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HYBRID TEA ROSE PLANT, SPECIALLY ADAPTED FOR LARGE-SCALE
CULTIVATION FOR CUT FLOWER PRODUCTION
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**HYBRID TEA ROSE PLANT, SPECIALLY ADAPTED
FOR LARGE-SCALE CULTIVATION FOR CUT
FLOWER PRODUCTION**

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1 Claim

The present invention relates to a new hybrid tea rose 10
plant, specially adapted for large-scale cultivation for cut
flower production in the open air as well as in green-
houses.

The rose of this invention has been produced by the 15
applicant after several years of extensive research by
means of the genetic cross-breeding of different varieties
appropriately chosen so as to bring together the desired
characteristics in the same plant and create a type of
flower meeting the wishes of international flower con-
sumers. The new type of plant had to satisfy the following 20
requirements: (a) The flowers had to be of medium to
large size, sufficiently large to provide a color patch in
floral compositions but not so large as to become too
heavy for export. The color of the flowers had to be in-
cluded in the medium intensity range of red, brilliant 25
under artificial light yet withstanding discoloration by
sunlight and inclement weather, with a special shade
appreciated on the market. (b) The flower stems had to be
sufficiently long, rigid and straight and had to bear the
flower gracefully and harmoniously, with a slender, erect,
straight peduncle. (c) The flowers had to bloom easily,
even after they had been cut; be resistant to packaging and
long-distance shipment after having been cut. (d) The
plant should grow vigorously and sprout when grafted on 30
any type of recipient usually employed in large-scale cul-
tivation, recover promptly after pruning and have a greater
productivity than normal varieties previously cultivated.
(e) The leaves, sufficiently abundant and decorative, had
to be particularly resistant to fungus attack generally 40
affecting roses in large-scale cultivation.

Thus a new variety of rose for large-scale cultivation
had to be developed, having improved characteristics
regarding the quality of the flower and its acceptability by
the public at large, as well as the properties of the plant,
so as to render its cultivation much more profitable in com- 45
parison with other varieties of the same class.

The applicant therefore carried out a thorough research
and made numerous attempts which finally led to positive
and satisfactory results. Starting in fact from a numerous 50
stock of hybrid varieties produced by fecundation of a
previously unknown hybrid variety bearing red flowers
with polyantha roses known as "Ninfa Rossa" variety, it
was possible to isolate or select the plant which is the
subject of this invention, and finally meet the targets of 55
this research. The rose Ninfa Rossa is a sport (*lusus*
naturae) of the variety Nymph obtained by A. Dickson
in 1953—rose flowered, with salmon-coral colored flowers,
which has changed the colors of its flowers in red. The
parentage of the new rose is an unnamed seedling, red 60
flowered × "Ninfa Rossa."

The variety which is the subject of this invention is in
fact excellently adapted for the large-scale production of
flowers to be cut, and represents a considerable improve-
ment on other varieties of the same class. 65

The variety in accordance with this invention can easily
be reproduced in any number of specimens, all of them
having the properties of the original plant, by means of
one of the development methods for plants commonly used
in flower cultivation, specifically by taking from the orig- 70
inal plant or a plant deriving from it a bud and grafting
the later by known techniques on a different species of

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rose (the graft recipient) adapted to the soil in which
the variety is to be cultivated. It will thus be possible
to obtain fully developed plants suitable for producing cut
flowers on an industrial or commercial scale, with all the
distinctive properties of the original plant.

These properties are listed, by way of example and
without any limitations, in the following description based
on a set of plants cultivated according to industrial criteria
in the open air and in full soil on a sunny hillside at San
Remo in the month of September.

Reference should always be made to these climatic and
seasonal conditions with regard to the purchase of the
plant in the light of the present description. Any differ-
ences which, as a result of different conditions of climate,
soil or method of cultivation, may be encountered between
certain features of the plant and the corresponding ones
of the description must be considered normal and do not
modify the essence of the present invention, as least so
long as it is possible to identify the plant by means of
the collection of features given in the description by re-
peating the cultivation under the same conditions as those
of the plants described.

In the description the colors have been named accord-
ing to the tables of the "Horticultural Color Chart" by
Robert F. Wilson (indicated in the text by the initials
HCC) except in those cases in which the colors were
absent from the tables or where its indication is suffi-
ciently clear according to common parlance.

Classification: Hybrid tea.

Stock: "Unknown hybrid with red flowers" × "Ninfa
Rossa" polyantha with red flowers (see identification
supra).

PLANT

Growth: Bushy, with vertical erect growth of average
compactness, leaves abundant.

Average height: 140–170 cm. from the ground at the apex
of the stems for 2–3 year plants grafted on *Rosa indica*
major.

Roots: Fairly developed; development variable according
to the type of graft recipient used. On *Rosa indica*
major they are fairly numerous starting from the col-
lar, ramified with sparse root hairs. On average 4–6,
average length 40–60 cm., average diameter at the
collar 5–12 mm., color dark brown.

Stem: Varying according to the type of graft recipient
used for the propagation. Generally consisting of the
recipient itself. In plants grafted on *Rosa indica major*
it is on average 25–30 cm. long with a 12–16 mm.
diameter at the collar, cylindrical, sometimes slightly
thicker towards the top. Globular grafting point. Bark
lavender green tinted in dark brown in its lower part.

Main branches: Varying in number and shape according
to the system adopted for pruning; generally strong,
fairly numerous, ascending, from 4 to 6 on average,
starting from the grafting point and from the stem at
short intervals, inserted sometimes in the base of other
branches, slightly divergent from the axis of the plant,
articulated in slender internodes 40–70 mm. on average,
of varying length without any definite rule, strong and
fairly differentiated nodes.

Size.—Varying according to the method of pruning.

Average length, 30–50 cm.; average diameter at
the base, 8–15 mm.

Bark.—Smooth hairless, slightly rough lengthwise of
the base of the main branches; average thickness.

Thorns.—Fairly or very numerous, variable sizes,
with very small thorns intermixed with large ones
and very large ones, singly inserted on the branch,
seldom budding, difficult to detach from the bark.

Shape—triangular with slightly curved sides and

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lower side concave. Sharp and fairly differentiated tip slightly tilted downwards and straight. Oval, fairly broadened base. Size: Large thorns—average length 9–12 mm.; average breadth 10–14 mm.; average thickness 3–5 mm. Small thorns—average length 0.5–1 mm.; average breadth 1–2 mm.; thickness 0.5–1 mm. Color—chamois tinted with brown at the tip. Consistency—hard and woody.

Flower stems: On average from 2 to 4 on each main branch, preferably inserted in the higher part of the latter.

Shape.—Approximately cylindrical; diameter gradually decreasing upwards, slender, erect, rigid, straight or slightly sinuous, articulated in numerous elongated internodes, on average from 40 to 70 mm. long, with fairly differentiated nodes. Flower peduncle differentiated, with short tender needle-shaped thorns, average length 80–120 mm., average diameter 3–5 mm., rigid, erect, slightly sinuous.

Size.—Average length of stems 70–110 cm.; average diameter at base 5–10 mm.

Color.—Spinach green background (HCC, page 187, shade 60/60/1), occasionally covered lengthwise by grenade brown color (HCC, page 192, shades 18/1.2). The same color is more widely found on the young vegetation and on the apical shoots of the flower stems.

Bark.—Smooth, hairless, slightly pruinose, opaque or slightly satiny, average thickness.

Large thorns.—Fairly numerous, scattered on stems, on average from 2 to 4 per internode intermingled with many small needle-shaped thorns. Shape—triangular with upper side almost straight and lower side concave, sharp, straight or slightly hooked tip. Size: Large thorns—average length 6–9 mm., average breadth 8–12 mm., average thickness 2–4 mm. Small thorns—average length 0–1 mm., average breadth 1–2 mm., thickness 0.5–1 mm. Color—greenish yellow tinted at the point with violet purple (HCC, page 177, shades 28/2.3). Consistency—semi-woody, resistant.

Small thorns.—Numerous and scattered, triangular with a narrow oval base, straight tip, easily detachable from bark. Average size—length 2–3 mm., breadth 3–5 mm., thickness 1 mm. or less. Color—almost violet purple (HCC, page 177, shades 28/2/3). Consistency—sub-woody, often slightly more tender.

Leaf shape.—Elongated, comprising 3–5–7 folioles, generally 7 in the lower part of the plant, 5 in the middle part and 3 in the upper part, inserted in opposing pairs plus a terminal foliole on a sturdy rachis, rather short, straight or slightly angled in the points where the folioles are inserted.

Bearing.—Scarcely or fairly diverging from the stems, sometimes horizontal or drooping in the terminal part. Peduncle short or almost sessile, often inserted on the rachis in points offset in relation to the opposite foliole, specially in the pair of folioles nearest to the base of the rachis. Folioles generally perpendicular to the rachis, flat or slightly upturned in relation to the plane of the leaf.

Size.—Average length, from attachment to tip of terminal foliole: 120–160 mm. on the main branches, 100–130 mm. on the flower stems. Breadth: 70–100 mm. on the main branches, 80–100 mm. on the flower stems.

Folioles.—Limb oval and rounded, sometimes amply spear-shaped; limb flat and slightly V-shaped on central longitudinal nervation, or undulated with outer edges curved upwards. Side and outer edge serrated, with sharp teeth of average size turned towards the top of the foliole. Small tip fairly differentiated at apex of foliole. Size—varying with the position on the stem and on the midrib, as

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follows. Leaves with 7 folioles (from the base of the leaf): 1st pair—average length 20–35 mm., breadth 15–25 mm. on average; 2nd pair—length 30–40 mm., breadth 25–30 mm.; 3rd pair—length 30–50 mm., breadth 30–35 mm. Terminal foliole—length 40–60 mm., breadth 30–40 mm. Leaves with 5 folioles: 1st pair—length 25–30 mm., breadth 20–30 mm.; 2nd pair—length 30–45 mm., breadth 25–35 mm. Terminal foliole—length 50–60 mm., breadth 35–45 mm., sometimes as much as 70 mm.

Color.—Upper face—spinach green background (HCC, page 187, shades 60/60/1) tinted here and there from grenade red (HCC, page 192, shades 18/1–2–2) to violet purple (HCC, page 177, shades 28/2–3). Lower face—nearing willow green (HCC page 199, shades 62/1–2) sometimes tinted with violet purple tones (HCC, page 177, shades 28/1–2–3).

Surface.—Upper face—smooth, hairless, shiny, sometimes slightly bubbly between nervations. Feathered nervations fairly concave in the limb. Lower face—smooth, hairless, opaque, with feathered nervations fairly protruding on the limb.

Consistency.—Tough, rigid, or fairly herbaceous—resistant.

Bearing.—Axis of side folioles inclined towards the base of the foliole in the first pair from the base; then almost perpendicular to the rachides in the other pairs.

Rachis.—Sturdy, short or average length, semi-cylindrical, with a longitudinal furrow fairly marked in the upper face, with slightly hairy edges provided with glandular hairs. Small sturdy hooked thorns, from 2 to 4 in number, on the lower face of the rachis.

Size.—Average length 80–100 mm. from the attachment to the base of the terminal foliole.

Color.—Spinach green (HCC, page 187, shades 60/1–2–3), tinted with reddish brown at the point of attachment of the petioles. Stipulae—well differentiated, clustered on the rachis until the middle of the first internode of the latter, breadth 4–8 mm., ending in triangular ears. Edges of stipulae hairy and minutely serrated.

FLOWER

Bearing: Main flower from average to large, single at the apex of the stem, accompanied by 2 to 3 small secondary buds borne by short secondary stems inserted at the base of the flower-bearing peduncle or on the highest nodes of the stems, generally slightly longer than the main stem. Corolla: Straight along the axis of the stem.

Closed flower bud: Short oval very rounded, almost globose, with differentiated conical tip, sharp and with leafy appendices of the sepals. Early budding of sepals when petals are still completely closed.

Size.—Average length, 15–20 mm. at attachment of sepals. Average diameter at $\frac{1}{3}$ of length, 14–18 mm.

Calyx: Shape—elongated urn-shaped receptacle. Sepals 5 in number, triangular and irregular, spear-shaped with very irregular dented leafy appendices; size and shape differing greatly from one sepal to another. The sepals bear on their side edges a few slender spear-shaped leafy appendices, with an average length of 5–8 mm. and breadth of 1–3 mm., with hairy serrated edges diverging from the sides of the sepals and from the closed bud. The flower peduncle is strong, straight or slightly curved, rigid with numerous short and sometimes tender needle-shaped thorns.

Color.—Near to spinach green (HCC, page 187, shades 60/2–3) with purple violet tones (HCC, page 177, shades 28/2–3) on one side. Surface of

sepals: outer—smooth, hairless, slightly glandular; inner—downy, with a woolly down typically short, white and fine.

Consistency.—Average thickness, tough and fleshy.

Half-open flower bud: Urn-shaped, globose, frusto-conical tip and turbinated petals opening sideways and outwards, tangentially on the perimeter of the bud. Upper edge of petals slightly or fairly furled on the terminal margin. Outer petals slightly drooping, fairly furled on the outer margin.

Size.—Varying in accordance with budding stage. Average diameter, 25–40 mm.; length of flower from receptacle to apices of petals, 35–50 mm.

Color.—Outer of petals, from Bengal red (HCC, page 25, shades 25–25/1) to pink red (HCC, page 158, shades 21–21/1). Inner face of petals (nearly Turkish red) (HCC, page 94, shades 21–21/1).

Open corolla: From average to large, round, regular with festooned edge and a few rounded tips on the outer petals formed by their being furled up. Profile of the corolla shaped as an open hemispherical cup, the upper part being flat. Center of flower fully concave with central petals arranged dialwise or irregularly concave towards the center of the flower so that the stamens and pistils are almost covered. The outer petals are fairly furled outwardly in their terminal parts or on the side edges, so as to form tips slightly protruding on the contour of the corolla. The central petals are concave at the center, the outer margin being slightly curved outwards.

Size.—Average diameter in wholly open condition, 70–100 mm. Length of flower from receptacle to apex of petals, 30–50 mm. General color—from Oriental red (HCC, page 165, shades 19–19/1–2–3) to Geranium lake (HCC, page 20, shade 20) with light Turkish red tones (HCC, page 97, shades 21/2–3) at the center of the corolla.

Petals.—Fairly numerous, on average 35 to 50, arranged regularly in the corolla, imbricated.

Shape.—Outer petals—rounded limbs, concave at center, with side edges converging in the claw at angles up to 150–160°. Outer edge slightly corrugated and festooned, with frequent furls forming obtuse undefined points in the places where they meet. The claw is fairly differentiated, whitish tinted in red in the limb. Inner petals—oval, narrower and more elongated, sometimes rope-shaped, the outer edge being rounded and slightly festooned. Side edges converging in the claw at angles of 100–120°. Outer edge slightly or fairly curved outwards, not furled. A few petaloid stamens at the center of the corolla.

Size.—Outer petals: length, 35–45 mm.; breadth, 35–50 mm. Inner petals: length, 30–35 mm. on average; average breadth, 20–35 mm.

Color.—Front side of petals: Upper face from Oriental red (HCC, page 165, shades 19/19–1–2–3) to Geranium lake (HCC, page 20, shade 20) with tones in Primrose red (HCC, page 23, shades 23/2–3) around the claw. Lower face, outer part,

almost Primrose red (HCC, page 23, shades 23/23–1). Claw—Aureoline yellow (HCC, page 2, shade 3/3).

Surface.—Upper face—satiny or slightly velvety with minute veins carved in the limb. Lower face—satiny; smooth, with minute veins upstanding from the limb.

Consistency.—Fairly fleshy, solid, resistant.

Organs of reproduction: Stamens—numerous, free; inserted on the receptacle around the styles. On average 100 to 120. Filaments erect, slender, yellow, straight or slightly curved; length up to 8–12 mm. Anthers long, bilocular, kidney-shaped; length 2–3 mm., breadth 0.5–2 mm. Styles are numerous, slender, glandular, in the center of the thalamus, with a thick woolly down at the base opening towards the apex. On average from 50 to 70. Trough-shaped stygmata, rosy yellow color. Ovarium almost entirely closed in the receptacle.

Scent: Slight, fruity tone.

Resistance of flowers to transport: Excellent.

Resistance of flowers to inclemency of weather: Excellent; very slight discoloration from sunlight; good resistance to wind and rain.

Resistance of plant to disease: Considerable.

Simplicity of cultivation: Excellent.

Grafting: Good sprouting power.

I claim:

1. Hybrid tea rose plant, whose first plant of this variety has been obtained through artificial fecundation of flowers of an unknown rose with red flowers with pollen from a variety called Ninfa Rossa, red-flower polyantha, characterized by:

(a) from the physical point of view: flowers from average to large size having the shape of a very graceful hemispherical cup with fairly numerous petals slightly furled outwards, color from Oriental red to Geranium lake with Turkish red shades at the center of the flower; flower stems numerous, erect and rigid, straight or slightly sinuous, abundantly covered with leaves of a color perfectly harmonized with the red color of the corolla, dark shiny green in the upper face, resistant, tough, with large thorns intermingled with smaller ones, fairly numerous and easily detachable from the bark; the plant is tall and erect, slender, compact, the branches and stems slightly diverging from each other;

(b) from the physiological standpoint: flowers withstanding transport and inclemency of weather, hardly any discoloration from sunlight and rain, good durability after having been cut and easy to recover after long journeys; plant vigorous, not requiring delicate handling in cultivation for the large-scale production of cut flowers, withstanding inclemency of weather and fungal diseases, mildew, Oidium and black spot, considerable vegetative affinity for the main graft recipients used in large-scale cultivation.

No references cited.

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