



US00D853785S

(12) **United States Design Patent** (10) **Patent No.:** **US D853,785 S**  
**Young et al.** (45) **Date of Patent:** **\*\* Jul. 16, 2019**

(54) **THERMAL IMMERSION CIRCULATOR**

(71) Applicant: **ChefSteps, Inc.**, Seattle, WA (US)

(72) Inventors: **Chris Young**, Seattle, WA (US); **Tom Udd**, Sultan, WA (US); **Cameron Jue**, Seattle, WA (US); **Kevin Finke**, Everett, WA (US); **Emmett Barton**, Seattle, WA (US); **N. Tim Salazar**, Seattle, WA (US)

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

(21) Appl. No.: **29/542,731**

(22) Filed: **Oct. 16, 2015**

(51) **LOC (11) Cl.** ..... **07-99**

(52) **U.S. Cl.**  
USPC ..... **D7/402**

(58) **Field of Classification Search**  
USPC ..... D7/323, 362, 402, 213; D10/50;  
D23/316

CPC ..... A47J 27/004; A47J 27/10; A47J 27/62;  
A47J 27/21058; A47J 36/00; A47J  
36/165; A47J 36/32; A47J 37/0786; A47J  
37/1257; A47J 37/1266; A47J 43/044;  
B65B 29/08; B65B 31/02; B65B 31/047;  
B65B 7/06; G01K 1/024; G01K 1/14;  
G01K 7/00; G01K 7/02; G01K 7/16;  
G05B 19/0426; G05B 19/048; H02J  
7/025; H02J 7/027; H05B 3/68; H05B  
3/80; H05B 6/062; H05B 6/1209

See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

3,270,661 A \* 9/1966 Juvan ..... A47J 29/02  
99/343  
D651,034 S \* 12/2011 Eades ..... A47J 27/10  
D7/323  
D683,583 S \* 6/2013 Hone ..... D7/396.2

9,215,948 B2 \* 12/2015 Fetterman ..... A47J 27/10  
9,687,104 B2 \* 6/2017 Wu ..... H05B 3/80  
2011/0186283 A1 \* 8/2011 Preston ..... B01L 7/02  
165/287  
2015/0082996 A1 \* 3/2015 Wu ..... A47J 27/10  
99/342  
2015/0335192 A1 \* 11/2015 Plazarte ..... A47J 27/10  
99/332  
2015/0342390 A1 \* 12/2015 Wu ..... H05B 6/1209  
426/523  
2015/0342392 A1 \* 12/2015 Wu ..... H05B 3/68  
99/331  
2016/0128515 A1 \* 5/2016 Edmonds ..... A47J 43/044  
426/231

(Continued)

**FOREIGN PATENT DOCUMENTS**

CN EU 003914084-0001 \* 5/2017

*Primary Examiner* — Ian Simmons

*Assistant Examiner* — Samantha Q Lawrence

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

(57) **CLAIM**

The ornamental design for a thermal immersion circulator, as shown and described.

**DESCRIPTION**

FIG. 1 is a top left-front isometric view of a thermal immersion circulator showing our new design.

FIG. 2 is a top right-rear isometric view thereof.

FIG. 3 is a front elevational view thereof.

FIG. 4 is a left side elevational view thereof.

FIG. 5 is a right side elevational view thereof.

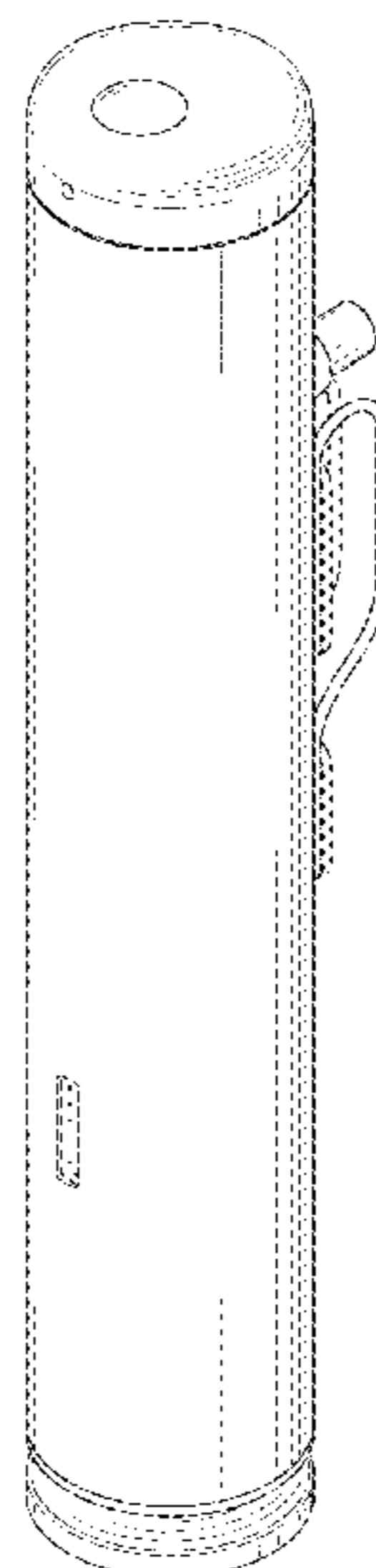
FIG. 6 is a rear elevational view thereof.

FIG. 7 is a top plan view thereof; and,

FIG. 8 is a bottom plan view thereof.

The broken lines are included for the purpose of illustrating portions of the thermal immersion circulator that form no part of the claimed design.

**1 Claim, 7 Drawing Sheets**



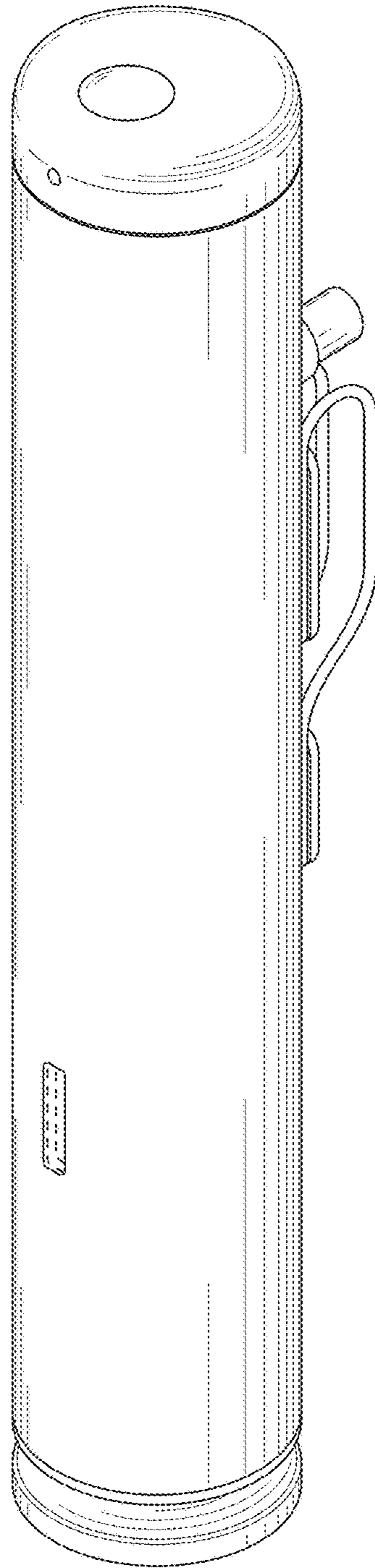
(56)

**References Cited**

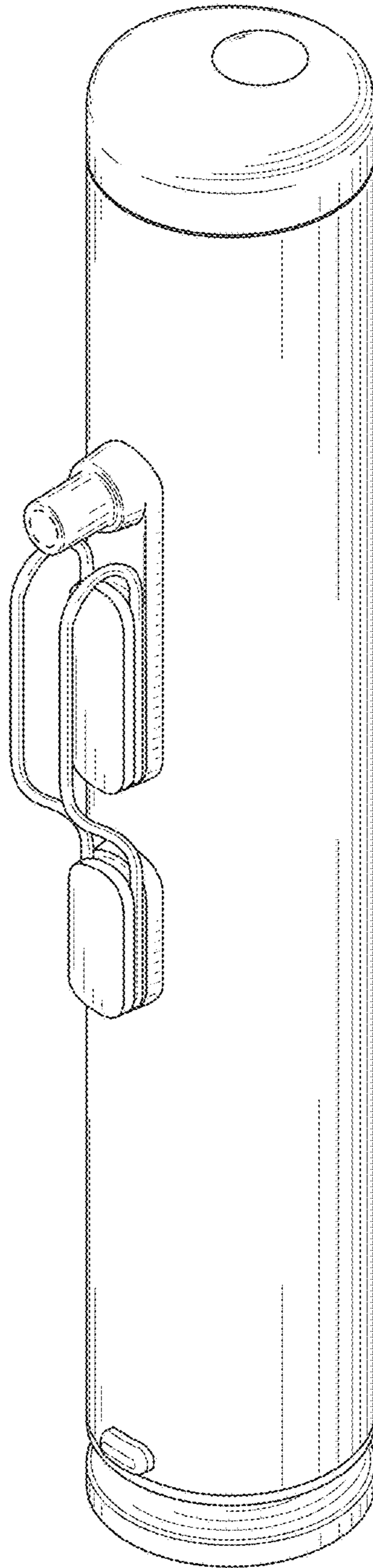
U.S. PATENT DOCUMENTS

2016/0174748 A1\* 6/2016 Baldwin ..... A47J 27/10  
426/231  
2016/0209077 A1\* 7/2016 Wu ..... A47J 36/32  
2017/0245673 A1\* 8/2017 Peng ..... A47J 27/10

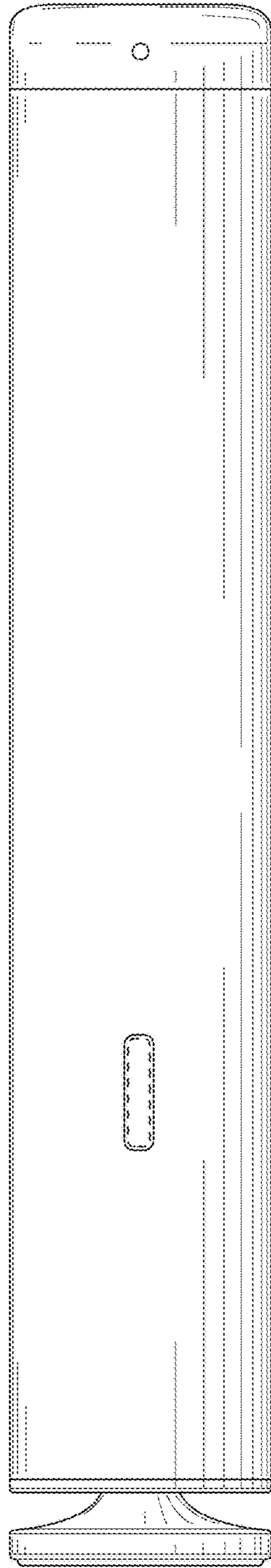
\* cited by examiner



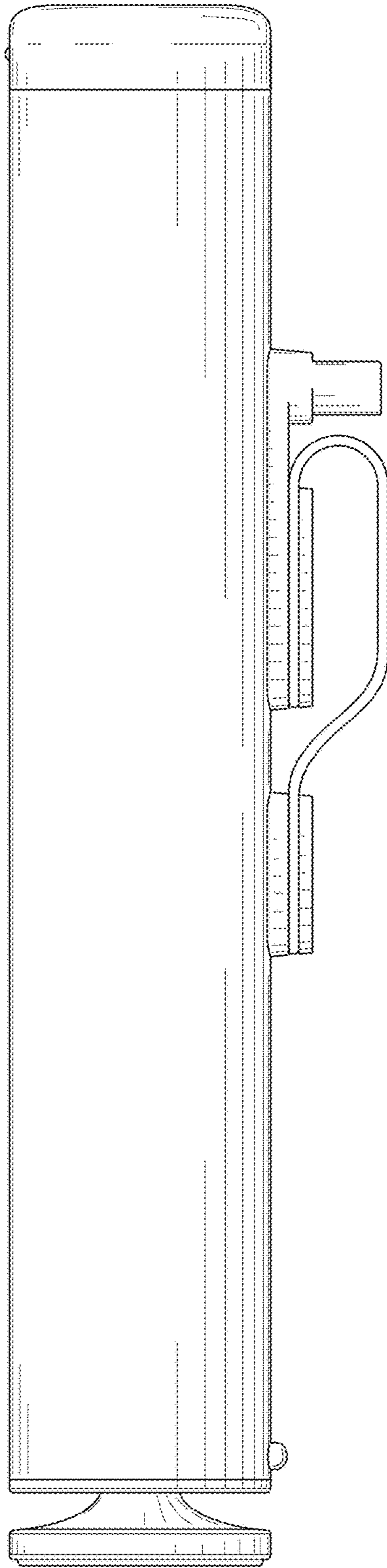
*Fig. 1*



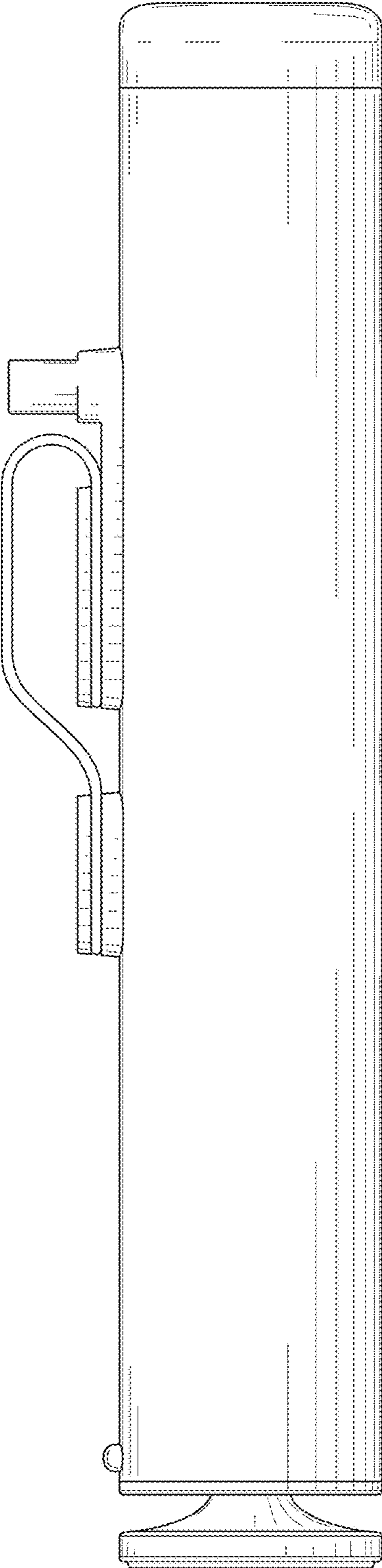
*Fig. 2*



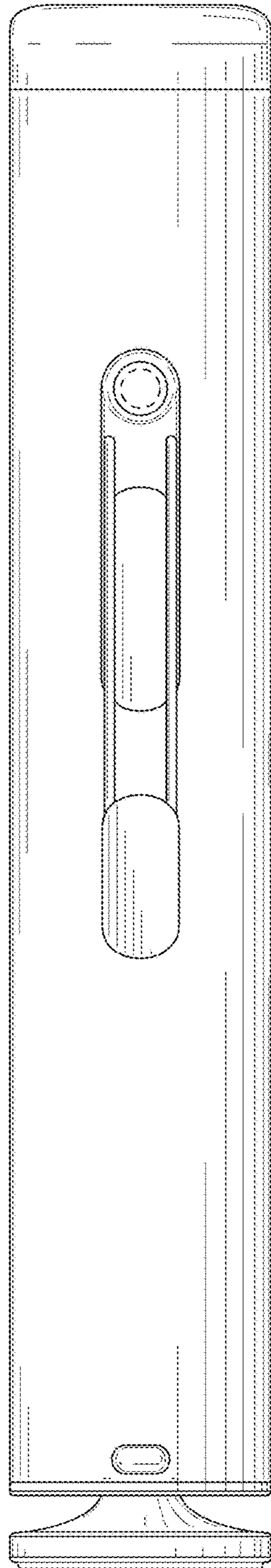
*Fig. 3*



*Fig. 4*

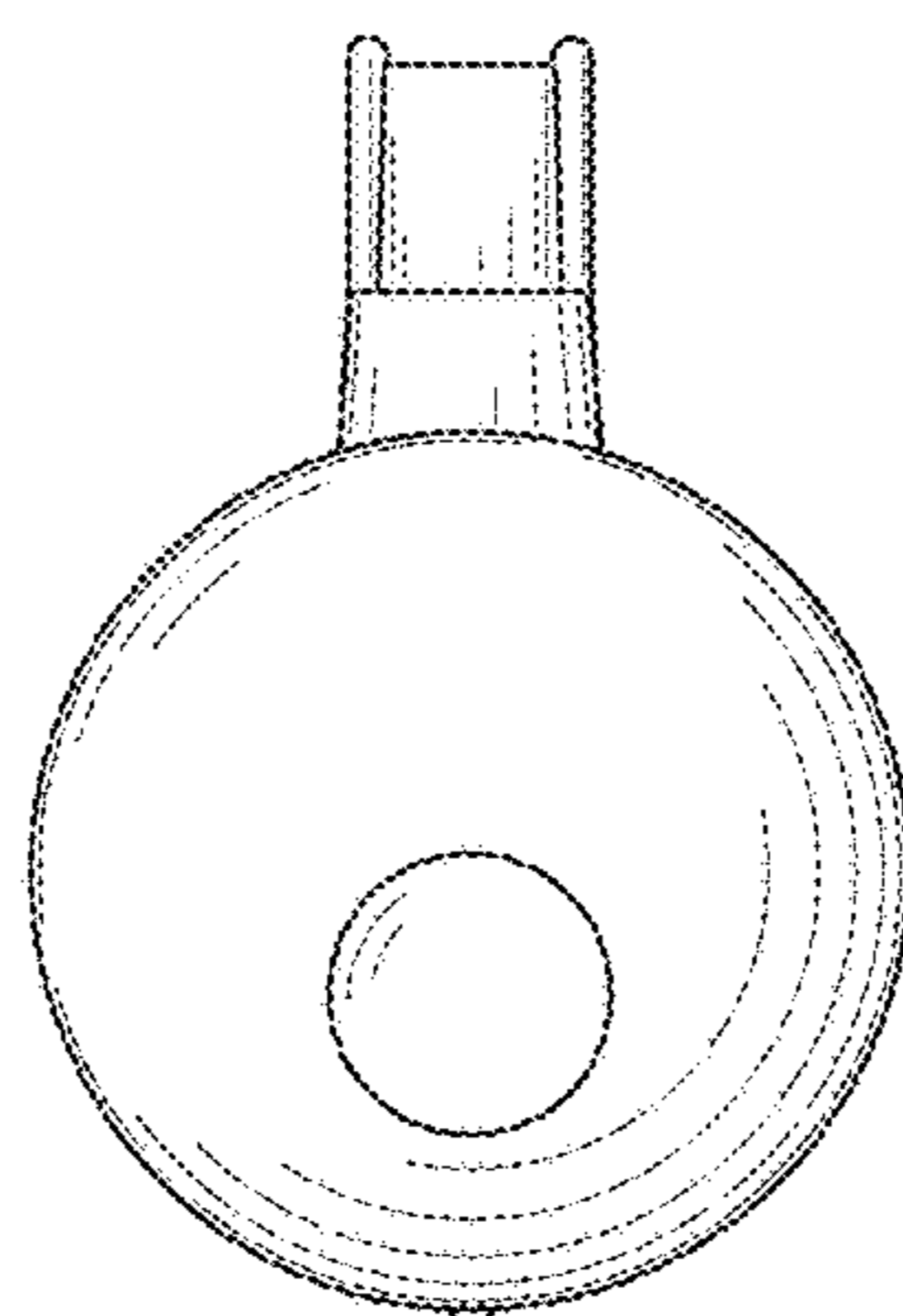


*Fig. 5*

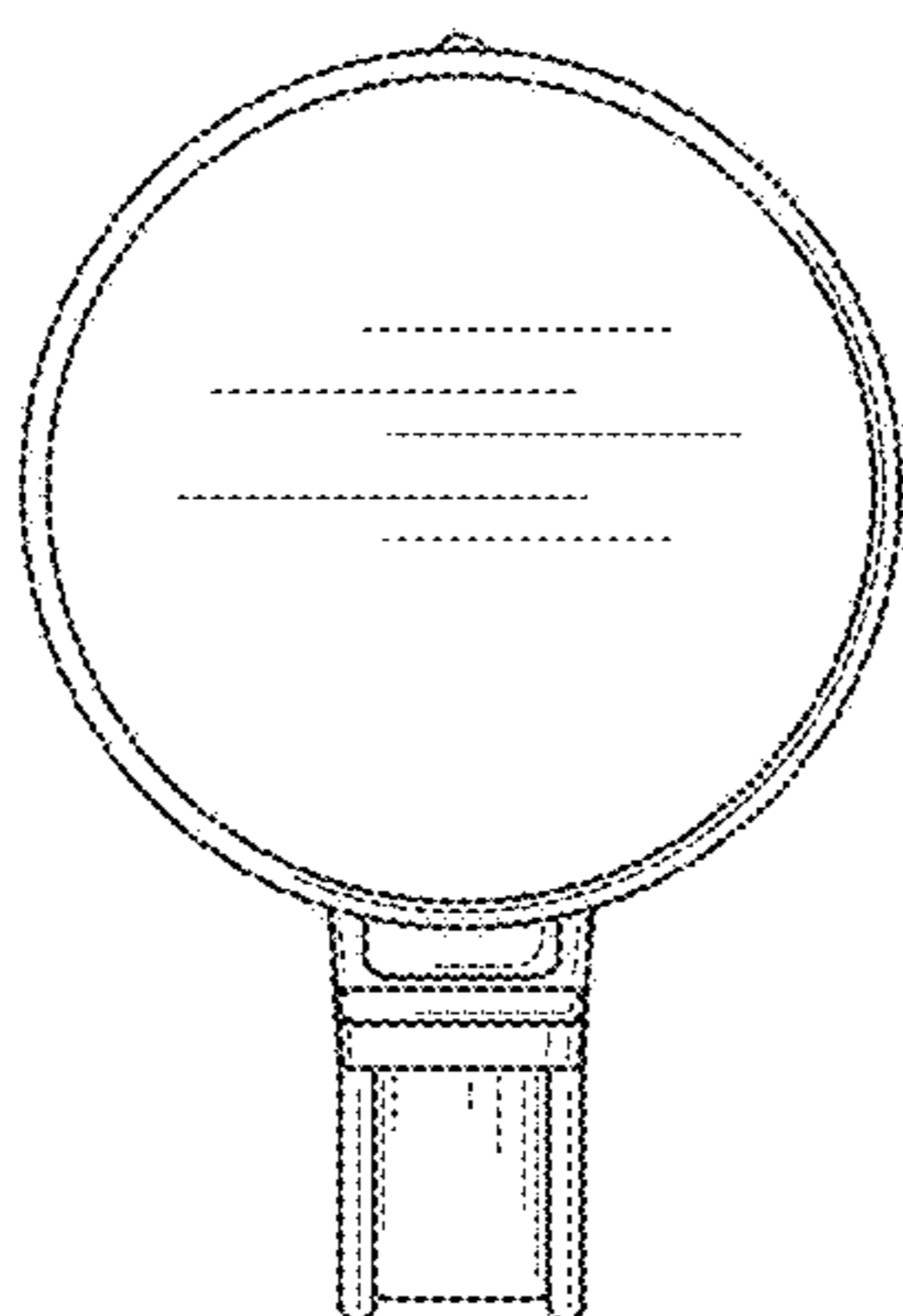


*Fig. 6*





*Fig. 7*



*Fig. 8*