

PATENT ASSIGNMENT COVER SHEET

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(12) **United States Patent**
Snell

(10) **Patent No.:** **US 8,650,847 B2**
(45) **Date of Patent:** **Feb. 18, 2014**

(54) **NUT AND FRUIT HARVESTING APPARATUS, SYSTEMS AND METHODS**

(76) Inventor: **Lloyd D. Snell**, Ames, IA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 613 days.

(21) Appl. No.: **12/871,459**

(22) Filed: **Aug. 30, 2010**

(65) **Prior Publication Data**

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Related U.S. Application Data

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(51) **Int. Cl.**
A01D 46/00 (2006.01)

(52) **U.S. Cl.**
USPC **56/340.1**

(58) **Field of Classification Search**
USPC 56/328.1, 340.1
See application file for complete search history.

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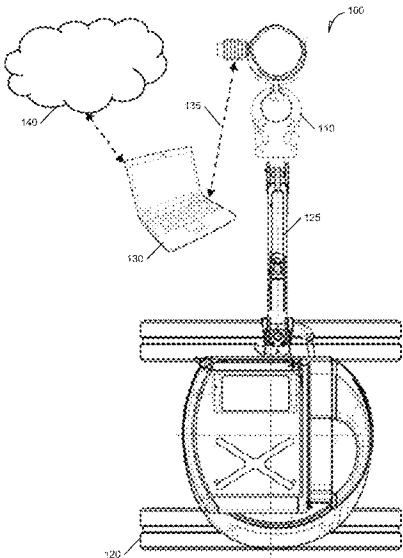
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(57) **ABSTRACT**

In an example, a system for harvesting nut and fruit trees includes an electro-mechanical shaker head, a transport mechanism, and a control system. The electro-mechanical shaker head is configured to dislodge fruit or nuts from a target tree using a linear energy system. The transport mechanism is configured to position the electro-mechanical shaker head on the target tree. The control system is communicatively coupled to the shaker head and configured to dynamically control shaker head operation.

22 Claims, 14 Drawing Sheets



TRANSFER OF PATENT OWNERSHIP

April 14th, 2015

I Lloyd D. Snell assign ownership of Patent number United States Patent Number 8,650,847 Nut and Fruit Harvesting Apparatus, System and Methods date February 18, 2014 to HzARVESTEC, LLC an Iowa Limited Liability Company.

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This record was acknowledged before me this 14th day of April, 2015
by Peggy L. Duncan - Dennis Pyle & Lloyd Snell

Peggy L. Duncan
Signature of Notary Public

