



US006382072B1

(12) **United States Patent**
Cipolla

(10) **Patent No.:** **US 6,382,072 B1**

(45) **Date of Patent:** **May 7, 2002**

- (54) **SUPPORT AND ALIGNMENT ASSEMBLY**
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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.: **09/968,397**
- (22) Filed: **Oct. 1, 2001**

Related U.S. Application Data

- (62) Division of application No. 09/090,222, filed on May 22, 1998, now Pat. No. 6,330,866.
- (51) **Int. Cl.**⁷ **F41F 3/04**
- (52) **U.S. Cl.** **89/1.815; 89/1.816; 89/1.802; 114/238**
- (58) **Field of Search** **89/1.816, 1.815; 114/238**

(57) **ABSTRACT**

A support and alignment assembly for use on a moving vehicle having a fixed receiver mounted thereon. The assembly comprises a support assembly including (i) a loading tray for supporting a missile, (ii) a storage structure for supporting the loading tray, and (iii) mounts resiliently connecting the storage structure to the vehicle. The missile support and alignment assembly further comprises an alignment assembly including (i) indicator means on the launch tube, (ii) a sensor on the tray for reading a position of the indicator means, the sensor being adapted to send a signal indicative of position of the tray, and thereby a missile on the tray, relative to the indicator means, and thereby the launch tube, (iii) a control device adapted to receive the sensor signals and compute movement of the tray necessary to align the missile with the launch tube, the control device being adapted to send corrective signals, and (iv) alignment motors mounted on the storage structure for receiving the control device signals and for moving the tray relative to the launch tube to bring the missile in the tray into alignment with the launch tube.

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12 Claims, 1 Drawing Sheet

