



(12) **United States Patent**  
**Lavie et al.**

(10) **Patent No.:** **US 10,813,488 B2**  
(45) **Date of Patent:** **Oct. 27, 2020**

(54) **BEVERAGE DISPLAYING AN EDIBLE PRINTED DESIGN IMAGE THEREUPON, AND A METHOD FOR PRODUCTION THEREOF**

(75) Inventors: **Danny Lavie**, Ramat Hasharon (IL);  
**Eyal Eliav**, Tel Aviv (IL)

(73) Assignee: **RIPPLES LTD.**, Petach Tivka (IL)

(\* ) 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.: **12/583,770**

(22) Filed: **Aug. 26, 2009**

(65) **Prior Publication Data**  
US 2009/0317519 A1 Dec. 24, 2009

**Related U.S. Application Data**  
(63) Continuation-in-part of application No. 10/586,565, filed as application No. PCT/IL2005/000067 on Jan. 20, 2005, now abandoned.

(30) **Foreign Application Priority Data**  
Jan. 21, 2004 (IL) ..... 159990

(51) **Int. Cl.**  
**A47J 31/44** (2006.01)  
**A23F 5/46** (2006.01)  
(Continued)

(52) **U.S. Cl.**  
CPC ..... **A47J 31/44** (2013.01); **A23F 5/243** (2013.01); **A23F 5/465** (2013.01); **A23L 2/54** (2013.01);  
(Continued)

(58) **Field of Classification Search**  
CPC ..... **A47J 31/44; A23F 5/243**  
See application file for complete search history.

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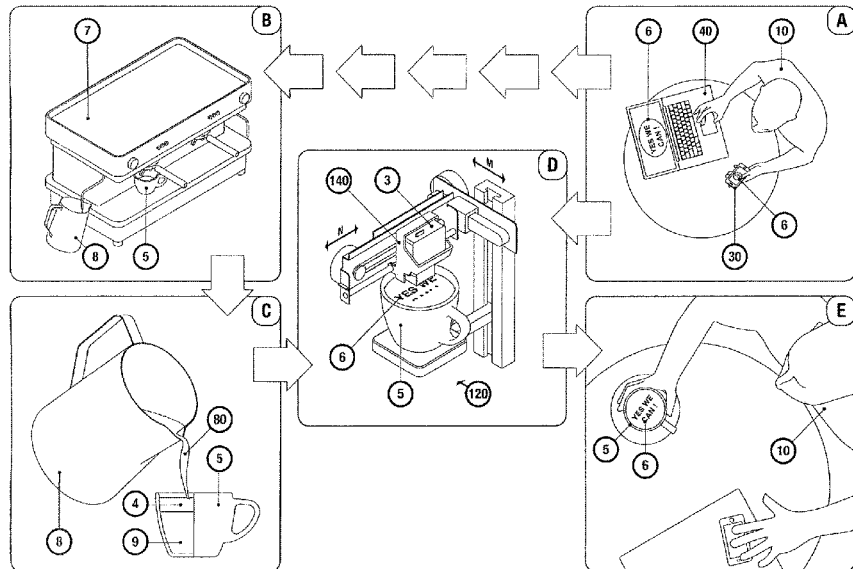
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*Primary Examiner* — Jenna A Watts  
(74) *Attorney, Agent, or Firm* — Marc Van Dyke;  
Momentum IP Group

(57) **ABSTRACT**  
The present invention discloses a beverage displaying a printed design image upon a foamed portion of the beverage. The invention further discloses a device and method for same. In the invention, an automated printer is used, comprising a movable printing head, loaded with an edible liquid ink, to print a design of interest upon the beverage foam. In some embodiments, the beverage is coffee and the liquid ink is a second coffee essence. The invention additionally discloses business methods comprising printing an advertisement upon a foamed portion of a beverage, or selling a beverage displaying a printed image upon a foamed portion of the beverage.

**11 Claims, 4 Drawing Sheets**





US010455857B2

(12) **United States Patent**  
**Eliav et al.**

(10) **Patent No.:** **US 10,455,857 B2**  
(45) **Date of Patent:** **Oct. 29, 2019**

(54) **METHOD FOR APPLYING A DESIGN TO A FOOD SUBSTRATE**

**67/0083** (2013.01); **C09D 11/32** (2013.01);  
**A23V 2002/00** (2013.01)

(71) Applicants: **Eyal Eliav**, Tel Aviv (IL); **Danny Lavie**, Ramet Hasharon (IL); **Shlomo Magdassi**, Jerusalem (IL)

(58) **Field of Classification Search**  
CPC ..... **A23P 20/15**; **A23P 20/18**; **C09D 11/32**  
See application file for complete search history.

(72) Inventors: **Eyal Eliav**, Tel Aviv (IL); **Danny Lavie**, Ramet Hasharon (IL); **Shlomo Magdassi**, Jerusalem (IL)

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(73) Assignees: **Ripples Ltd.**, Petach Tikva (IL); **Yissum Research Development Company of the Hebrew University of Jerusalem**, Jerusalem (IL)

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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.

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(21) Appl. No.: **14/509,080**

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(22) Filed: **Oct. 8, 2014**

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**Related U.S. Application Data**

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(63) Continuation of application No. 12/311,840, filed as application No. PCT/IL2007/001229 on Oct. 15, 2007, now abandoned.

*Primary Examiner* — Jenna A Watts  
(74) *Attorney, Agent, or Firm* — Marc Van Dyke

(30) **Foreign Application Priority Data**

(57) **ABSTRACT**

Oct. 15, 2006 (IL) ..... 178519

The present invention provides a liquid coloring composition comprising of a coffee solution or coffee extract and an ink vehicle. The coloring composition is suitable for use as an ink in a non-impact printing device, including an ink jet type printer. The composition is composed of edible components. The invention further provides a process for applying a design to a food substrate, comprising of providing a non-impact printing device, wherein the ink cartridge or external container contains the coloring composition of the invention.

(51) **Int. Cl.**  
**A23P 20/18** (2016.01)  
**C09B 61/00** (2006.01)  
**C09B 67/44** (2006.01)  
**C09D 11/32** (2014.01)  
**A23L 5/43** (2016.01)

(52) **U.S. Cl.**  
CPC ..... **A23P 20/18** (2016.08); **A23L 5/43** (2016.08); **C09B 61/00** (2013.01); **C09B**

**10 Claims, No Drawings**



US00D770830S

(12) **United States Design Patent**  
**Eliav et al.**

(10) **Patent No.:** **US D770,830 S**

(45) **Date of Patent:** **\*\* Nov. 8, 2016**

- (54) **PRINTING APPARATUS**
- (71) Applicant: **STEAM CC LTD.**, Kibbutz Einat (IL)
- (72) Inventors: **Eyal Eliav**, Tel Aviv (IL); **Danny Lavie**, Ramat Hasharon (IL); **Yosef Meshulam**, Kochav Yair (IL); **Eli Ireni**, Raanana (IL)
- (73) Assignee: **STEAM CC LTD.**, Petah Tikva (IL)
- (\*\*) Term: **14 Years**
- (21) Appl. No.: **29/512,634**
- (22) Filed: **Dec. 22, 2014**
- (51) **LOC (10) Cl.** ..... **07-01**
- (52) **U.S. Cl.**  
USPC ..... **D7/305**; D7/311; D7/306; D7/309;  
D18/50
- (58) **Field of Classification Search**  
USPC ..... D7/306-311, 305, 300, 313, 399, 398,  
D7/397; 99/279, 284, 290, 280, 299, 307,  
99/305, 295, 308, 309, 383, 304, 323.1,  
99/395, 300, 306; 222/23, 129.1; 62/395;  
D20/1; D23/207, 209; D15/89;  
D13/162, 164; D18/50, 53, 36;  
D14/420; 426/383, 519  
CPC ..... A47J 31/44; A47J 31/00; A47J 31/407;  
B67D 1/0041; B67D 3/00; B41J 2/175;  
A43G 9/322  
See application file for complete search history.

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*Primary Examiner* — Marianne Pandozzi  
(74) *Attorney, Agent, or Firm* — Marc Van Dyke

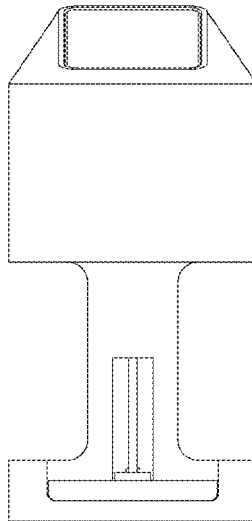
(57) **CLAIM**  
The ornamental design for a printing apparatus, as shown and described.

**DESCRIPTION**

FIG. 1 is a front view of a first embodiment of a printing apparatus showing the new design;  
FIG. 2 is a back view thereof;  
FIG. 3 is a right view thereof;  
FIG. 4 is a left view thereof;  
FIG. 5 is a top view thereof;  
FIG. 6 is a bottom view thereof; and,  
FIG. 7 is a perspective view thereof.

**1 Claim, 7 Drawing Sheets**

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US009731514B2

(12) **United States Patent**  
**Eliav et al.**

(10) **Patent No.:** **US 9,731,514 B2**

(45) **Date of Patent:** **Aug. 15, 2017**

(54) **METHOD AND APPARATUS FOR PRINTING ON A DRINK**

(71) Applicant: **STEAM CC LTD.**, Petah Tikva (IL)

(72) Inventors: **Eyal Eliav**, Tel Aviv (IL); **Yossi Meshulam**, Kochav Yair (IL); **Marc Van Dyke**, Beit Shemesh (IL)

(73) Assignee: **STEAM CC LTD.**, Petach Tikva (IL)

(\*) 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.: **15/191,465**

(22) Filed: **Jun. 23, 2016**

(65) **Prior Publication Data**

US 2017/0066252 A1 Mar. 9, 2017

**Related U.S. Application Data**

(60) Provisional application No. 62/183,695, filed on Jun. 23, 2015.

(51) **Int. Cl.**  
**B41J 3/407** (2006.01)  
**G06Q 30/06** (2012.01)  
(Continued)

(52) **U.S. Cl.**  
CPC ..... **B41J 3/4073** (2013.01); **B41J 2/01** (2013.01); **G06Q 30/0601** (2013.01);  
(Continued)

(58) **Field of Classification Search**  
CPC ..... B41J 2/01; B41J 3/4073; G06C 30/0601; G06C 30/0603; G06C 30/0631; G06C 30/0635; G06C 30/60; G07F 13/065  
See application file for complete search history.

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*Primary Examiner* — Anh T. N. Vo

(74) *Attorney, Agent, or Firm* — Marc Van Dyke

(57) **ABSTRACT**

A method and printing device of providing a customized drink and printing on a current drink through an ink-jet printer and computer programs can be configured to perform actions by instructions when executed by data processing apparatus. The printing device includes a mapped drink-code database specifying a map for a plurality of drink-printing codes between, a respective combination of a respective drink-printing-code-specific target image to be printed by the ink-jet printer, respective drink-printing-code-specific target drink property-data describing contents of a respective target-drink and container by database, analysis circuitry for computing a drink-match parameter between, property-data of the current drink sensed by the sensor(s), displaying a drink-property-heterogeneous menu including the plurality of drink-printing codes on the display-screen, receiving a user-selection of one of the drink codes to thereby user-specify, according to the mapped drink-code database, a target-image and target-drink property-data, and a device controller for responding to the user drink-code selection, in accordance with content of the mapped drink-code database, output of the sensor(s) and output of the analysis circuitry.

**5 Claims, 26 Drawing Sheets**

