



US00D677384S

(12) **United States Design Patent**
Kelman

(10) **Patent No.:** **US D677,384 S**
(45) **Date of Patent:** **** Mar. 5, 2013**

- (54) **SURGICAL HIP ANTERIOR APPROACH ARTHROPLASTY DEVICE**
- (75) Inventor: **David C. Kelman**, Collierville, TN (US)
- (73) Assignee: **Smith & Nephew, Inc.**, Memphis, TN (US)
- (**) Term: **14 Years**
- (21) Appl. No.: **29/395,763**
- (22) Filed: **Sep. 23, 2011**

- 4,938,762 A 7/1990 Wehrli
- 4,952,213 A 8/1990 Bowman et al.
- 4,990,149 A 2/1991 Fallin
- 5,049,149 A 9/1991 Schmidt
- 5,089,003 A 2/1992 Fallin et al.
- 5,089,004 A 2/1992 Averill et al.
- 5,129,909 A 7/1992 Sutherland
- 5,190,549 A 3/1993 Miller et al.
- 5,190,550 A 3/1993 Miller et al.
- 5,261,915 A 11/1993 Durlacher et al.
- 5,324,293 A 6/1994 Rehmann
- 5,352,230 A 10/1994 Hood
- 5,364,401 A 11/1994 Ferrante et al.
- 5,443,471 A 8/1995 Swajger
- 5,445,642 A 8/1995 McNulty et al.
- 5,486,178 A 1/1996 Hodge

(Continued)

Related U.S. Application Data

- (60) Division of application No. 29/387,182, filed on Mar. 10, 2011, now Pat. No. Des. 648,850, which is a continuation of application No. 13/019,635, filed on Feb. 2, 2011, which is a continuation of application No. 12/412,527, filed on Apr. 27, 2009, now Pat. No. 8,096,993, which is a continuation of application No. 10/991,641, filed on Nov. 18, 2004, now Pat. No. 7,591,821.

- (51) **LOC (9) Cl.** **24-02**
- (52) **U.S. Cl.** **D24/133**
- (58) **Field of Classification Search** D24/133, D24/140, 155; 606/79, 84
See application file for complete search history.

- (56) **References Cited**

U.S. PATENT DOCUMENTS

- 3,029,811 A 4/1962 Yost
- 3,815,599 A 6/1974 Deyerle
- 3,955,568 A 5/1976 Neufeld
- 4,306,500 A 12/1981 Castanien et al.
- 4,306,550 A 12/1981 Forte
- D272,764 S 2/1984 Dohogne
- 4,457,307 A 7/1984 Stillwell
- 4,565,192 A 1/1986 Shapiro
- 4,574,794 A 3/1986 Cooke et al.
- 4,583,270 A 4/1986 Kenna
- 4,587,964 A 5/1986 Walker et al.
- 4,703,751 A 11/1987 Pohl
- 4,765,328 A 8/1988 Keller et al.
- 4,921,493 A 5/1990 Webb et al.

FOREIGN PATENT DOCUMENTS

- DE 2732325 C3 1/1980
- DE 19850980 C2 11/2000

(Continued)

OTHER PUBLICATIONS

International Search Report and Written Opinion for International Application No. PCT/US2010/057326, mailed May 23, 2011, 3 pages.

(Continued)

Primary Examiner — Bridget L Eland
(74) *Attorney, Agent, or Firm* — Fish & Richardson P.C.

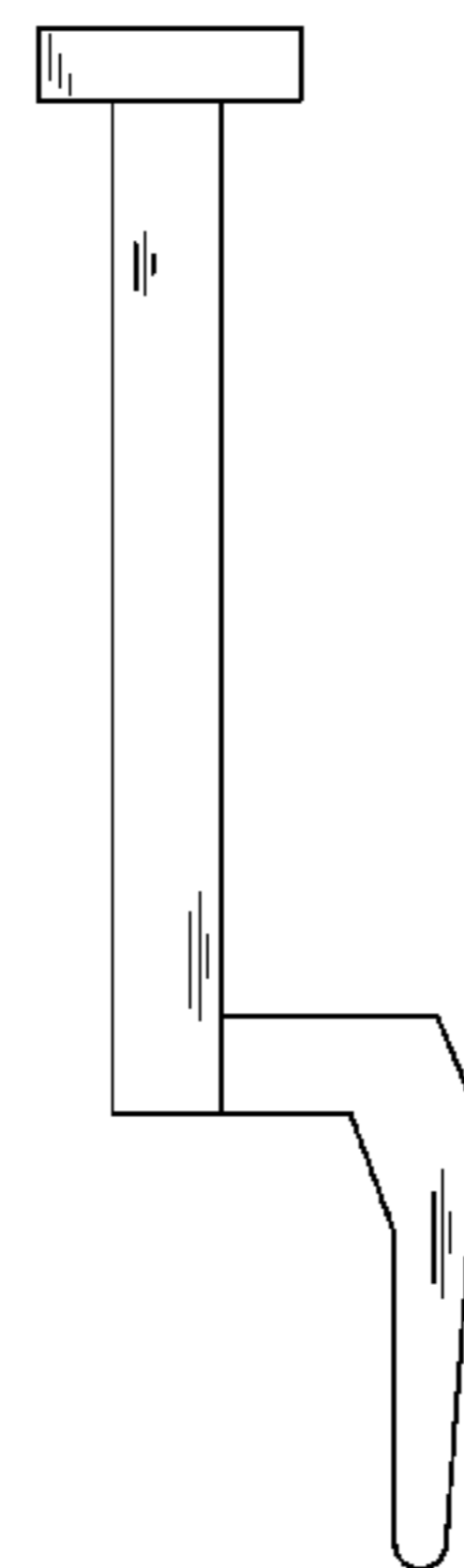
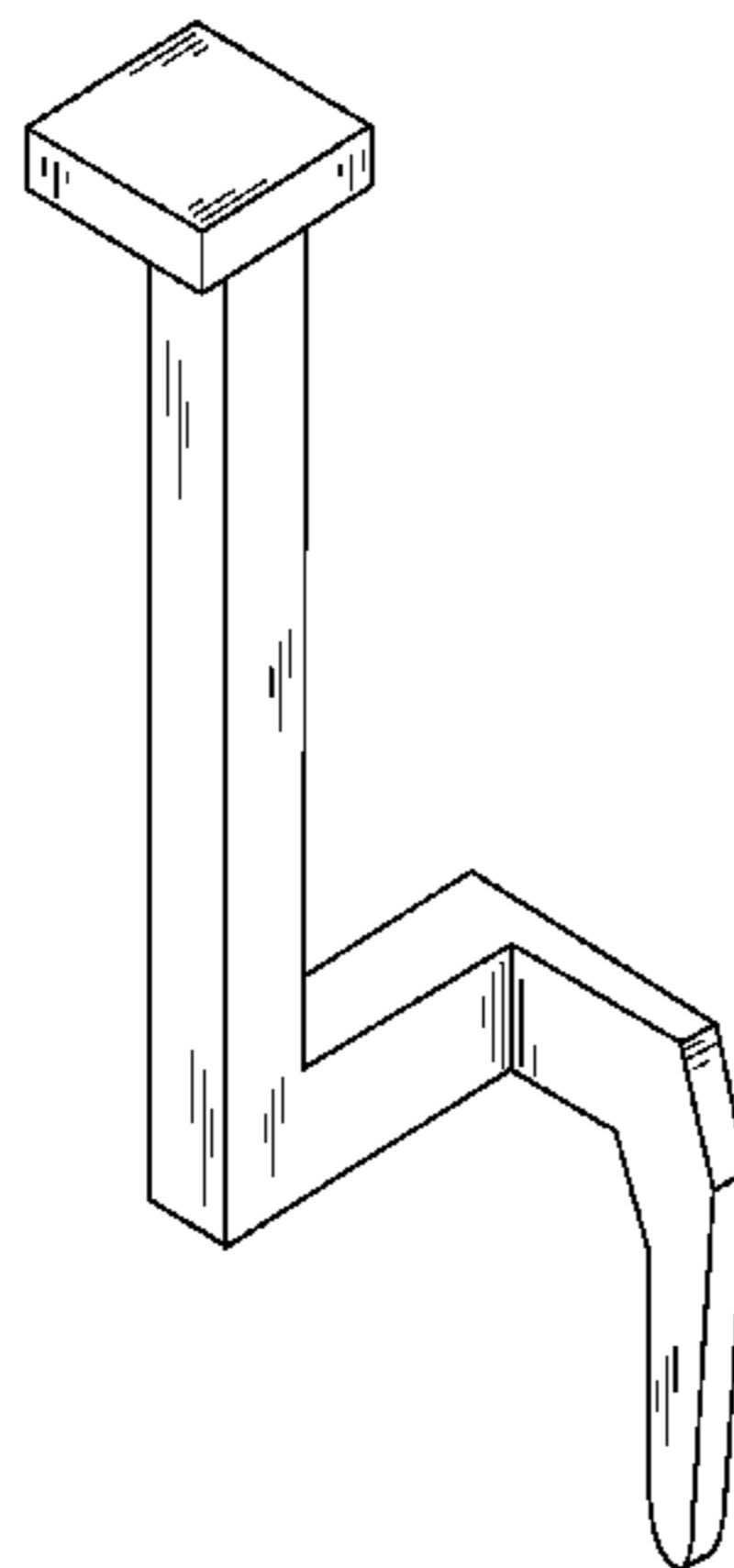
- (57) **CLAIM**

The ornamental design for a surgical hip anterior approach arthroplasty device, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of a surgical hip anterior approach arthroplasty device showing my new design; FIG. 2 is a left side view of the design of FIG. 1. FIG. 3 is a right side view of the design of FIG. 1. FIG. 4 is a rear view of the design of FIG. 1. FIG. 5 is a front view of the design of FIG. 1. FIG. 6 is a top view of the design of FIG. 1; and, FIG. 7 is a bottom view of the design of FIG. 1.

1 Claim, 4 Drawing Sheets



U.S. PATENT DOCUMENTS

5,569,260	A	10/1996	Petersen	
5,581,892	A	12/1996	Dean	
5,607,431	A	3/1997	Dudasik et al.	
5,676,668	A	10/1997	McCue et al.	
5,681,315	A	10/1997	Szabo	
5,683,395	A	11/1997	Mikhail	
5,683,397	A	11/1997	Vendrely et al.	
5,688,279	A	11/1997	McNulty et al.	
5,693,056	A	12/1997	Carls et al.	
5,704,941	A	1/1998	Jacobson et al.	
5,709,689	A	1/1998	Ferrante et al.	
5,810,827	A	9/1998	Haines et al.	
5,810,830	A	9/1998	Noble et al.	
5,897,559	A	4/1999	Masini	
5,919,195	A	7/1999	Wilson et al.	
5,935,128	A	8/1999	Carter et al.	
5,938,665	A	8/1999	Martin	
5,993,455	A	11/1999	Noble	
D433,506	S	11/2000	Asfora	
6,187,006	B1	2/2001	Keller	
6,224,605	B1	5/2001	Anderson et al.	
6,258,095	B1	7/2001	Lombardo et al.	
6,273,915	B1	8/2001	Grimes	
D454,952	S	3/2002	Ku et al.	
D455,212	S	4/2002	Albrektsson et al.	
6,409,768	B1	6/2002	Tepic et al.	
6,554,837	B1	4/2003	Hauri et al.	
6,558,391	B2	5/2003	Axelsson et al.	
6,595,997	B2	7/2003	Axelsson et al.	
6,626,913	B1	9/2003	McKinnon et al.	
6,676,706	B1	1/2004	Mears et al.	
6,685,711	B2	2/2004	Axelsson et al.	
6,692,503	B2	2/2004	Foley et al.	
6,695,850	B2	2/2004	Diaz	
7,396,357	B2	7/2008	Tornier et al.	
D598,096	S	8/2009	Petersen	
D599,479	S	9/2009	Petersen	
D600,346	S	9/2009	Petersen	
7,591,821	B2	9/2009	Kelman	
D648,850	S *	11/2011	Kelman	D24/133
8,096,993	B2 *	1/2012	Kelman	606/84
2002/0099446	A1	7/2002	MacArthur	
2002/0198531	A1	12/2002	Millard et al.	
2003/0050645	A1	3/2003	Parker et al.	
2003/0069591	A1	4/2003	Carson et al.	
2003/0187449	A1	10/2003	McCleary et al.	
2003/0220698	A1	11/2003	Mears et al.	
2004/0010261	A1	1/2004	Hoag et al.	
2004/0127887	A1	7/2004	Zinkel	
2004/0153062	A1	8/2004	McGinley et al.	
2004/0153191	A1	8/2004	Grimm et al.	
2005/0048853	A1	3/2005	Pacha	
2005/0107801	A1	5/2005	Davies et al.	
2005/0171548	A1	8/2005	Kelman	
2005/0181548	A1	8/2005	Yanagisawa et al.	
2005/0216022	A1	9/2005	Lehot et al.	
2005/0234462	A1 *	10/2005	Hershberger	606/85
2005/0234463	A1 *	10/2005	Hershberger et al.	606/85
2007/0093897	A1	4/2007	Gerbec et al.	
2007/0233134	A1	10/2007	Bastian et al.	
2007/0293871	A1	12/2007	Ackermann	
2007/0299451	A1	12/2007	Tulkis	
2008/0033444	A1	2/2008	Bastian et al.	
2008/0255565	A1	10/2008	Fletcher	
2009/0275948	A1	11/2009	Kelman	

2010/0121331	A1	5/2010	Sharp et al.	
2011/0247633	A1 *	10/2011	Kelman	128/845
2011/0295259	A1 *	12/2011	Kelman	606/79

FOREIGN PATENT DOCUMENTS

DE	202008017200	U1	4/2009
EP	359097	A1	3/1990
EP	380450	A3	9/1990
EP	415837	A2	3/1991
EP	380451	A3	4/1991
EP	619097	A1	10/1994
EP	0645127	A1	3/1995
EP	645127	A1	3/1995
EP	1566147	A1	8/2005
FR	2742334	B1	5/1998
FR	2796261	A1	1/2001
FR	2854786	A1	11/2004
JP	4044759	Y2	10/1992
WO	WO0051530	A1	9/2000
WO	WO03026517	A1	4/2003
WO	WO03065906	A3	11/2003
WO	WO03092513	A1	11/2003
WO	WO2004024007	A1	3/2004

OTHER PUBLICATIONS

International Preliminary Report on Patentability for International Application No. PCT/US2010/057326, mailed May 22, 2012.
 Office Action for U.S. Appl. No. 12/623,030, mailed Jul. 25, 2012.
 Multi-Reference 4-in-a Femoral Knee Instrumentation <http://www.zimmer.com/ctl?op=global&action=1&ids=1065&template=MP> printed on Oct. 13, 2004, 2 pages.
 HSS/HSS.Newsroom: New Knee Replacement Reduces Recovery Time <http://www/hss.edu/Newsroom/New/Knee/Replacement/Reduces/Recover/Time>, printed on Mar. 5, 2003, 2 pages.
 Mobile Bearing Knee, Genesis II and Profix, Acufex EndoButton CL, Brochure, 3 pages, undated.
 Posterior Reference NexGen System Complete Knee Solution, Multi/Reference™ r/in/1 Femoral Instrumentation, Posterior Reference Surgical Technique for NexGen Cruciate Retaining & Legacy® Posterior Stabilized Knees, Zimmer brochure, pp. 1/16, 1996.
 Xcelerate™ 4/in/1 Ceramic Cutting Blocks Extremely Accurate Cutting with the Potential for Reduced Intraoperative Wear Debris, Stryker Howmedica Osteonics brochure, 2 pages, undated.
 BioRCI/HA Bioabsorbable Screws with Hydroxylapatite, The Innovative Choice for Exceptional Strength and Selection, Smith & Nephew brochure, pp. 3/10, undated.
 Matrix Opti/Fix Plus, Surgical Technique Developed in Conjunction with John M. Cuckler, M.D., University of Alabama, Birmingham, Alabama, Smith & Nephew brochure, pp. 1/36, Dec. 1996.
 Miller, Steve, "Echelon Instrumentation Options," OrthoUpdate, Smith+Nephew, 2 pages, undated.
 "Surgical Technique, Innovations in Minimally Invasive Joint Surgery, Minimally Invasive Hip Replacement Through the Posterior Approach," Smith & Nephew brochure, 20 pages, Oct. 2003.
 "Paralign Hip Instrument MIS Systems," Orthogroup, 4 pages, undated.
 Deirmengian, et al, "A Technique for the Minimally Invasive, Watson-Jones Approach to Total Hip Arthroplasty," Operative Techniques in Orthopaedics, 2006, pp. 126-134.
 Nogler, et al, "A Double Offset Broach Handle for Preparation of the Femoral Cavity in Minimally Invasive Direct Anterior Total Hip Arthroplasty," The Journal of Arthroplasty, vol. 21, No. 8, 2006, pp. 1206-1208.

* cited by examiner

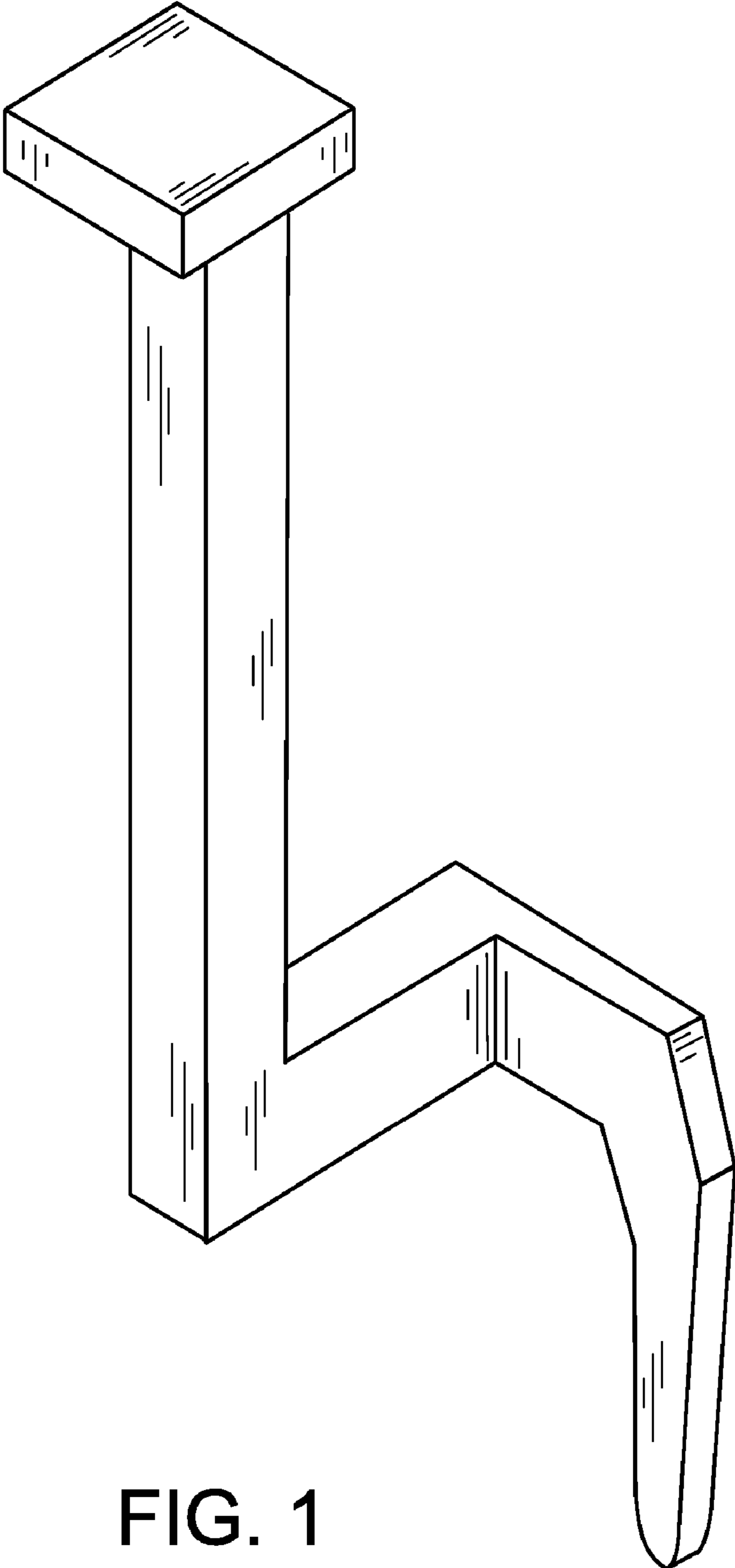


FIG. 1

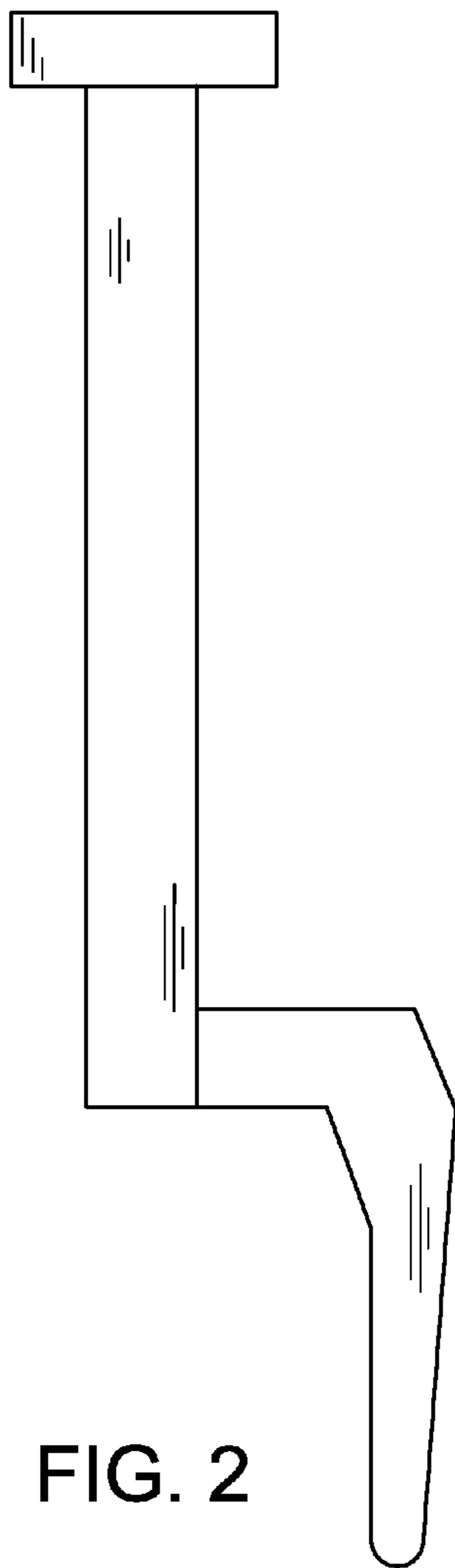


FIG. 2

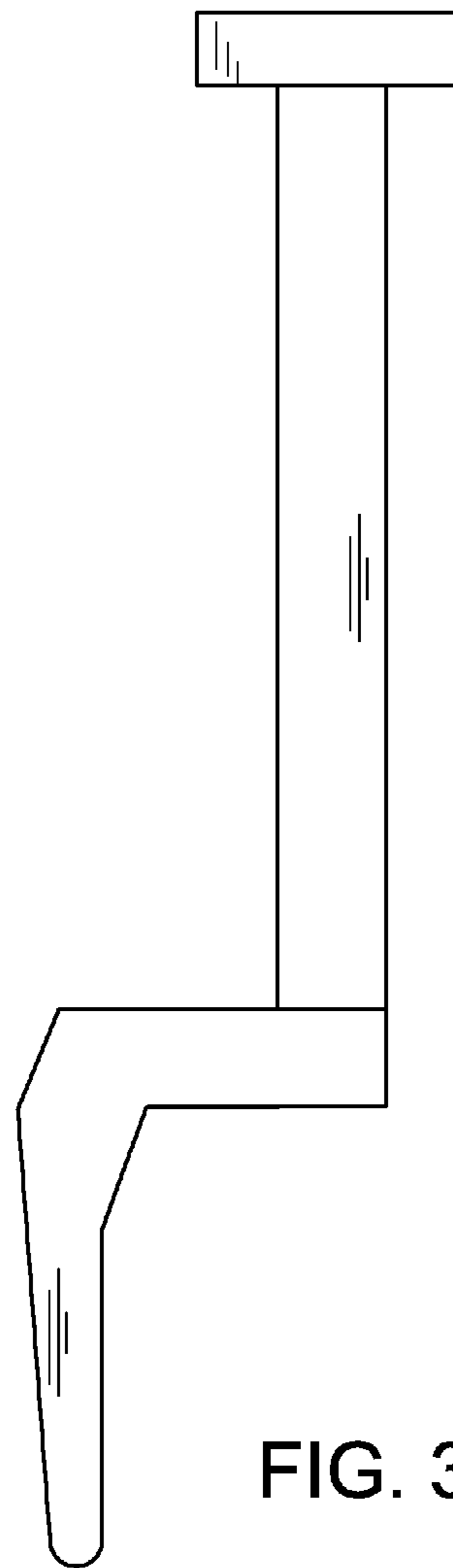
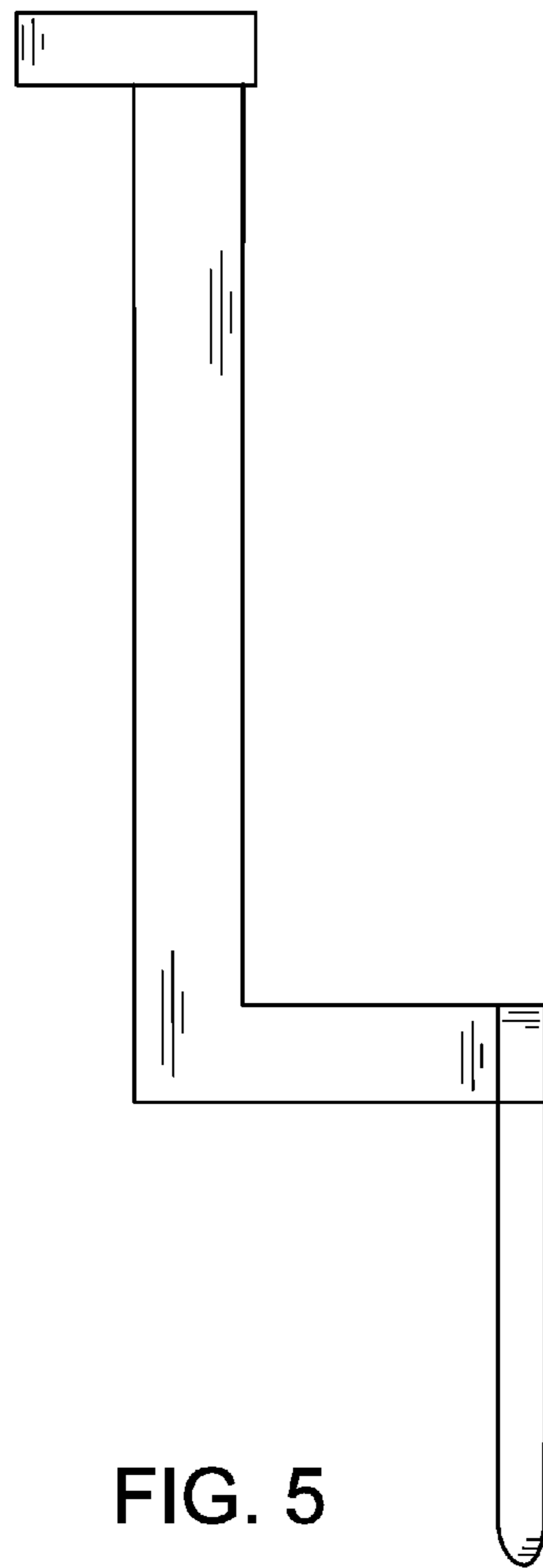
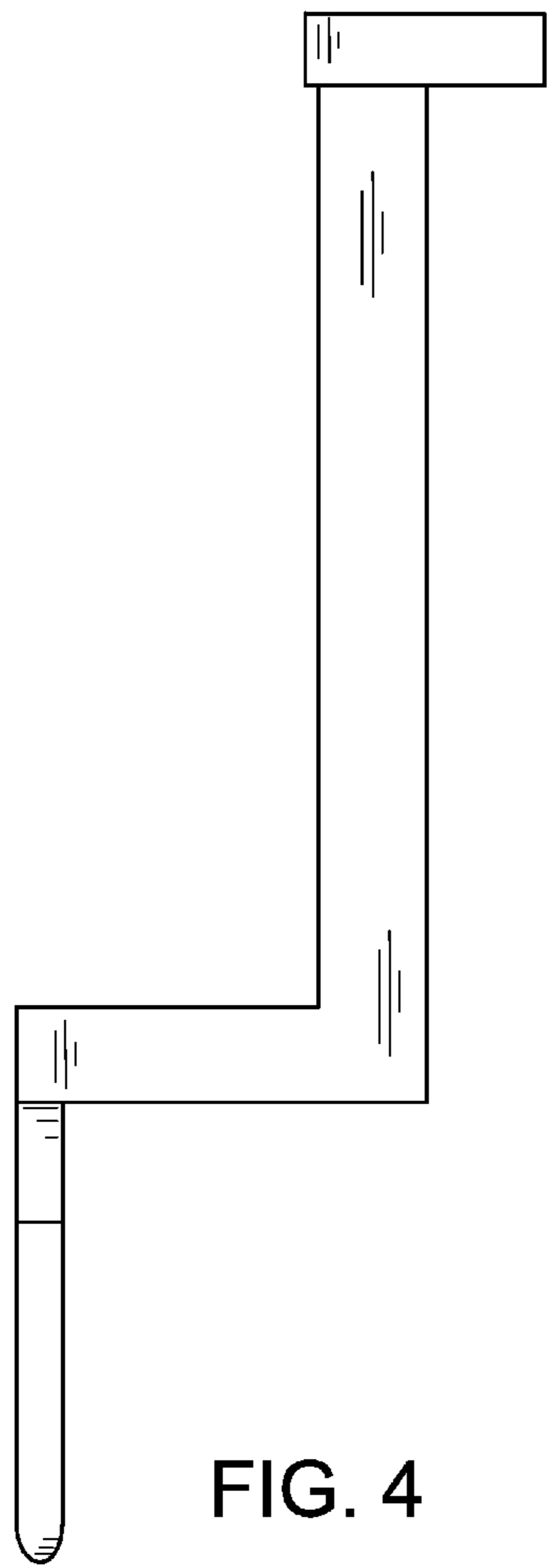


FIG. 3



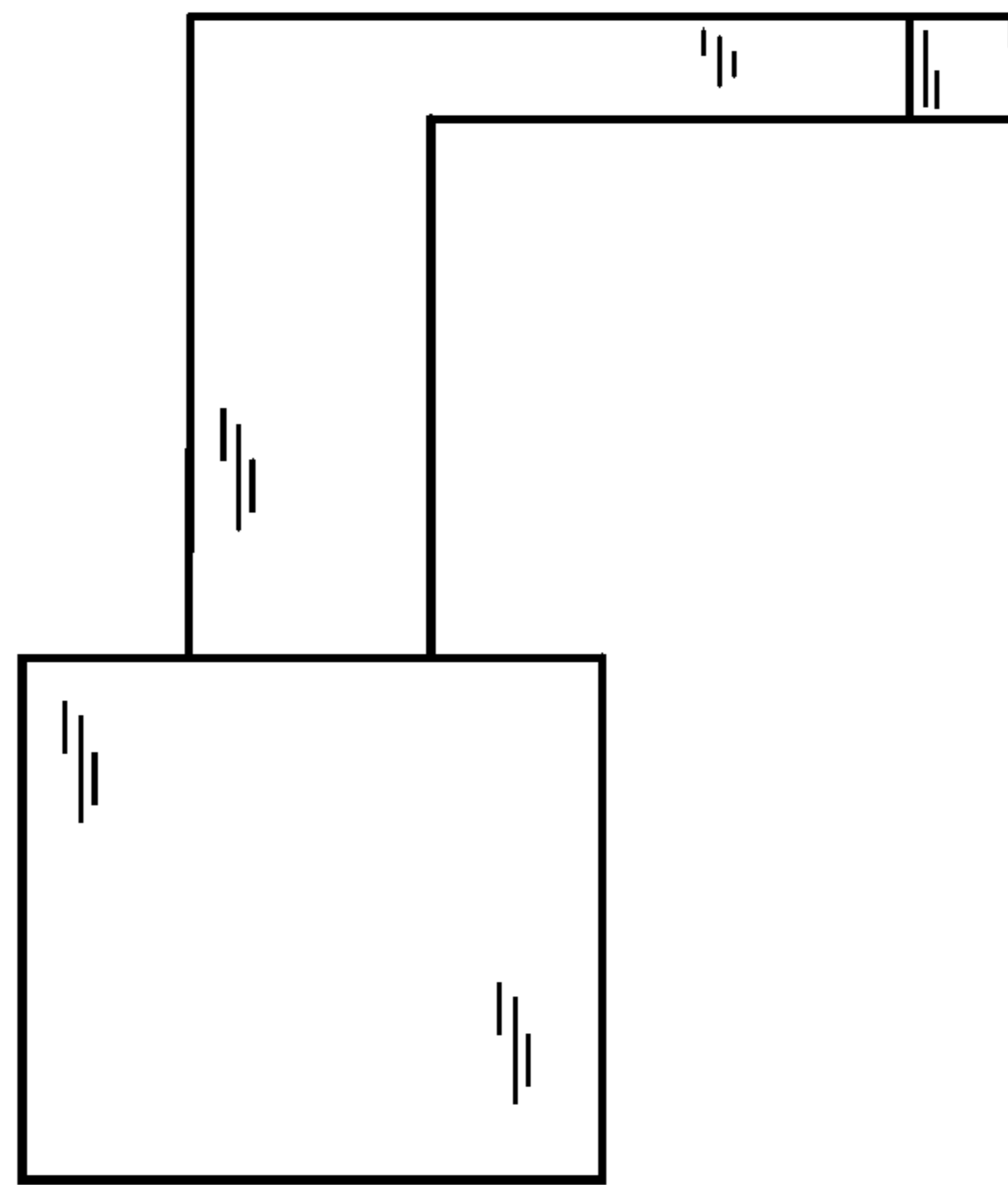


FIG. 6

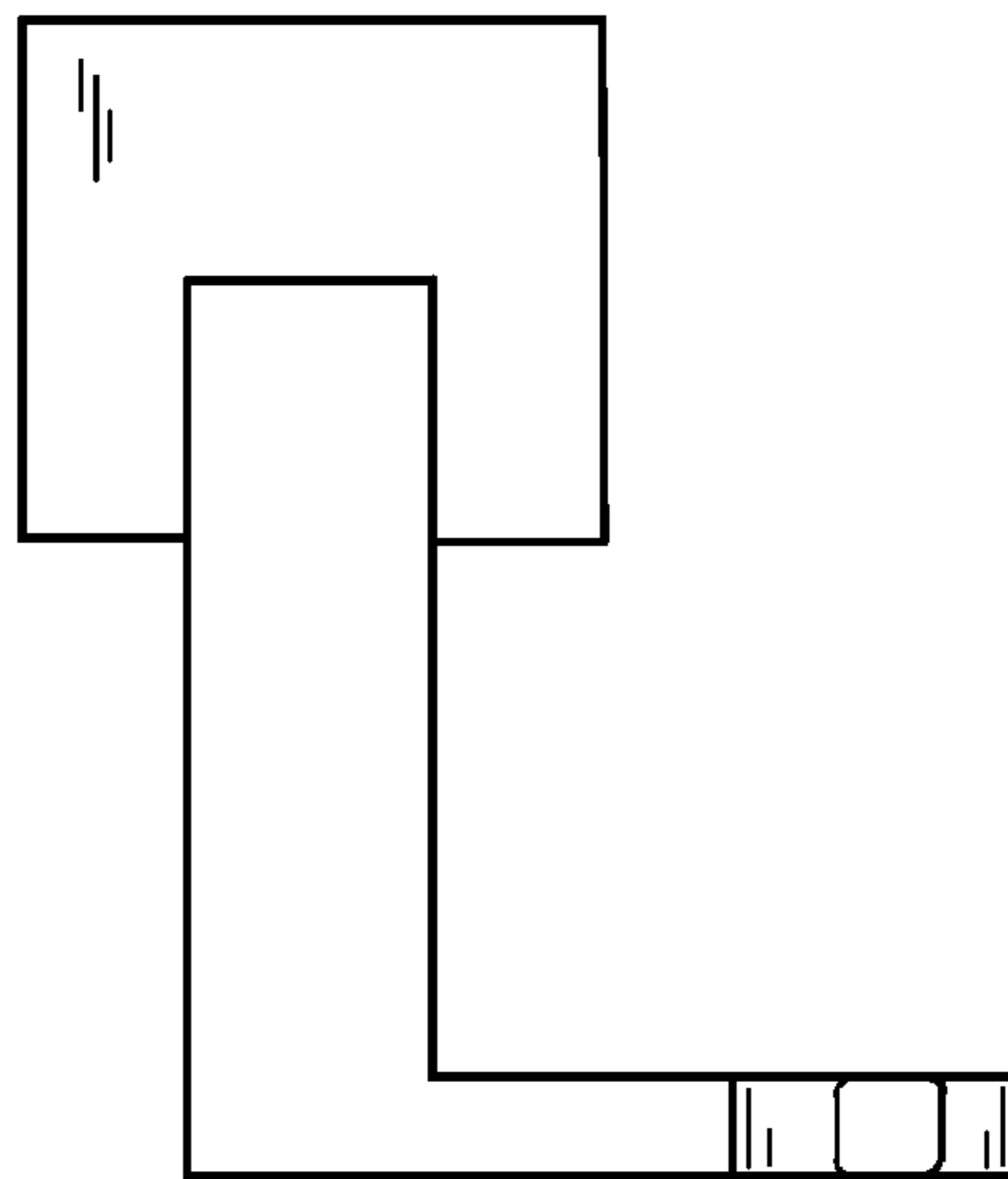


FIG. 7