



US00D752219S

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

(10) **Patent No.:** **US D752,219 S**  
(45) **Date of Patent:** **\*\* Mar. 22, 2016**

(54) **TISSUE FASTENING INSTRUMENT**

- (71) Applicant: **Incisive Surgical, Inc.**, Plymouth, MN (US)
- (72) Inventors: **James A. Peterson**, Edina, MN (US); **David B. Herridge**, Mendota Heights, MN (US); **John L. Shannon**, Orono, MN (US); **Chad D. Naegeli**, Andover, MN (US); **Christopher J. Sperry**, Plymouth, MN (US); **Mark E. Reader**, St. Bonifacius, MN (US)
- (73) Assignee: **INCISIVE SURGICAL, INC.**, Plymouth, MN (US)

(\*\*) Term: **14 Years**

(21) Appl. No.: **29/513,614**

(22) Filed: **Jan. 2, 2015**

(51) **LOC (10) Cl.** ..... **24-02**

(52) **U.S. Cl.**  
USPC ..... **D24/145**

(58) **Field of Classification Search**  
USPC ..... D24/145, 133  
CPC ..... A61B 17/064; A61B 17/0644; A61B 17/06166; A61B 17/068; A61B 17/0469; A61B 17/0485; A61B 17/10  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

2,283,814	A	5/1942	La Place
2,351,608	A	6/1944	Greenwood
2,439,383	A	4/1948	Erickson

(Continued)

**FOREIGN PATENT DOCUMENTS**

EP	1 323 384	A2	7/2003
FR	2549544		1/1985

(Continued)

**OTHER PUBLICATIONS**

Brochure: *Information Booklet for Auto Suture® Purse String Instrument*, Auto Suture Company, a division of United States Surgical Corporation, Norwalk, CT, 2 pgs., 1978.

(Continued)

*Primary Examiner* — Wan Laymon

(74) *Attorney, Agent, or Firm* — Patterson Thunte Pedersen, P.A.

(57) **CLAIM**

We claim the ornamental design for a tissue fastening instrument, as shown and described.

**DESCRIPTION**

FIG. 1 is a bottom view of a tissue fastening instrument in an initial tissue capture orientation according to an embodiment of the invention.

FIG. 2 is a top view of the tissue fastening instrument depicted in FIG. 1.

FIG. 3 is a rear, end view of the tissue fastening instrument depicted in FIG. 1.

FIG. 4 is a front end view of the tissue fastening instrument depicted in FIG. 1.

FIG. 5 is a left side view of the tissue fastening instrument depicted in FIG. 1.

FIG. 6 is a right side view of the tissue fastening instrument depicted in FIG. 1.

FIG. 7 is a top, front perspective view of the tissue fastening instrument depicted in FIG. 1.

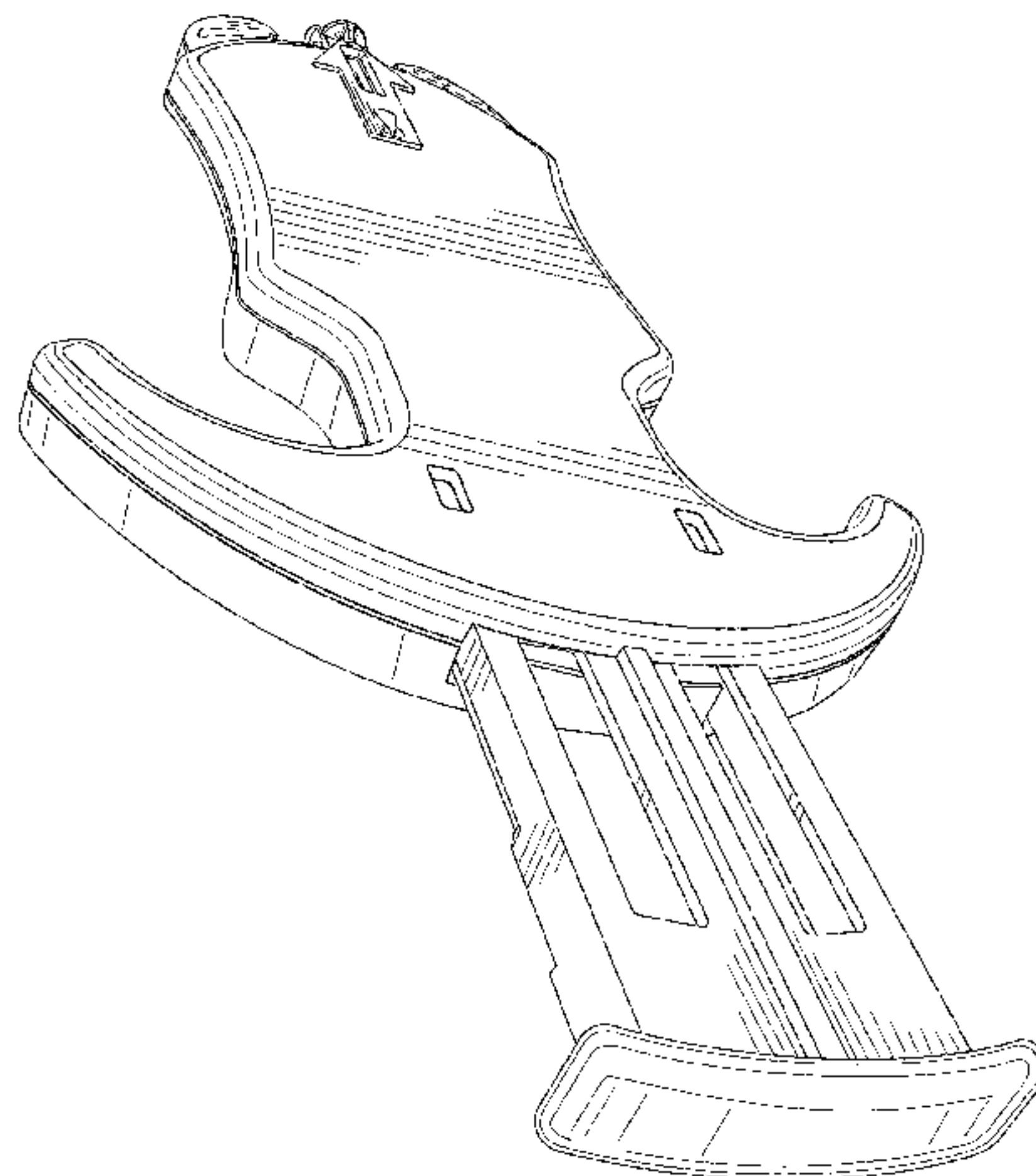
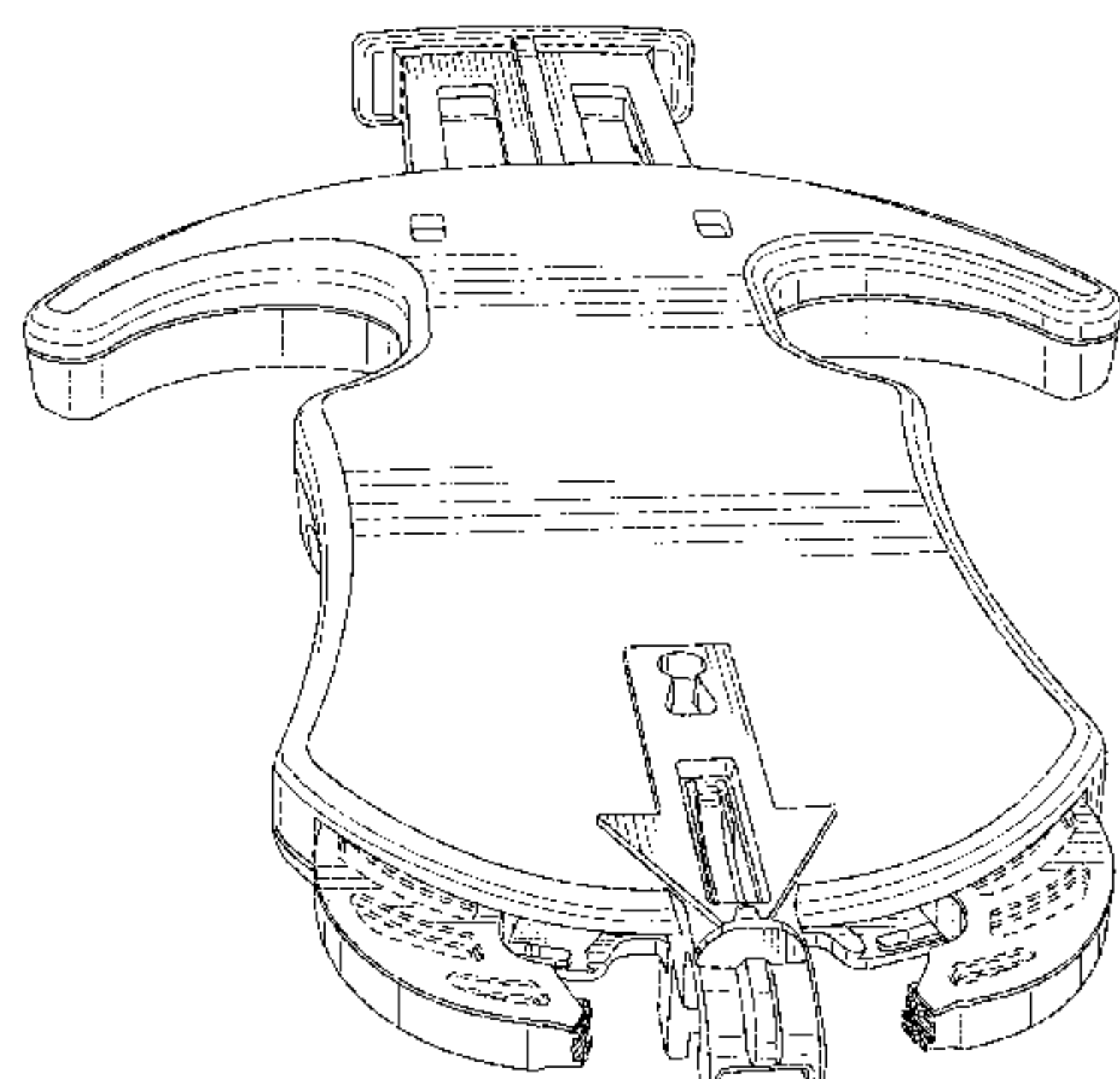
FIG. 8 is a top, rear perspective view of the tissue fastening instrument depicted in FIG. 1.

FIG. 9 is a top view of the tissue fastening instrument of FIG. 2 in an intermediate tissue capture orientation; and,

FIG. 10 is a top view of the tissue fastening instrument of FIG. 2 in a completed tissue capture orientation.

The broken lines shown in the figures represent portions of the tissue fastening instrument that form no part of the claimed invention.

**1 Claim, 8 Drawing Sheets**



(56)

## References Cited

## U.S. PATENT DOCUMENTS

2,526,902 A	10/1950	Rublee	4,899,745 A	2/1990	Laboureau et al.
2,881,762 A	4/1959	Lowrie	4,915,100 A	4/1990	Green
2,959,172 A	11/1960	Held	4,924,866 A	5/1990	Yoon
3,082,426 A	3/1963	Miles	4,955,898 A	9/1990	Matsutani et al.
3,123,077 A	3/1964	Alcamo	4,969,591 A	11/1990	Richards et al.
3,297,033 A	1/1967	Schmitt et al.	4,976,686 A	12/1990	Ball et al.
3,344,790 A	10/1967	Dorner	4,976,715 A	12/1990	Bays et al.
3,636,956 A	1/1972	Schneider	4,994,073 A	2/1991	Green
3,643,851 A	2/1972	Green et al.	5,002,562 A	3/1991	Oberlander
3,716,058 A	2/1973	Tanner, Jr.	5,007,921 A	4/1991	Brown
3,757,629 A	9/1973	Schneider	5,015,252 A	5/1991	Jones
3,792,010 A	2/1974	Wasserman et al.	5,026,390 A	6/1991	Brown
4,014,492 A	3/1977	Rothfuss	5,035,692 A	7/1991	Lyon et al.
4,027,676 A	6/1977	Mattei	5,044,540 A	9/1991	Dulebohn
4,047,533 A	9/1977	Perciaccante et al.	5,047,047 A	9/1991	Yoon
4,162,678 A	7/1979	Fedotov et al.	5,058,315 A	10/1991	Wagner
4,259,959 A	4/1981	Walker	5,062,563 A	11/1991	Green et al.
4,261,244 A	4/1981	Becht et al.	5,078,731 A	1/1992	Hayhurst
4,296,751 A *	10/1981	Blake, III ..... A61B 17/128 227/145	5,078,731 A	1/1992	Jarrett et al.
4,317,451 A	3/1982	Cerwin et al.	5,080,665 A	1/1992	Jarrett et al.
4,399,810 A	8/1983	Samuels et al.	5,089,009 A	2/1992	Green
4,407,286 A	10/1983	Noiles et al.	5,108,422 A	4/1992	Green et al.
4,410,125 A	10/1983	Noiles et al.	5,129,570 A	7/1992	Schulze et al.
4,428,376 A	1/1984	Mericle	5,156,609 A	10/1992	Nakao et al.
4,430,998 A	2/1984	Harvey et al.	5,158,566 A	10/1992	Pianetti
4,434,796 A	3/1984	Karapetian et al.	5,158,567 A	10/1992	Green
4,454,875 A	6/1984	Pratt et al.	5,160,339 A	11/1992	Chen et al.
4,465,071 A *	8/1984	Samuels ..... A61B 17/0644 606/143	5,179,964 A	1/1993	Cook
4,467,805 A	8/1984	Fukuda	5,211,644 A	5/1993	VanBeek et al.
4,485,816 A	12/1984	Krumme	5,211,722 A	5/1993	Wagner
4,485,953 A	12/1984	Rothfuss	5,236,440 A	8/1993	Hlavacek
4,493,322 A	1/1985	Becht	5,242,457 A	9/1993	Akopov et al.
4,505,273 A	3/1985	Braun et al.	5,257,713 A	11/1993	Green et al.
4,506,669 A	3/1985	Blake, III	5,258,009 A	11/1993	Connors
4,508,253 A	4/1985	Green	5,258,010 A	11/1993	Green et al.
4,513,746 A	4/1985	Aranyi et al.	5,258,012 A	11/1993	Luscombe et al.
4,526,173 A	7/1985	Sheehan	5,263,973 A	11/1993	Cook
4,526,174 A	7/1985	Froehlich	5,269,783 A	12/1993	Sander
4,534,352 A	8/1985	Korthoff	5,269,792 A	12/1993	Kovac et al.
4,535,772 A	8/1985	Sheehan	5,285,944 A	2/1994	Green et al.
4,548,202 A	10/1985	Duncan	5,292,326 A	3/1994	Green et al.
4,557,265 A	12/1985	Andersson	5,293,881 A	3/1994	Green et al.
4,566,620 A	1/1986	Green et al.	5,297,714 A	3/1994	Kramer
4,568,009 A	2/1986	Green	5,304,204 A	4/1994	Bregen
4,570,623 A	2/1986	Ellison et al.	5,324,307 A	6/1994	Jarrett et al.
4,573,622 A	3/1986	Green et al.	5,333,772 A	8/1994	Rothfuss et al.
4,583,670 A	4/1986	Alvarado	5,337,937 A	8/1994	Remiszewski et al.
4,592,498 A	6/1986	Braun et al.	5,342,376 A	8/1994	Ruff
4,593,843 A	6/1986	Saravis	5,350,400 A	9/1994	Esposito et al.
4,596,350 A	6/1986	Smith et al.	5,364,003 A	11/1994	Williamson, IV
4,607,638 A	8/1986	Crainich	5,366,134 A	11/1994	Green et al.
4,610,251 A	9/1986	Kumar	5,389,102 A	2/1995	Green et al.
4,618,086 A	10/1986	Li et al.	5,392,979 A	2/1995	Green et al.
4,619,262 A	10/1986	Taylor	5,398,861 A	3/1995	Green
4,637,380 A	1/1987	Orejola	D357,316 S	4/1995	Green et al.
4,646,741 A	3/1987	Smith	5,413,584 A	5/1995	Schulze
4,655,222 A	4/1987	Florez et al.	5,415,334 A	5/1995	Williamson, IV et al.
4,665,916 A	5/1987	Green	5,417,361 A	5/1995	Williamson, IV
4,671,279 A	6/1987	Hill	5,423,856 A	6/1995	Green
4,676,245 A	6/1987	Fukuda	5,425,489 A	6/1995	Shichman et al.
4,696,300 A	9/1987	Anderson	5,425,747 A	6/1995	Brotz
4,719,917 A	1/1988	Barrows et al.	5,456,400 A	10/1995	Shichman et al.
4,728,020 A	3/1988	Green et al.	5,456,401 A	10/1995	Green et al.
4,741,337 A	5/1988	Smith et al.	5,478,003 A	12/1995	Green et al.
4,752,024 A	6/1988	Green et al.	5,480,089 A	1/1996	Blewett
4,753,636 A	6/1988	Free	5,482,197 A	1/1996	Green et al.
4,762,260 A	8/1988	Richards et al.	5,489,058 A	2/1996	Plyley et al.
4,776,506 A	10/1988	Green	5,489,287 A	2/1996	Green et al.
4,789,090 A	12/1988	Blake, III	5,505,363 A	4/1996	Green et al.
4,802,478 A	2/1989	Powell	5,509,596 A	4/1996	Green et al.
4,887,601 A	12/1989	Richards	5,514,149 A	5/1996	Green et al.
4,887,756 A	12/1989	Puchy	5,542,594 A	8/1996	McKean et al.
4,895,148 A	1/1990	Bays et al.	5,544,802 A	8/1996	Crainich
			5,549,619 A	8/1996	Peters et al.
			5,551,622 A	9/1996	Yoon
			5,558,266 A	9/1996	Green et al.
			5,562,241 A	10/1996	Knodel et al.
			5,571,285 A	11/1996	Chow et al.
			5,573,541 A	11/1996	Green et al.
			5,579,978 A	12/1996	Green et al.



(56)

References Cited

U.S. PATENT DOCUMENTS

5,584,859 A 12/1996 Brotz  
 5,591,178 A 1/1997 Green et al.  
 5,593,423 A 1/1997 Person et al.  
 5,618,311 A 4/1997 Gryskiewicz  
 5,645,567 A 7/1997 Crainich  
 5,658,312 A 8/1997 Green et al.  
 5,662,258 A 9/1997 Knodel et al.  
 5,662,655 A 9/1997 Laboureau et al.  
 5,667,527 A 9/1997 Cook  
 5,706,997 A 1/1998 Green et al.  
 5,725,538 A 3/1998 Green et al.  
 5,725,554 A 3/1998 Simon et al.  
 5,728,108 A 3/1998 Griffiths et al.  
 5,794,834 A 8/1998 Hamblin et al.  
 5,816,471 A 10/1998 Plyley et al.  
 5,829,662 A 11/1998 Allen et al.  
 5,843,084 A 12/1998 Hart et al.  
 5,871,135 A 2/1999 Williamson, IV et al.  
 5,878,937 A 3/1999 Green et al.  
 5,902,319 A 5/1999 Daley  
 5,908,427 A 6/1999 McKean et al.  
 5,947,999 A 9/1999 Groiso  
 5,964,774 A 10/1999 McKean et al.  
 5,976,160 A 11/1999 Crainich  
 5,984,949 A 11/1999 Levin  
 5,993,476 A 11/1999 Groiso  
 6,045,560 A 4/2000 McKean et al.  
 6,083,242 A 7/2000 Cook  
 6,090,131 A 7/2000 Daley  
 6,120,526 A 9/2000 Daley  
 6,131,789 A 10/2000 Schulze et al.  
 6,149,658 A 11/2000 Gardiner et al.  
 6,159,224 A 12/2000 Yoon  
 6,241,747 B1 6/2001 Ruff  
 6,250,532 B1 6/2001 Green et al.  
 6,270,517 B1 8/2001 Brotz  
 6,325,805 B1 12/2001 Ogilvie et al.  
 6,387,104 B1 5/2002 Pugsley et al.  
 6,387,113 B1 5/2002 Hawkins et al.  
 6,409,743 B1 6/2002 Fenton, Jr.  
 6,423,088 B1 7/2002 Fenton, Jr.  
 6,599,310 B2 7/2003 Leung et al.  
 6,619,529 B2 9/2003 Green et al.  
 6,626,916 B1 9/2003 Yeung et al.  
 6,629,988 B2 10/2003 Weadock  
 6,638,297 B1 10/2003 Huitema  
 6,666,872 B2 12/2003 Barreiro et al.  
 6,692,499 B2 2/2004 Törmälä et al.  
 6,726,705 B2 4/2004 Peterson et al.  
 6,767,356 B2 7/2004 Kanner et al.  
 6,773,437 B2 8/2004 Ogilvie et al.  
 7,112,214 B2 9/2006 Peterson et al.  
 D532,107 S 11/2006 Peterson et al.  
 7,547,315 B2 6/2009 Peterson et al.  
 7,682,372 B2 3/2010 Peterson  
 7,686,200 B2 3/2010 Peterson  
 D635,259 S \* 3/2011 Peterson ..... D24/145  
 7,950,559 B2 5/2011 Peterson et al.  
 8,066,736 B2 11/2011 Peterson et al.  
 8,074,857 B2 12/2011 Peterson et al.  
 8,100,939 B2 1/2012 Peterson  
 8,506,591 B2 \* 8/2013 Danielson ..... A61B 17/064  
 2002/0007184 A1 1/2002 Ogilvie et al.

2002/0019636 A1 2/2002 Ogilvie et al.  
 2002/0133181 A1 9/2002 Tong  
 2003/0028218 A1 2/2003 Bauer  
 2003/0139746 A1 7/2003 Groiso  
 2005/0033317 A1 2/2005 Ables  
 2007/0185504 A1 \* 8/2007 Manetakis ..... A61B 17/068  
 606/142  
 2012/0083831 A1 4/2012 Peterson  
 2012/0145765 A1 6/2012 Peterson et al.  
 2013/0267997 A1 10/2013 Peterson et al.  
 2015/0133966 A1 \* 5/2015 Gupta ..... A61B 17/064  
 606/142  
 2015/0305740 A1 \* 10/2015 Peterson ..... A61B 17/10  
 606/216

FOREIGN PATENT DOCUMENTS

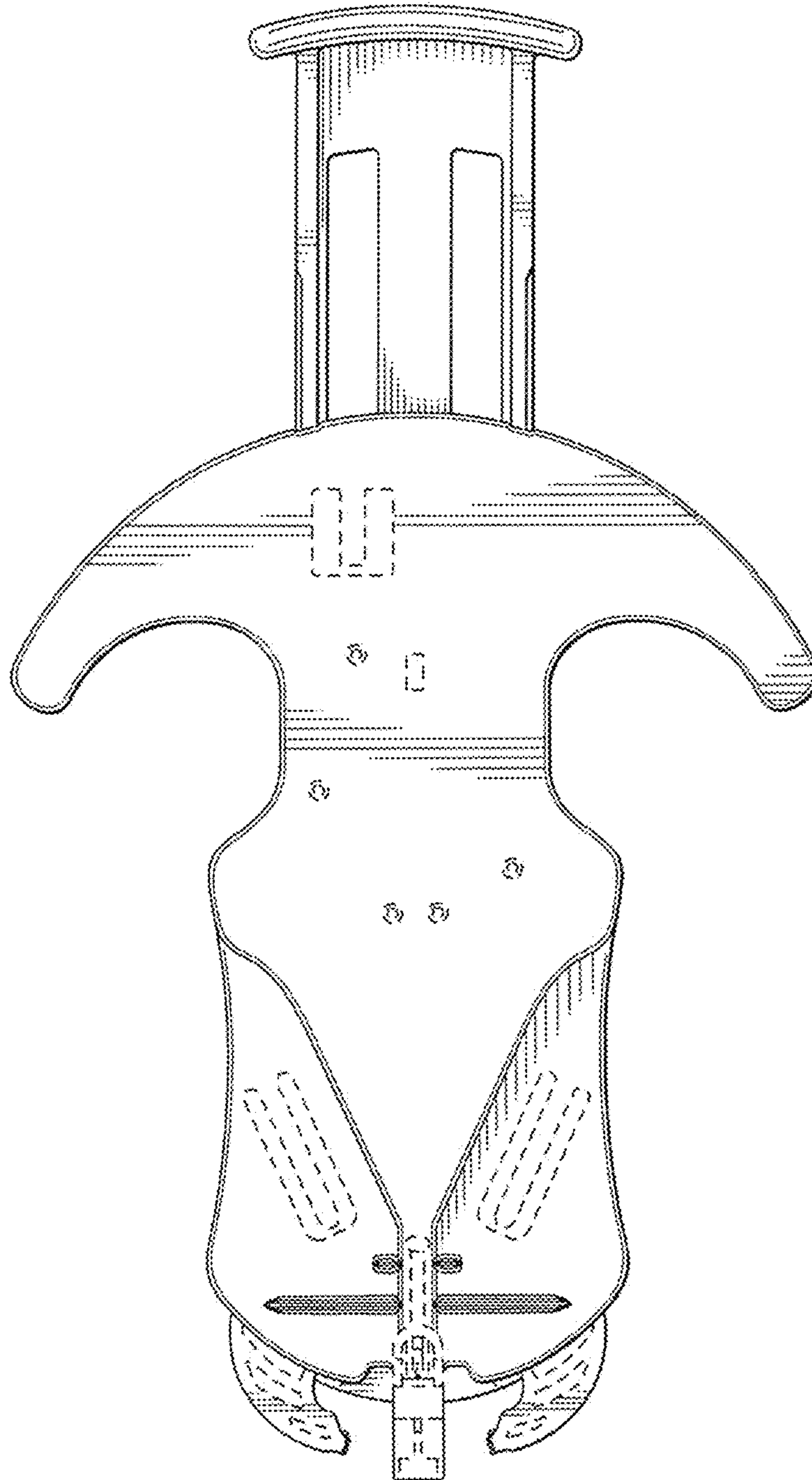
JP 04-226642 A 8/1992  
 JP 5-504892 7/1993  
 JP 06233772 8/1994  
 JP 7-124166 5/1995  
 JP 2000-217829 8/2000  
 JP 2000-517197 12/2000  
 WO WO 97/18761 5/1997  
 WO WO 00/57796 10/2000  
 WO WO 00/67644 11/2000

OTHER PUBLICATIONS

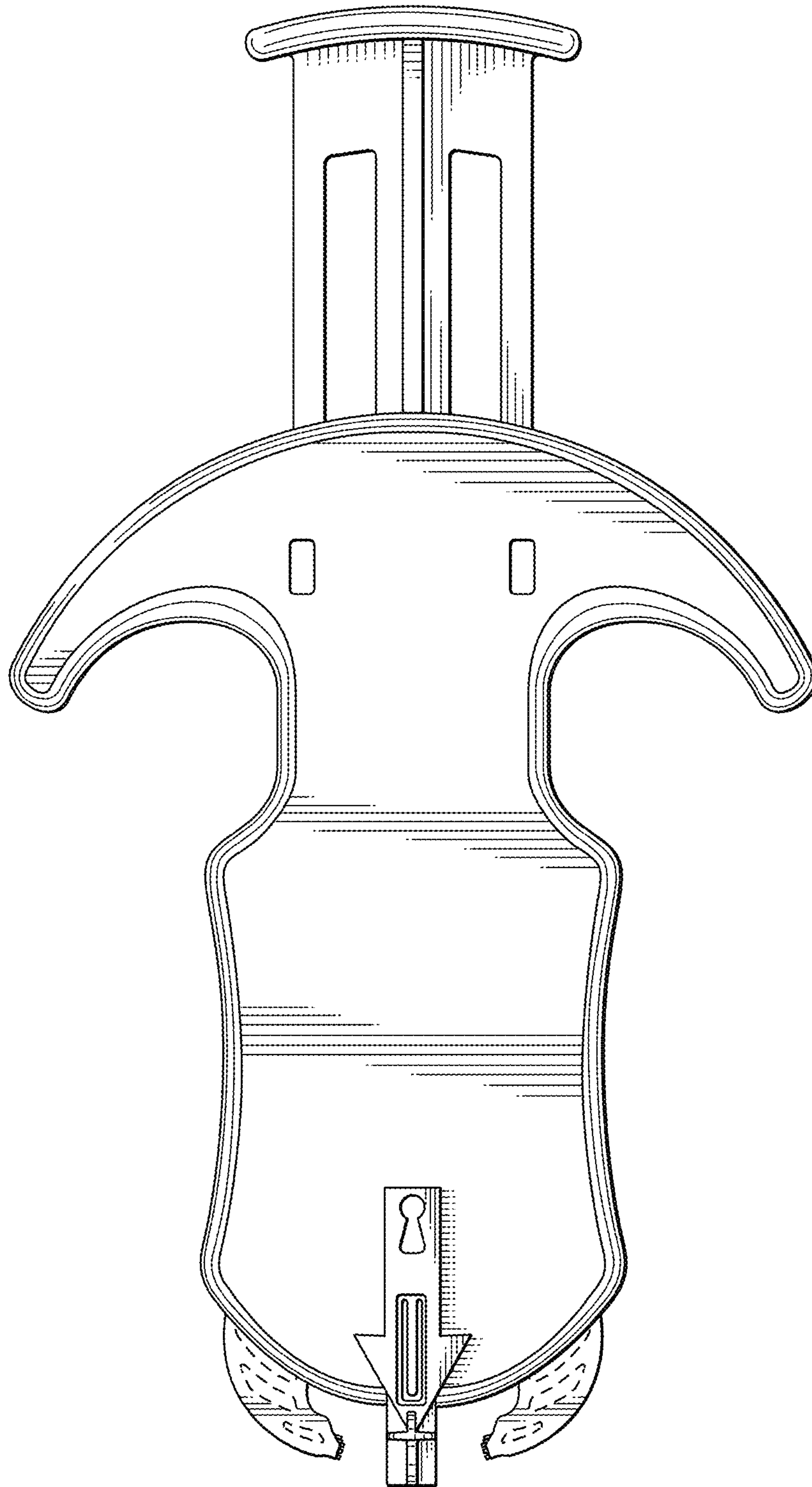
Brochure: *La Sutura Perde it Filo*, Farmitalia Carlo Erba, 4 pgs., not dated.  
*Evaluation of New Absorbable Lactomer Subcuticular Staple*, G.C. Zachmann, P.A. Foresman, T.J. Bill, D.J. Bentrem, G.T. Rodeheaver, R.F. Edlich, Journal of Applied Biomaterial, vol. 5, No. 3, pp. 221-226, 1994.  
 File history for U.S. Appl. No. 10/448,838, filed May 30, 2003. Inventors: James Peterson.  
 File history for U.S. Appl. No. 10/607,497, filed Jun. 25, 2003. Inventors: James Peterson et al.  
 File history for U.S. Appl. No.: 10/603,397, filed Jun. 25, 2003. Inventors: James Peterson et al.  
 File history for U.S. Appl. No. 11/022,319, filed Dec. 23, 2004. Inventors: James Peterson et al.  
 File history for U.S. Appl. No. 11/003,145, filed Dec. 3, 2004. Inventors: James Peterson et al.  
 File history for U.S. Appl. No. 11/097,085, filed Apr. 1, 2005. Inventors: James Peterson et al.  
 File history for U.S. Appl. No. 13/314,978, filed Dec. 8, 2011. Inventors: James Peterson et al.  
 EPO Communication dated Mar. 8, 2011 for EP Application No. 03761338.7 filed Jun. 25, 2003, 6 pages.  
 PCT Search Report dated Oct. 13, 2004 for PCT Application No. PCT/US03/20083 filed Jun. 25, 2003, 5 pages.  
 File history for U.S. Appl. No. 13/796,798, filed Mar. 12, 2013. Inventors: James Peterson et al.  
 File history for U.S. Appl. No. 11/316,322, filed Dec. 22, 2005. Inventor: James Peterson.  
 File history for U.S. Appl. No. 11/487,951, filed Jul. 17, 2006. Inventor: James Peterson.  
 File history for U.S. Appl. No. 13/324,680, filed Dec. 13, 2011. Inventor: James Peterson.  
 Application and File history for U.S. Appl. No. 14/262,071, filed Apr. 25, 2014. Inventors: Peterson et al.

\* cited by examiner

*Fig. 1*

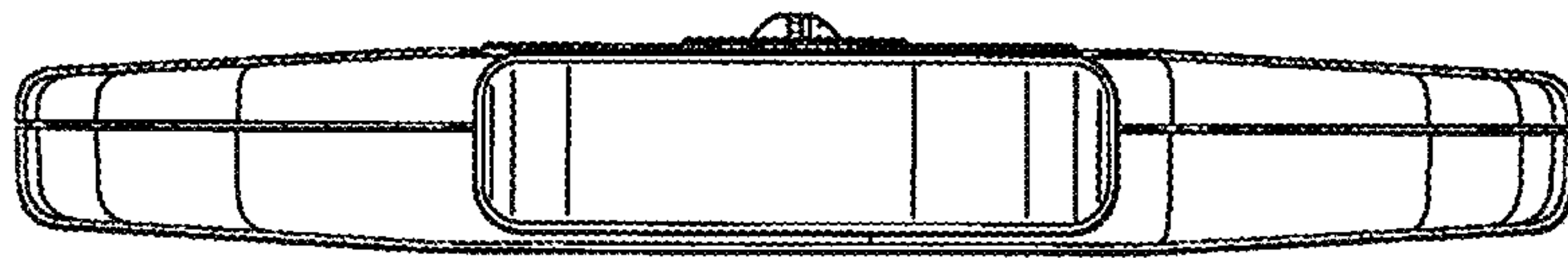


**Fig. 2**

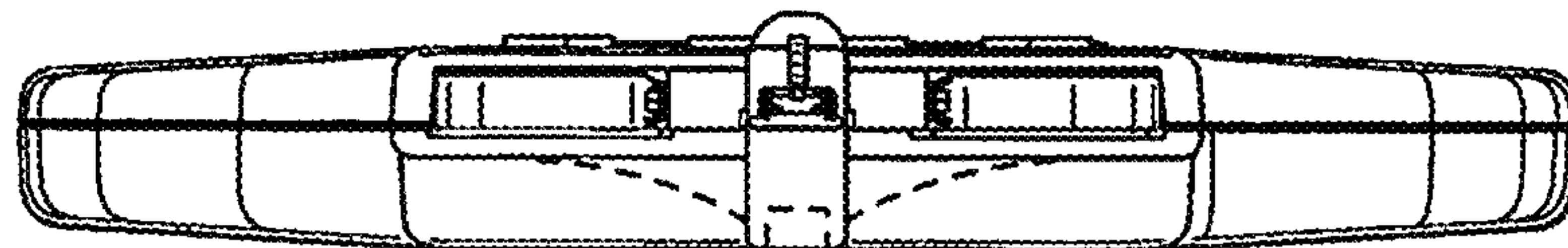




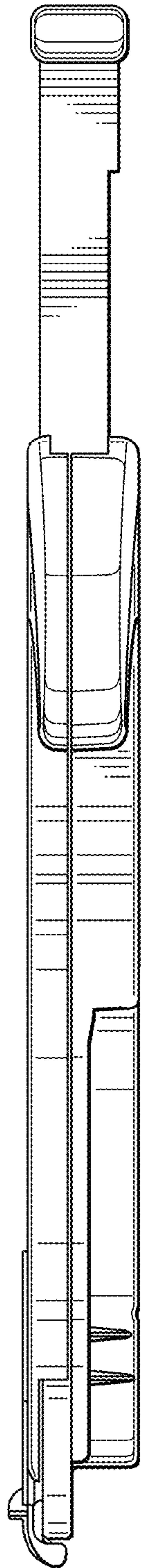
**Fig. 3**



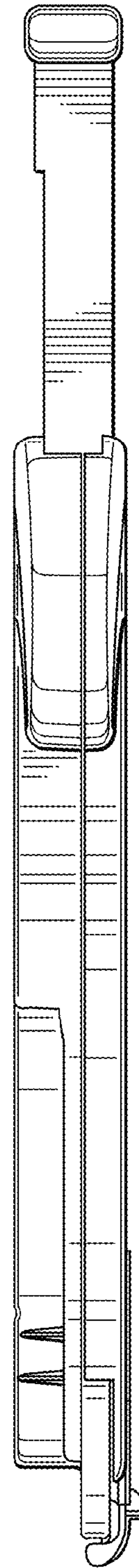
**Fig. 4**



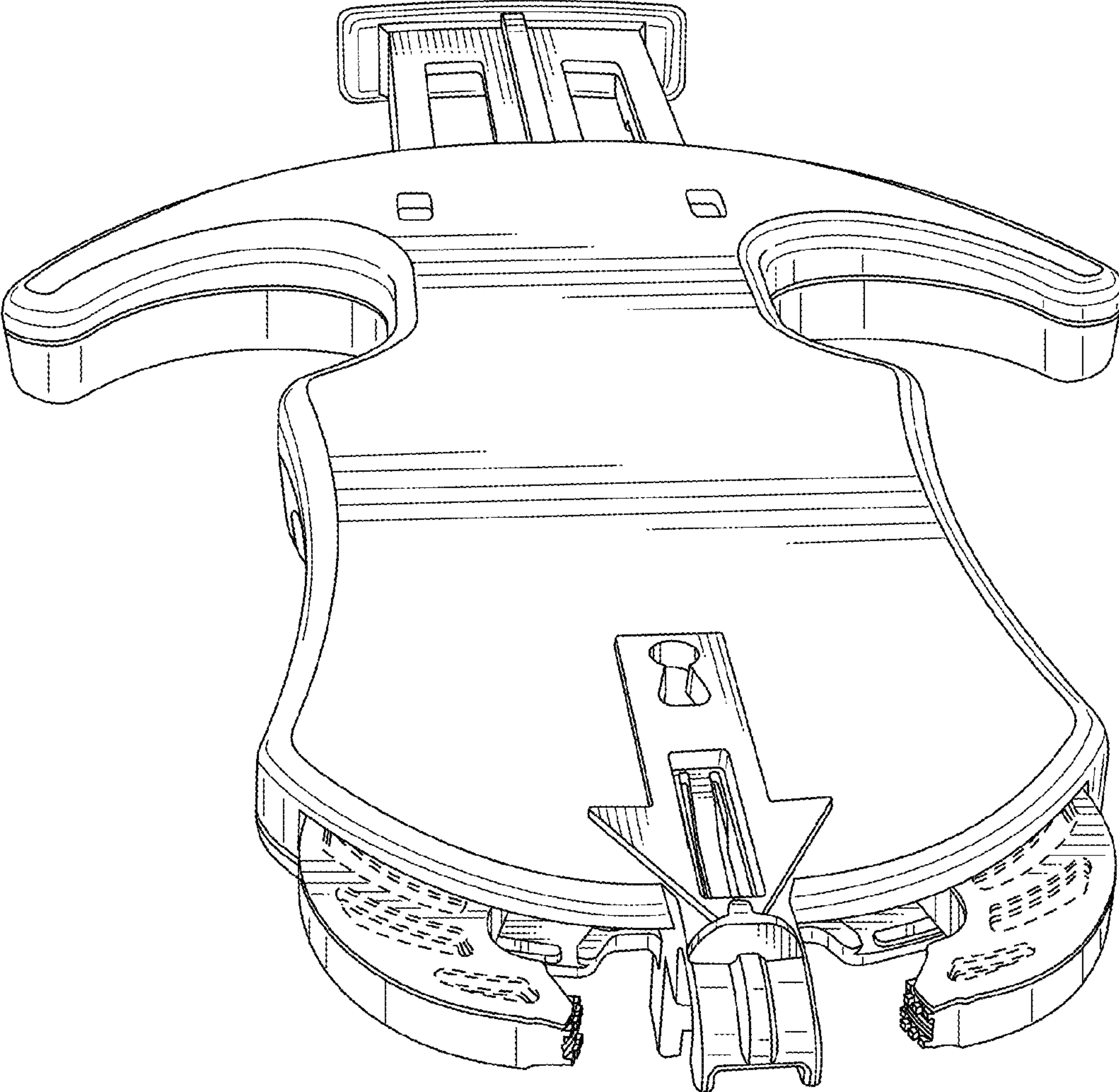
**Fig. 5**



**Fig. 6**

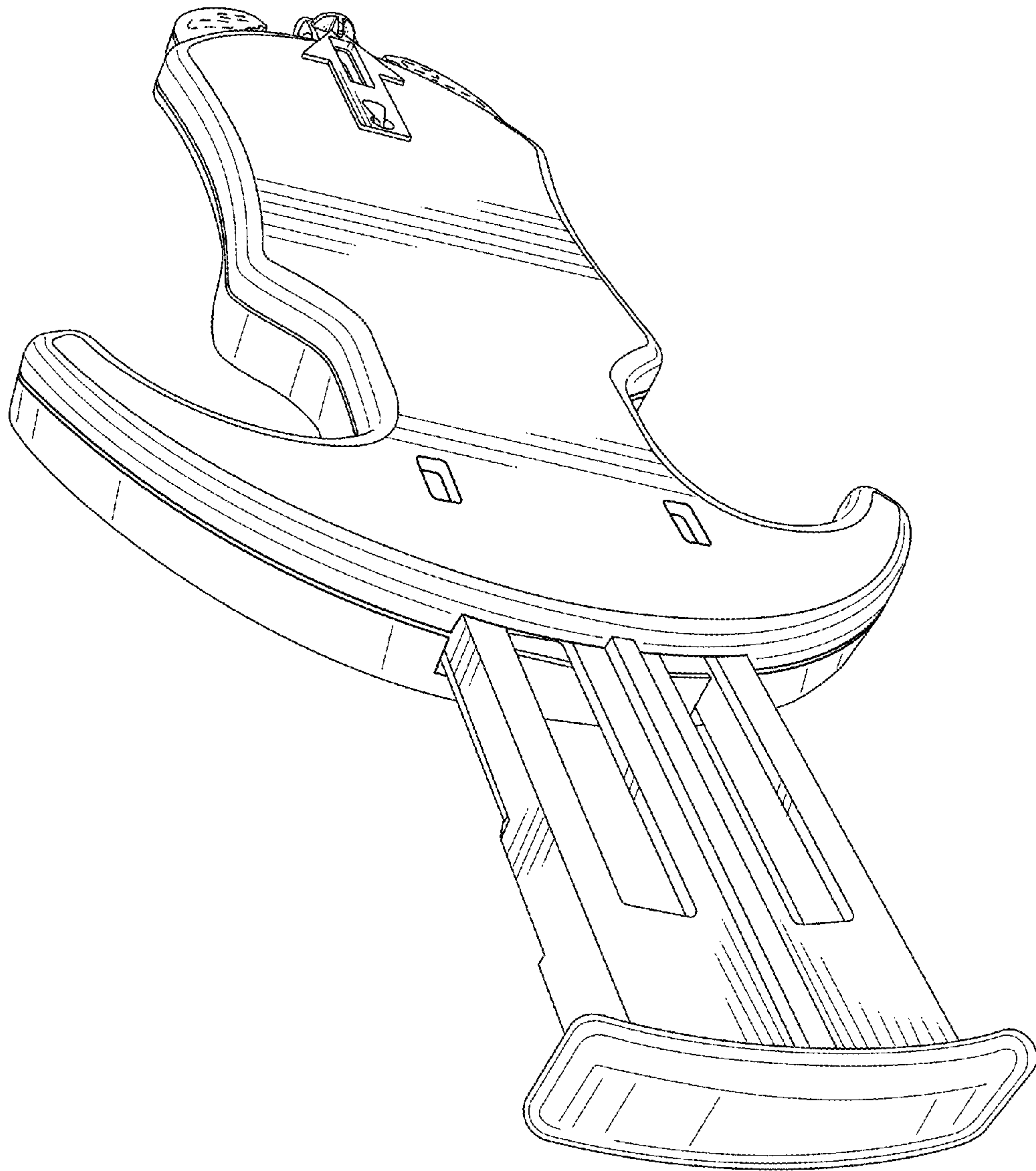


**Fig. 7**

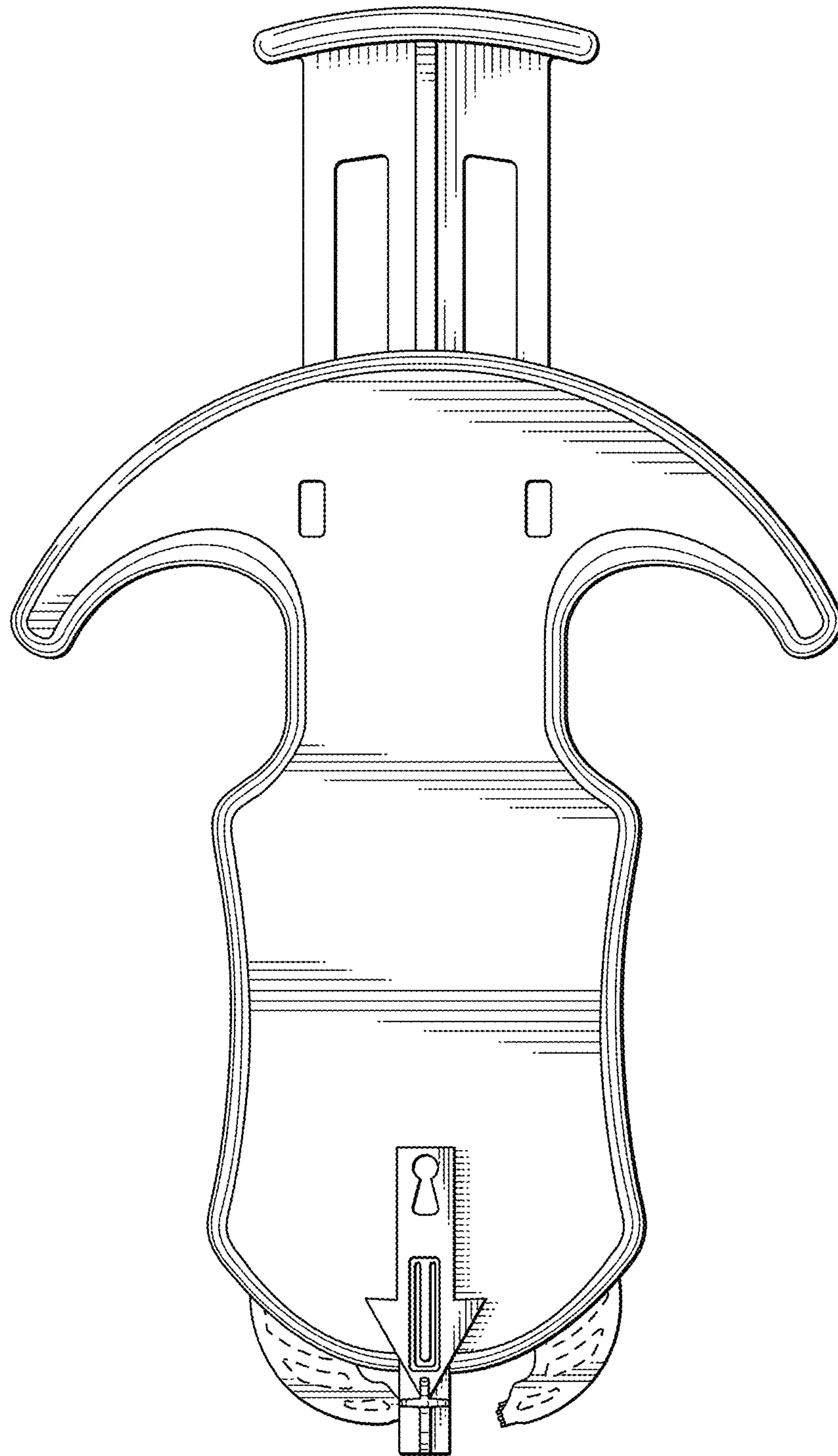




**Fig. 8**



**Fig. 9**



**Fig. 10**

