



US00D839795S

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

(10) **Patent No.:** **US D839,795 S**

(45) **Date of Patent:** **** Feb. 5, 2019**

(54) **TIE ROD END**

(71) Applicant: **Stemco Products, Inc.**, Charlotte, NC (US)

(72) Inventors: **William Chirrey**, Woodstock (CA);
Paul Dolan, Clio, MI (US); **Altan Uğurkan**, Istanbul (TR)

(73) Assignee: **Stemco Products, Inc.**, Charlotte, NC (US)

(**) Term: **15 Years**

(21) Appl. No.: **29/586,401**

(22) Filed: **Dec. 2, 2016**

(51) **LOC (11) Cl.** **12-16**

(52) **U.S. Cl.**
USPC **D12/160**

(58) **Field of Classification Search**
USPC D12/159-160
CPC B60G 11/22; B60G 2204/125; B60G 2202/143; B60G 2202/142; B60G 2204/41; B60G 2202/14; B60G 2206/73; B60W 10/20; B60W 2540/18; B62D 1/046; B62D 1/185; B62D 1/195; B62D 1/187

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,615,638 A * 10/1986 Ito F16C 11/0638 384/203
5,613,792 A * 3/1997 Terada F16C 7/00 403/131

D524,149 S * 7/2006 Kim D8/397
D566,630 S * 4/2008 Ortiz D12/159
D624,855 S * 10/2010 Hsu D12/159
D672,694 S * 12/2012 Cooper, Sr. D12/159
D766,142 S * 9/2016 Renshaw D12/159
D784,801 S * 4/2017 Nishide D8/400
D807,164 S * 1/2018 Nishide D8/400
9,909,616 B2 * 3/2018 Yokoi F16C 11/0638
2009/0173033 A1 * 7/2009 Baxter, Jr. A63J 1/00 52/646
2018/0087564 A1 * 3/2018 Nishide F16C 11/06

* cited by examiner

Primary Examiner — Michael A. Pratt

(74) *Attorney, Agent, or Firm* — Perkins Coie LLP

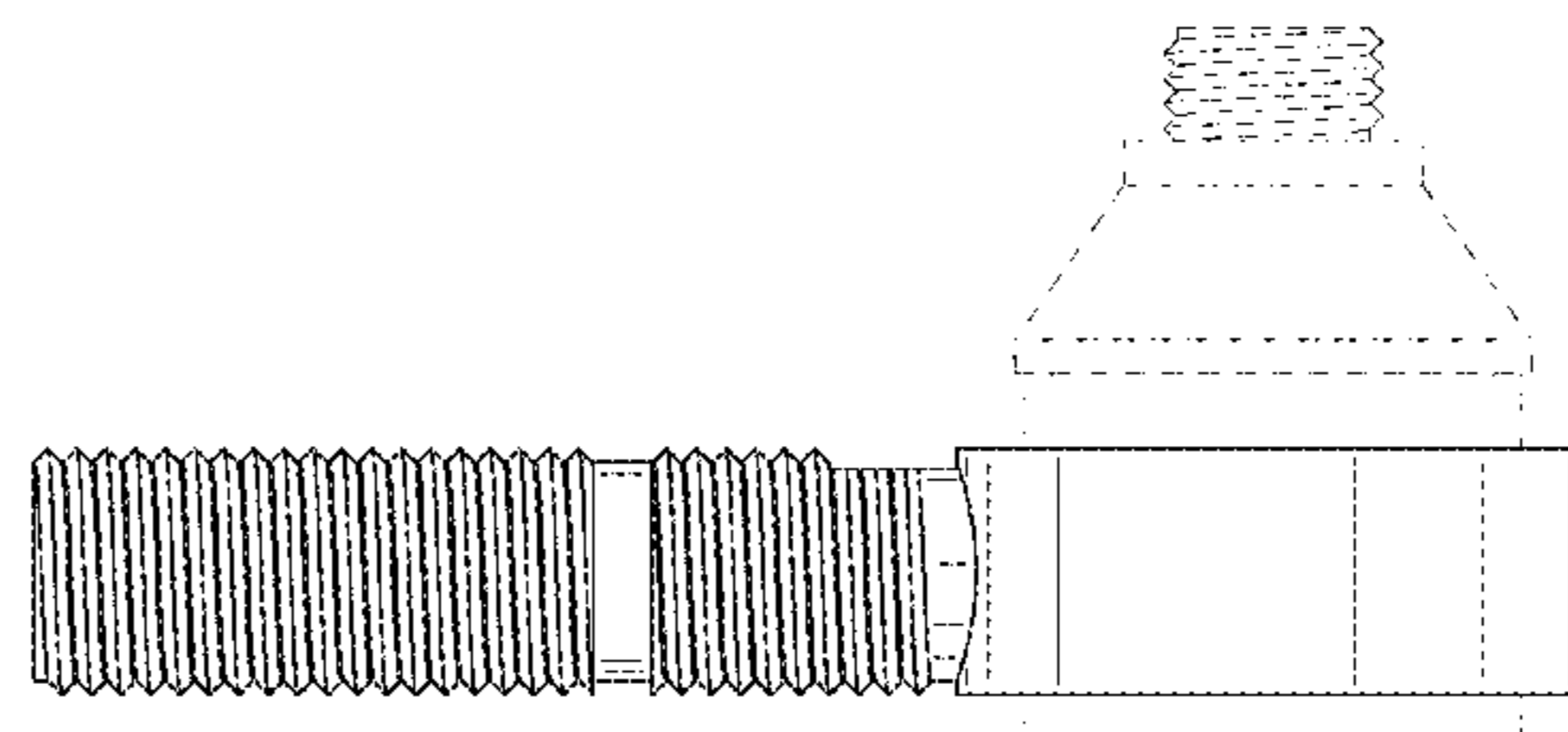
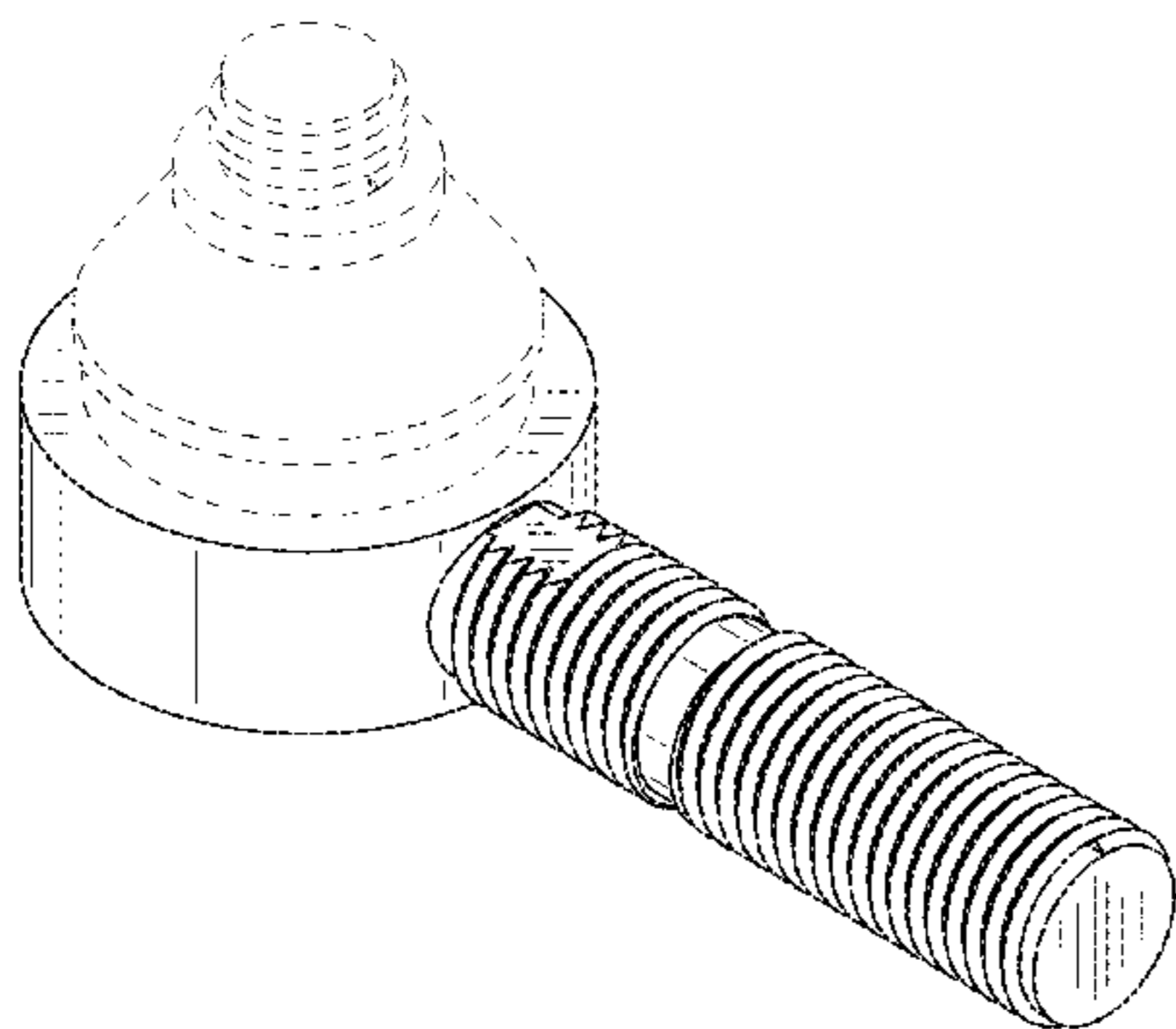
(57) **CLAIM**

The ornamental design for a tie rod end, as shown.

DESCRIPTION

FIG. 1 is a perspective view of a tie rod end.
FIG. 2 is a front plan view thereof.
FIG. 3 is a back plan view thereof.
FIG. 4 is a right view thereof.
FIG. 5 is a left view thereof.
FIG. 6 is a top view thereof; and,
FIG. 7 is a bottom view thereof.
The broken lines form no part of the claimed design.

1 Claim, 5 Drawing Sheets



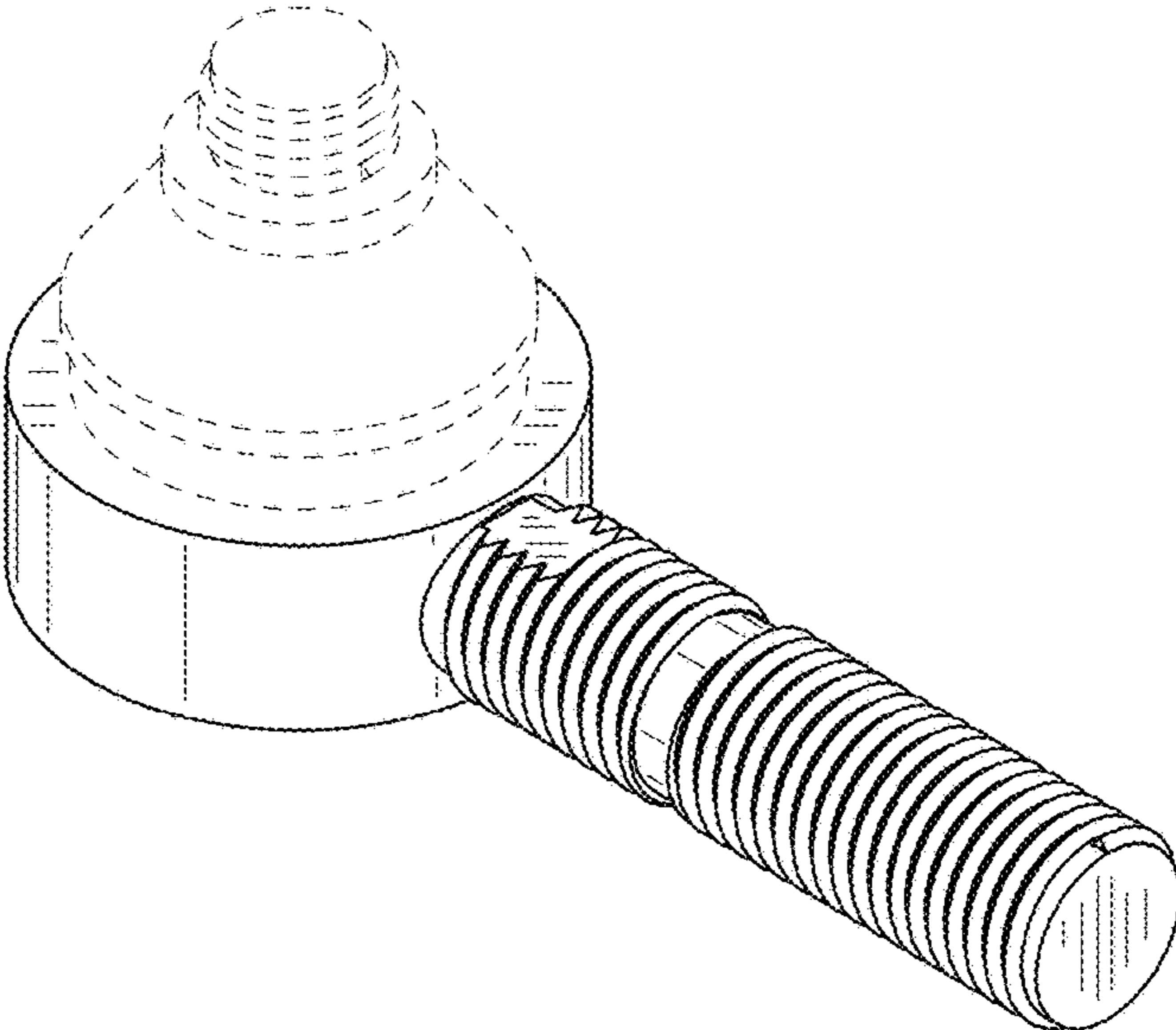


FIG. 1

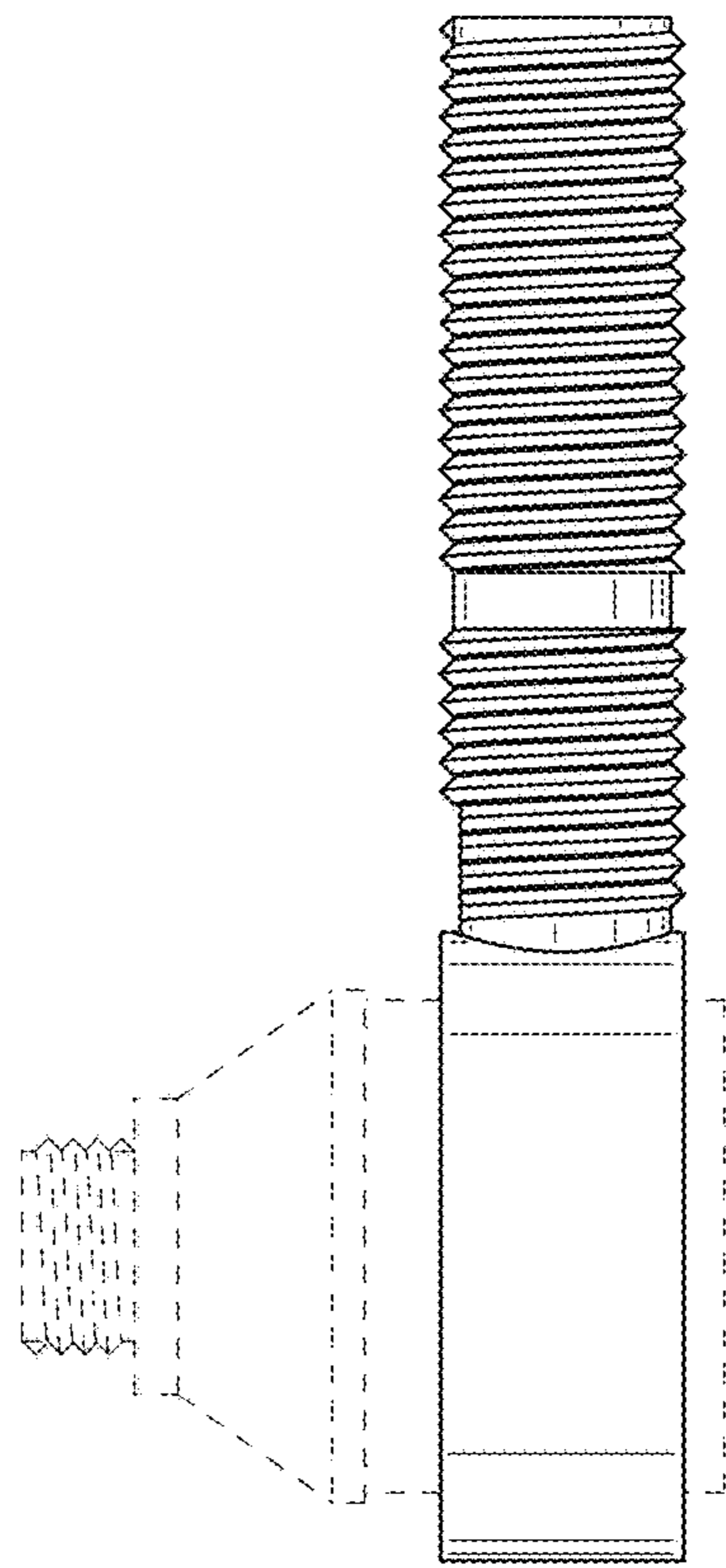


FIG. 2

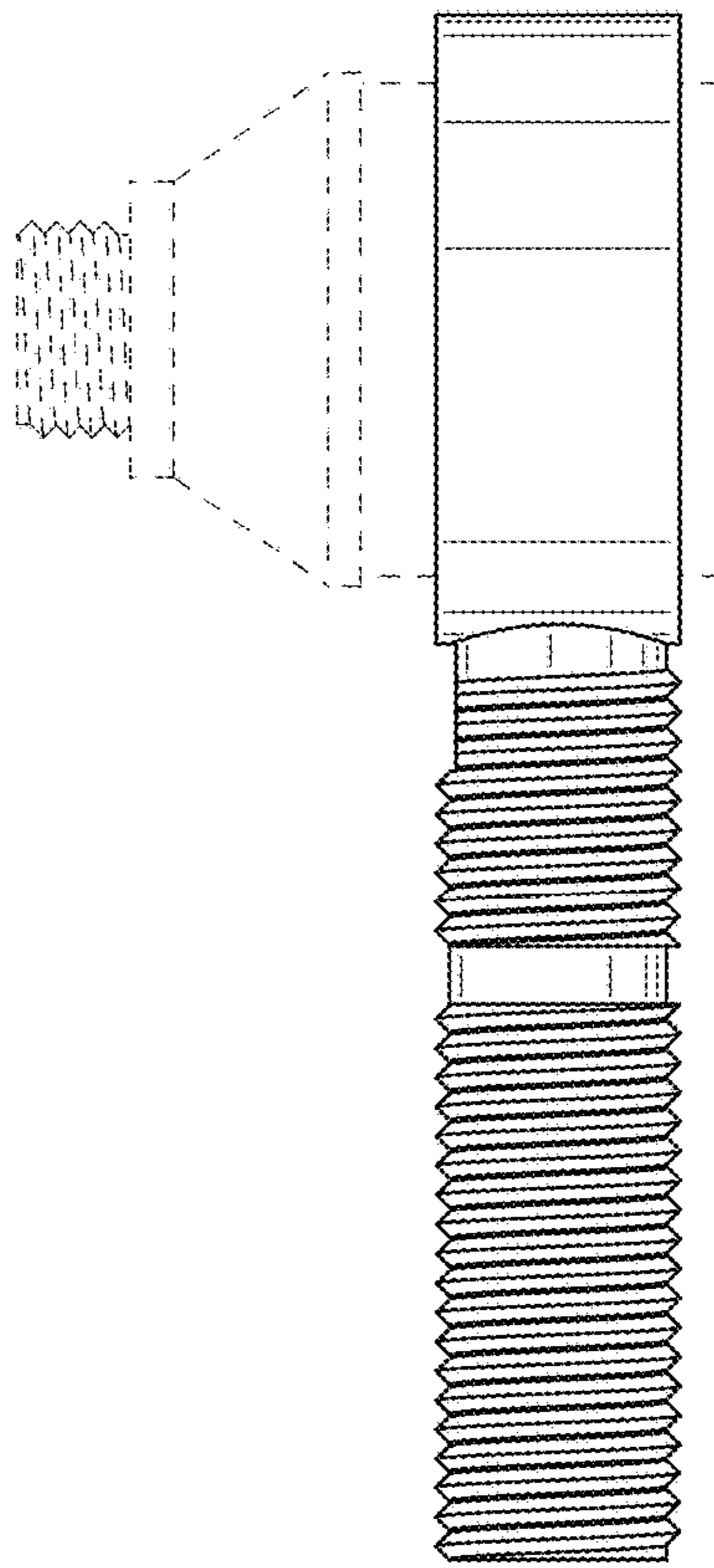


FIG. 3

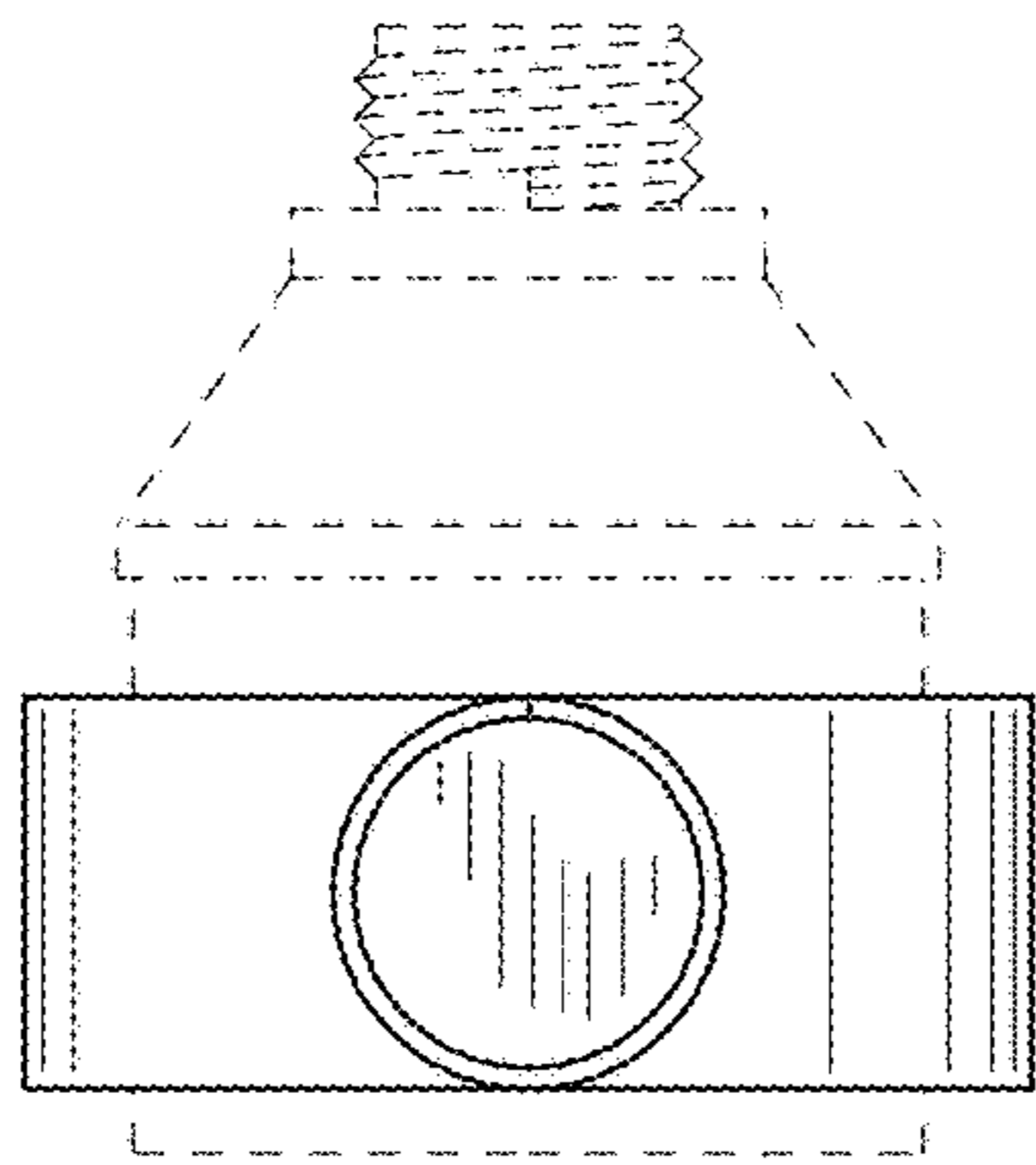


FIG. 4

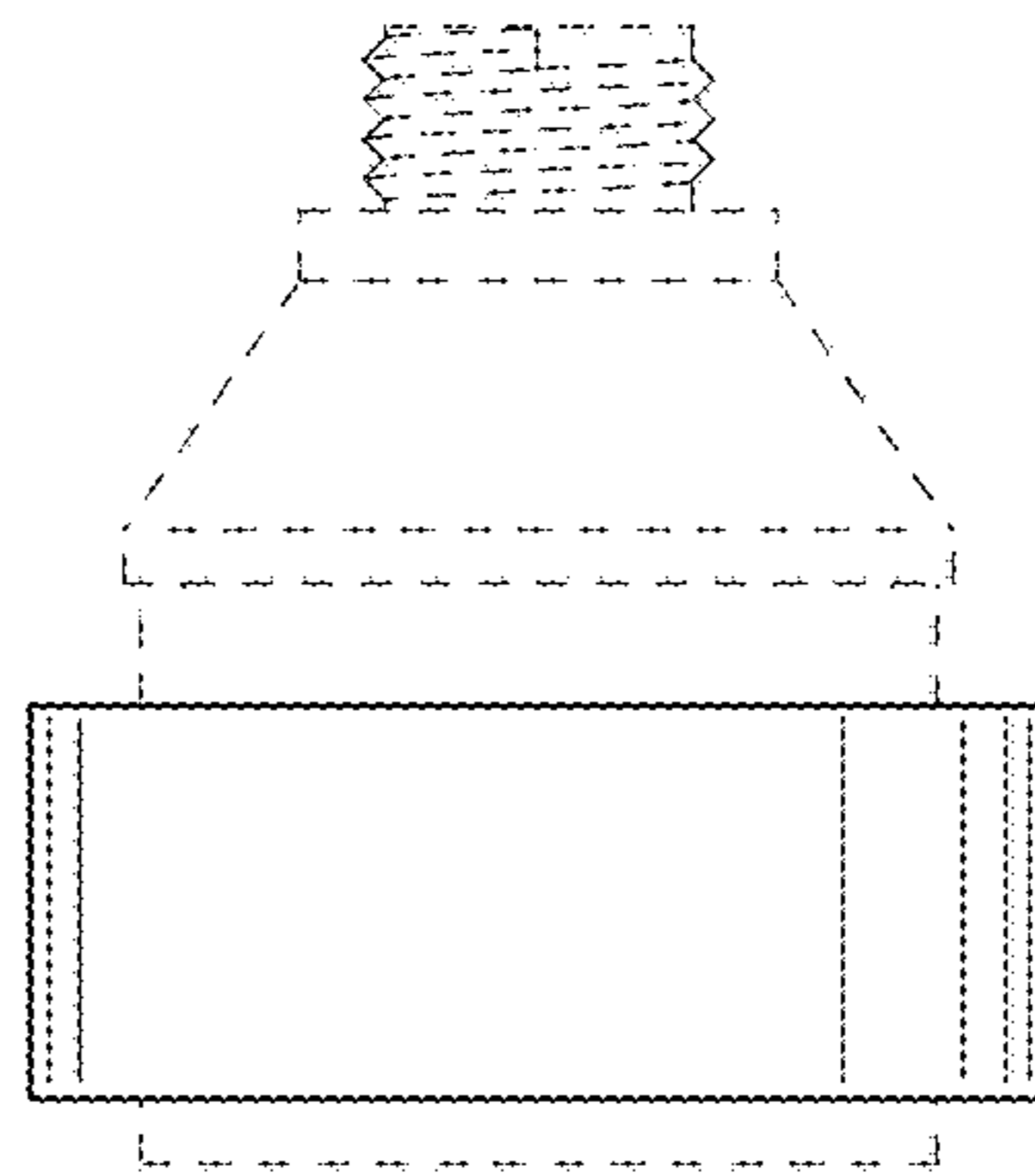


FIG. 5

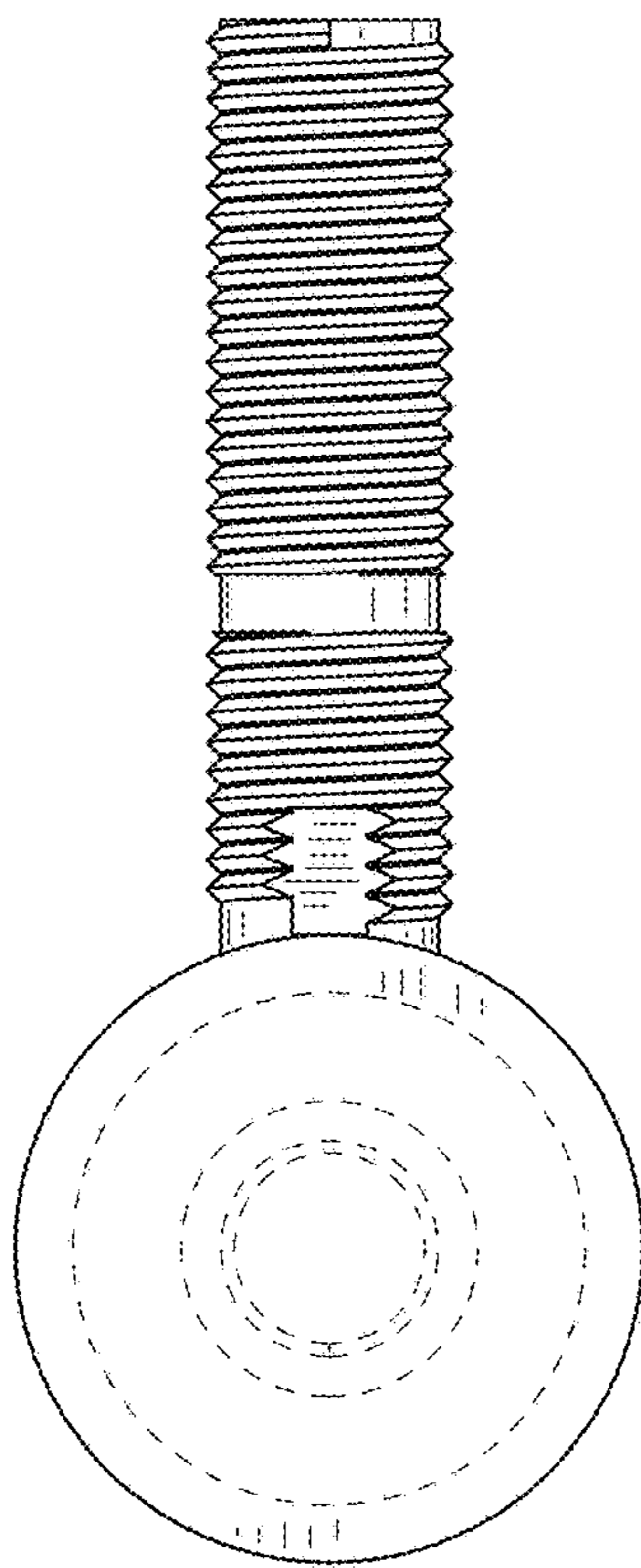


FIG. 6

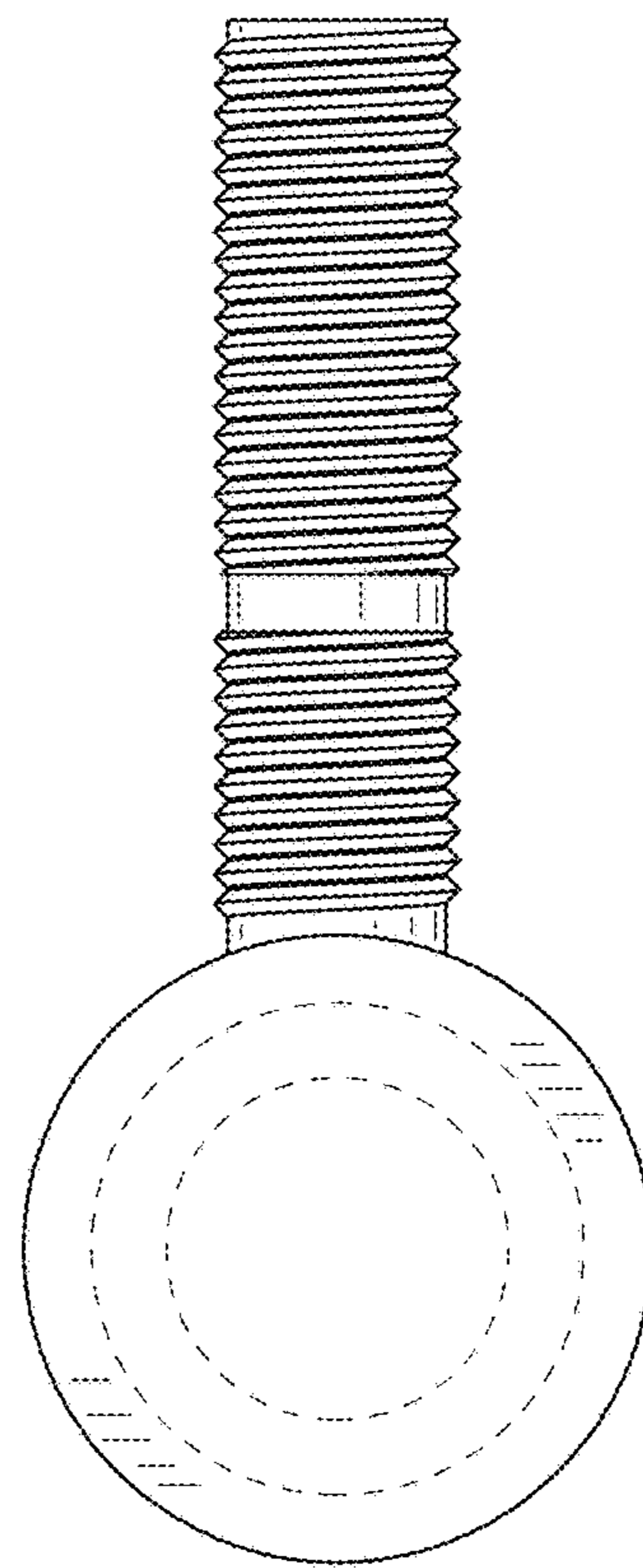


FIG. 7