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

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(54) **MEDICAL SENSOR**

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USPC ..... D24/165, 167, 168, 186, 187; D13/133,  
D13/147; D10/56, 60, 97  
CPC ... A61B 5/1455; A61B 5/6833; A61B 5/6843;  
A61B 5/14552; A61M 25/0127; A42B  
1/242  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

4,825,879 A \* 5/1989 Tan ..... A61B 5/02427  
600/344  
4,865,038 A \* 9/1989 Rich ..... A61B 5/14552  
600/344  
4,964,408 A 10/1990 Hink et al.  
5,069,213 A 12/1991 Polczynski  
5,154,175 A 10/1992 Gunther

(Continued)

**FOREIGN PATENT DOCUMENTS**

EP 1945099 A1 7/2008  
JP 6016774 A 1/1994

(Continued)

**OTHER PUBLICATIONS**

Nellcor Oximax DS100A Adult Neonatal Disposable oxygen sensor. Online, published date unknown. Retrieved on Dec. 21, 2018 from URL: [https://www.alibaba.com/product-detail/Nellcor-Oximax-DS100A-Adult-Neonatal-Disposable\\_60609345689.html](https://www.alibaba.com/product-detail/Nellcor-Oximax-DS100A-Adult-Neonatal-Disposable_60609345689.html).\*

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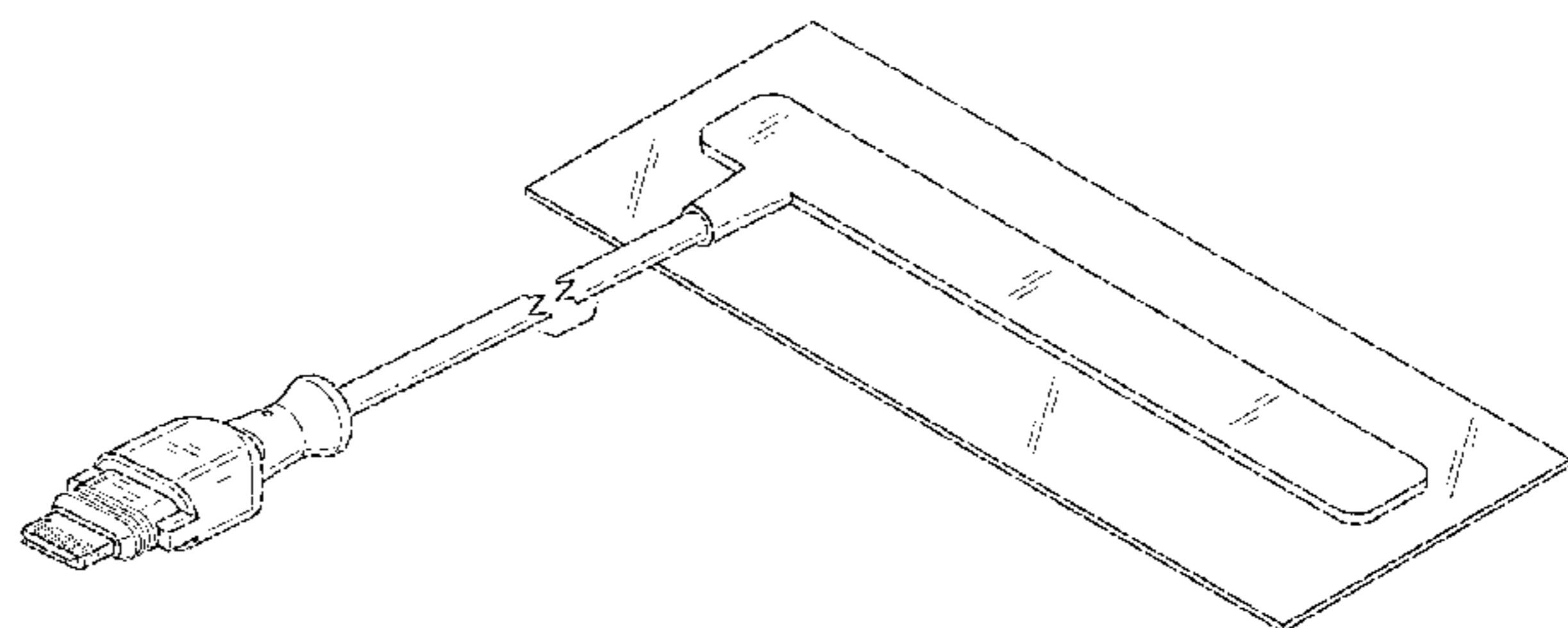
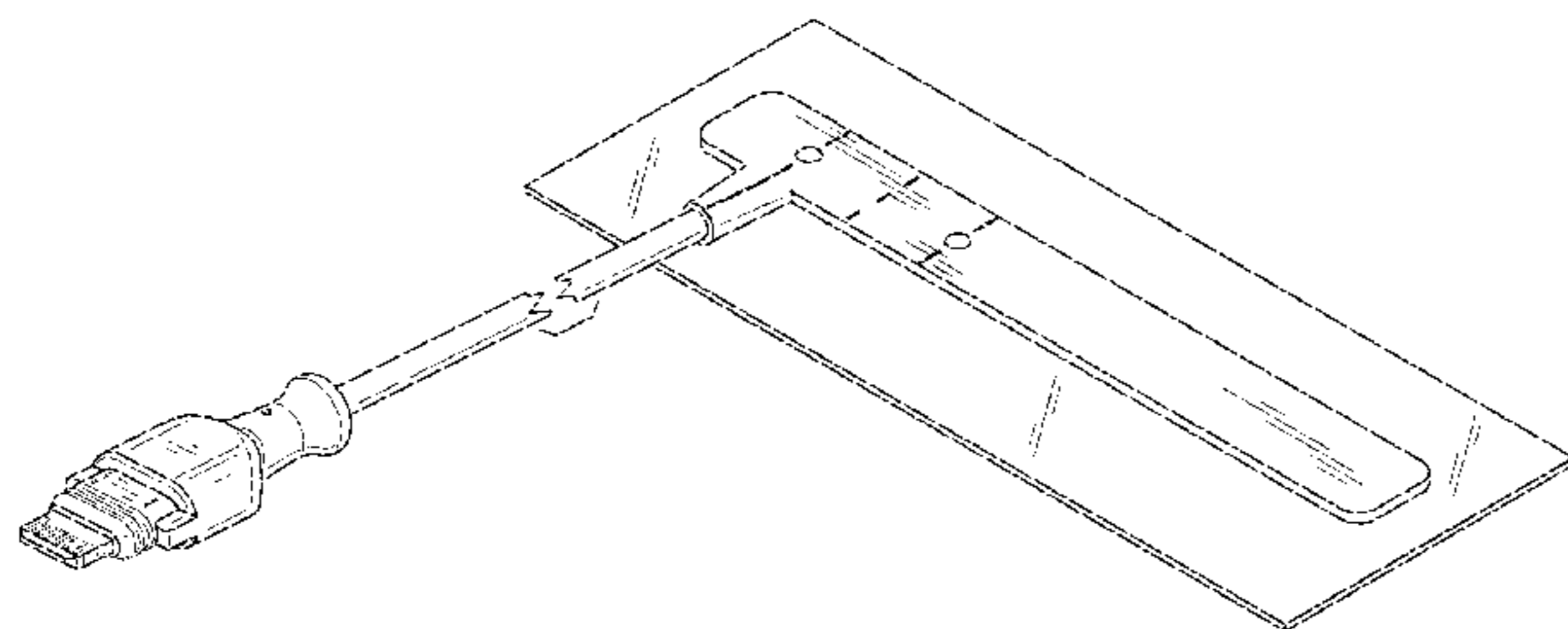
(57) **CLAIM**

We claim the ornamental design for a medical sensor, as shown and described.

**DESCRIPTION**

FIG. 1 is a perspective view of the first embodiment of a medical sensor of the present invention;  
FIG. 2 is a top view of the medical sensor of FIG. 1;  
FIG. 3 is a bottom view of the medical sensor of FIG. 1;  
FIG. 4 is a right side view of the medical sensor of FIG. 1;  
FIG. 5 is a left side view of the medical sensor of FIG. 1;  
FIG. 6 is a front view of the medical sensor of FIG. 1;  
FIG. 7 is a rear view of the medical sensor of FIG. 1;  
FIG. 8 is a perspective view of the second embodiment of a medical sensor;  
FIG. 9 is a top view of the medical sensor of FIG. 8;  
FIG. 10 is a rear view of the medical sensor of FIG. 8;  
FIG. 11 is a perspective view of the third embodiment of a medical sensor; and  
FIG. 12 is a top view of the medical sensor of FIG. 11.  
The broken away symbols in the drawings indicate that any portion of the article beyond what is shown forms no part of the claimed design. The thick broken lines in the figures are claimed features of the design.  
The thin broken lines in FIGS. 3 and 4 depict portions of the medical sensor that form no part of the claimed design.

**1 Claim, 10 Drawing Sheets**



(56)

References Cited

U.S. PATENT DOCUMENTS

5,228,440 A 7/1993 Chung et al.  
 5,249,576 A 10/1993 Goldberger et al.  
 5,287,853 A 2/1994 Vester et al.  
 5,343,869 A 9/1994 Pross et al.  
 5,387,122 A 2/1995 Goldberger et al.  
 5,425,362 A 6/1995 Siker et al.  
 D366,528 S 1/1996 Crouse et al.  
 5,491,299 A 2/1996 Naylor et al.  
 5,645,440 A 7/1997 Tobler et al.  
 5,660,567 A 8/1997 Nierlich et al.  
 5,743,260 A 4/1998 Chung et al.  
 5,790,729 A 8/1998 Pologe et al.  
 5,851,178 A 12/1998 Aronow  
 5,890,929 A 4/1999 Mills et al.  
 5,934,925 A 8/1999 Tobler et al.  
 5,961,452 A 10/1999 Chung et al.  
 5,997,343 A 12/1999 Mills et al.  
 6,014,576 A 1/2000 Raley  
 6,026,312 A 2/2000 Shemwell et al.  
 6,112,107 A 8/2000 Hannula  
 6,152,754 A 11/2000 Gerhardt et al.  
 6,165,005 A 12/2000 Mills et al.  
 6,253,097 B1 6/2001 Aronow et al.  
 6,280,213 B1 8/2001 Tobler et al.  
 6,298,255 B1\* 10/2001 Cordero ..... A61B 5/04085  
 600/372  
 6,370,409 B1 4/2002 Chung et al.  
 6,541,756 B2 4/2003 Schultz et al.  
 6,678,543 B2 1/2004 Diab et al.  
 6,850,788 B2 2/2005 Al-Ali  
 7,117,590 B2 10/2006 Koenig et al.  
 7,132,641 B2 11/2006 Schulz et al.  
 7,210,959 B1 5/2007 Teves  
 7,225,006 B2 5/2007 Al-Ali et al.  
 7,248,910 B2 7/2007 Li et al.  
 7,371,981 B2 5/2008 Abdul-Hafiz  
 7,377,794 B2 5/2008 Al-Ali et al.  
 7,427,165 B2 9/2008 Benaron et al.  
 D615,657 S \* 5/2010 Anderson ..... D24/187  
 D615,658 S \* 5/2010 Anderson ..... D24/187  
 D615,659 S \* 5/2010 Anderson ..... D24/187  
 D615,660 S \* 5/2010 Anderson ..... D24/187  
 D629,521 S \* 12/2010 Lash ..... D24/168  
 8,188,433 B2 5/2012 Gonopolskiy et al.  
 8,428,967 B2 4/2013 Olsen et al.  
 8,483,790 B2\* 7/2013 Hannula ..... A61B 5/14552  
 600/310  
 D705,429 S \* 5/2014 Cheney ..... D24/169  
 8,726,496 B2 5/2014 Besko  
 8,764,671 B2\* 7/2014 Kiani ..... A61B 5/0048  
 600/500  
 9,138,182 B2 9/2015 Al-Ali et al.  
 D741,808 S \* 10/2015 Shim ..... D13/147  
 9,211,072 B2 12/2015 Kiani

D756,817 S 5/2016 Fries  
 D779,432 S \* 2/2017 Wong ..... D10/97  
 D779,433 S \* 2/2017 Fries ..... D13/133  
 D790,069 S \* 6/2017 Wong ..... D24/187  
 D794,568 S \* 8/2017 Wardenburg ..... D13/133  
 D800,583 S \* 10/2017 Ahong ..... D10/52  
 D806,256 S \* 12/2017 Allen ..... A61M 1/0088  
 D24/189  
 D813,498 S \* 3/2018 Lavin, Jr. .... D2/853  
 D826,173 S \* 8/2018 Chen ..... D13/147  
 2002/0103423 A1 8/2002 Chin et al.  
 2003/0135099 A1 7/2003 Al-Ali  
 2003/0162414 A1 8/2003 Schulz et al.  
 2004/0267103 A1 12/2004 Li et al.  
 2005/0113704 A1 5/2005 Lawson et al.  
 2006/0149149 A1\* 7/2006 Schmid ..... A61B 5/14552  
 600/473  
 2006/0241363 A1 10/2006 Al-Ali et al.  
 2007/0073121 A1\* 3/2007 Hoarau ..... A61B 5/14552  
 600/323  
 2007/0123783 A1 5/2007 Chang  
 2008/0064940 A1 3/2008 Raridan  
 2008/0071153 A1 3/2008 Al-Ali et al.  
 2008/0076980 A1 3/2008 Hoarau  
 2008/0076995 A1 3/2008 Hoarau  
 2008/0076996 A1 3/2008 Hoarau  
 2008/0081954 A1 4/2008 Meyer et al.  
 2008/0220633 A1 9/2008 Al-Ali et al.  
 2008/0255435 A1 10/2008 Al-Ali et al.  
 2008/0316488 A1 12/2008 Mao et al.  
 2010/0076282 A1\* 3/2010 Sandmore ..... A42B 1/242  
 600/340  
 2014/0228659 A1 8/2014 Besko  
 2015/0216459 A1 8/2015 Al-Ali

FOREIGN PATENT DOCUMENTS

JP 2004329406 A 11/2004  
 JP 2005052385 A 3/2005  
 JP 20055110816 A 4/2005  
 JP 2006061566 A 3/2006  
 JP 2007117641 A 5/2007  
 JP 2007167183 A 7/2007  
 JP 2007167184 A 7/2007  
 JP 2007190122 A 8/2007

OTHER PUBLICATIONS

SpO2\_Sensors\_and\_Adapter\_Cables\_for\_IntelliVue Aug. 1, 2008.  
 AdultO2\_Manual\_Multi\_Jan. 1, 2011.  
 Nellcor-adult-reusable-spo2-sensor-application-guide Jan. 1, 2012.  
 883-11-PM-0258BRC\_INVOSNeonatalBrochure\_singles-  
 1320864559.  
 12673-DesignedtoTreat-1402592390\_INVOS\_brochure.

\* cited by examiner

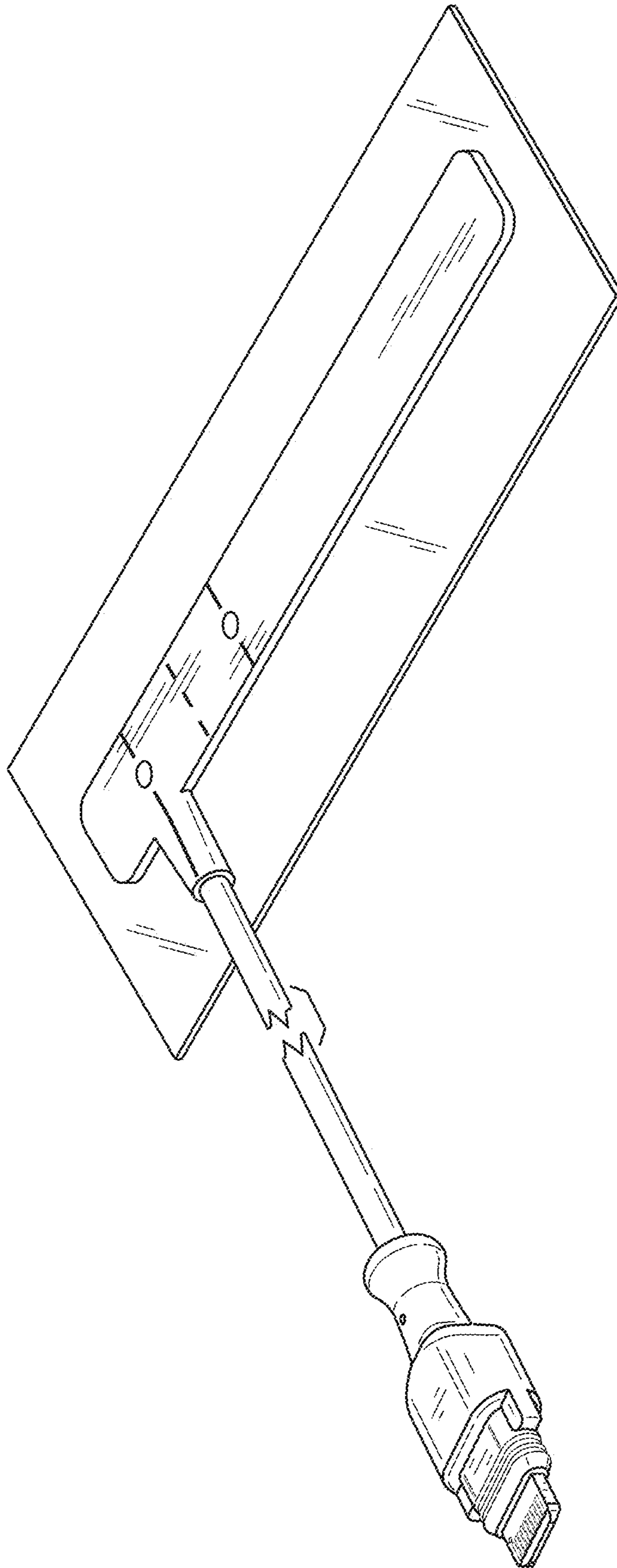


FIG. 1



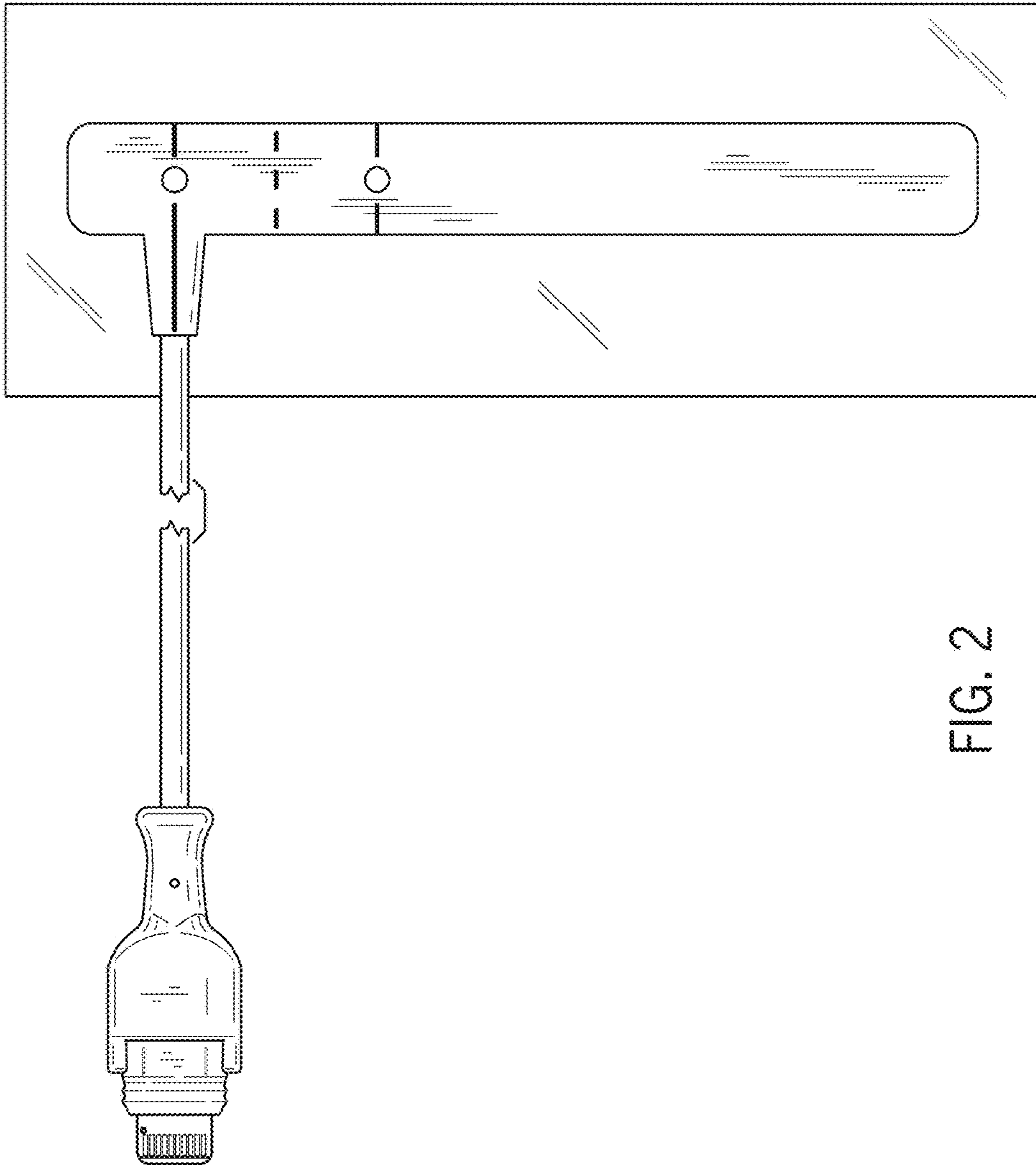


FIG. 2

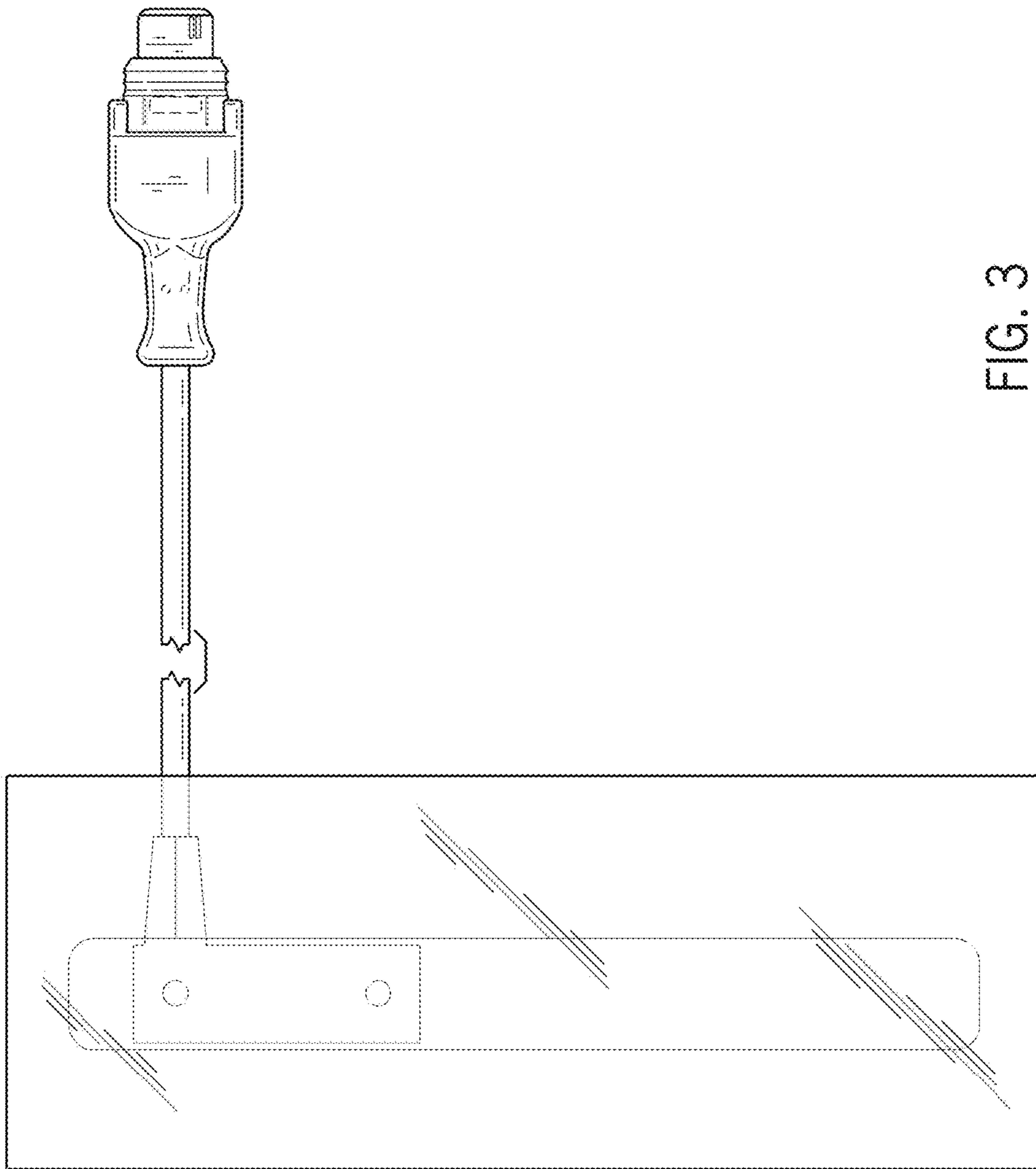


FIG. 3

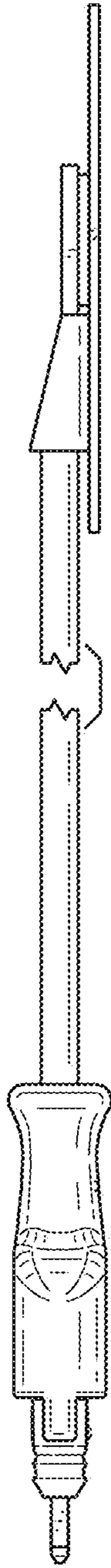


FIG. 4

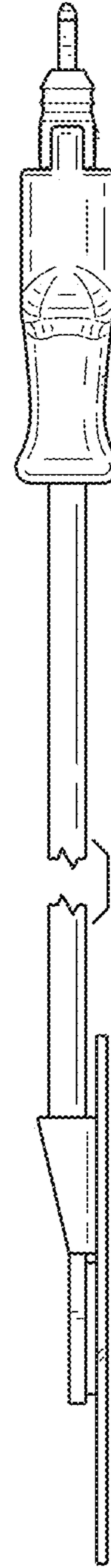


FIG. 5

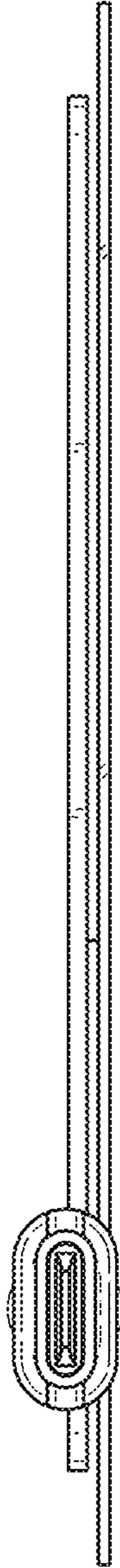


FIG. 6

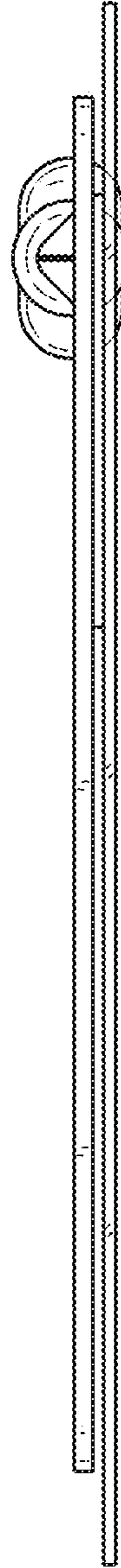


FIG. 7

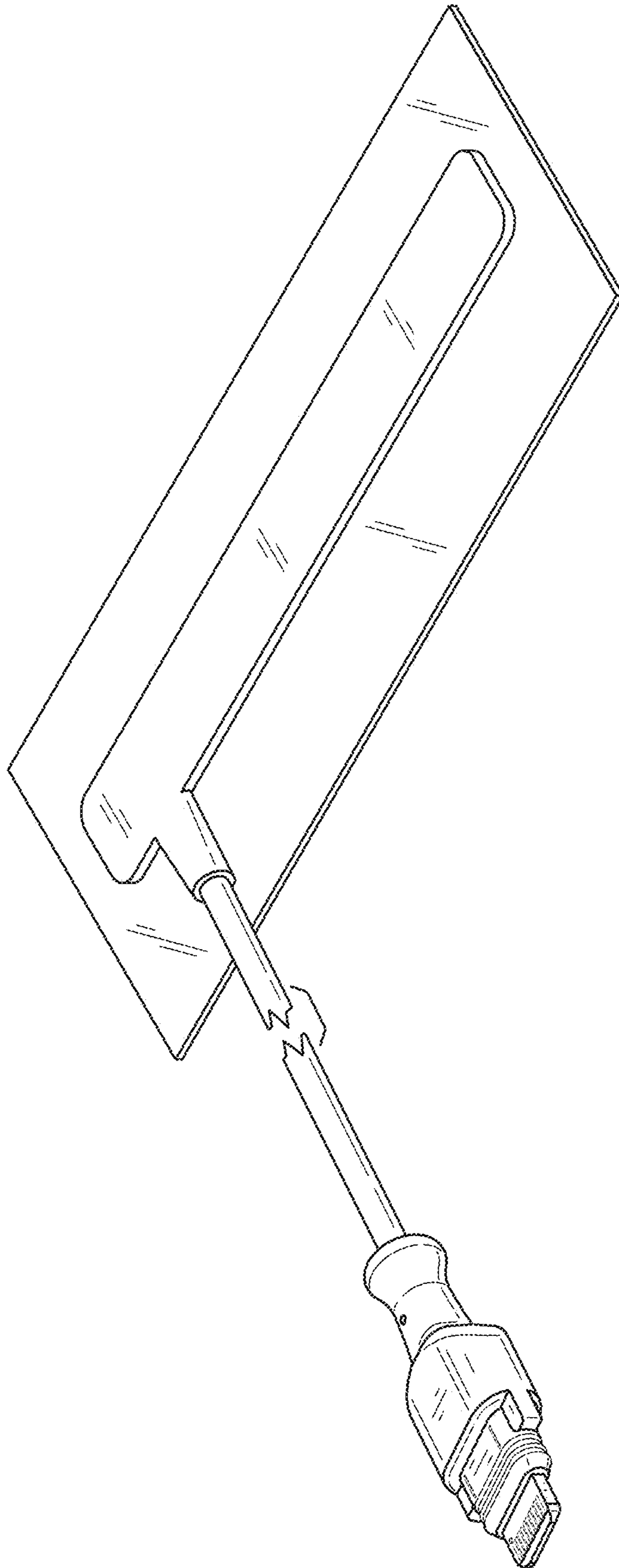


FIG. 8



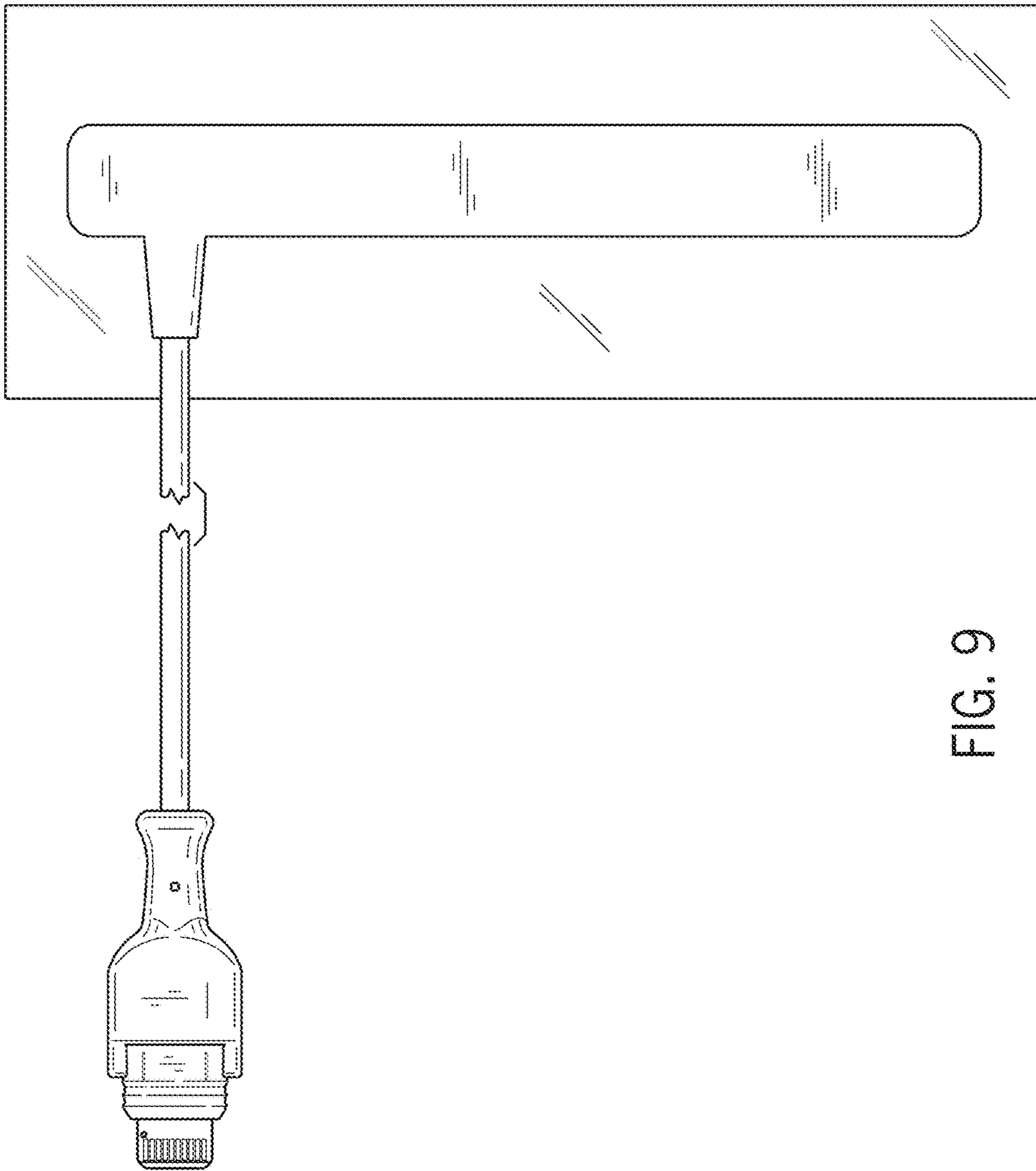


FIG. 9

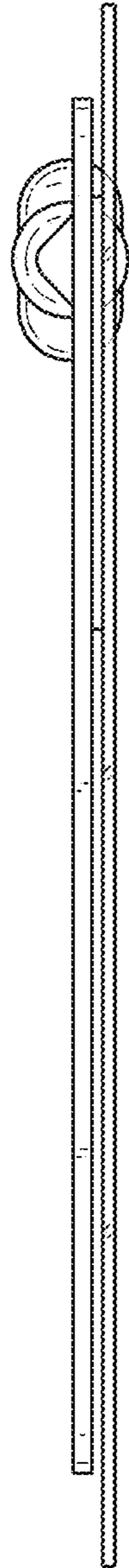


FIG. 10

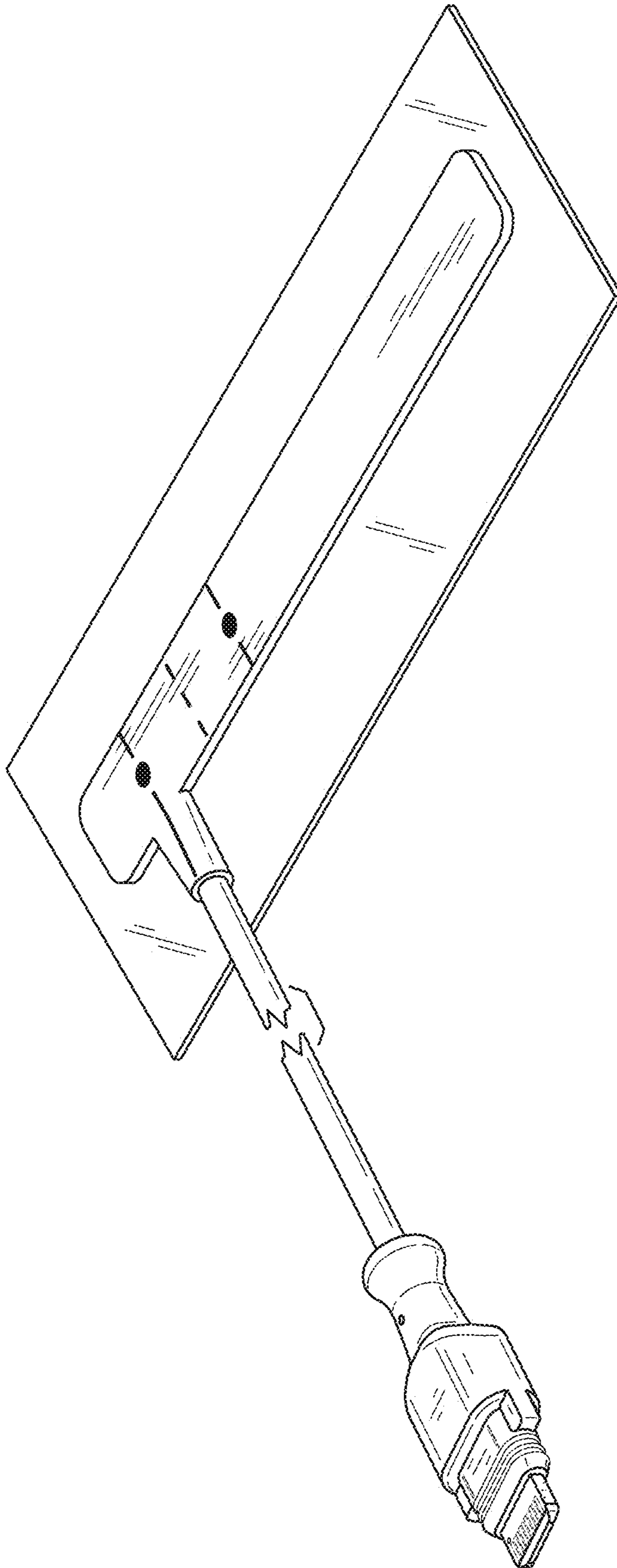


FIG. 11

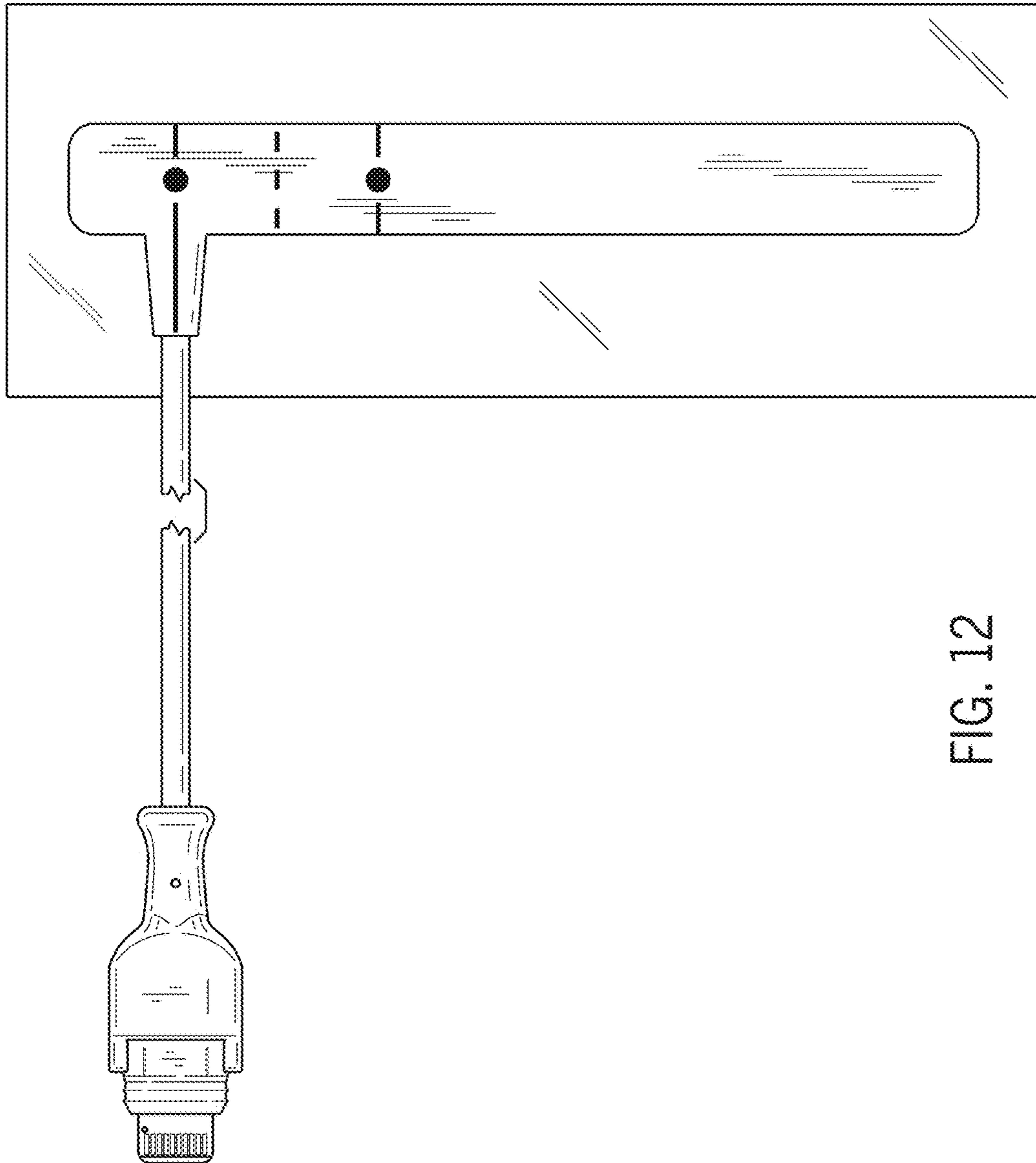


FIG. 12