



US0D1042106S

(12) **United States Design Patent** (10) **Patent No.: US D1,042,106 S**
Yang (45) **Date of Patent: ** Sep. 17, 2024**

(54) **HELICAL PILE**

(71) Applicant: **Daiye Screw Pile LTD.**, Taipei (TW)

(72) Inventor: **Jen Te Yang**, Taipei (TW)

(73) Assignee: **DAIYE SCREW PILE LTD.**, Taipei (TW)

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

(21) Appl. No.: **29/839,786**

(22) Filed: **May 24, 2022**

(51) **LOC (14) Cl.** **08-08**

(52) **U.S. Cl.**
USPC **D8/387**

(58) **Field of Classification Search**
USPC D25/102, 61; D8/355, 349, 354, 387,
D8/385, 499, 315, 317, 356, 378;
D11/222, 226; D17/20; D23/249;
D13/102

CPC E02D 5/02; E02D 5/03; E02D 5/04; E02D
5/06; E02D 5/08; E02D 5/12; E02D 5/22;
E02D 5/24; E02D 5/28; E02D 5/285;
E02D 5/52; E02D 5/54; E02D 5/56;
E02D 5/74; E02D 5/76; E02D 5/765;
E02D 5/80; E02D 5/801; E02D 5/803;
E02D 27/12; E02D 27/14; E02D 27/16;
E02D 27/34; E02D 27/50; E02D
2200/1671; E02D 2250/0007; E02D
2250/0023; E02D 2250/0038; E02D
2250/0076; E02D 2300/0064; E02D
2600/30; E02D 2600/40; E04C 3/30;
E04C

(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,980,162 A * 11/1999 McCown E02D 27/34
405/251
D613,881 S * 4/2010 Perko D25/122

(Continued)

FOREIGN PATENT DOCUMENTS

KR 301036040.0000 * 12/2019
KR 301036042.0000 * 12/2019

(Continued)

OTHER PUBLICATIONS

Ground Screw Helical Pile, Jan. 25, 2024 [online], [retrieved Jan. 25, 2024]. Retrieved from internet, https://www.alibaba.com/product-detail/Factory-Directly-Sale-HDG-Ground-Screw_1600831502792.html?spm=a2700.7735675.0.0.57d9fqVFfqVFmq (Year: 2024).*

(Continued)

Primary Examiner — Eric L Goodman

Assistant Examiner — Adrian A Shwaiko

(74) *Attorney, Agent, or Firm* — Millen, White, Zelano & Branigan P.C.; William F. Nixon

(57) **CLAIM**

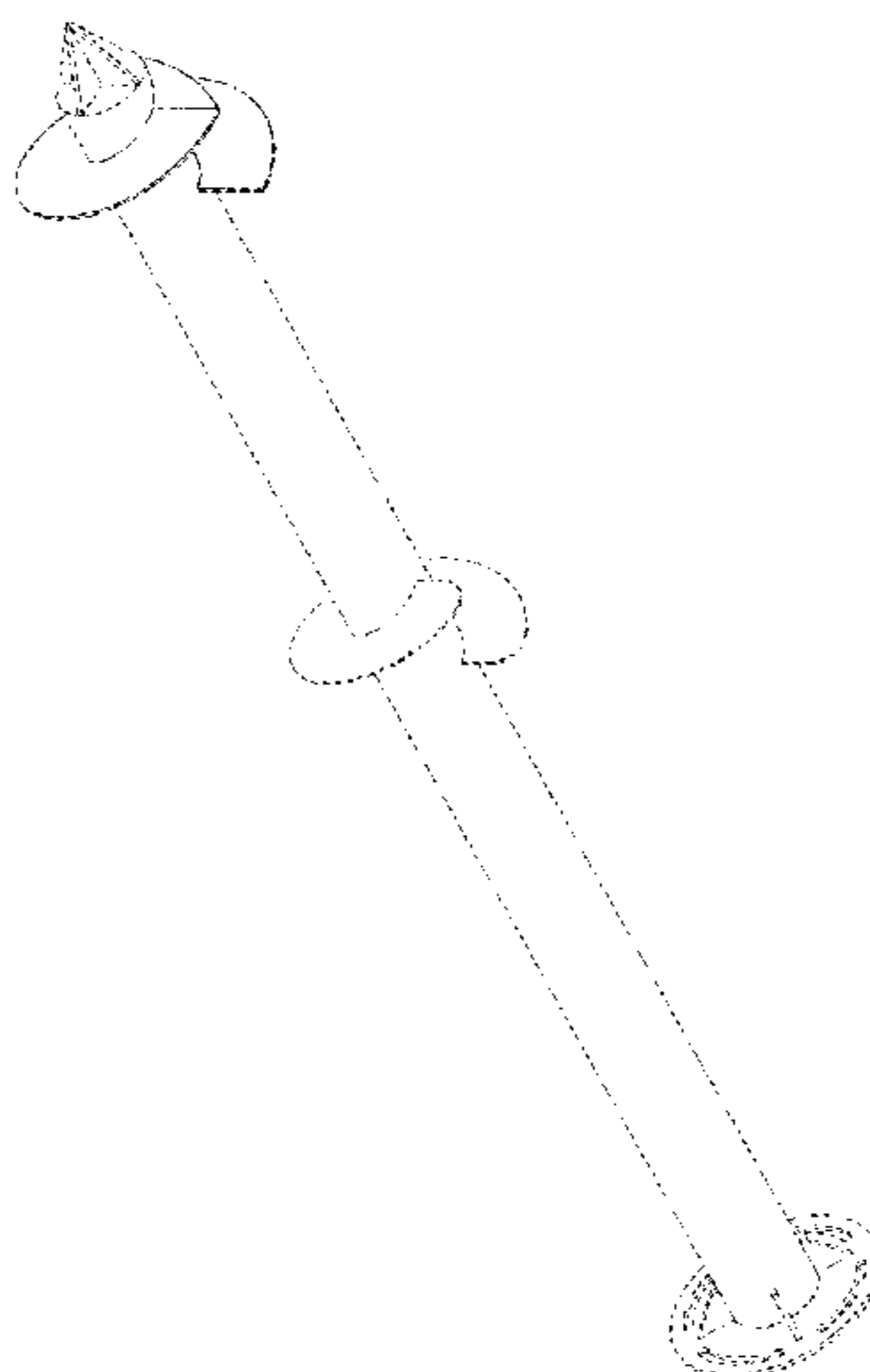
The ornamental design for a helical pile, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of helical pile according to the present design;
FIG. 2 is a front view of the helical pile according to the present design;
FIG. 3 is a rear view of the helical pile according to the present design;
FIG. 4 is a top view of the helical pile according to the present design;
FIG. 5 is a bottom view of the helical pile according to the present design;
FIG. 6 is a right-side view of the helical pile according to the present design; and,
FIG. 7 is a left-side view of the helical pile according to the present design.

The broken lines represent environment and form no part of the claimed design.

1 Claim, 7 Drawing Sheets



(58) **Field of Classification Search**

CPC 3/32; E04F 15/02183; E04F 15/02044;
E21B 7/027; E21B 17/042; E21B
17/0423; E21B 17/0426; F16B 12/24;
F16B 12/125; F16B 12/20; F16B 12/26;
F16B 13/045; F16B 19/109; F16B 35/00;
F16B 37/085; F16B 37/14; B21K 1/06;
F24S 25/617; F24S 25/61; F24S 25/63;
F24S 25/636

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

8,845,236 B1 * 9/2014 Dosdourian E02D 5/801
405/253
D882,827 S * 4/2020 Egan D25/126
D913,780 S * 3/2021 Hudson D13/102
11,306,456 B2 4/2022 Yang
D974,271 S * 1/2023 Lu D8/349
2005/0074298 A1 * 4/2005 Jones E02D 5/523
405/252.1

2012/0087741 A1* 4/2012 Desmeules E02D 27/12
405/253
2014/0186126 A1* 7/2014 Lin E02D 5/56
405/252.1
2017/0130416 A1* 5/2017 Wilson E02D 13/00
2022/0170225 A1* 6/2022 Yang E02D 5/223
2023/0383492 A1* 11/2023 Downey E02D 5/54

FOREIGN PATENT DOCUMENTS

TW M597787 U 7/2020
TW I708918 B 11/2020
TW 202138726 A 10/2021

OTHER PUBLICATIONS

Heavy Duty Ground Screw, Dec. 28, 2023 [online], [retrieved Dec. 28, 2023]. Retrieved online, https://www.alibaba.com/product-detail/heavy-duty-ground-screw-anchor-production_1600945087785.html?spm=a2700.7735675.0.0.4e9aSF9HSF9HuC (Year: 2023).*

* cited by examiner

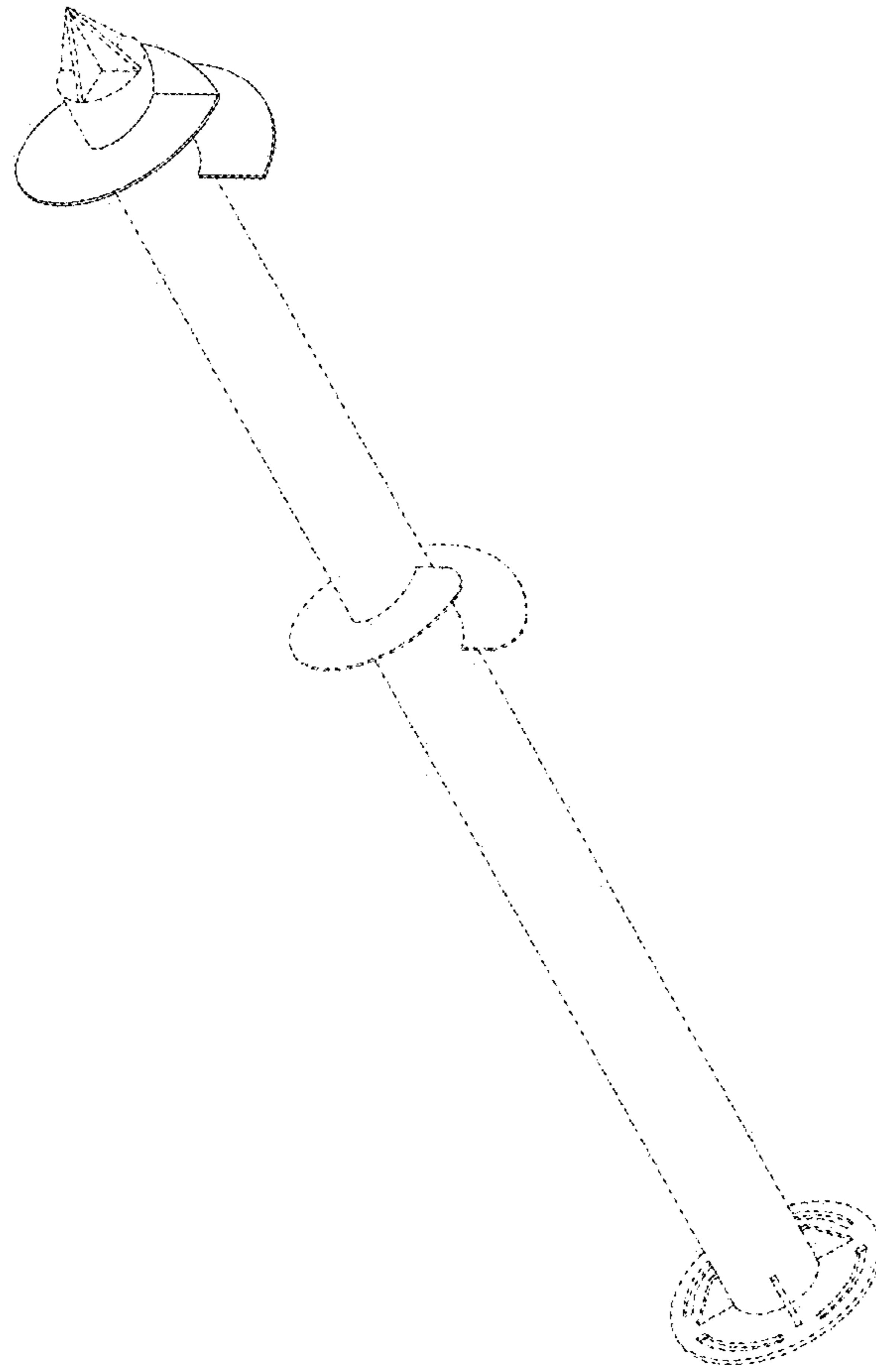


FIG. 1

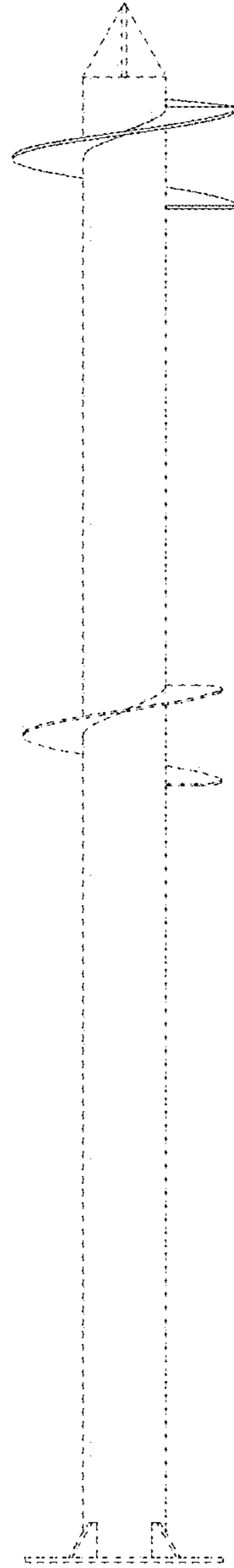


FIG. 2

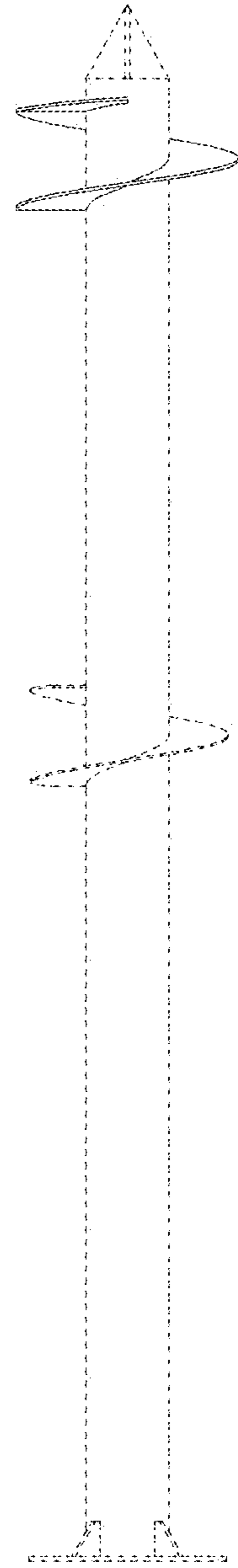


FIG. 3

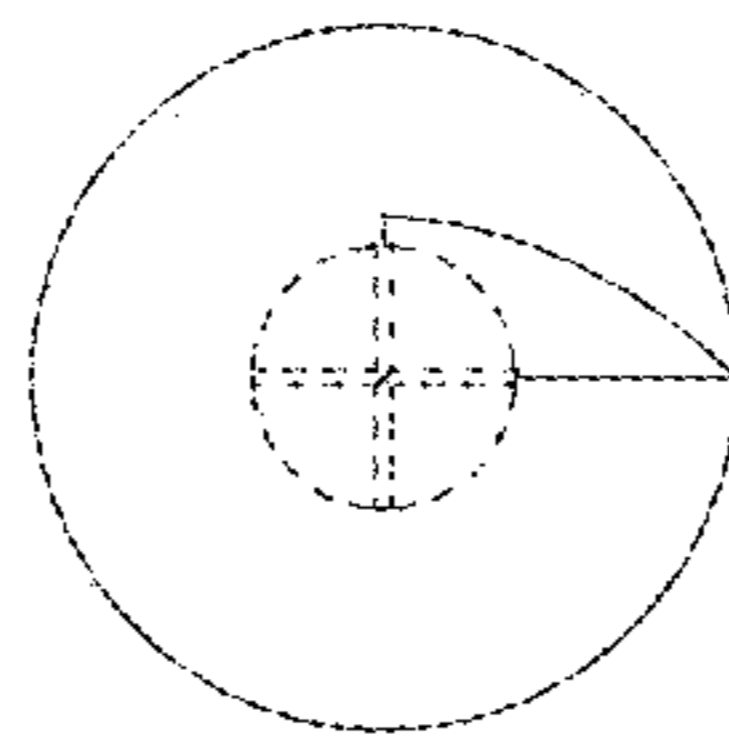


FIG. 4

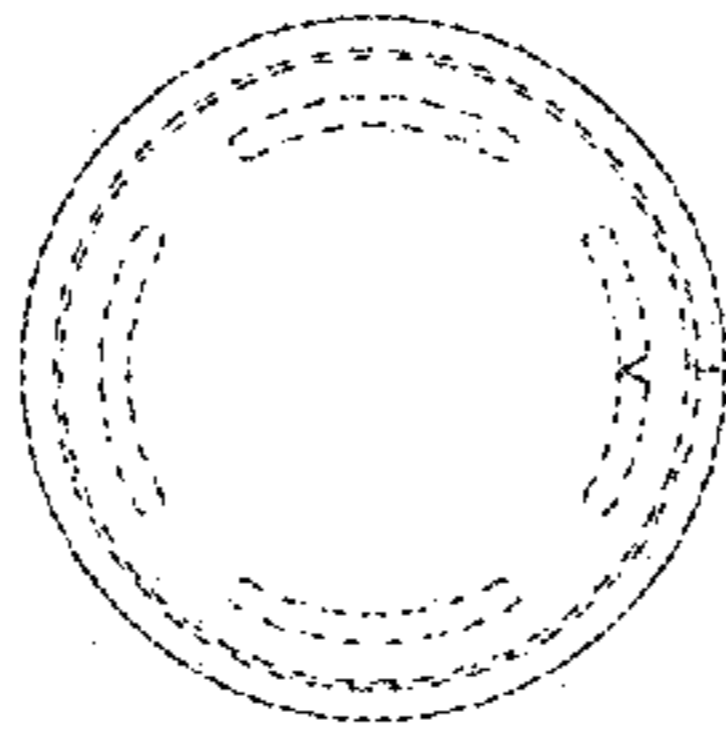


FIG. 5

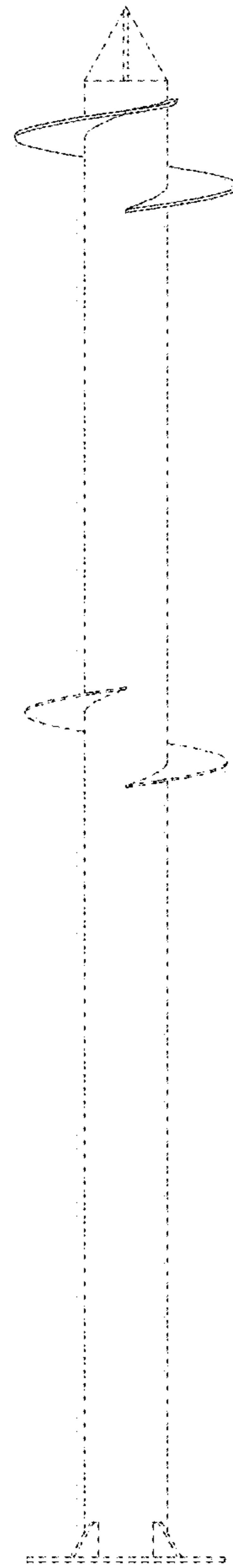


FIG. 6

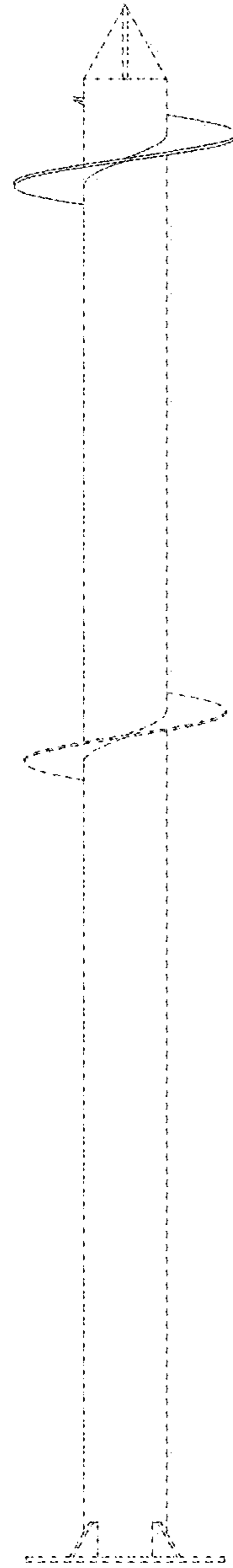


FIG. 7