,135,771	8/1992	Chackal	427/4

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Biran et al. Effects of varying light intensities and temperature treatments applied to whole plants, or locally to leaves of flower buds, on growth and pigmentation of 'Baccara' roses. *Physiologia Plantarum*, vol 31, pp. 175-179, 1974.

Primary Examiner—David T. Fox

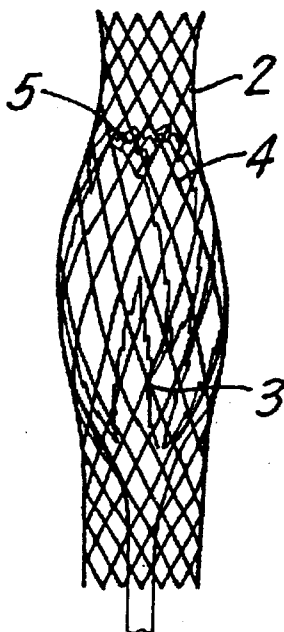
Assistant Examiner—Melissa L. Kimball

Attorney, Agent, or Firm—Anthony R. Barkume, P.C.

[57] **ABSTRACT**

The present invention is a method for increasing the size of a rose head prior to cutting the rose head from its plant comprising at least partially preventing the rose head from opening prior to cutting the rose head from the plant. This is accomplished by constricting the rose head with an elastic material wrapped around the rose head. The elastic material is preferably a netting sleeve having at least one open end suitable for placing over the rose head, the netting sleeve being comprised of an elastic netting material such as nylon or rubber capable of stretching so as to fit snugly over the rose head. In particular, the rose head is at least partially constricted for a predetermined time period prior to cutting from the plant. By partially constricting the rose head from opening, the amount of light and thus heat incident on inner petals of the rose head is reduced and the growth rate is accordingly increased, which results is a larger rose head heretofore unobtainable without allowing the outer petals of the rose head to commence opening.

8 Claims, 2 Drawing Sheets



U.S. Patent

Jun. 16, 1998

Sheet 1 of 2

5,765,305

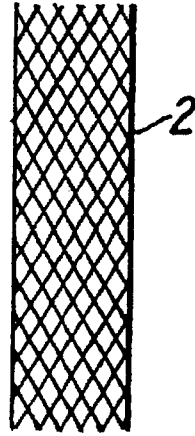


FIG. 1

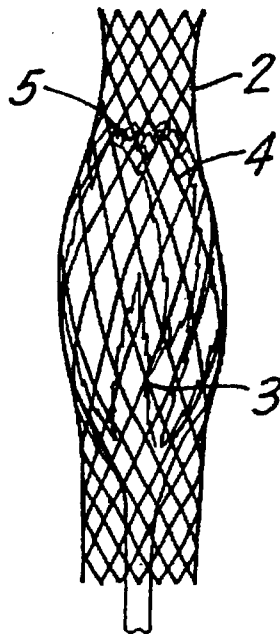


FIG. 2

U.S. Patent

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Sheet 2 of 2

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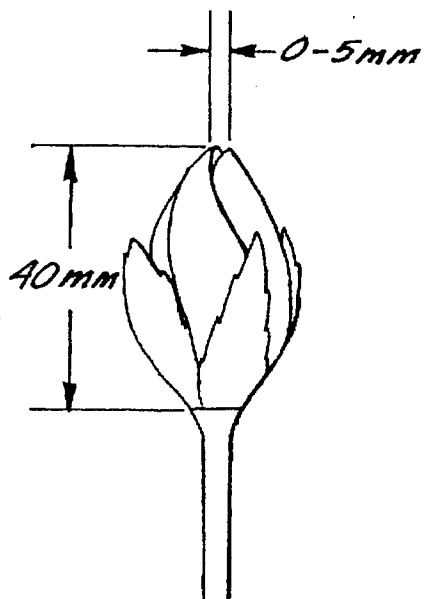


FIG.3A

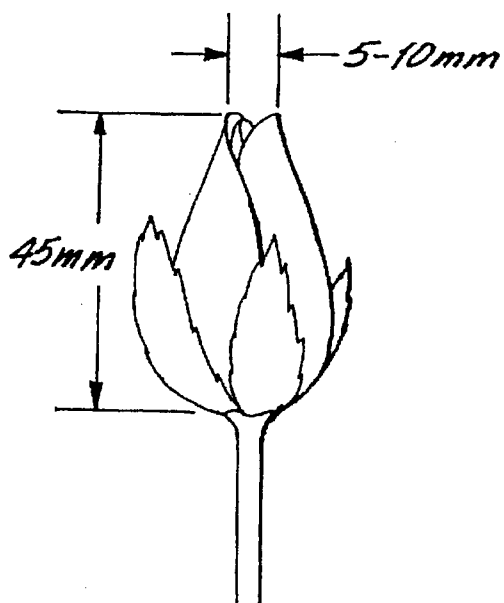


FIG.3B

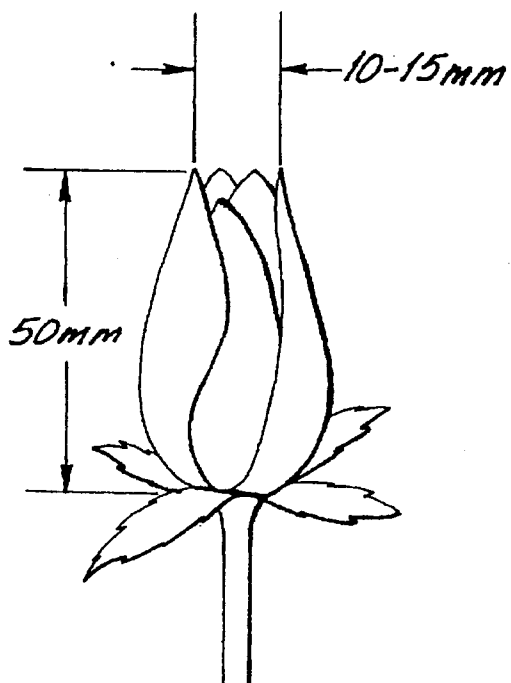


FIG.3C

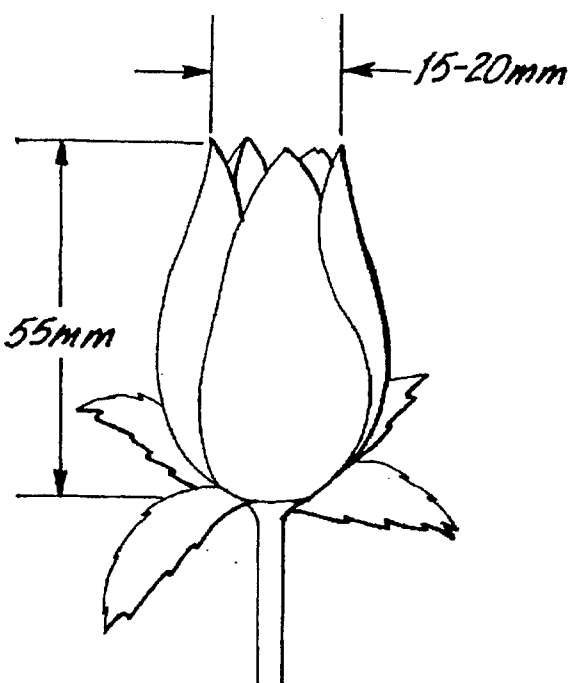


FIG.3D

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METHOD OF INCREASING THE SIZE OF A ROSE HEAD DURING GROWTH

BACKGROUND OF THE INVENTION

The present invention relates to a method for increasing the size of a rose head prior to cutting the rose head from the stem, and in particular to a method of at least partially preventing the rose head from opening by placing an elastic constraining material on and around the rose head for a predetermined time prior to cutting the rose head from the stem in order to effect such increased head growth without suffering loss of shelf life of the rose after cutting.

Roses are grown by commercial rose growers and cut from the plant for the purpose of vending the cut roses to consumers via commercial channels such as distributors and retail flower shops. Roses with larger heads have more commercial value than those with smaller heads; it has thus been desired to increase the size of the rose head prior to vending to the consumer. Typically, a rose grower will cut the rose stem from the plant and ship the cut rose at a certain time in its growth stage for marketing. The optimum time to cut the rose stem is when the rose head has reached as large a size as possible without substantial opening of the petals.

If a rose stem is cut prior to the optimum time, then the size of the rose head will be small and the rose will be less valuable. In addition, the petals of the rose head will be too tight and the rose will not open, thus making the rose unmarketable. However, the life expectancy of the rose after cutting is generally longer when the petals are tighter, so a rose cut prior to the optimum time will last longer than one cut later in its growth stage. On the other hand, if the rose stem is cut too long after the optimum time, then the petals will be already open (some may even fall off) and the flower will have a shorter life expectancy and thus be less valuable.

There is therefore a long felt need in the art to increase the size of the rose head prior to cutting the stem without the rose head opening and losing petals prematurely.

SUMMARY OF THE INVENTION

The present invention is a method for increasing the size of a rose head prior to cutting the rose head from its plant comprising at least partially preventing the rose head from opening prior to cutting the rose head from the plant. This is accomplished by constricting the opening of the rose head with an elastic material wrapped around the rose head. The elastic material is preferably a netting sleeve having at least one open end suitable for placing over the rose head, the netting sleeve being comprised of an elastic netting material such as nylon or rubber capable of stretching so as to fit snugly over the rose head. In particular, the rose head is at least partially constricted for a predetermined time period prior to cutting from the plant.

By constricting the rose head from opening, the amount of light (and thus heat) incident on the inner petals of the rose head is reduced and the growth rate of the rose head is accordingly increased, which results in a larger rose head heretofore unobtainable without allowing the outer petals of the rose head to commence opening.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is an illustration of the nylon netting sleeve used in the preferred embodiment in order to effect increased rose head growth;

FIG. 2 is an illustration of a rose head covered with the netting sleeve of FIG. 1 in accordance with the preferred embodiment of the present invention; and

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FIGS. 3A through 3D depict the final growth stages of a rose head.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

A sleeve of nylon netting 2 as shown in FIG. 1 is utilized in accordance with the preferred embodiment of the present invention. The netting sleeve 2 is formed so as to be able to stretch and conform to the rose head when the rose head is in its final growth stages, which is prior to normal cutting of the stem. Preferably, the netting 2 in its quiescent, unstretched stage will be smaller than the rose head but will easily expand so as to fit snugly over the rose head when desired. For example, the nylon netting 2 used in the preferred embodiment can stretch to a distance of six times its unstretched width. Due to the resiliency of the nylon netting, the sleeve will hold itself around the rose head until it is desired to be removed.

To effect the increased rose head size of the present invention, the netting sleeve 2 is placed over the rose head 3 as shown in FIG. 2 so as to conform snugly to the surface thereof. The placement of the netting sleeve should occur a few days prior to the expected cutting time of the rose head as will be explained further below.

The placement of the nylon netting sleeve 2 over the rose head 3 prior to cutting the stem from the plant performs two interrelated functions which the applicant has determined are critical to the present invention. First, the netting sleeve 2 acts to physically constrict the opening of the rose head 3, thus helping in keeping intact the outer or guard petals 4 of the rose. The guard petals 4 would normally protect the remainder of the rose head (i.e., the inner petals 5) during shipping and handling, and often would fall off as a result of handling of the cut plant. However, by placing the netting sleeve around the rose head prior to cutting, it has been determined that the rose head 3 is slightly constricted from opening at the normal time, and the guard petals 4 retain a stronger natural bond with the rose head 3 as a result thereof. Since the guard petals 4 retain a stronger bond, they do not fall off as easily during handling as they would otherwise. Moreover, the overall tightness of the rose head 3 is increased by the slight constriction effect of the netting sleeve 2, thus acting to counteract the otherwise decreased shelf life of a larger rose head. The head also has more petals due to the presence of guard petals 4. Without the net, two to three outer petals 4 would be lost and the resulting appearance would be undesirable.

Second, the prolonged presence of the guard petals 4 due to the constricting action of the netting sleeve 2 results in the reduction in the amount of ambient light reaching the inner petals 5 of the rose head 3 during the final growth stage. Since the guard petals 4 would normally block light from reaching the inner petals 5, there is less light and therefore less heat incident on the inside of the rose head. As a result, the temperature of the rose head is reduced, which in turn acts to reduce the respiration rate. The reduced respiration rate decreases the amount of energy consumed, which in turn decreases the amount of carbohydrates expended by the flower for respiration. The result of this process is that the rose head becomes stronger and healthier and grows to an increased size, without the guard petals opening because the carbohydrate content within the flower is retained in the head due to the lower respiration. The result is a higher rate of growth of the rose head in the same growing time as a plant without the use of the netting.

The timing of the placement of the nylon netting sleeve over the rose head is critical to the present invention. If the

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netting sleeve is placed over the rose head too soon prior to the cutting stage, the rose will tend to accumulate too much water on the head and may develop water rot, or botrytis. This results from the rose petals being held too closely together and not allowing enough evaporation on the petal surface while trapping in existing moisture. In addition, early usage of the netting sleeve prevents light interception by most of the rose head. Since during the initial stages of growth, rosebuds need light to build color pigments, then early blockage of light would negatively affect this process. On the other hand, if the netting sleeve is placed over the rose head too close to the cutting stage, there is no increase in rose head size, and the advantages presented by the use of the instant invention are not achieved because the guard petals open in the normal course of growth.

The optimal time for sleeve placement on the rose head has been determined to vary according to the particular variety of rose being grown. Table A below lists the experimentally determined optimal number of days prior to the normal cutting time of the rose stem that the sleeve should be placed on the rose head.

TABLE A

Variety	Number of days prior to normal cutting time
Vivaldi, Osima, Marlyse, Livia, Jacaranda	2
Sonia, Aalsmeer Gold, Slyline, Confetti, Pailene, Lomada, Lorena, Lovely Girl, Arianna, Harmony, Blue Bird, Paro, Diplomat, Lasser, Anna, Prive	3-5
Carolla, Madame Delbard, Dallas, First Red	5-7

FIGS. 3A through 3D illustrate the various progressive growth stages of a normal rose head. The time between the stages varies, but it is approximately several days. In the normal case, the rose should be cut from the plant at the stage in FIG. 3C in order to achieve optimal head size and shelf life after cutting. If the cutting of the rose head is delayed until the stage shown in FIG. 3D, the rose is overdeveloped and the shelf life is severely shortened due to the opening of the petals. When the netting sleeve of the present invention is placed on the rose head as described herein, then the head will grow approximately to the size as shown in FIG. 3D while maintaining the petal tightness shown in FIG. 3C. Thus, by implementing the present invention, the larger head size is achieved while maintaining the petals in relative tightness and keeping the optimal shelf life intact after cutting.

Although the present invention has been described herein with reference to the use of a nylon netting, it is noted that

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other materials which give the desired properties of elasticity and resiliency may be also used within the spirit and scope of the claims presented below. For example, an elastic or rubber material may be used to constrict the outer petals from opening. In addition, the present invention may be applied to other flowers which may have a similar growth and cutting cycle in order to obtain larger flowers with a longer shelf life than has been otherwise obtainable. Further, the number of days for keeping the sleeve on the head prior to cutting may be varied as required by the particular flower variety, climate conditions, and requirements of the grower while still operating within the scope of the present invention as claimed herein.

I claim:

1. A method for increasing the size of a rose head prior to cutting the rose head from its plant comprising at least partially preventing the rose head from opening prior to cutting the rose head from the plant, wherein the rose head is at least partially prevented from opening by constricting the rose head with an elastic material wrapped around the rose head, wherein the elastic material is a netting sleeve having at least one open end suitable for placing over the rose head, the netting sleeve being comprised of an elastic netting material capable of stretching so as to fit snugly over the rose head.

2. The method of claim 1 wherein said elastic netting material is comprised of nylon.

3. The method of claim 1 wherein said elastic netting material is comprised of rubber.

4. The method of claim 1 wherein the rose head is at least partially constricted for a predetermined time period prior to cutting from the plant.

5. A method for increasing the size of a rose head prior to cutting the rose head from its plant comprising wrapping an elastic netting material substantially around the rose head, the elastic netting material making substantial contact with said rose head so as to constrict the opening of said rose head.

6. The method of claim 5 wherein said elastic netting material is comprised of nylon.

7. The method of claim 5 wherein said elastic netting material is comprised of rubber.

8. The method of claim 5 wherein the elastic netting material is placed over the rose head for a predetermined time period prior to cutting from the plant.

* * * * *

EXHIBIT "C"

**[to Complaint for
Declaratory Judgment]**

LAW OFFICES OF

MICHAEL SCHIFFRIN & ASSOCIATES, P.A.

TWO DATRAN CENTER • 9130 SOUTH DADELAND BOULEVARD, SUITE 1109 • MIAMI, FLORIDA 33156 • (305) 539-0000 • FAX (305) 539-0013



ONE BISCAYNE TOWER, 21ST FLOOR
2 SOUTH BISCAYNE BOULEVARD
MIAMI, FLORIDA 33131-1811
TELEPHONE: 305.373.9400
FACSIMILE: 305.373.9443
www.broadandcassel.com

MARK F. RAYMOND, P.A.
MANAGING PARTNER
DIRECT LINE: 305.373.9425
DIRECT FACSIMILE: 305.995.6385
EMAIL: MRaymond@BroadandCassel.com

December 8, 2006

VIA CERTIFIED MAIL

Superior Florals, Inc.
c/o Richard Perillo
2080 NW 96 Avenue
Miami, FL 33172

Re: Mr. Kenneth P. Shaw – United States Patent 5,765,305

Dear Mr. Perillo:

Please be advised that we represent Shaw Rose Nets, LLC and Kenneth P. Shaw, inventor and owner of United States Patent 5,765,305, entitled “Method of Increasing the Size of a Rose Head During Growth” (the “305 Patent”). The ‘305 Patent covers a method for increasing the size of a rose head prior to cutting the rose head from the plant by constricting the rose head with an elastic material wrapped around the rose head. A copy of the ‘305 Patent is enclosed.

It has come to our attention that Superior Florals, Inc. has been infringing one or more claims of the ‘305 Patent. Mr. Shaw has advised us that he has spoken with you regarding your company’s infringement. Based on his calls with you, Mr. Shaw understands that you are prepared to resolve this matter. Accordingly, please contact us. Of course, if we do not hear from you, Mr. Shaw demands that Superior Florals, Inc. immediately cease and desist from importing, marketing, selling, and/or distributing any and all infringing products.

Pursuant to 35 U.S.C. § 271(g), whoever without authority imports into the United States or offers to sell, sells, or uses within the United States a product which is made by a process patented in the United States shall be liable as an infringer, if the importation, offer to sell, sale, or use of the product occurs during the term of such process patent.

Mr. Shaw zealously protects his intellectual property rights and intends to vigorously enforce his interests in the ‘305 Patent to the fullest extent of the law.

Unless Superior Florals, Inc. ceases any and all infringing activities within fifteen (15) days from the date of this correspondence, Mr. Shaw will avail himself of all remedies under the law. If that becomes necessary, Mr. Shaw will seek to prohibit Superior Florals, Inc. from any further infringing activities; recover damages incurred by Mr. Shaw by virtue of Superior Florals, Inc.’s infringing activities; and recover treble damages and attorney’s fees on the basis

Superior Florals, Inc.
December 8, 2006
Page 2

that Superior Florals, Inc.'s continued infringement was willful and knowing and constituted an "exceptional case" within the meaning of 35 U.S.C. § 284-5.

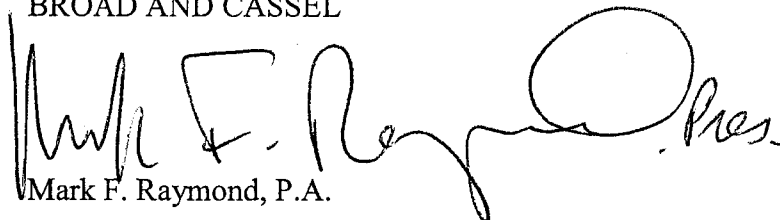
Shaw Rose Nets, LLC will consider entering into an appropriate license respecting the use of the '305 Patent and resolving claims for all past infringements as well as all future imports of infringing products.

We trust that this matter can be resolved amicably and without the necessity of litigation. In order for that to occur, you must contact us immediately. We look forward to your prompt response.

GOVERN YOURSELF ACCORDINGLY.

Sincerely,

BROAD AND CASSEL



Mark F. Raymond, P.A.

Enclosure

MIA1\COMMLIT\360833.1
38550/0001



United States Patent [19]
Shaw

[11] **Patent Number:** 5,765,305
 [45] **Date of Patent:** Jun. 16, 1998

[54] **METHOD OF INCREASING THE SIZE OF A ROSE HEAD DURING GROWTH**

[76] **Inventor:** Kenneth P. Shaw, 570 N. Island Dr., Golden Beach, Fla. 33179

[21] **Appl. No.:** 585,952

[22] **Filed:** Jan. 16, 1996

[51] **Int. Cl.⁶** A01G 9/00; A01G 9/12; A01G 5/06; A01H 3/00

[52] **U.S. Cl.** 47/58; 47/41.1; 800/DIG. 36

[58] **Field of Search** 47/58. 41.01; 800/DIG. 36

[56] **References Cited**

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4,091,925	5/1978	Griffo et al.	206/423
5,135,771	8/1992	Chackal	427/4

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Biran et al. Effects of varying light intensities and temperature treatments applied to whole plants, or locally to leaves of flower buds, on growth and pigmentation of 'Baccara' roses. *Physiologia Plantarum*, vol 31, pp. 175-179, 1974.

Primary Examiner—David T. Fox

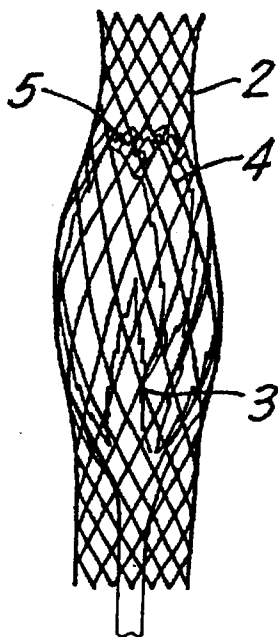
Assistant Examiner—Melissa L. Kimball

Attorney, Agent, or Firm—Anthony R. Barkume, P.C.

[57] **ABSTRACT**

The present invention is a method for increasing the size of a rose head prior to cutting the rose head from its plant comprising at least partially preventing the rose head from opening prior to cutting the rose head from the plant. This is accomplished by constricting the rose head with an elastic material wrapped around the rose head. The elastic material is preferably a netting sleeve having at least one open end suitable for placing over the rose head, the netting sleeve being comprised of an elastic netting material such as nylon or rubber capable of stretching so as to fit snugly over the rose head. In particular, the rose head is at least partially constricted for a predetermined time period prior to cutting from the plant. By partially constricting the rose head from opening, the amount of light and thus heat incident on inner petals of the rose head is reduced and the growth rate is accordingly increased, which results is a larger rose head heretofore unobtainable without allowing the outer petals of the rose head to commence opening.

8 Claims, 2 Drawing Sheets



U.S. Patent

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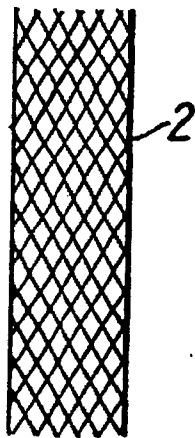


FIG. 1

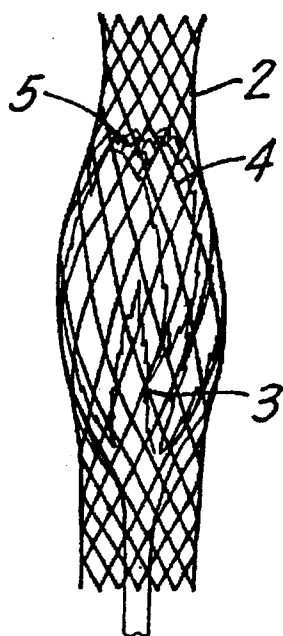


FIG. 2

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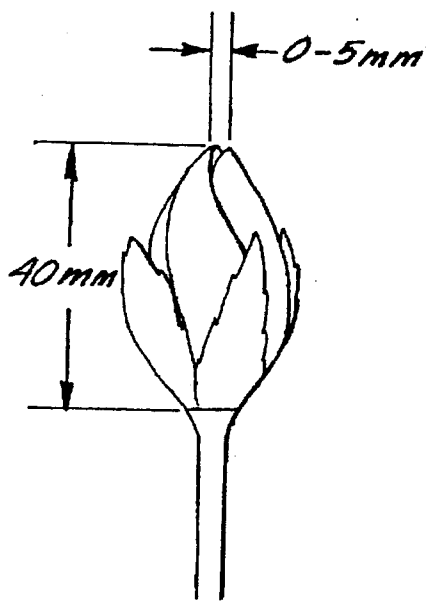


FIG.3A

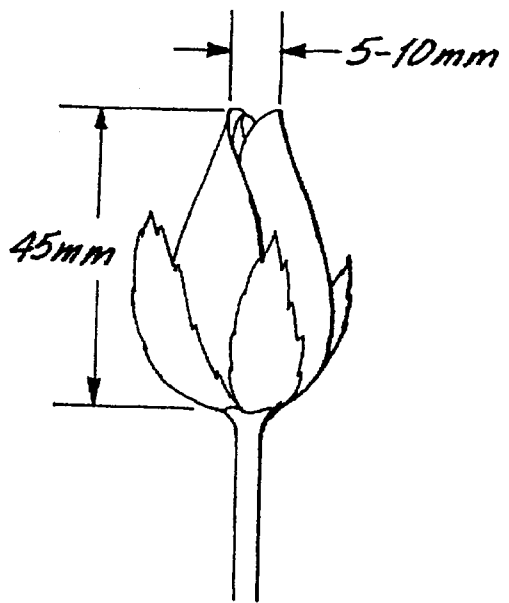


FIG.3B

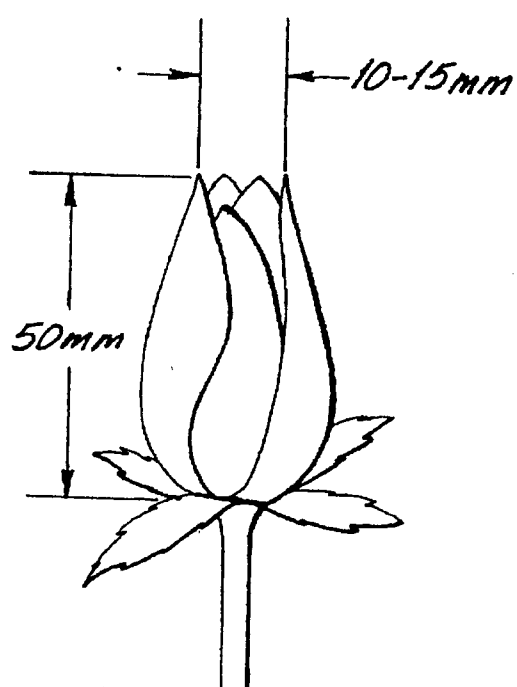


FIG.3C

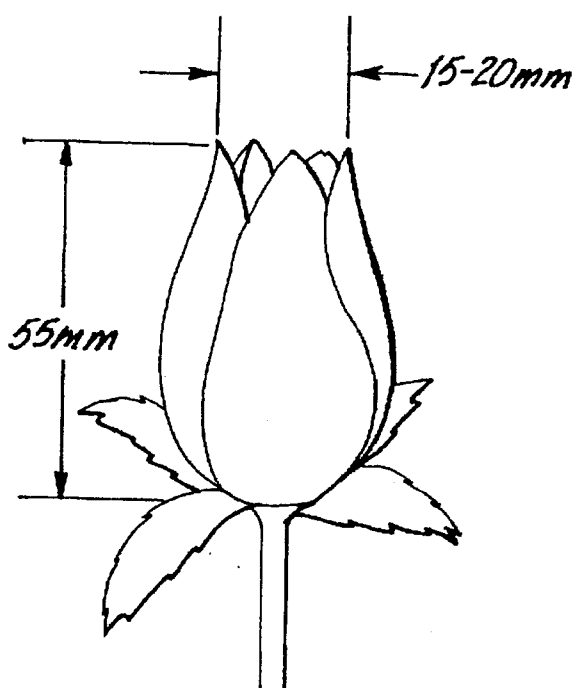


FIG.3D

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METHOD OF INCREASING THE SIZE OF A ROSE HEAD DURING GROWTH

BACKGROUND OF THE INVENTION

The present invention relates to a method for increasing the size of a rose head prior to cutting the rose head from the stem, and in particular to a method of at least partially preventing the rose head from opening by placing an elastic constraining material on and around the rose head for a predetermined time prior to cutting the rose head from the stem in order to effect such increased head growth without suffering loss of shelf life of the rose after cutting.

Roses are grown by commercial rose growers and cut from the plant for the purpose of vending the cut roses to consumers via commercial channels such as distributors and retail flower shops. Roses with larger heads have more commercial value than those with smaller heads; it has thus been desired to increase the size of the rose head prior to vending to the consumer. Typically, a rose grower will cut the rose stem from the plant and ship the cut rose at a certain time in its growth stage for marketing. The optimum time to cut the rose stem is when the rose head has reached as large a size as possible without substantial opening of the petals.

If a rose stem is cut prior to the optimum time, then the size of the rose head will be small and the rose will be less valuable. In addition, the petals of the rose head will be too tight and the rose will not open, thus making the rose unmarketable. However, the life expectancy of the rose after cutting is generally longer when the petals are tighter, so a rose cut prior to the optimum time will last longer than one cut later in its growth stage. On the other hand, if the rose stem is cut too long after the optimum time, then the petals will be already open (some may even fall off) and the flower will have a shorter life expectancy and thus be less valuable.

There is therefore a long felt need in the art to increase the size of the rose head prior to cutting the stem without the rose head opening and losing petals prematurely.

SUMMARY OF THE INVENTION

The present invention is a method for increasing the size of a rose head prior to cutting the rose head from its plant comprising at least partially preventing the rose head from opening prior to cutting the rose head from the plant. This is accomplished by constricting the opening of the rose head with an elastic material wrapped around the rose head. The elastic material is preferably a netting sleeve having at least one open end suitable for placing over the rose head, the netting sleeve being comprised of an elastic netting material such as nylon or rubber capable of stretching so as to fit snugly over the rose head. In particular, the rose head is at least partially constricted for a predetermined time period prior to cutting from the plant.

By constricting the rose head from opening, the amount of light (and thus heat) incident on the inner petals of the rose head is reduced and the growth rate of the rose head is accordingly increased, which results in a larger rose head heretofore unobtainable without allowing the outer petals of the rose head to commence opening.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is an illustration of the nylon netting sleeve used in the preferred embodiment in order to effect increased rose head growth;

FIG. 2 is an illustration of a rose head covered with the netting sleeve of FIG. 1 in accordance with the preferred embodiment of the present invention; and

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FIGS. 3A through 3D depict the final growth stages of a rose head.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

A sleeve of nylon netting 2 as shown in FIG. 1 is utilized in accordance with the preferred embodiment of the present invention. The netting sleeve 2 is formed so as to be able to stretch and conform to the rose head when the rose head is in its final growth stages, which is prior to normal cutting of the stem. Preferably, the netting 2 in its quiescent, unstretched stage will be smaller than the rose head but will easily expand so as to fit snugly over the rose head when desired. For example, the nylon netting 2 used in the preferred embodiment can stretch to a distance of six times its unstretched width. Due to the resiliency of the nylon netting, the sleeve will hold itself around the rose head until it is desired to be removed.

To effect the increased rose head size of the present invention, the netting sleeve 2 is placed over the rose head 3 as shown in FIG. 2 so as to conform snugly to the surface thereof. The placement of the netting sleeve should occur a few days prior to the expected cutting time of the rose head as will be explained further below.

The placement of the nylon netting sleeve 2 over the rose head 3 prior to cutting the stem from the plant performs two interrelated functions which the applicant has determined are critical to the present invention. First, the netting sleeve 2 acts to physically constrict the opening of the rose head 3, thus helping in keeping intact the outer or guard petals 4 of the rose. The guard petals 4 would normally protect the remainder of the rose head (i.e., the inner petals 5) during shipping and handling, and often would fall off as a result of handling of the cut plant. However, by placing the netting sleeve around the rose head prior to cutting, it has been determined that the rose head 3 is slightly constricted from opening at the normal time, and the guard petals 4 retain a stronger natural bond with the rose head 3 as a result thereof. Since the guard petals 4 retain a stronger bond, they do not fall off as easily during handling as they would otherwise. Moreover, the overall tightness of the rose head 3 is increased by the slight constriction effect of the netting sleeve 2, thus acting to counteract the otherwise decreased shelf life of a larger rose head. The head also has more petals due to the presence of guard petals 4. Without the net, two to three outer petals 4 would be lost and the resulting appearance would be undesirable.

Second, the prolonged presence of the guard petals 4 due to the constricting action of the netting sleeve 2 results in the reduction in the amount of ambient light reaching the inner petals 5 of the rose head 3 during the final growth stage. Since the guard petals 4 would normally block light from reaching the inner petals 5, there is less light and therefore less heat incident on the inside of the rose head. As a result, the temperature of the rose head is reduced, which in turn acts to reduce the respiration rate. The reduced respiration rate decreases the amount of energy consumed, which in turn decreases the amount of carbohydrates expended by the flower for respiration. The result of this process is that the rose head becomes stronger and healthier and grows to an increased size, without the guard petals opening because the carbohydrate content within the flower is retained in the head due to the lower respiration. The result is a higher rate of growth of the rose head in the same growing time as a plant without the use of the netting.

The timing of the placement of the nylon netting sleeve over the rose head is critical to the present invention. If the

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netting sleeve is placed over the rose head too soon prior to the cutting stage, the rose will tend to accumulate too much water on the head and may develop water rot, or botrytis. This results from the rose petals being held too closely together and not allowing enough evaporation on the petal surface while trapping in existing moisture. In addition, early usage of the netting sleeve prevents light interception by most of the rose head. Since during the initial stages of growth, rosebuds need light to build color pigments, then early blockage of light would negatively affect this process. On the other hand, if the netting sleeve is placed over the rose head too close to the cutting stage, there is no increase in rose head size, and the advantages presented by the use of the instant invention are not achieved because the guard petals open in the normal course of growth.

The optimal time for sleeve placement on the rose head has been determined to vary according to the particular variety of rose being grown. Table A below lists the experimentally determined optimal number of days prior to the normal cutting time of the rose stem that the sleeve should be placed on the rose head.

TABLE A

Variety	Number of days prior to normal cutting time
Vivaldi, Osiana, Martyac, Livia, Jacaranda	2
Sonia, Aalsmeer Gold, Sylene, Confetti, Pailene, Lornada, Lorena, Lovely Girl, Arianna, Harmony, Blue Bird, Parac, Diplomat, Lasser, Anna, Prive	3-5
Carolla, Madame Delbard, Dallas, First Red	5-7

FIGS. 3A through 3D illustrate the various progressive growth stages of a normal rose head. The time between the stages varies, but it is approximately several days. In the normal case, the rose should be cut from the plant at the stage in FIG. 3C in order to achieve optimal head size and shelf life after cutting. If the cutting of the rose head is delayed until the stage shown in FIG. 3D, the rose is overdeveloped and the shelf life is severely shortened due to the opening of the petals. When the netting sleeve of the present invention is placed on the rose head as described herein, then the head will grow approximately to the size as shown in FIG. 3D while maintaining the petal tightness shown in FIG. 3C. Thus, by implementing the present invention, the larger head size is achieved while maintaining the petals in relative tightness and keeping the optimal shelf life intact after cutting.

Although the present invention has been described herein with reference to the use of a nylon netting, it is noted that

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other materials which give the desired properties of elasticity and resiliency may be also used within the spirit and scope of the claims presented below. For example, an elastic or rubber material may be used to constrict the outer petals from opening. In addition, the present invention may be applied to other flowers which may have a similar growth and cutting cycle in order to obtain larger flowers with a longer shelf life than has been otherwise obtainable. Further, the number of days for keeping the sleeve on the head prior to cutting may be varied as required by the particular flower variety, climate conditions, and requirements of the grower while still operating within the scope of the present invention as claimed herein.

I claim:

1. A method for increasing the size of a rose head prior to cutting the rose head from its plant comprising at least partially preventing the rose head from opening prior to cutting the rose head from the plant, wherein the rose head is at least partially prevented from opening by constricting the rose head with an elastic material wrapped around the rose head, wherein the elastic material is a netting sleeve having at least one open end suitable for placing over the rose head, the netting sleeve being comprised of an elastic netting material capable of stretching so as to fit snugly over the rose head.

2. The method of claim 1 wherein said elastic netting material is comprised of nylon.

3. The method of claim 1 wherein said elastic netting material is comprised of rubber.

4. The method of claim 1 wherein the rose head is at least partially constricted for a predetermined time period prior to cutting from the plant.

5. A method for increasing the size of a rose head prior to cutting the rose head from its plant comprising wrapping an elastic netting material substantially around the rose head, the elastic netting material making substantial contact with said rose head so as to constrict the opening of said rose head.

6. The method of claim 5 wherein said elastic netting material is comprised of nylon.

7. The method of claim 5 wherein said elastic netting material is comprised of rubber.

8. The method of claim 5 wherein the elastic netting material is placed over the rose head for a predetermined time period prior to cutting from the plant.

* * * * *

CIVIL COVER SHEET

The JS 44 civil cover sheet and the information contained in neither replace nor supplement the filing and service of pleadings or other papers as required by law, except as provided by local rules of court. This form, approved by the Judicial Conference of the United States in September 1974, is required for the use of the Clerk of Court for the purpose of initiating the civil docket sheet. (SEE INSTRUCTIONS ON THE REVERSE OF THE FORM.)

NOTICE: Attorneys MUST Indicate All Re-filed Cases Below.

I. (a) PLAINTIFFS

SUPERIOR FLORALS, INC.

(b) County of Residence of First Listed Plaintiff Miami-Dade (EXCEPT IN U.S. PLAINTIFF CASES)

(c) Attorney's (Firm Name, Address, and Telephone Number)

Michael Schiffrin, Esq. 9130 S. Dadeland Boulevard, Suite 1109 Miami, Florida 33156 305-539-0000

DEFENDANTS

SHAW ROSE NETS, LLC and KENNETH I. SHAW

County of Residence of First Listed Defendant Miami-Dade (IN U.S. PLAINTIFF CASES ONLY)

NOTE: IN LAND CONDEMNATION CASES, USE THE LOCATION OF THE TRACT LAND INVOLVED

Attorneys (If Known)

Mark Raymond/Broad & Cassel, 2 South Biscayne Blvd. Miami, Florida 33131-1811

CIV-UNGARO-BENAGES

MAGISTRATE JUDGE

(d) Check County Where Action Arose: [X] MIAMI-DADE [] MONROE [] BROWARD [] PALM BEACH [] MARTIN [] ST. LUCIE [] INDIAN RIVER [] OKEECHOBEE HIGHLANDS

II. BASIS OF JURISDICTION (Place an "X" in One Box Only)

- 1 U.S. Government Plaintiff
2 U.S. Government Defendant
3 Federal Question (U.S. Government Not a Party)
4 Diversity (Indicate Citizenship of Parties in Item III)

III. CITIZENSHIP OF PRINCIPAL PARTIES (Place an "X" in One Box for Plaintiff and One Box for Defendant)

- Citizen of This State PTF DEF
Citizen of Another State PTF DEF
Citizen or Subject of a Foreign Nation PTF DEF

IV. NATURE OF SUIT (Place an "X" in One Box Only)

Table with columns: CONTRACT, REAL PROPERTY, TORTS, CIVIL RIGHTS, PRISONER PETITIONS, FORFEITURE/PENALTY, LABOR, SOCIAL SECURITY, FEDERAL TAX SUITS, BANKRUPTCY, OTHER STATUTES.

V. ORIGIN (Place an "X" in One Box Only)

- 1 Original Proceeding
2 Removed from State Court
3 Re-filed (see VI below)
4 Reinstated or Reopened
5 Transferred from another district (specify)
6 Multidistrict Litigation
7 Appeal to District Judge from Magistrate Judgment

VI. RELATED/RE-FILED CASE(S).

(See instructions second page): a) Re-filed Case YES NO b) Related Cases YES NO JUDGE DOCKET NUMBER

VII. CAUSE OF ACTION

Cite the U.S. Civil Statute under which you are filing and Write a Brief Statement of Cause (Do not cite jurisdictional statutes unless diversity):

Complaint for Declaratory Judgment relating to an invalid patent. 35 USC 102 (b) and (f)

LENGTH OF TRIAL via 5 days estimated (for both sides to try entire case)

VIII. REQUESTED IN COMPLAINT:

CHECK IF THIS IS A CLASS ACTION UNDER F.R.C.P. 23 DEMAND \$ CHECK YES only if demanded in complaint: JURY DEMAND: YES NO

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January 25, 2007

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