



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

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(45) **Date of Patent:** **** Aug. 9, 2022**

(54) **SOIL SENSOR MODULE FOR A SOIL SENSING SYSTEM**

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- (72) Inventors: **Niels Grabbert**, Potsdam (DE); **Bernd Spleiss**, Munich (DE)
- (73) Assignee: **stenon GmbH**
- (**) Term: **15 Years**
- (21) Appl. No.: **29/728,306**
- (22) Filed: **Mar. 17, 2020**

(30) **Foreign Application Priority Data**

Oct. 7, 2019 (EM) 006990677-0002

(51) **LOC (13) Cl.** **10-05**
(52) **U.S. Cl.**

USPC **D10/52**; D10/56

(58) **Field of Classification Search**

USPC D10/49-56, 59, 65, 81, 103, 96-98
 CPC G01N 3/42; G01N 3/48; G01N 2033/245;
 G01N 1/08; G01N 33/24; G01N 2001/2276; G01N 2001/2279; G01N 7/00; G01N 7/02; G01N 7/04; G01N 7/06; G01N 7/08; G01N 7/10; G01N 7/12; G01N 7/16; G01N 7/18; G01N 7/20; Y10T 436/173076; Y10T 436/25375; G01V 9/00; A01C 21/007; A01C 21/005; G06Q 10/10

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

- 3,803,570 A * 4/1974 Barlow G01N 27/223 318/643
 - D247,899 S * 5/1978 Underwood D15/12
 - D250,882 S 1/1979 Johansen
- (Continued)

FOREIGN PATENT DOCUMENTS

- CN 303125919 9/2014
- CN 305221161 * 3/2019

(Continued)

OTHER PUBLICATIONS

Dominic Roth, Developing revolutionary sensortechnology for soil analysis, Date first available Jun. 17, 2020, [online]retrieved Nov. 2, 2021,available from <https://www.innovationnewsnetwork.com/developing-revolutionary-sensor-technology-for-soil-analysis/5584/> (Year: 2020).*

(Continued)

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(57) **CLAIM**

The ornamental design for a soil sensor module for a soil sensing system, as shown and described.

DESCRIPTION

The file of this patent contains at least one drawing executed in color. Copies of this patent with color drawings will be provided by the Office upon request and payment of the necessary fee

FIG. 1 is a front and bottom perspective view of a soil sensor module for a soil sensing system.

FIG. 2 is a front view thereof.

FIG. 3 is a back view thereof.

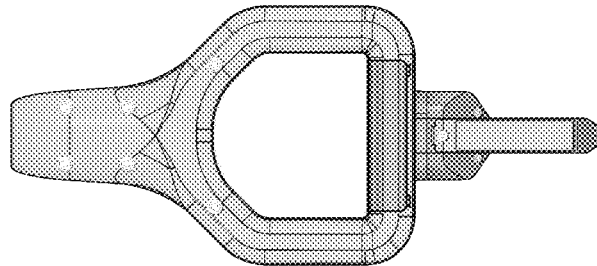
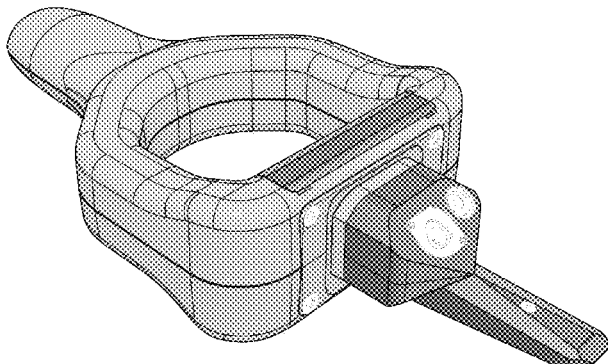
FIG. 4 is a left side view thereof.

FIG. 5 is a right side view thereof; and,

FIG. 6 is a bottom view thereof.

The broken lines shown are included for the purpose of illustrating portions of the soil sensor module for a soil sensing system that form no part of the claim.

1 Claim, 5 Drawing Sheets
(5 of 5 Drawing Sheet(s) Filed in Color)



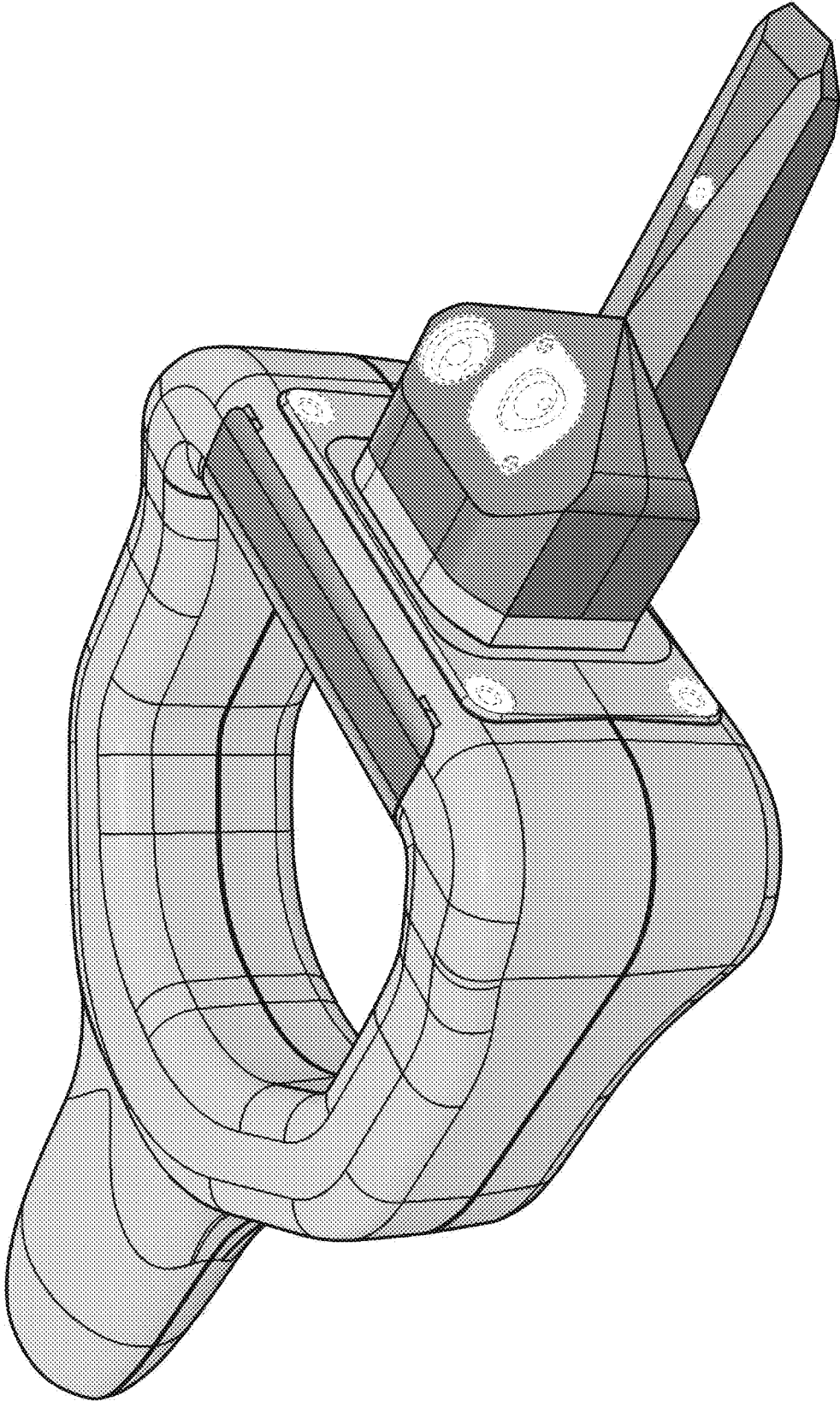


FIG. 1

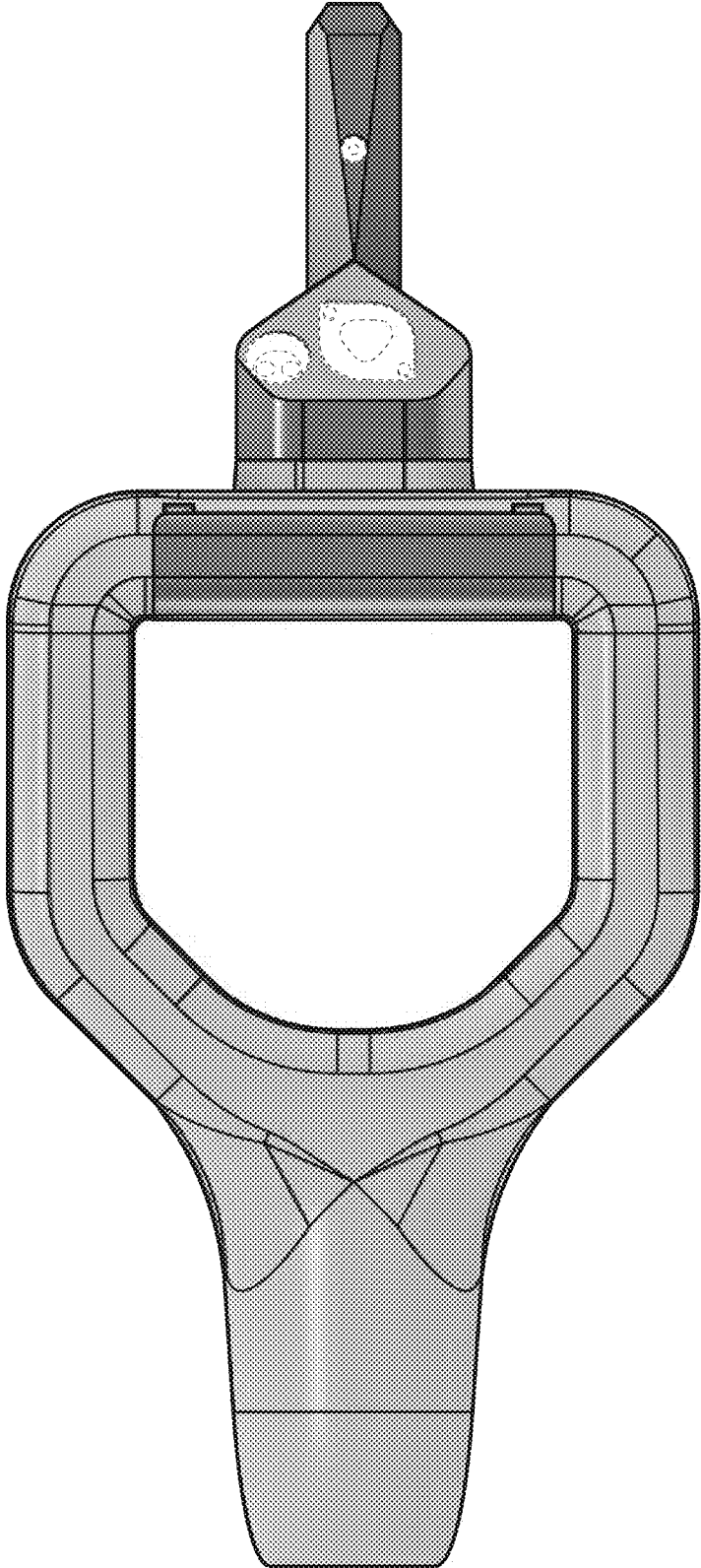


FIG. 2

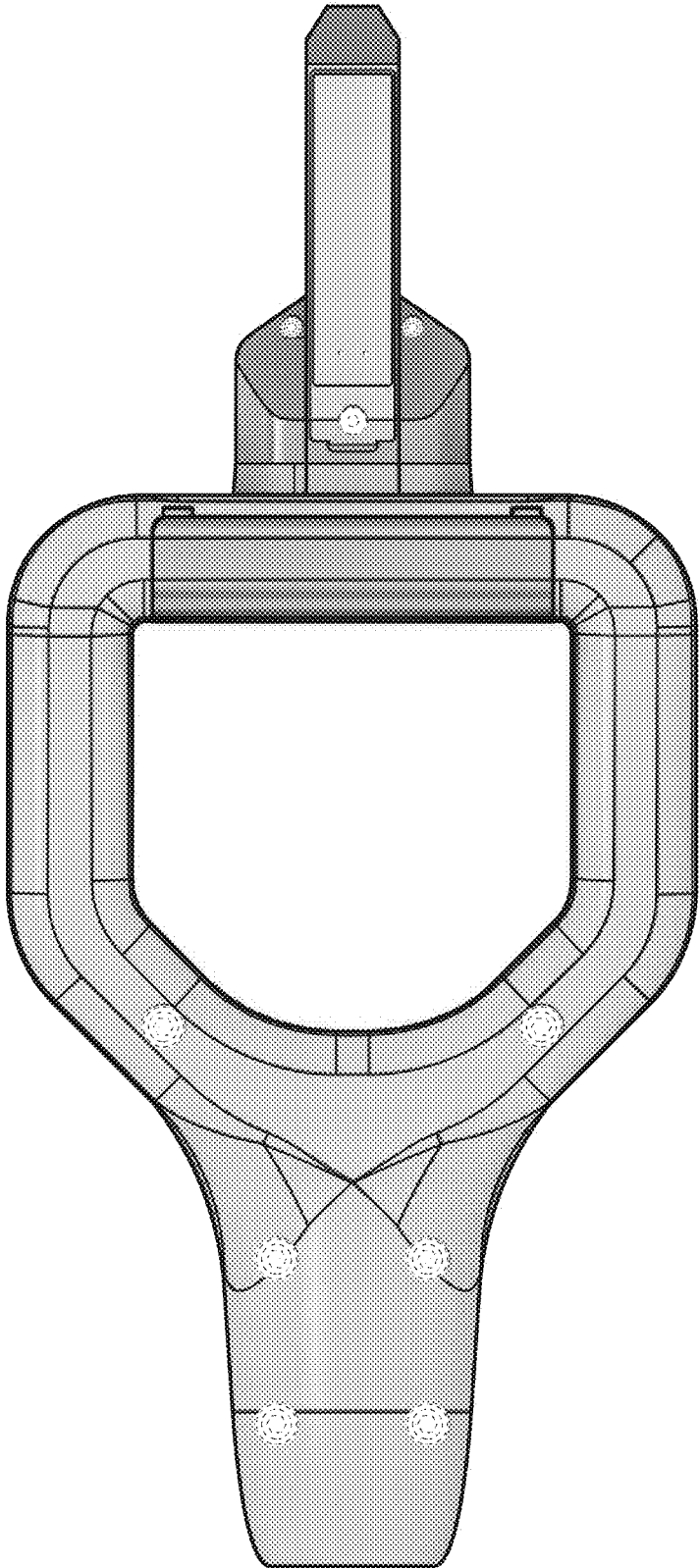


FIG. 3

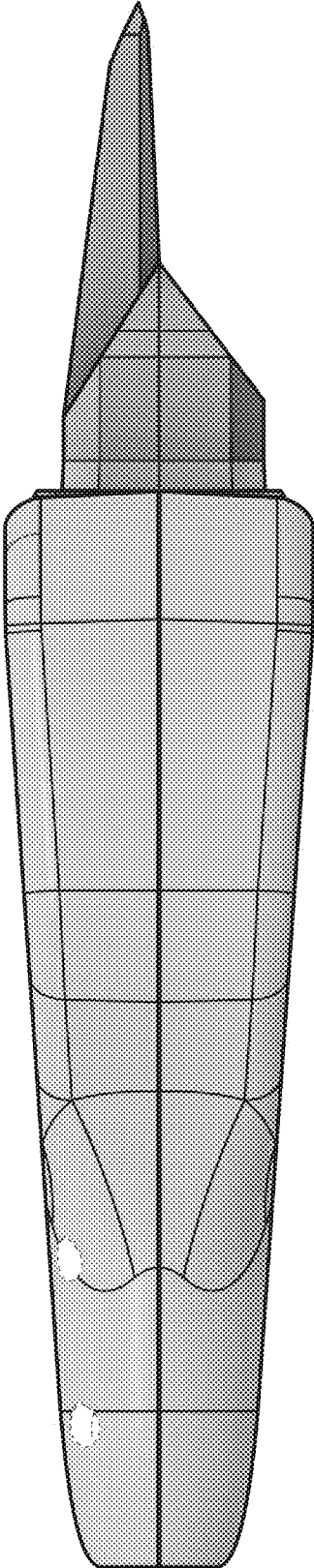


FIG. 4

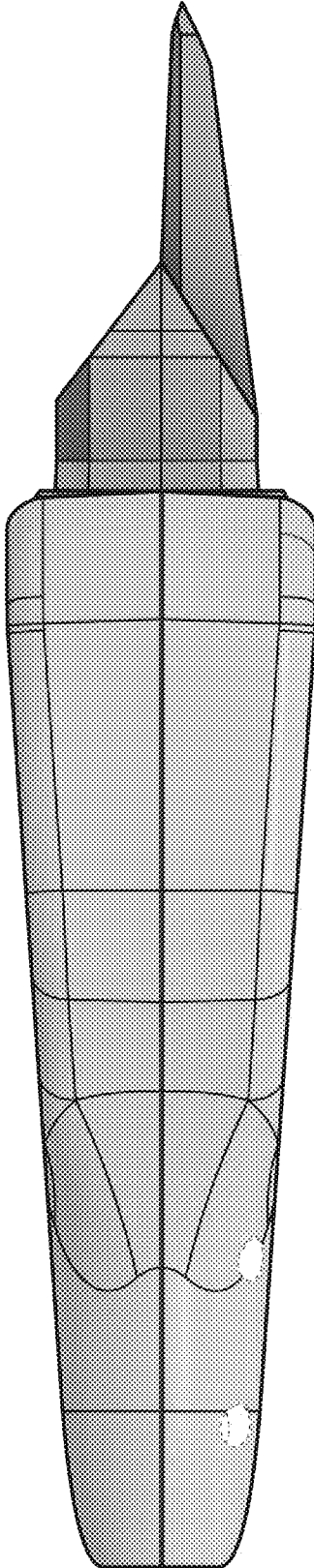


FIG. 5

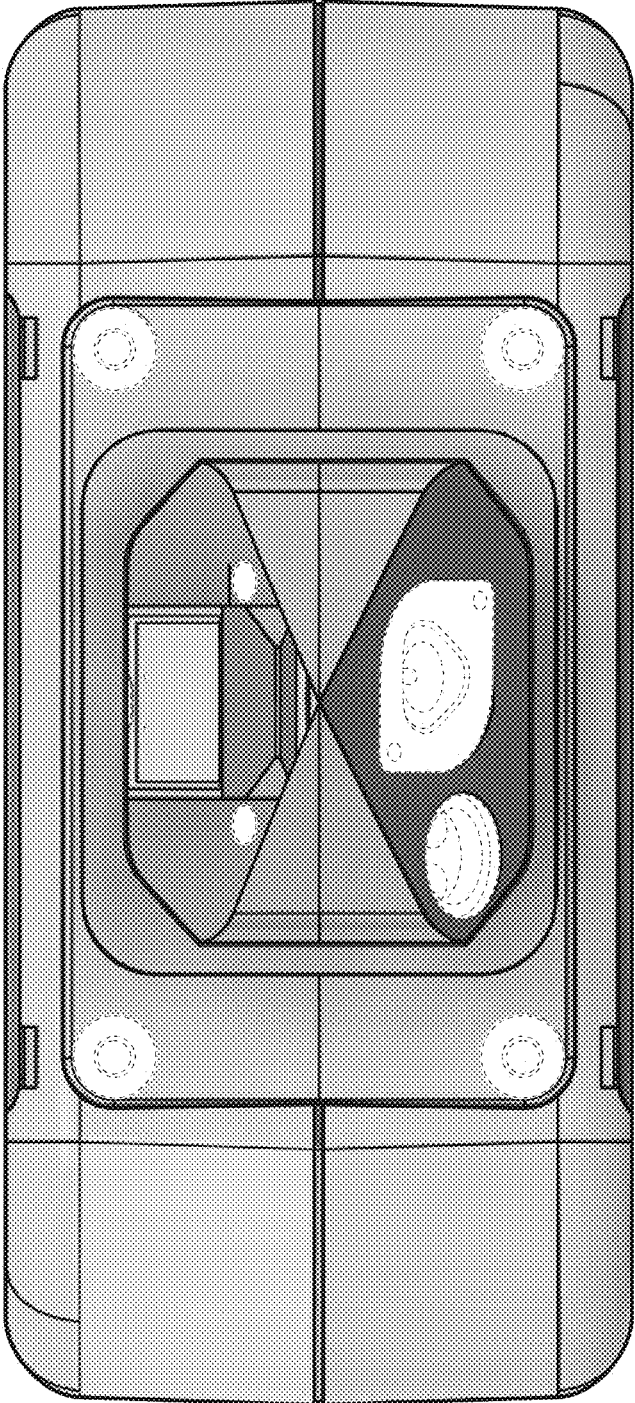


FIG. 6