



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

(10) **Patent No.:** **US 8,850,678 B2**  
(45) **Date of Patent:** **Oct. 7, 2014**

(54) **UNITARY MULTI-USE ALIGNMENT  
FIXTURE FOR SHOE PRODUCTION**

(2013.01); *A43D 8/20* (2013.01); *A43D 8/06*  
(2013.01); *D10B 2501/043* (2013.01); *C14B*  
*1/56* (2013.01)

(75) Inventors: **Melody Crisp**, Beaverton, OR (US);  
**Eric Graham**, Hillsboro, OR (US);  
**Jeremy Petty**, Portland, OR (US);  
**Trisha Kamakeeaina**, Beaverton, OR  
(US)

USPC ..... **29/271**  
(58) **Field of Classification Search**  
USPC ..... 29/271, 281.1, 278, 244; 269/289 R,  
269/302.1, 900, 903  
See application file for complete search history.

(73) Assignee: **NIKE, Inc.**, Beaverton, OR (US)

(56) **References Cited**

(\* ) Notice: Subject to any disclaimer, the term of this  
patent is extended or adjusted under 35  
U.S.C. 154(b) by 635 days.

U.S. PATENT DOCUMENTS

3,456,913 A 7/1969 Lutz  
4,072,461 A 2/1978 Pirk

(Continued)

(21) Appl. No.: **13/122,706**

(22) PCT Filed: **Sep. 28, 2009**

FOREIGN PATENT DOCUMENTS

CN 1432336 7/2003

(86) PCT No.: **PCT/US2009/058633**

§ 371 (c)(1),  
(2), (4) Date: **Jul. 29, 2011**

OTHER PUBLICATIONS

International Search Report and Written Opinion of Nov. 23, 2009 for  
Application No. PCT/US09/58633.

(87) PCT Pub. No.: **WO2010/037039**

PCT Pub. Date: **Apr. 1, 2010**

(Continued)

(65) **Prior Publication Data**

US 2012/0272463 A1 Nov. 1, 2012

*Primary Examiner* — Lee D Wilson

(74) *Attorney, Agent, or Firm* — Shook, Hardy & Bacon  
L.L.P.

**Related U.S. Application Data**

(60) Provisional application No. 61/194,300, filed on Sep.  
26, 2008.

(51) **Int. Cl.**

**B25B 27/14** (2006.01)  
**A43D 117/00** (2006.01)  
**A43D 8/20** (2006.01)  
**A43D 8/06** (2006.01)  
**C14B 1/56** (2006.01)

(57) **ABSTRACT**

A system for manufacturing shoes is provided that includes  
two or more pieces of equipment used in the customization  
and manufacturing of shoes and an alignment fixture that may  
engage with each piece of equipment by way of an alignment  
mounting member. The alignment fixture may secure to a  
portion of a shoe, such as an upper portion, wherein the shoe  
portion remains in a flat position, and in a fixed relationship to  
the alignment fixture, throughout the various processes per-  
formed by the pieces of equipment. These processes may  
include, for example, printing, laser, embroidery, forming,  
cutting, or the like.

(52) **U.S. Cl.**

CPC ..... *A43D 117/00* (2013.01); *A43D 2200/00*

**9 Claims, 11 Drawing Sheets**

