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**WANG et al.**(10) **Pub. No.: US 2023/0232124 A1**(43) **Pub. Date: Jul. 20, 2023**(54) **HIGH-SPEED IMAGING APPARATUS AND IMAGING METHOD**(71) Applicant: **HERIOT-WATT UNIVERSITY,**  
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**ABSTRACT**

An imaging apparatus (100, 300) comprising: an optical encoder (150, 350) configured to provide an encoded image of an object (110) with at least one mask pattern; a rotating mirror (170) configured to receive and project said encoded image; and an image sensor (180) configured to receive said encoded; wherein, said rotating mirror (170) is operable such that a plurality of encoded images, which are individually projected by said rotating mirror (170) are spatially shifted as a result of rotation of said rotating mirror (170), are swept across said image sensor (180).

