

US00PP32864P2

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

(10) **Patent No.:** **US PP32,864 P2**
(45) **Date of Patent:** **Mar. 2, 2021**

(54) **MUSHROOM PLANT NAMED ‘ALLERPO’**

(50) Latin Name: *Pleurotus ostreatus*
Varietal Denomination: **ALLERPRO**

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

(21) Appl. No.: **16/602,521**

(22) Filed: **Oct. 22, 2019**

(51) **Int. Cl.**
A01H 5/00 (2018.01)

(52) **U.S. Cl.**
USPC **Plt./394**

(58) **Field of Classification Search**
USPC Plt./394
CPC A01H 5/00
See application file for complete search history.

(56) **References Cited**

PUBLICATIONS

PLUTO Plant Variety Database May 9, 2020.p. 1.*

* cited by examiner

Primary Examiner — Annette H Para

(74) *Attorney, Agent, or Firm* — The Webb Law Firm

(57) **ABSTRACT**

‘ALLERPO’ is a new variety of oyster mushroom that
produces no spores and has brown colored caps.

6 Drawing Sheets

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Botanical classification: *Pleurotus ostreatus*.

Varietal denomination: ‘ALLERPO’.

BACKGROUND OF THE INVENTION

The present invention comprises a new and distinct cul-
tivar of mushroom of the species *Pleurotus ostreatus* known
by the varietal name ‘ALLERPO’. The new variety was
discovered in Wageningen, The Netherlands in January of
2004 as part of a planned breeding program. The purpose of
the breeding program was to develop a sporeless strain of
oyster mushroom. ‘ALLERPO’ was first asexually repro-
duced in March of 2004 at the same location by maintaining
vegetative mycelium on agar slants and in the vapor phase
of liquid nitrogen. The new variety has been trial and field
tested and has been found to retain its distinctive character-
istics and remain true to type through successive propaga-
tions.

DESCRIPTION OF THE DRAWINGS

The accompanying photographic drawings illustrate the
new variety, with the color being as nearly true as is possible
with color illustrations of this type:

FIG. 1 shows a bundle of ‘ALLERPO’ mushrooms in
their entirety;

FIG. 2 shows the upper surface of a plurality of
‘ALLERPO’ mushrooms;

FIG. 3 shows the lower surface of a plurality of
‘ALLERPO’ mushrooms;

FIG. 4 shows slices of ‘ALLERPO’ cut transversely;

FIG. 5 shows a plurality of ‘ALLERPO’ mushrooms
emerging from their growth medium; and

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FIG. 6 shows an upper side cap of ‘ALLERPO’ with lines
to designate color measurement location.

**DETAILED DESCRIPTION OF THE
INVENTION**

The following detailed description sets forth the breeding
procedures and the characteristics of the new cultivar. In
breeding the new variety, parental lines were isolated from
HK35 (female parent) (unpatented) and ATCC 58937 (male
parent) (unpatented). Strains HK35 and ATCC 58937 were
protoplasted to recover their parental genotypes. As they are
basidiomycetes, the cells (dikaryons) contain two nuclei,
one from each parent of the strain. Protoplasting therefore
results in two types of monokaryons (haploids). The parent
strains of HK35 were recovered and crosses were made with
the parents of ATCC 58937. This created two parallel
breeding lines: HK35-parent 1 x ATCC 58937-parent 1 and
HK35-parent 2 x ATCC 58937-parent 2. The inability of
ATCC 58937 to produce spores is linked to a defect in the
msh4 gene. In both breeding lines, molecular markers were
used to select offspring containing the defect version of
msh4, in combination with as much of the genotype of the
HK35 parents. In both breeding lines, a selection of the
offspring was used to prepare a backcross with the original
HK35 parent. Again, molecular markers were used to select
offspring containing the defect version of msh4, in combi-
nation with as much of the genotype of the HK35 parents.
From each of the parallel breeding lines, a representative
haploid strain was chosen. These two strains (each contain-
ing a defective msh4 gene) were crossed and this yielded the
new variety named ‘ALLERPO’.

The new variety is similar in shell-shaped morphology
and mushroom yield to HK35, but unlike HK35,
‘ALLERPO’ does not produce basidiospores. ‘ALLERPO’

is similar to ATCC 58937 in not producing basidiospores, but differs from ATCC 58937 in morphology and mushroom size (ATCC 58937 produces small, funnel-shaped mushrooms).

'ALLERPO' is very similar to oyster mushroom variety named 'Spoppo' (U.S. Plant Pat. No. 18,037), as they both originate from the same breeding program, using the same parental lines. 'ALLERPO' is similar in morphology to 'Spoppo', however, the cap color of 'ALLERPO' is slightly darker and more brown in color than 'Spoppo'.

Growth Conditions and Reproduction

The oyster mushrooms were grown on fermented wheat straw that is packed into 17-18 kg blocks of about 40×60×20 cm that are wrapped in micro-porous plastic foil. Before packaging, the wheat straw substrate was inoculated with spawn at 25-30 liters per 1000 kg of substrate. During venting, the air temperature is gradually lowered to 14° C., at a relative humidity of 90%.

Botanical Data Collection Conditions and Standards

The color standard used in the present application is the L*a*b* method (also designated as CIE.LAB or CIE-L*a*b*) defined by "Commission International de l'Eclaire" in 1976. The location where measurements were made was Wageningen, The Netherlands. Light conditions where measurements were made were by artificial light provided by a Minolta Chroma Meter type CR-200.

Botanical Description

Number of days from beginning of development to peak development: Based on venting after a 19 day spawn run, first pins appear about 5 days after venting. The first day of harvest is about 10-12 days after venting. A second flush will appear about 25-30 days after venting.

Age of described plant: Oyster mushrooms are generally produced within 5 weeks after inoculation of the straw substrate. The oyster mushrooms are produced as a bundle of mushrooms varying in size. This limits the possibilities for a uniform description of the mushrooms. A bundle of oyster mushrooms of 'ALLERPO' emerging from their growth medium can be seen at FIG. 5.

Overall appearance: Typical of oyster mushrooms, with a brown cap and white, fleshy stipe.

Cap:

Shape.—Shell formed, with a stipe that is excentric to the cap center.

Texture.—Smooth.

Pubescence.—None.

Margin.—Smooth.

Diameter.—Varies from 4-15 cm.

Color.—L: 67.40 (st. dev. 4.72, n=250), a: 2.207 (st. dev. 0.787, n=250), b: 14.55 (st. dev. 1.80, n=250).

The lines of FIG. 6 designate the measured color location approximately halfway between the attachment of the stipe and the edge of the cap.

Flesh color.—White, also white upon cutting.

Flesh/cap thickness.—Short and variable, as cap size varies considerably between individual mushrooms.

Gills/lamellae:

Description.—The lamellae are long and radiate from the stipe outward to the margin of the cap.

Length.—46.8 mm (st. dev. 11.2 mm, n=12).

Width.—5.6 mm (st. dev. 1.0 mm, n=12).

Color.—White.

Stipe/stem:

Placement.—Slightly excentric to the middle of the mushroom cap.

Shape.—Short and slightly thickened at the base.

Length.—51.5 mm (st. dev. 12.6 mm, n=12).

Width.—16.8 mm (st. dev. 6.0 mm, n=12).

Texture.—Fibrous.

Pubescence.—Present at the base.

Color.—White.

Spores: None present.

Veil: Not present.

Odor: Typical fungal odor.

General

Disease/pest resistance or tolerance: Nothing unusual noted to date.

Shipping quality: Good.

Temperature tolerance: Between 2 and 32° C.

Market use: For human consumption.

I claim:

1. A new and distinct variety of mushroom plant, as is herein illustrated and described.

* * * * *



FIG. 1

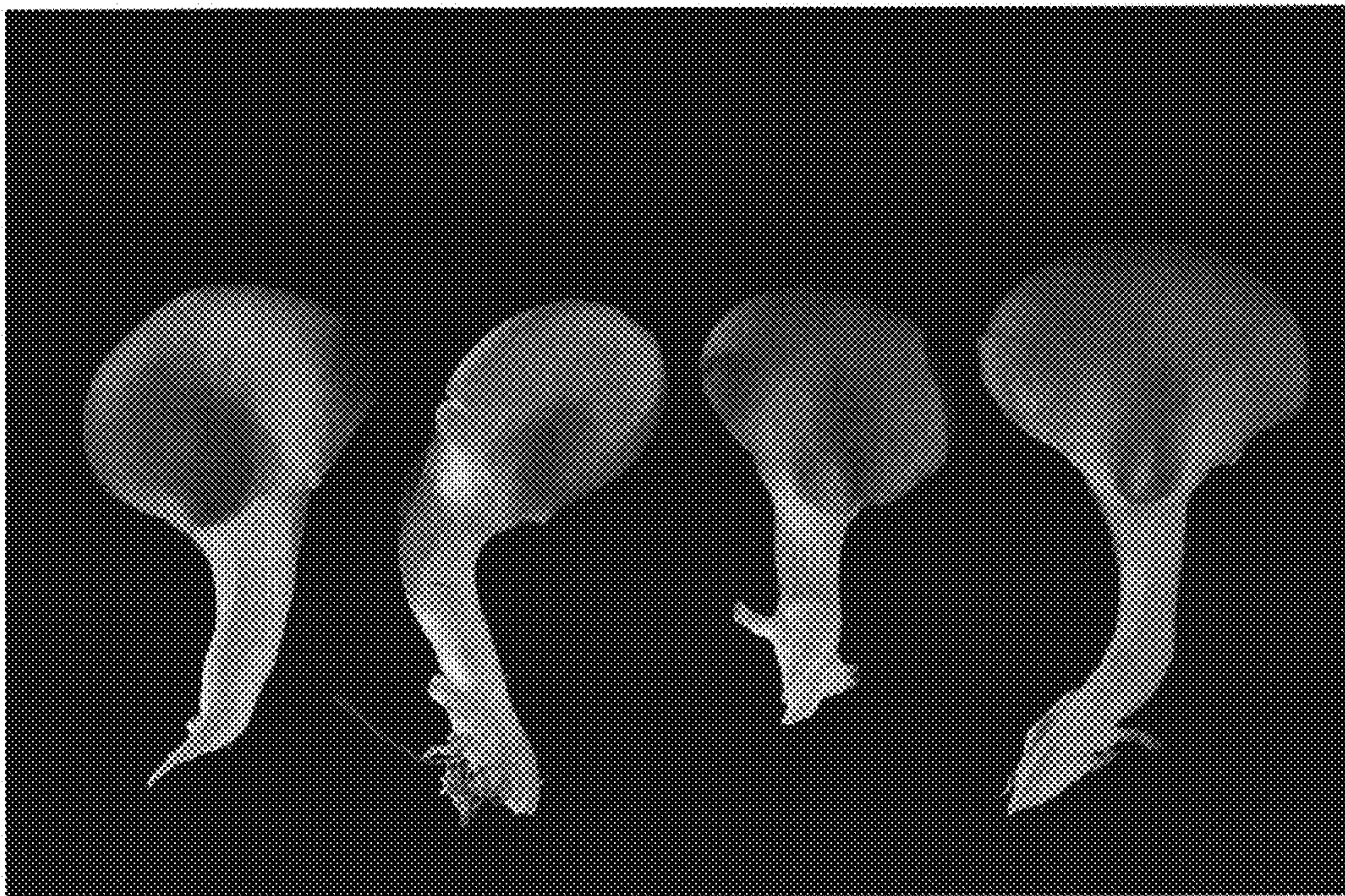


FIG. 2



FIG. 3

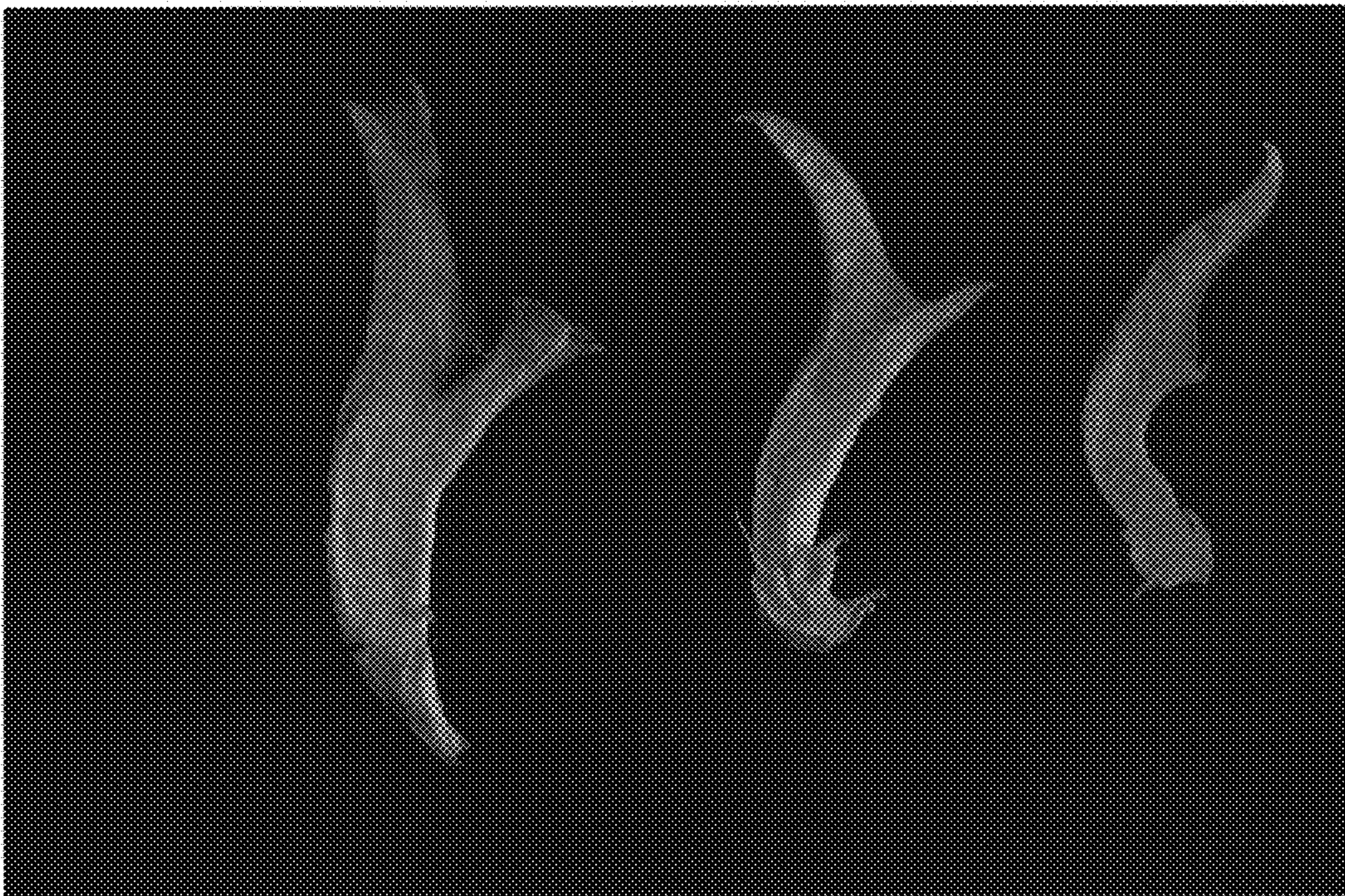


FIG. 4



FIG. 5



FIG. 6

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : PP32,864 P2
APPLICATION NO. : 16/602521
DATED : March 2, 2021
INVENTOR(S) : Baars

Page 1 of 1

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

On the Title Page

Column 1, item (50) Varietal Denomination, Line 1, Delete "ALLERPRO" and insert -- ALLERPO --

Signed and Sealed this
Nineteenth Day of October, 2021



Drew Hirshfeld
*Performing the Functions and Duties of the
Under Secretary of Commerce for Intellectual Property and
Director of the United States Patent and Trademark Office*