



US00D704227S

(12) **United States Design Patent**  
**Chino et al.**

(10) **Patent No.:** **US D704,227 S**

(45) **Date of Patent:** **\*\* May 6, 2014**

(54) **FLUID-MIXING DEVICE FOR A CATALYTIC CONVERTER**

(71) Applicant: **Komatsu Ltd.**, Tokyo (JP)  
(72) Inventors: **Hiroyuki Chino**, Oyama (JP); **Hidehiko Kobayashi**, Oyama (JP); **Tatsuya Watahiki**, Oyama (JP)

(73) Assignee: **Komatsu Ltd.**, Minato-ku, Tokyo (JP)

(\*\*) Term: **14 Years**

(21) Appl. No.: **29/466,882**

(22) Filed: **Sep. 12, 2013**

(30) **Foreign Application Priority Data**

Jun. 18, 2013 (JP) ..... 2013-013690

(51) **LOC (10) Cl.** ..... **15-01**

(52) **U.S. Cl.**  
USPC ..... **D15/5**

(58) **Field of Classification Search**  
USPC ..... D15/1-5; 422/179, 177, 211, 213;  
136/253; 60/302, 299, 229; D12/400,  
D12/194

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2009/0000282 A1\* 1/2009 Gruber ..... 60/299  
2010/0058745 A1\* 3/2010 Kim ..... 60/297  
2011/0283687 A1\* 11/2011 Dobler et al. .... 60/299  
2013/0098007 A1\* 4/2013 Waggoner et al. .... 60/299

\* cited by examiner

*Primary Examiner* — T. Chase Nelson

*Assistant Examiner* — Ania Aman

(74) *Attorney, Agent, or Firm* — Patterson Thuent Pedersen, P.A.

(57) **CLAIM**

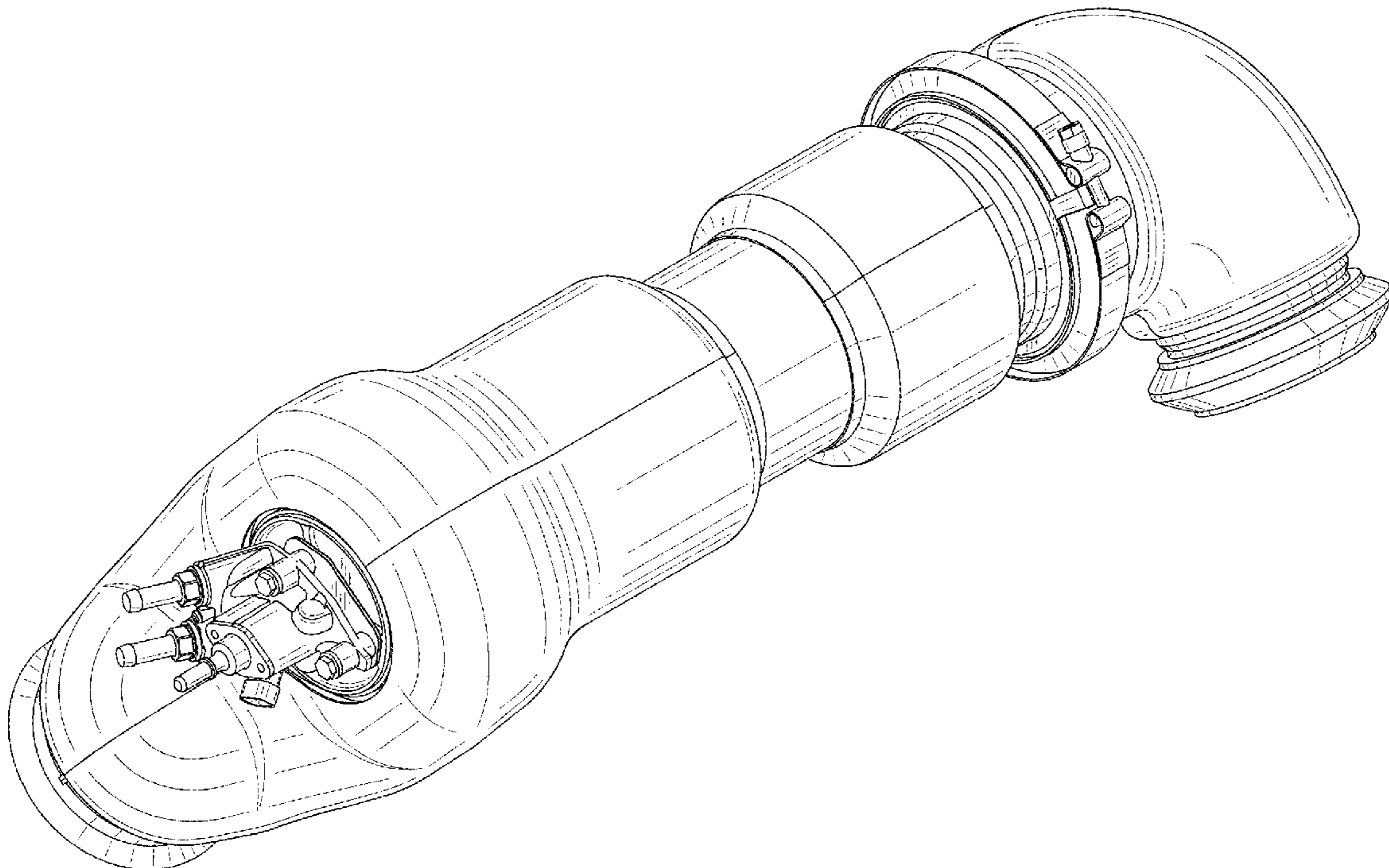
We claim the ornamental design for a fluid-mixing device for a catalytic converter, as shown and described.

**DESCRIPTION**

FIG. 1 is a front perspective view of a fluid-mixing device for a catalytic converter showing our new design;  
FIG. 2 is a rear perspective view thereof;  
FIG. 3 is a front view thereof;  
FIG. 4 is a rear view thereof;  
FIG. 5 is a top plan view thereof;  
FIG. 6 is a bottom plan view thereof;  
FIG. 7 is a right side view thereof;  
FIG. 8 is a left side view thereof; and,  
FIG. 9 is a perspective view showing the article in use.

The features shown in broken lines in the drawings depict environmental subject matter only and form no part of the claimed design.

**1 Claim, 9 Drawing Sheets**



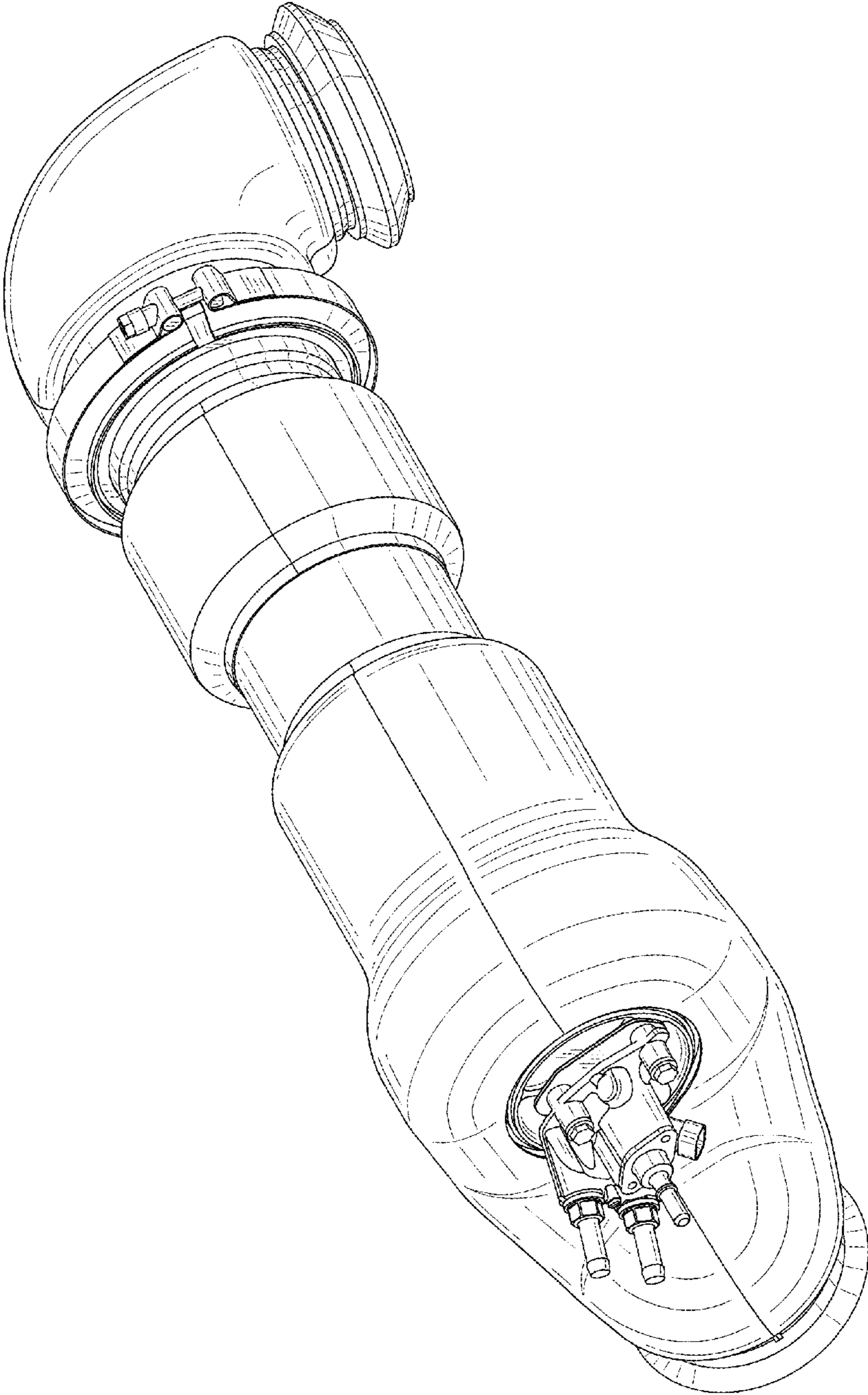


Fig. 1

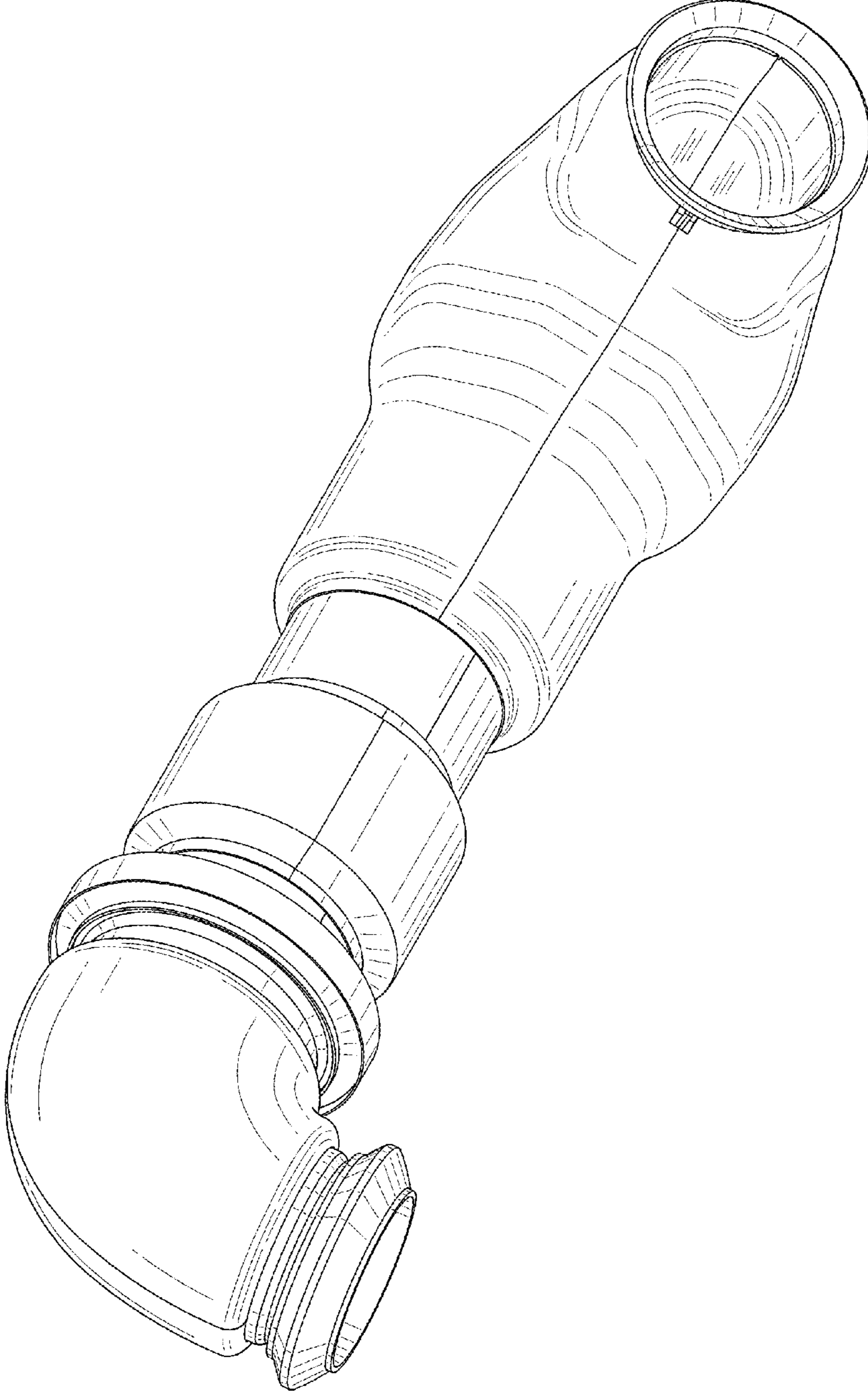


Fig. 2



Fig. 3

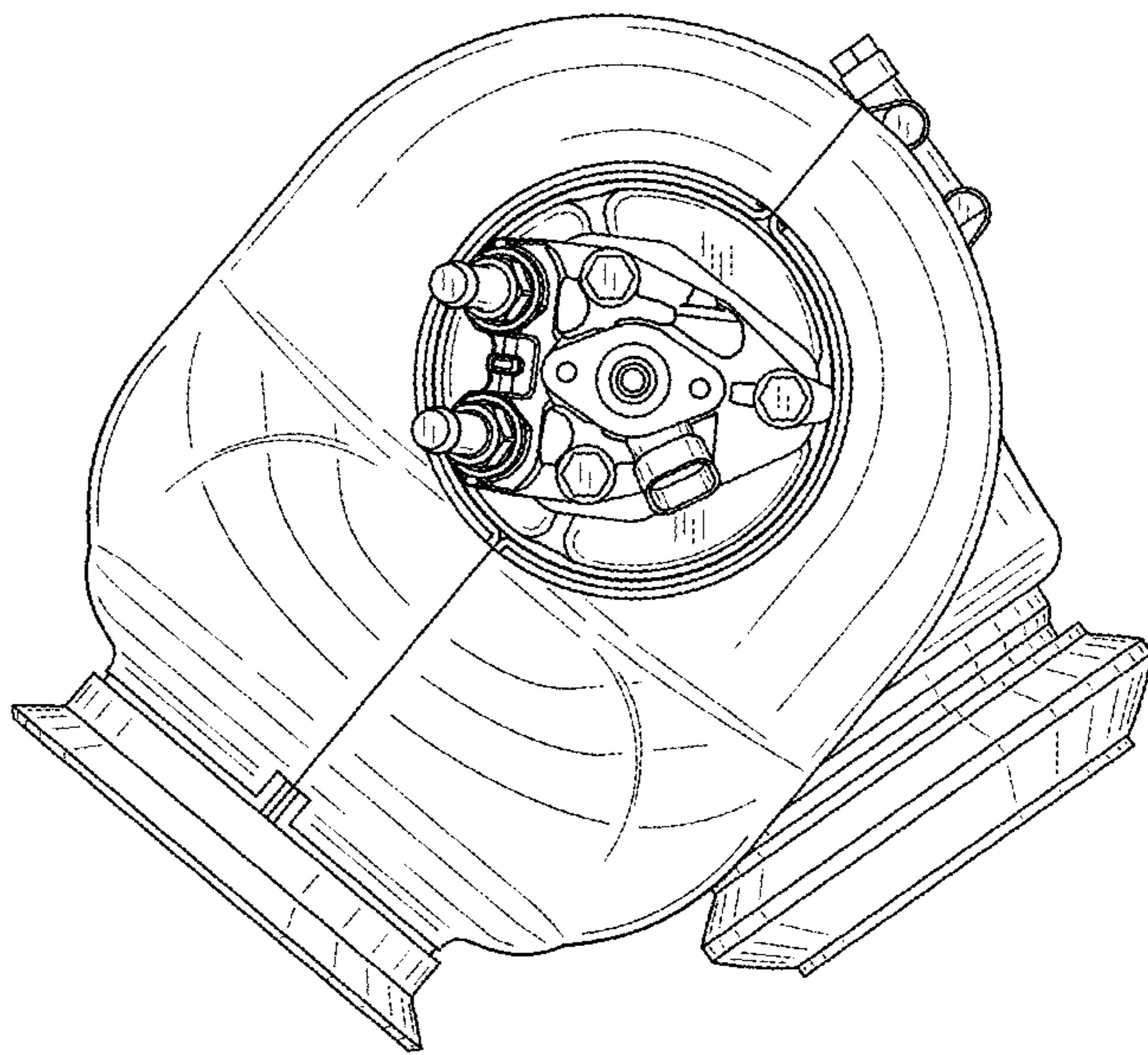


Fig. 4

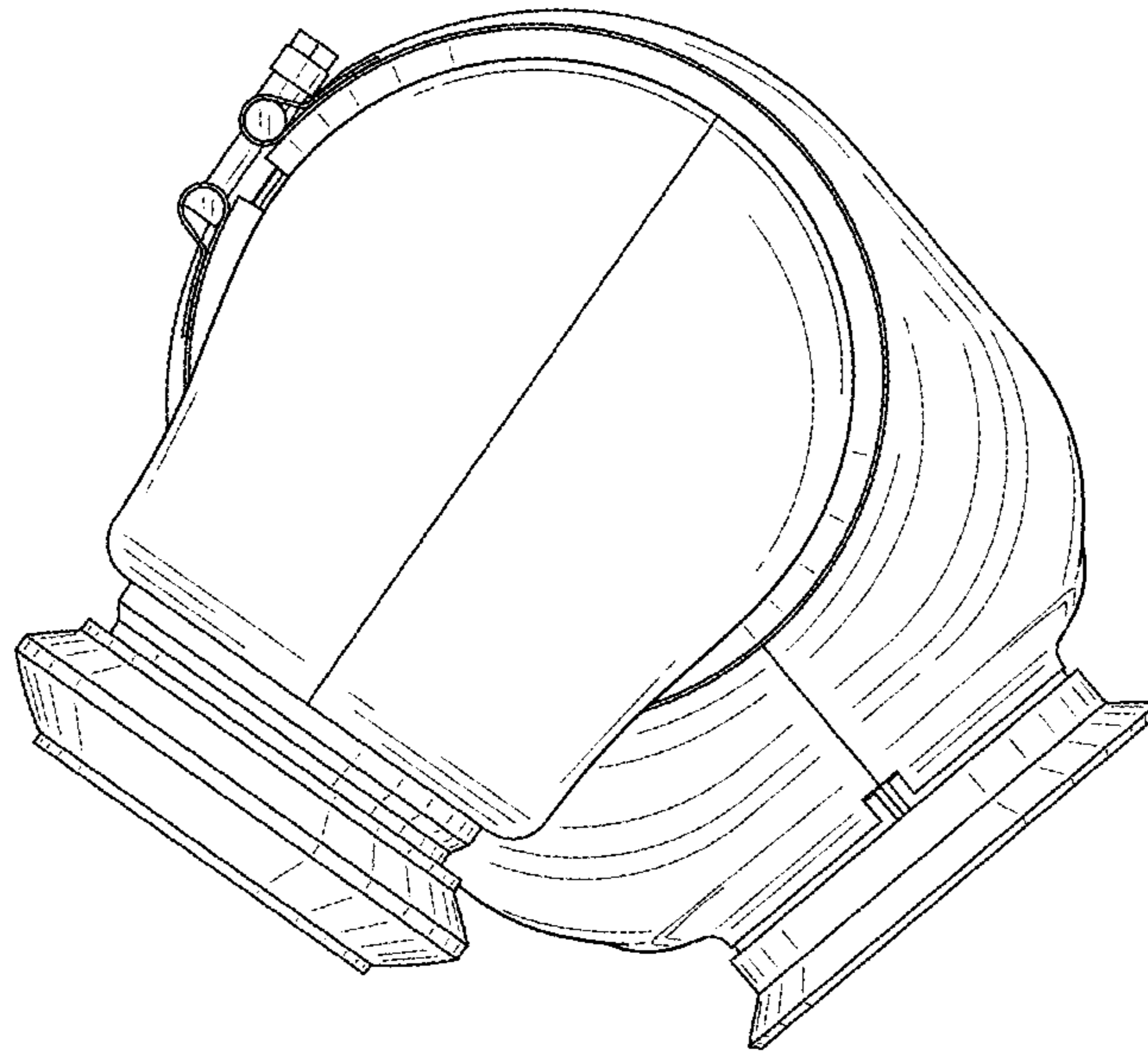


Fig. 5

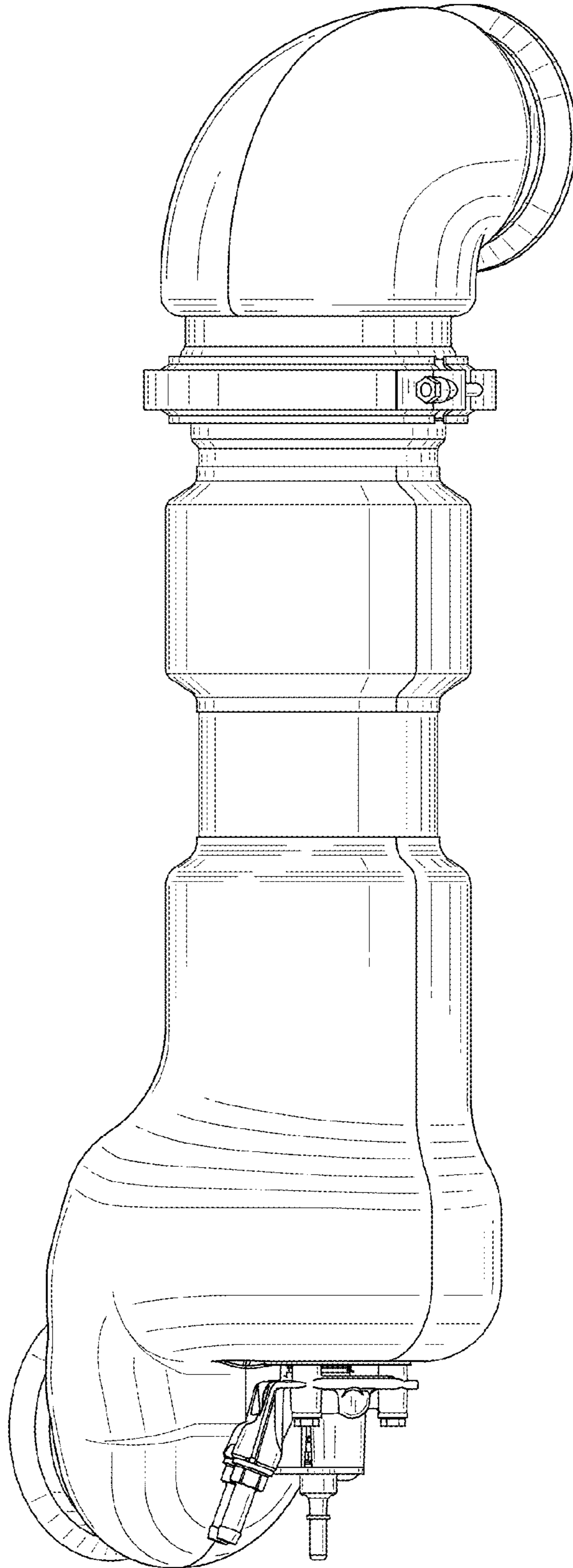
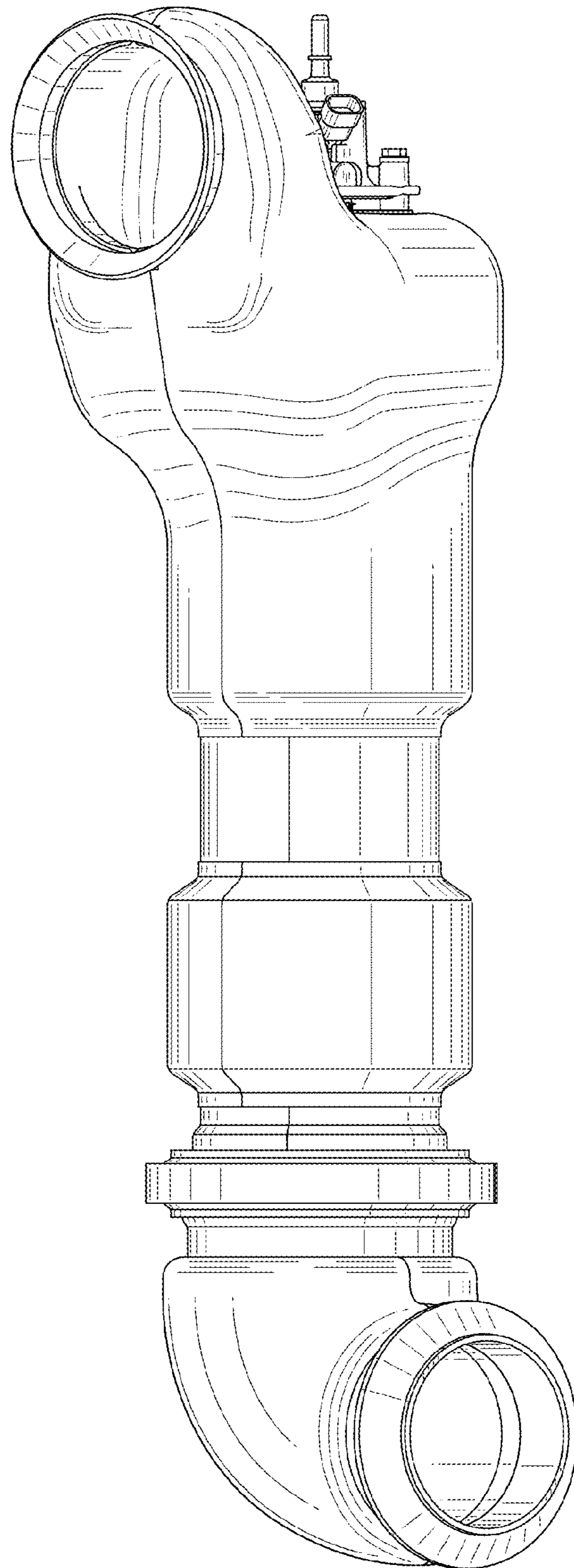


Fig. 6



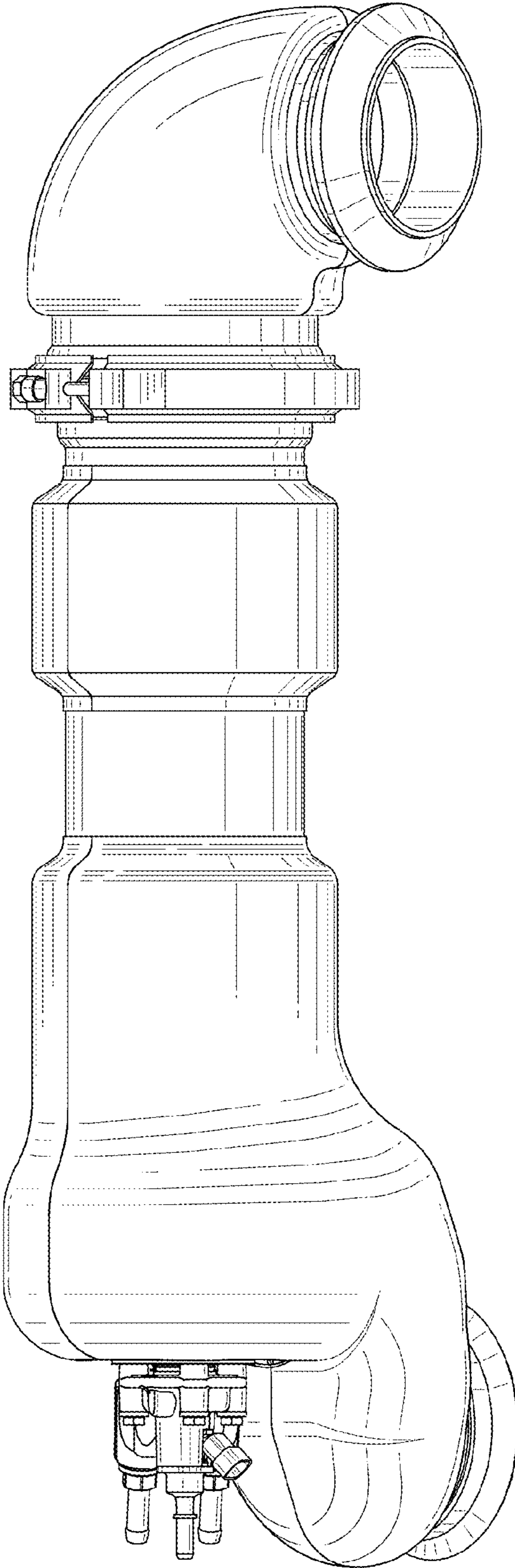


Fig. 7



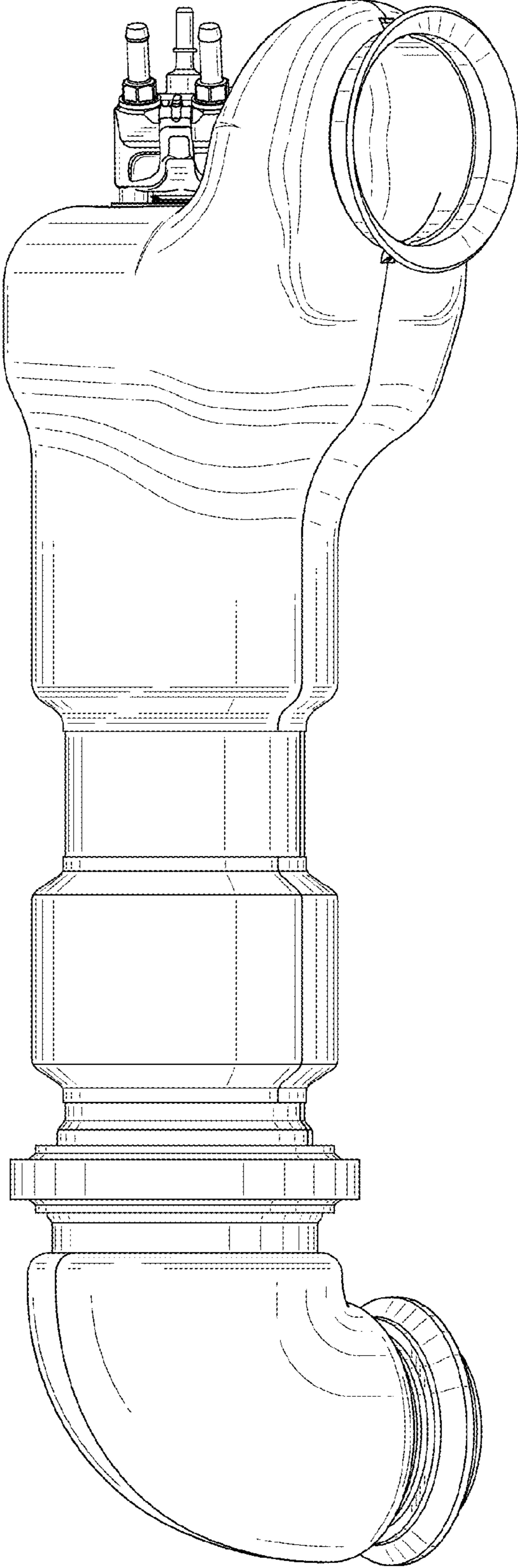


Fig. 8

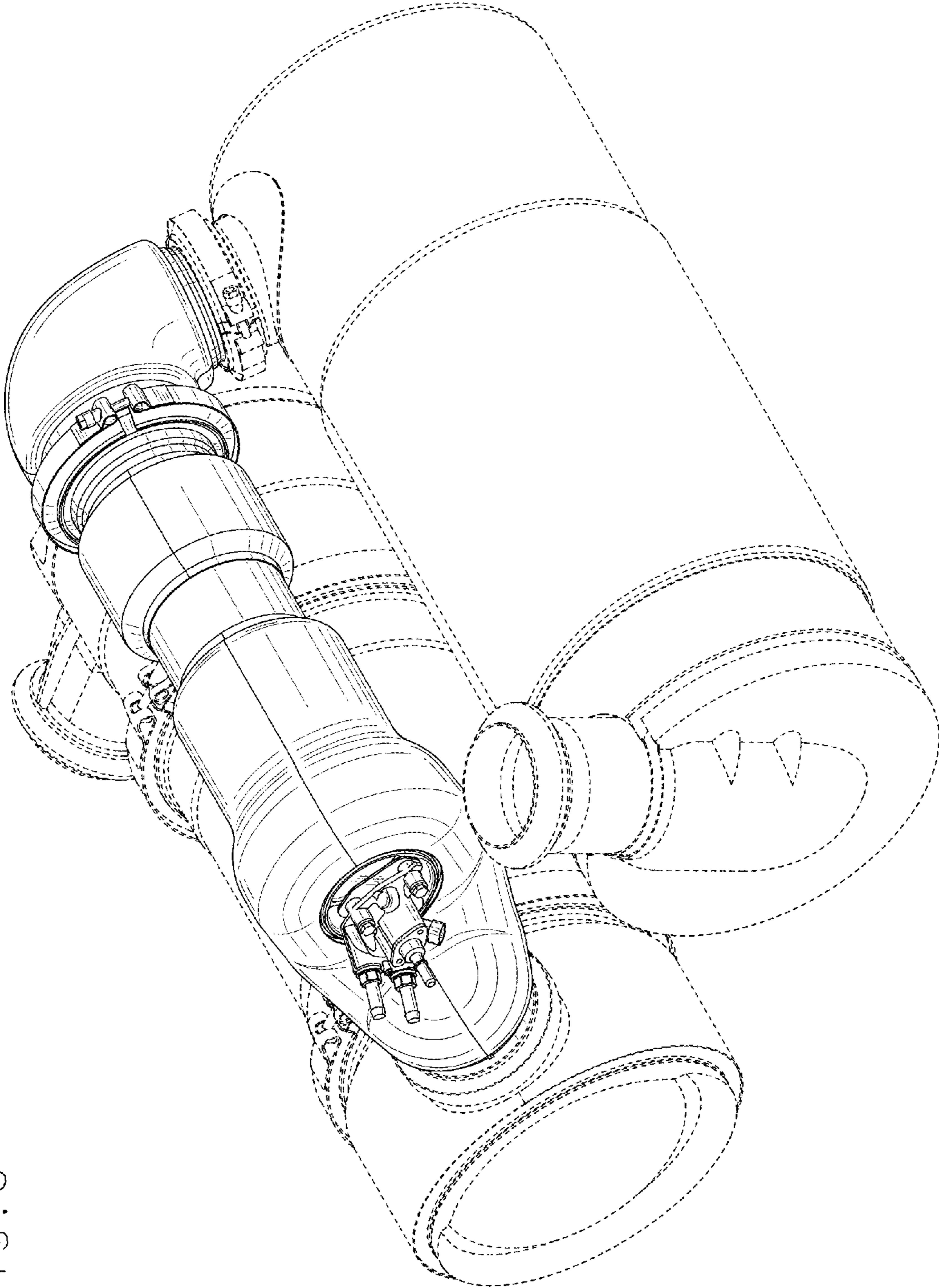


Fig. 9