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(12) United States Design Patent

Newman et al.

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(54) **MRI COMPATIBLE THERAPEUTIC GAS INJECTOR MODULE**

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

(21) Appl. No.: **29/578,294**

(22) Filed: **Sep. 20, 2016**

Related U.S. Application Data

(63) Continuation of application No. 29/544,067, filed on Oct. 30, 2015, now Pat. No. Des. 776,278.

(51) **LOC (10) Cl.** **24-01**

(52) **U.S. Cl.**
USPC **D24/164**

(58) **Field of Classification Search**
USPC D24/164, 110.6, 108, 127, 186; 128/200.24, 207.14, 207.15, 202.16, 128/204.18, 205.24
CPC A61M 16/00; A61M 16/0677; G05D 16/0602; G05D 16/185; G05D 16/103
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,746,199	A *	5/1998	Bayron	A61M 16/0463 128/205.24
6,044,841	A *	4/2000	Verdun	A61M 11/06 128/200.14
6,116,242	A	9/2000	Frye	
D442,277	S *	5/2001	Pryor	D24/110.6
6,364,161	B1	4/2002	Pryor	
D469,865	S	2/2003	Bar-Or	
6,588,421	B1	7/2003	Diehl	
D485,198	S *	1/2004	Islava	D10/96
D495,049	S	8/2004	Austin	
D497,989	S	11/2004	Myrick	
D519,632	S	4/2006	Bayron	
7,066,175	B2 *	6/2006	Hamilton	A61M 16/00 128/204.23
7,320,324	B2	1/2008	Willeford	

(Continued)

OTHER PUBLICATIONS

INOmax DSIR Operation Manual, 2012, Rev-05, Ikaria, inc., Hampton, NJ, USA.

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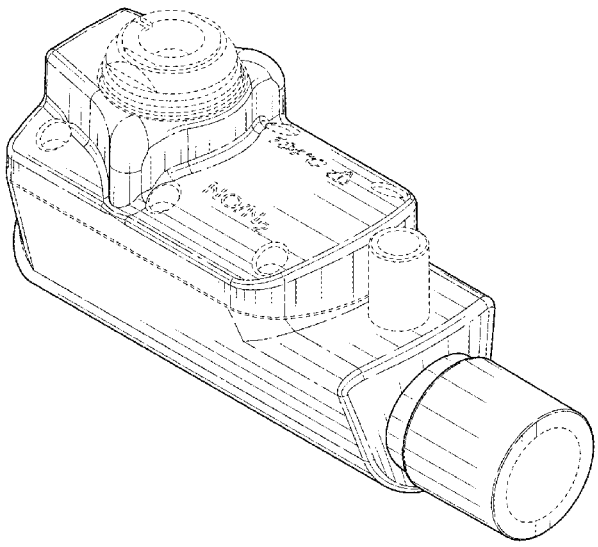
(57) **CLAIM**

We claim the ornamental design for an MRI-compatible therapeutic gas injector module, as shown and described.

DESCRIPTION

FIG. **1** is a top, front, and left-side perspective view of an MRI-compatible therapeutic gas injector module showing our new design;
FIG. **2** is a front elevational view thereof;
FIG. **3** is a rear elevational view thereof;
FIG. **4** is a left side elevational view thereof, the right side being a mirror image;
FIG. **5** is a top plan view thereof;
FIG. **6** is a bottom plan view thereof; and,
FIG. **7** is a bottom, rear, and left-side perspective view thereof.
The broken lines in the figures show portions of the injector module which form no part of the claimed design.

1 Claim, 4 Drawing Sheets



(56) **References Cited**

U.S. PATENT DOCUMENTS

7,594,509	B2 *	9/2009	Burk	A61M 16/1045 128/201.13
7,770,460	B1 *	8/2010	Chen	G01L 19/0038 73/756
7,971,588	B2	7/2011	Fink	
D655,405	S *	3/2012	Winter	D24/110.6
D659,835	S	5/2012	Benson	
D678,521	S *	3/2013	Mort	D24/110.6
8,720,435	B2	5/2014	Gallem	
D734,854	S	7/2015	Conner	
D742,507	S	11/2015	Miller	
D775,733	S *	1/2017	Buess	D24/164
2002/0162554	A1 *	11/2002	Loescher	A61M 16/08 128/205.24
2005/0039746	A1 *	2/2005	Grychowski	A61M 15/0086 128/204.18
2005/0150496	A1 *	7/2005	Smaldone	A61M 16/0616 128/206.21

* cited by examiner

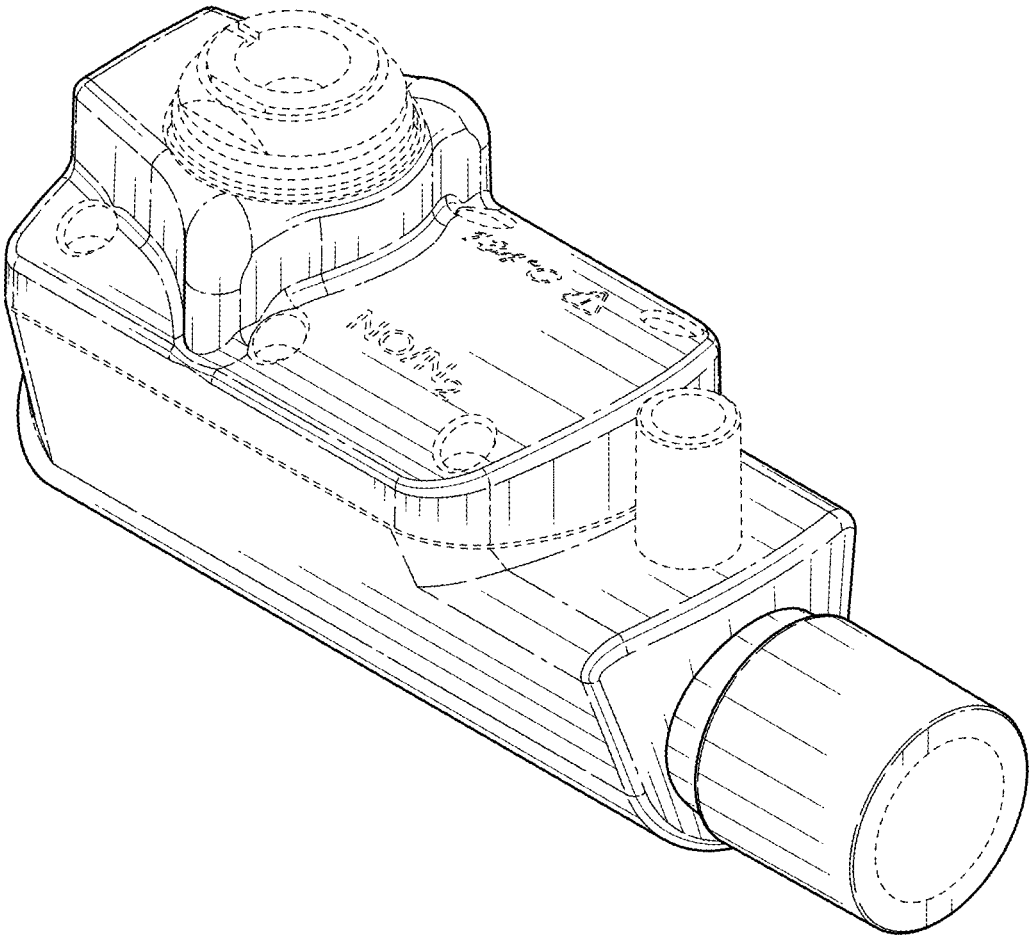


FIG. 1

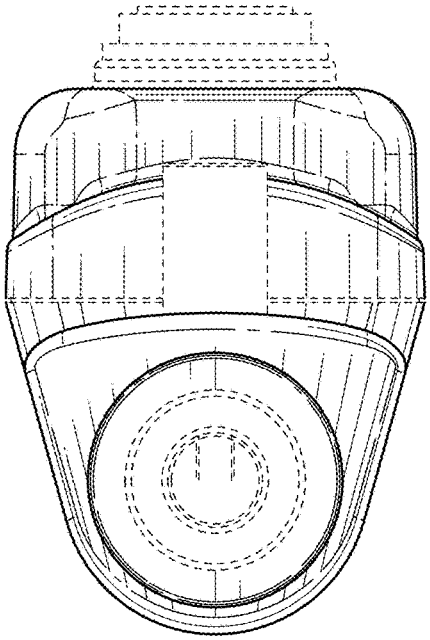


FIG. 2

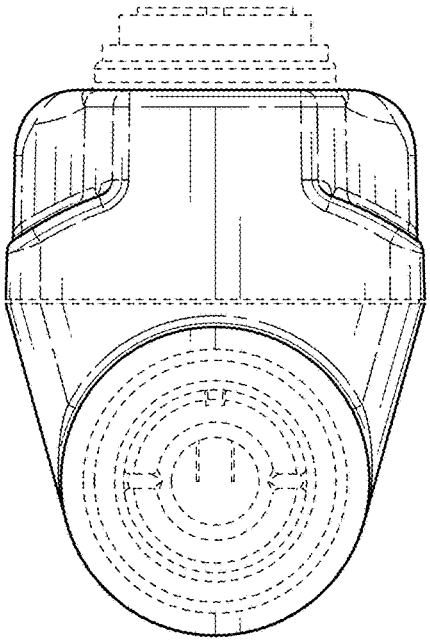


FIG. 3

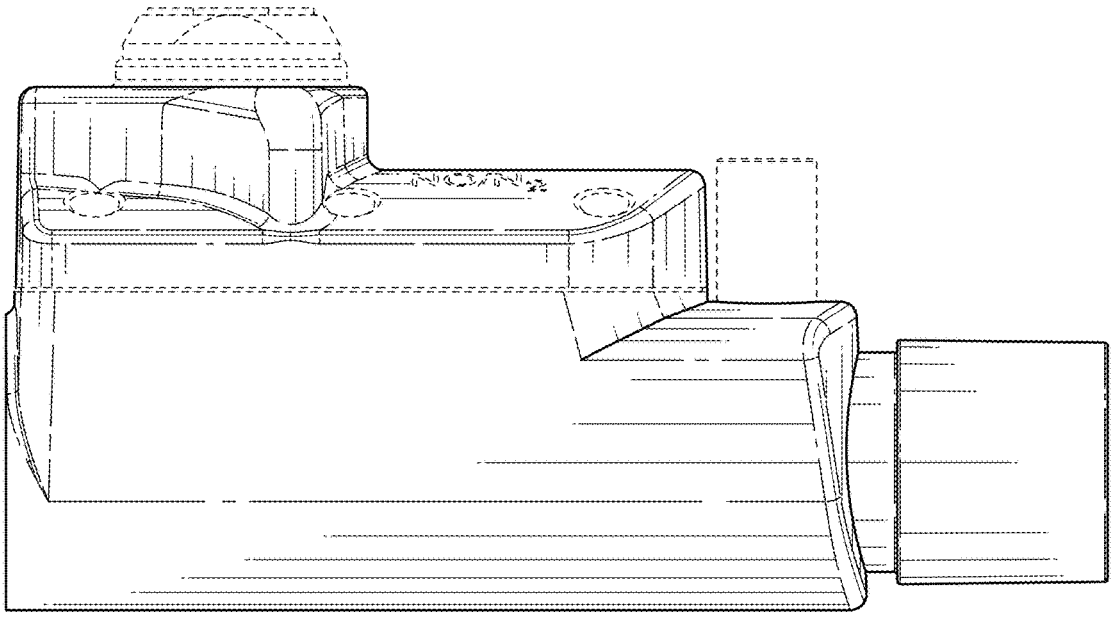


FIG. 4

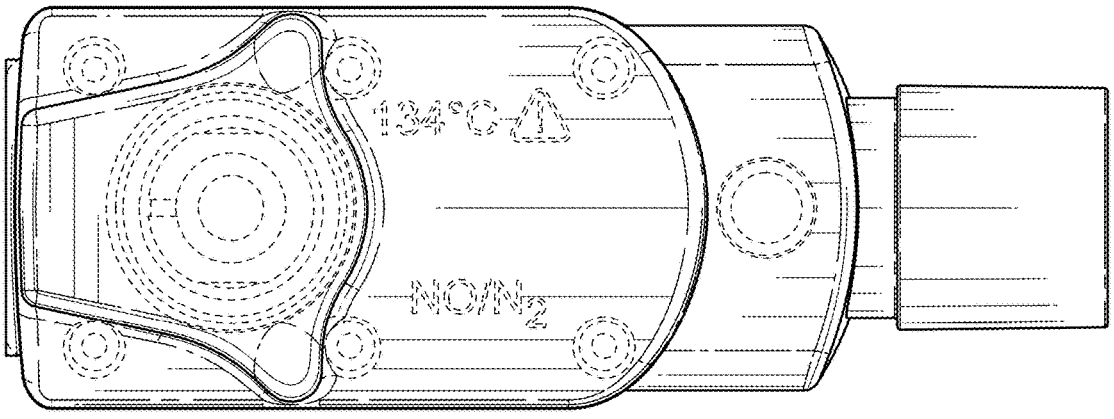


FIG. 5

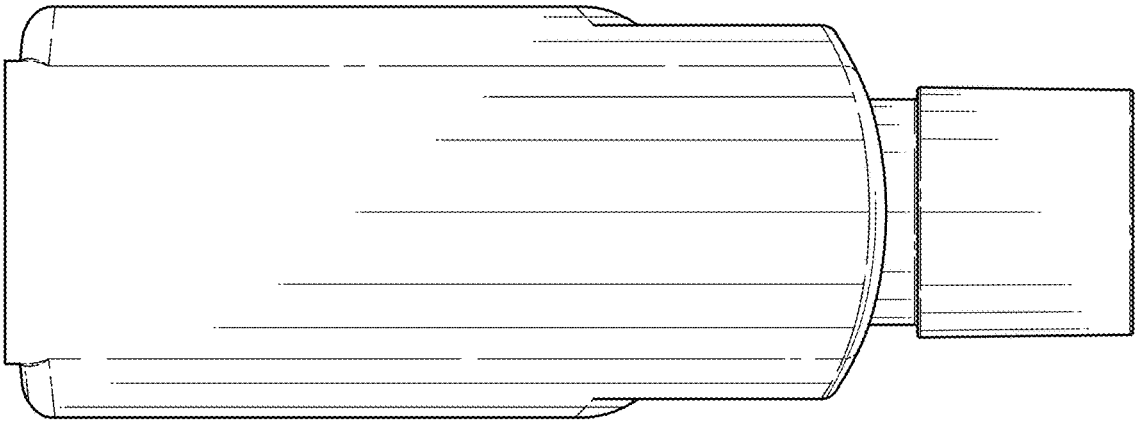


FIG. 6

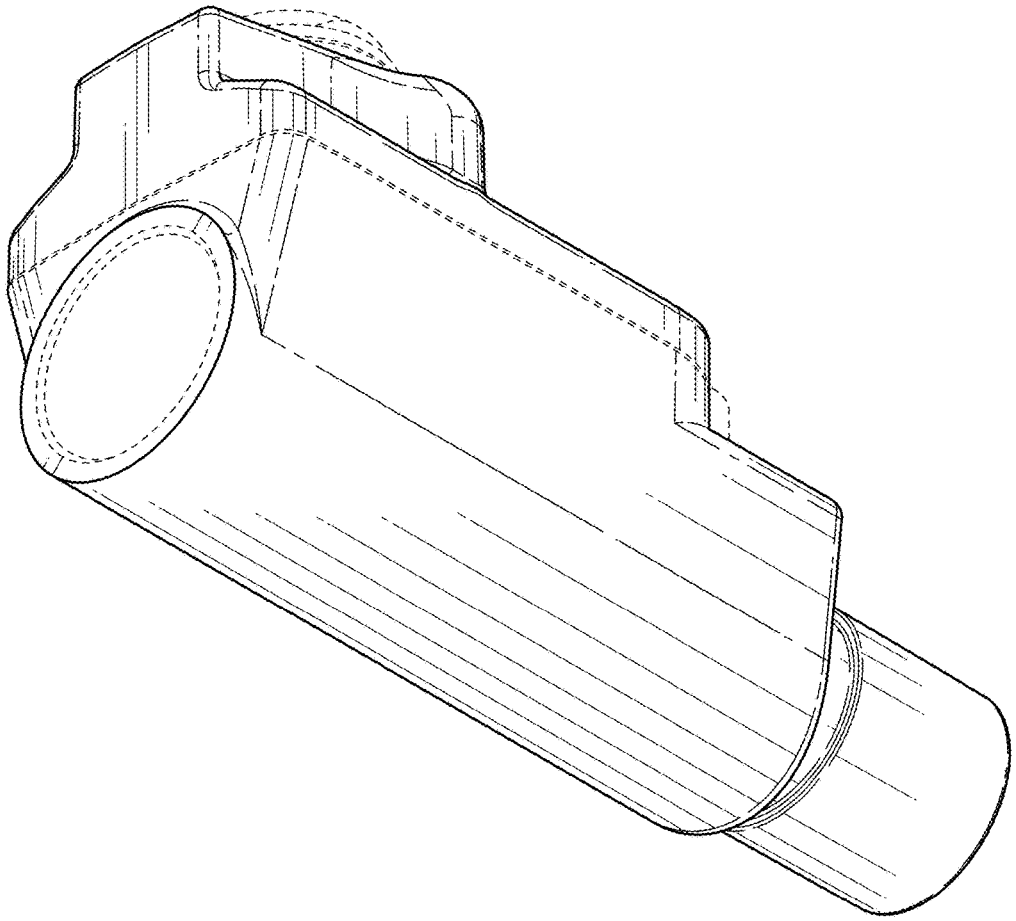


FIG. 7