

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

(10) **Patent No.:** **US 10,935,870 B2**  
(45) **Date of Patent:** **\*Mar. 2, 2021**

(54) **DUAL-APERTURE ZOOM DIGITAL CAMERA WITH AUTOMATIC ADJUSTABLE TELE FIELD OF VIEW**

(58) **Field of Classification Search**  
CPC .... G03B 3/06; G03B 17/17; G03B 2217/002;  
H04N 5/232933; H04N 5/2258;  
(Continued)

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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.  
  
This patent is subject to a terminal disclaimer.

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(21) Appl. No.: **16/699,577**

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(22) Filed: **Nov. 30, 2019**

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(65) **Prior Publication Data**  
US 2020/0103726 A1 Apr. 2, 2020

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**Related U.S. Application Data**

(63) Continuation of application No. 15/525,059, filed as application No. PCT/IB2016/057366 on Dec. 5, 2016, now Pat. No. 10,578,948.  
(Continued)

(57) **ABSTRACT**

Digital camera comprising an upright Wide camera configured to provide a Wide image with a Wide image resolution and a folded Tele camera configured to provide a Tele image with a Tele image resolution higher than the Wide image resolution, the Wide and Tele cameras having respective Wide and Tele fields of view  $FOV_W$  and  $FOV_T$  and respective Wide and Tele image sensors, the digital camera further comprising a rotating OPFE operative to provide a folded optical path between an object or scene and the Tele image sensor, wherein rotation of the OPFE moves  $FOV_T$  relative to  $FOV_W$ . In some embodiments, a rectangular  $FOV_T$  is orthogonal to a rectangular  $FOV_W$ . When included in a host device having a user interface that displays  $FOV_T$  within

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(51) **Int. Cl.**  
**G03B 3/06** (2021.01)  
**G03B 17/17** (2021.01)  
(Continued)

(52) **U.S. Cl.**  
CPC ..... **G03B 3/06** (2013.01); **G02B 26/105** (2013.01); **G03B 17/17** (2013.01); **H04N 3/08** (2013.01);  
(Continued)

