



US011858579B2

(12) **United States Patent**  
**Kelly**

(10) **Patent No.:** **US 11,858,579 B2**  
(45) **Date of Patent:** **Jan. 2, 2024**

(71) Applicant: **Michael John Kelly**, Ottawa (CA)  
(72) Inventor: **Michael John Kelly**, Ottawa (CA)  
(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 72 days.

4,647,165 A \* 3/1987 Lewis ..... 351/50 G02C 9/02  
4,798,454 A \* 1/1989 Hyun ..... 351/59 G02C 9/02  
4,934,806 A \* 6/1990 Berke ..... 351/158 G02C 7/14  
5,076,701 A 12/1991 Greenlaw ..... 351/50  
6,007,198 A \* 12/1999 Burton ..... G02C 7/14  
6,052,832 A \* 4/2000 Crompton ..... A42B 3/0426 2/DIG. 8  
6,065,832 A \* 5/2000 Fuziak ..... G02C 7/14 351/50  
6,247,824 B1 \* 6/2001 Berke ..... G02B 27/0176 2/209.14  
6,595,635 B2 \* 7/2003 Schubert ..... G02B 7/002 24/3.12  
8,156,575 B2 4/2012 Tronvig  
9,723,886 B2 8/2017 Burse  
(Continued)

(21) Appl. No.: **17/517,631**  
(22) Filed: **Nov. 2, 2021**

(65) **Prior Publication Data**  
US 2022/0135164 A1 May 5, 2022

**Related U.S. Application Data**  
(60) Provisional application No. 63/109,321, filed on Nov. 3, 2020.

(51) **Int. Cl.**  
**B62J 29/00** (2006.01)  
**G02B 7/182** (2021.01)

*Primary Examiner* — Ricky D Shafer  
(74) *Attorney, Agent, or Firm* — Stephen J. Scribner

(57) **ABSTRACT**

(56)

**References Cited**

U.S. PATENT DOCUMENTS

2006/0026741 A1\* 2/2006 Lang-Ree ..... A42B 3/04  
2/209.14  
2007/0091480 A1 4/2007 Varnes  
2018/0168266 A1\* 6/2018 Windover ..... A42B 3/0426

\* cited by examiner

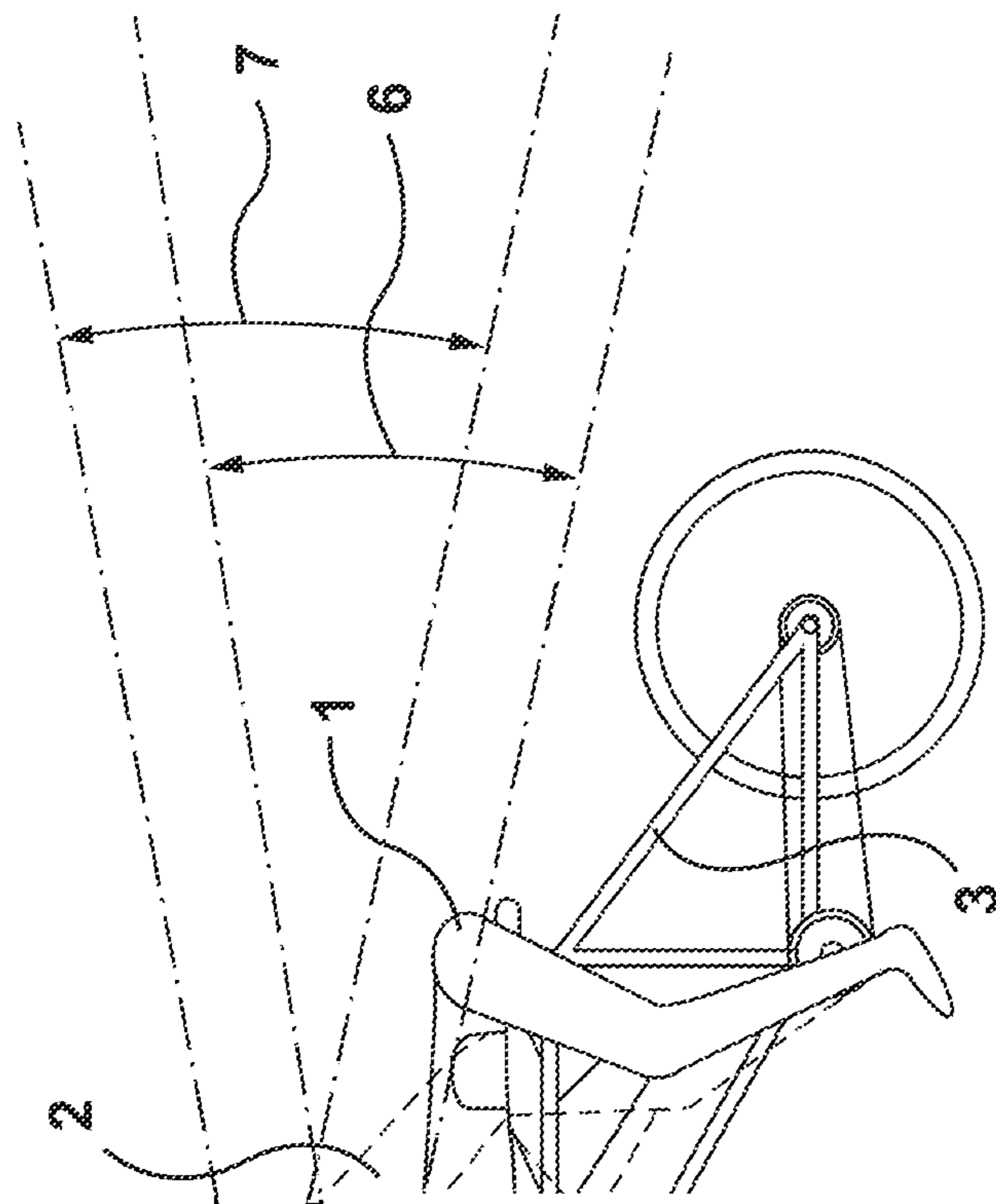
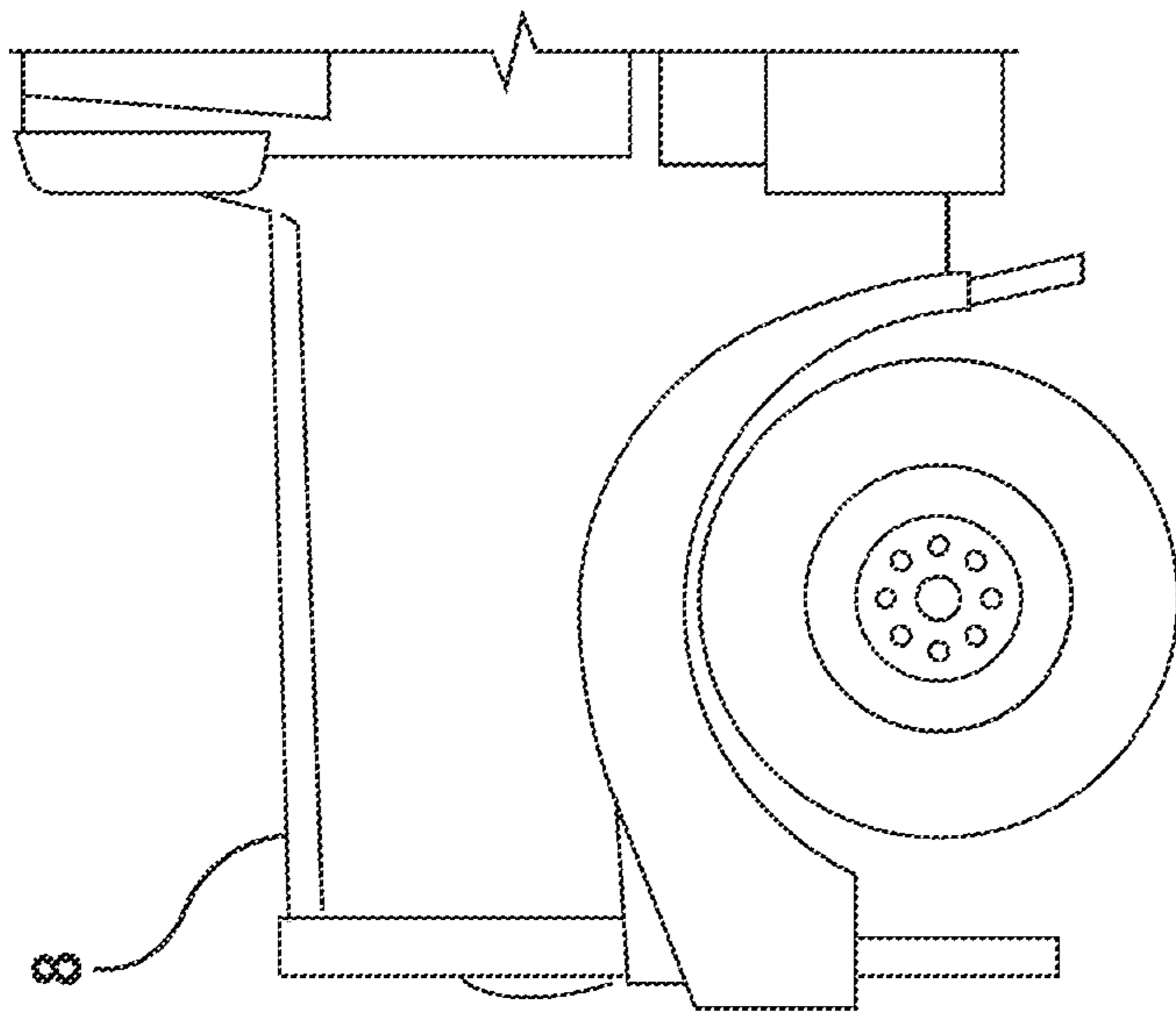
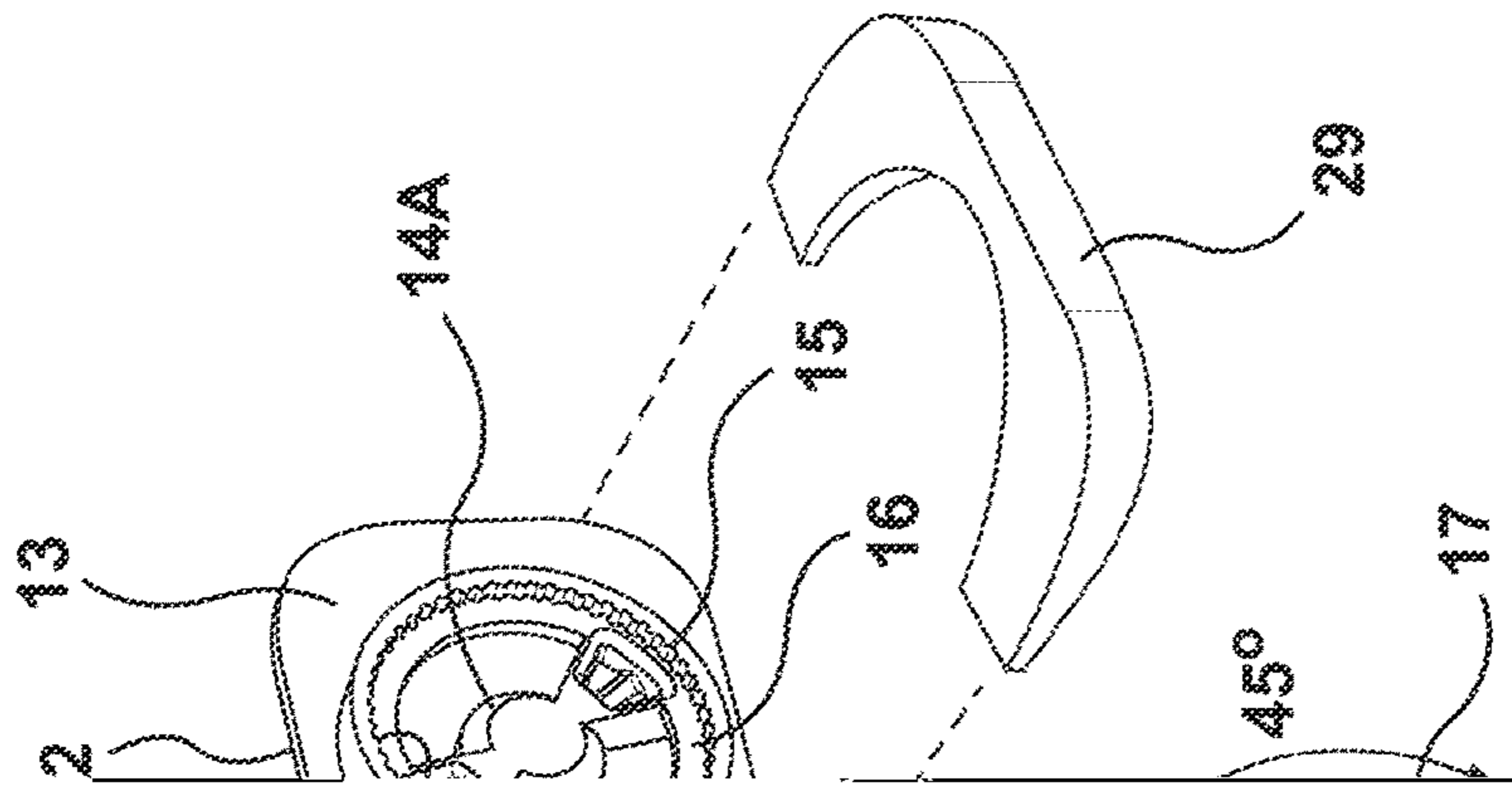
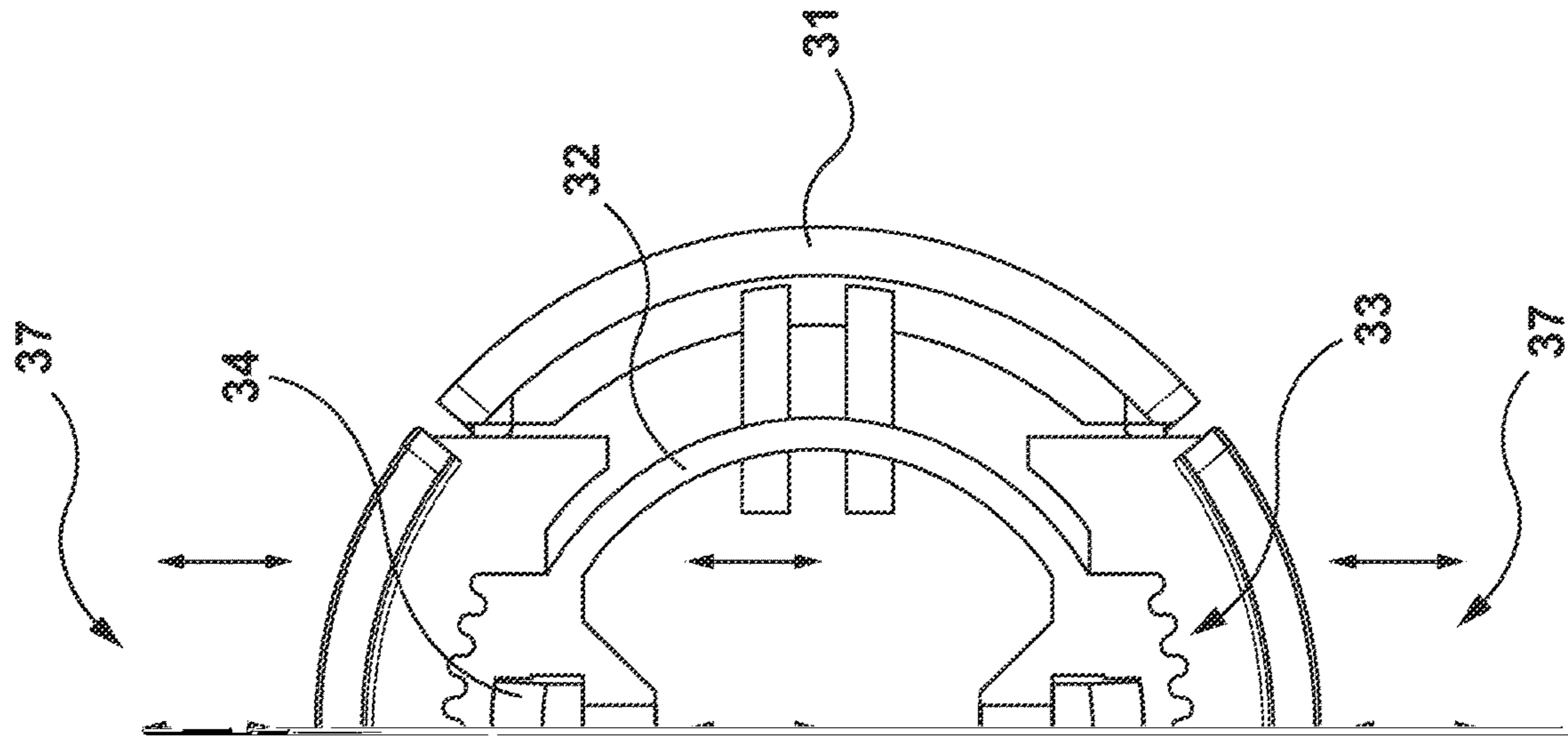


FIG. 1





FIELD

The present disclosure relates to a device and method for bicycle safety. More specifically, the disclosure relates to a

in the prior art. Examples of such known devices of this type are those shown in U.S. Pat. No. 5,076,701 to Greenlaw; U.S. Pat. No. 9,723,886 B2 to Burse; U.S. Pat, No. 8,156, 575 to Tronvig; and U.S. Pat. Application 20070091480 to Varnes.

3

By a further aspect of the present invention, a method is provided for presenting a plurality of viewing angles to the rear of a cyclist, the method including mounting a mirror device on a helmet or eye glasses, the mirror device comprising a first and second mirror each rotatably attached to a corresponding first and second mounting arm, rotating the first mirror to view a first rear-view angle for the cyclist in a low riding position, rotating the second mirror to view a second rear-view angle for the cyclist in an upright riding

4

Referring to FIG. 1, there is shown a perspective view of a preferred embodiment of a rider 1, 2 on a standard two-wheel bicycle 3 with the rider being in a low aerodynamic profile 1 and utilizing the top mirror 4 to view rear approaching vehicles in the visual range 6. With a rider in the high standing profile 2 and utilizing the bottom mirror 5, the rider is able to view rear approaching vehicles 8 in the visual range 7.

Referring to FIG. 2, there is shown a perspective view of

5

bracket guide 34 moves within the inner ring cavity of 16. The extension arm 19 and locking screw 20 are also shown, in reverse view as provided in FIG. 2.

The two adjustable mirror bodies 25A, 25B are mounted

6

What is claimed is:

1. A bicycle mirror device, the device comprising:  
first and second mounting arms adapted to be attached to a helmet or eye glasses through an extension arm and a quick-connect mounting mechanism;