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Snoke et al.

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[54] HANDLE INTERFACE FOR STEERABLE CATHETER

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[**] Term: 14 Years

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Related U.S. Application Data

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[51] LOC (6) Cl. 24-02

[52] U.S. Cl. D24/112

[58] Field of Search D24/112, 111, D24/138, 141, 133, 113, 147, 128; 604/95, 164, 169, 158, 159, 45, 161, 160, 93, 165, 177; 128/657, 656, 658, 772, DIG. 6

[56] References Cited

U.S. PATENT DOCUMENTS

Re. 33,854	3/1992	Adair	128/6
D. 243,115	1/1977	Ziegler et al.	D24/138
D. 251,652	4/1979	Thompson et al.	D24/138
D. 280,280	10/1986	Haltmon et al.	D24/107
D. 310,721	9/1990	Baisng, III	D24/128
D. 338,958	8/1993	Jensen	D24/133
D. 343,678	1/1994	Snoke et al.	604/95
D. 349,340	8/1994	Snoke et al.	D24/138
D. 350,605	9/1994	Williams	D24/133
D. 382,959	8/1997	Arpe	D24/133
D. 384,740	10/1997	Musgrave et al.	D24/112
922,985	5/1909	Wappler	.
3,470,876	10/1969	Barchilon	128/348
3,500,820	3/1970	Almen	604/95
3,605,725	9/1971	Bentov	.
3,625,200	12/1971	Muller	128/2.05
3,773,034	11/1973	Burns et al.	604/95
3,788,304	1/1974	Takahashi	128/6

3,831,017	8/1974	Auer	240/2
3,892,228	7/1975	Mitsui	128/4
3,948,251	4/1976	Hosono	128/4
4,273,111	6/1981	Tsukaya	128/6
4,279,245	7/1981	Takagi et al.	128/4

(List continued on next page.)

FOREIGN PATENT DOCUMENTS

0 343 094	1/1989	European Pat. Off.	.
0 370 158	5/1990	European Pat. Off.	.
0389453	9/1990	European Pat. Off.	.
0 489 937	6/1992	European Pat. Off.	.
489937	6/1992	European Pat. Off.	.
990417	9/1951	France	.
2 655 548	6/1991	France	.
1213571	3/1966	Germany	.
3916288	11/1989	Germany	.
4304530	8/1993	Germany	.
WO 88/00810	2/1988	WIPO	.
WO 9 101			
772	2/1991	WIPO	.
WO 91/11213	8/1991	WIPO	.

OTHER PUBLICATIONS

Cis Myelocath Brochure.

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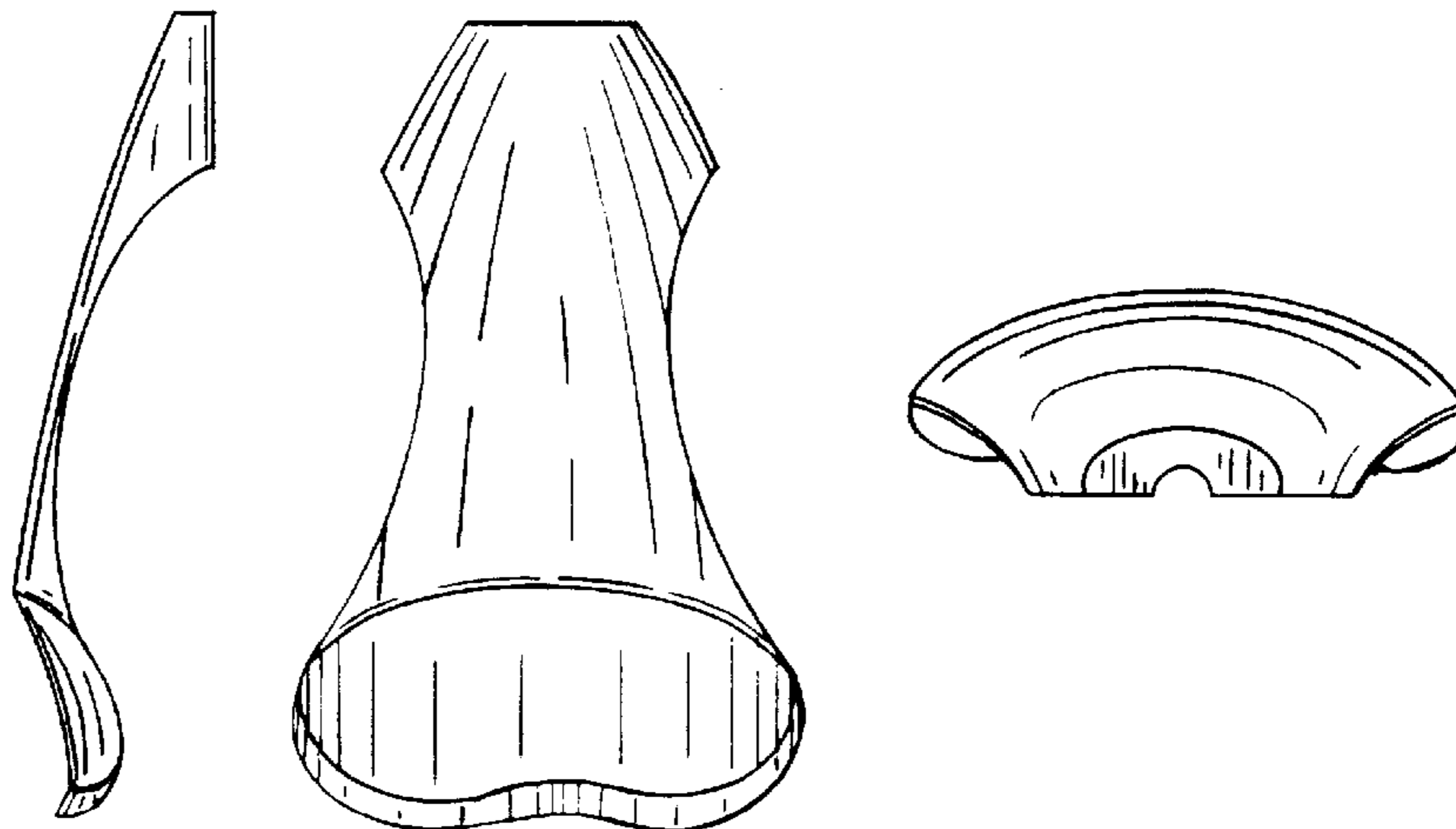
[57] CLAIM

The ornamental design for a handle interface for steerable catheter, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of a handle interface for steerable catheter showing our new design; FIG. 2 is a right side elevational view thereof; FIG. 3 is a top plan view thereof; FIG. 4 is a left side elevational view thereof; FIG. 5 is a bottom plan view thereof; FIG. 6 is a front elevational view thereof; and, FIG. 7 is a rear elevational view thereof.

1 Claim, 1 Drawing Sheet



U.S. PATENT DOCUMENTS

4,327,723	5/1982	Frankhouser	128/214.4	4,905,666	3/1990	Fukuda	128/4
4,344,092	8/1982	Miller	358/217	4,906,230	3/1990	Maloney et al.	604/95
4,353,358	10/1982	Emerson	128/4	4,911,148	3/1990	Sosonowski et al.	128/6
4,390,012	6/1983	Mizumoto	128/4	4,919,653	4/1990	Martinez et al.	604/117
4,413,278	11/1983	Feinbloom	358/93	4,920,413	4/1990	Nakamura et al.	358/98
4,417,886	11/1983	Frankhouser et al.	604/53	4,924,856	5/1990	Noguchi	128/6
4,421,106	12/1983	Uehara	128/4	4,930,521	6/1990	Metzger et al.	128/786
4,433,675	2/1984	Konoshima	128/6	4,933,816	6/1990	Hug et al.	362/32
4,475,539	10/1984	Konomura	128/6	4,934,340	6/1990	Ebling et al.	128/6
4,483,326	11/1984	Yamaka et al.	128/4	4,954,129	9/1990	Giuliani et al.	604/53
4,515,592	5/1985	Frankhouser	604/163	4,968,295	11/1990	Neumann	604/6
4,539,586	9/1985	Danna et al.	358/98	4,968,298	11/1990	Michelson	604/36
4,543,090	9/1985	McCoy	604/95	4,972,828	11/1990	Ito	128/4
4,545,374	10/1985	Jacobson	128/303	4,973,312	11/1990	Andrew	604/158
4,573,448	3/1986	Kambin	128/1 R	4,973,329	11/1990	Park et al.	606/1
4,577,621	3/1986	Patel	128/4	4,979,496	12/1990	Komi	128/4
4,580,551	4/1986	Siegmund et al.	128/4	4,983,165	1/1991	Loiterman	604/95
4,587,972	5/1986	Morantte, Jr.	128/660	4,986,258	1/1991	Cho et al.	128/7
4,589,404	5/1986	Barath et al.	128/6	4,989,582	2/1991	Sakiyama et al.	128/6
4,590,923	5/1986	Watanabe	128/6	4,996,974	3/1991	Ciarlei	128/4
4,601,284	7/1986	Arakawa et al.	128/6	5,004,456	4/1991	Botterbusch et al.	604/53
4,607,021	8/1986	Wheeler	128/6	5,010,875	4/1991	Kato	128/6
4,611,888	9/1986	Prenovitz et al.	350/96.22	5,024,655	6/1991	Freeman et al.	604/53
4,625,713	12/1986	Hiraoka	128/4	5,042,915	8/1991	Akutsu et al.	359/230
4,644,960	2/1987	Johans	128/786	5,053,046	10/1991	Janese	606/215
4,649,904	3/1987	Krauter et al.	128/6	5,058,568	10/1991	Irion et al.	128/4
4,651,202	3/1987	Arakawa	358/98	5,084,043	1/1992	Hertzmann et al.	606/3
4,653,476	3/1987	Bonnet	128/4	5,085,631	2/1992	Leighton	604/28
4,713,057	12/1987	Huttner et al.	604/164	5,090,959	2/1992	Samson et al.	604/96
4,737,142	4/1988	Heckele	604/95	5,101,807	4/1992	Kawashima	128/6
4,745,908	5/1988	Wardle	128/6	5,125,906	6/1992	Fleck	604/171
4,748,969	6/1988	Wardle	128/4	5,131,382	7/1992	Meyer	128/6
4,750,475	6/1988	Yoshihashi	128/6	5,134,469	7/1992	Uchimura	358/98
4,753,222	6/1988	Morishita	128/4	5,143,475	9/1992	Chikama	403/291
4,758,222	7/1988	McCoy	604/95	5,167,221	12/1992	Chikama	128/4
4,776,844	10/1988	Ueda	604/95	5,188,594	2/1993	Zilberstein	604/51
4,782,819	11/1988	Adair	604/280	5,195,541	3/1993	Obenchain	128/898
4,791,912	12/1988	Tashiro	128/4	5,197,649	3/1993	Bessler et al.	227/179
4,793,326	12/1988	Shishido	128/4	5,199,417	4/1993	Muller et al.	128/6
4,797,737	1/1989	Yazawa	358/98	5,199,950	4/1993	Schmitt et al.	604/95
4,799,496	1/1989	Hargreaves et al.	128/772	5,215,105	6/1993	Kizelshteyn et al.	128/898
4,808,157	2/1989	Coombs	604/44	5,232,442	8/1993	Johnson et al.	604/51
4,815,450	3/1989	Patel	128/6	5,267,573	12/1993	Evans et al.	604/95
4,834,710	5/1989	Fleck	604/171	5,273,535	12/1993	Edwards et al.	604/95
4,844,053	7/1989	Dittrich	128/4	5,275,151	1/1994	Shockey et al.	128/4
4,853,773	8/1989	Hibino et al.	358/98	5,342,299	8/1994	Snoke et al.	604/95
4,867,529	9/1989	Utsumi et al.	350/96.25	5,344,397	9/1994	Heaven et al.	604/95
4,884,133	11/1989	Kanno et al.	358/98	5,354,266	10/1994	Snoke	604/28
4,890,602	1/1990	Hake	128/4	5,396,880	3/1995	Kagan et al.	128/6
4,893,613	1/1990	Hake	128/4	5,399,164	3/1995	Snoke et al.	604/95
4,901,142	2/1990	Ikuno et al.	358/98	5,423,311	6/1995	Snoke et al.	128/6
4,904,237	2/1990	Janese	604/28	5,437,636	8/1995	Snoke et al.	604/95

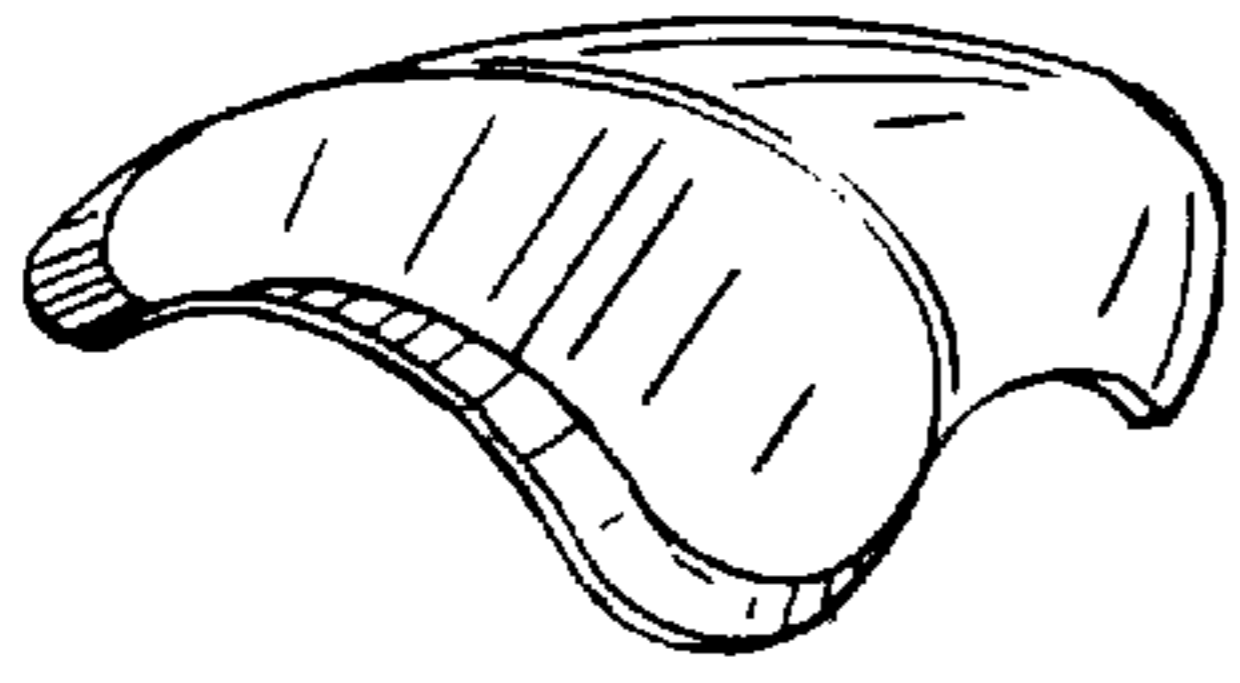


FIG. 1.



FIG. 2.

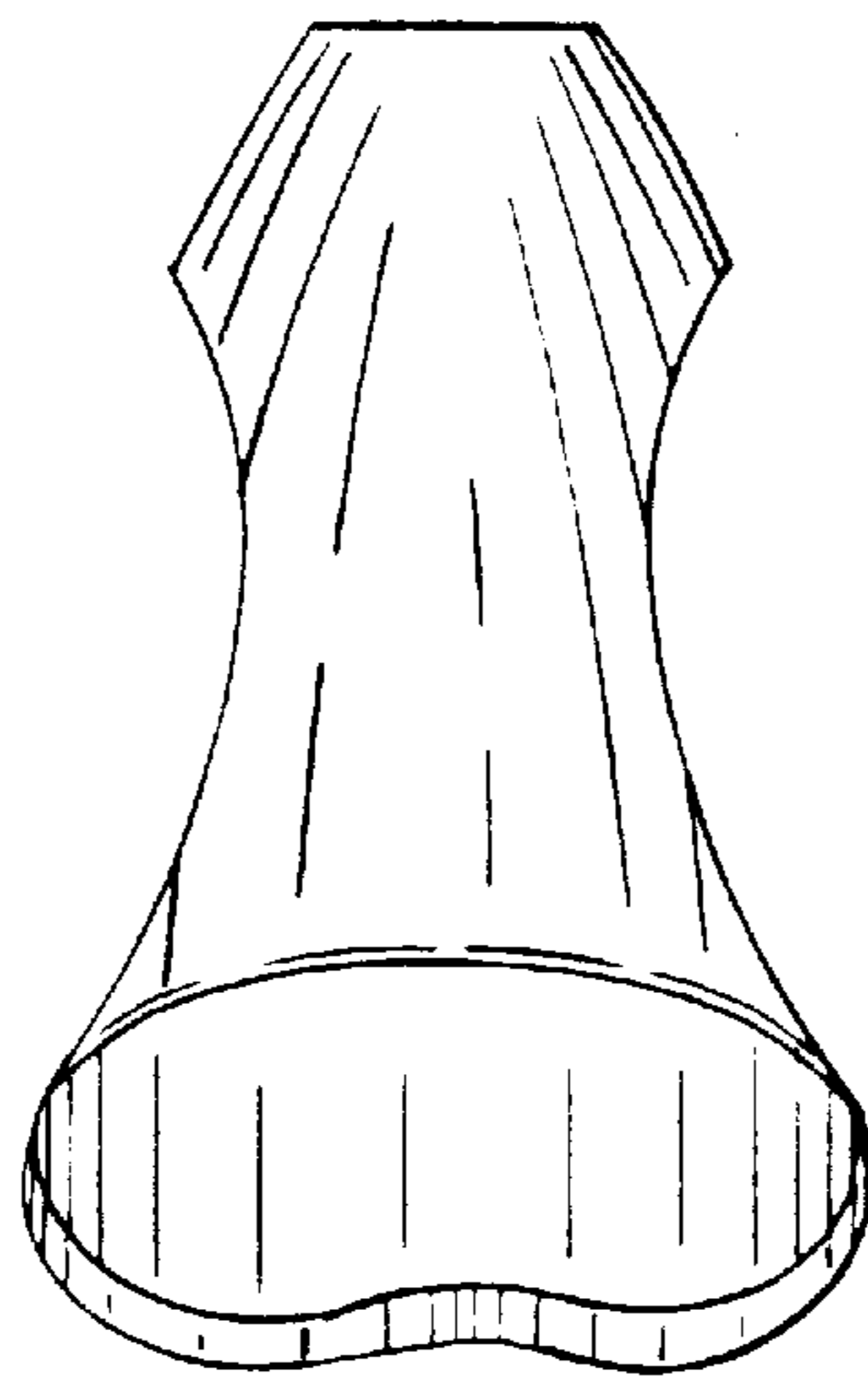


FIG. 3.



FIG. 4.

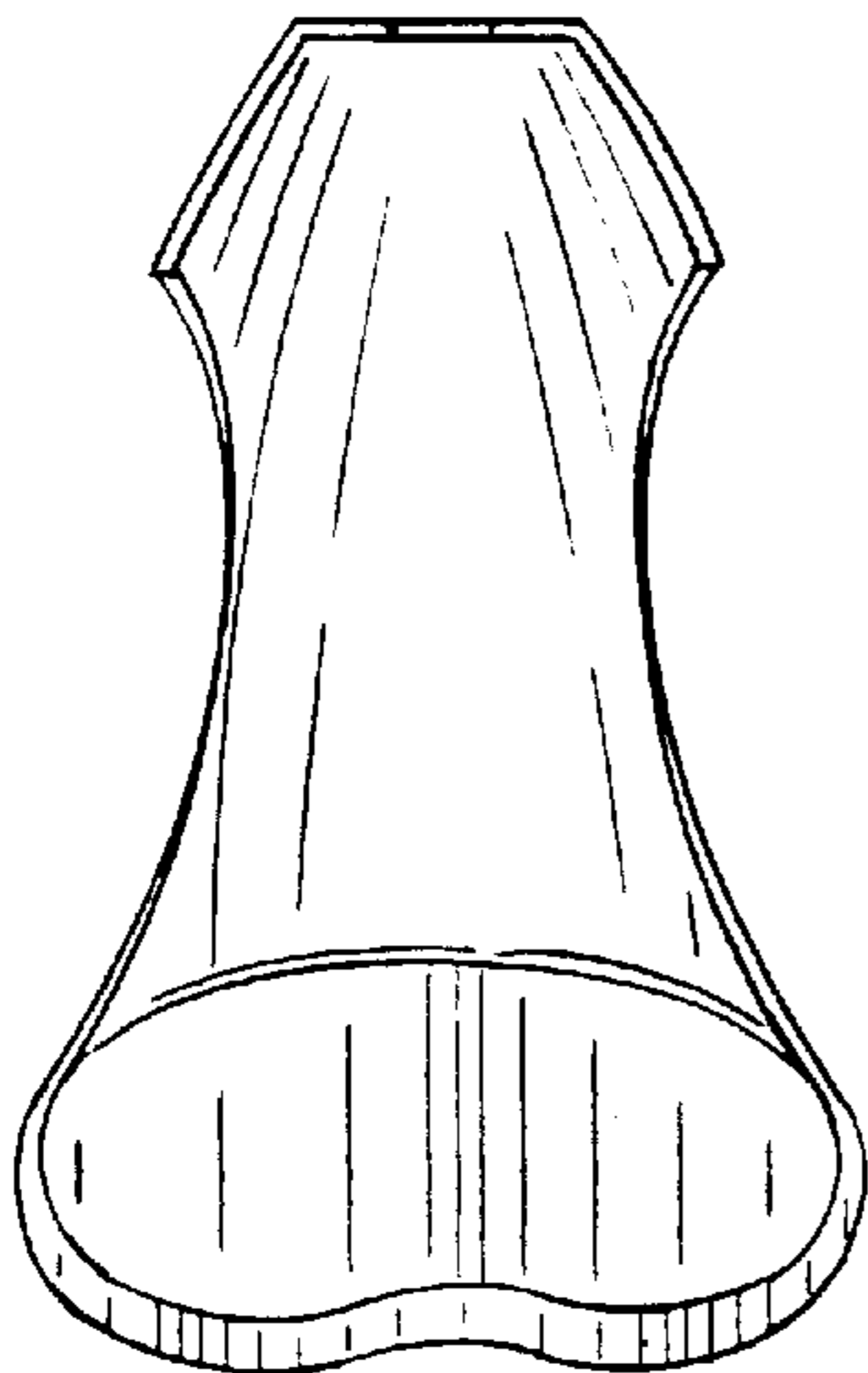


FIG. 5.



FIG. 6.

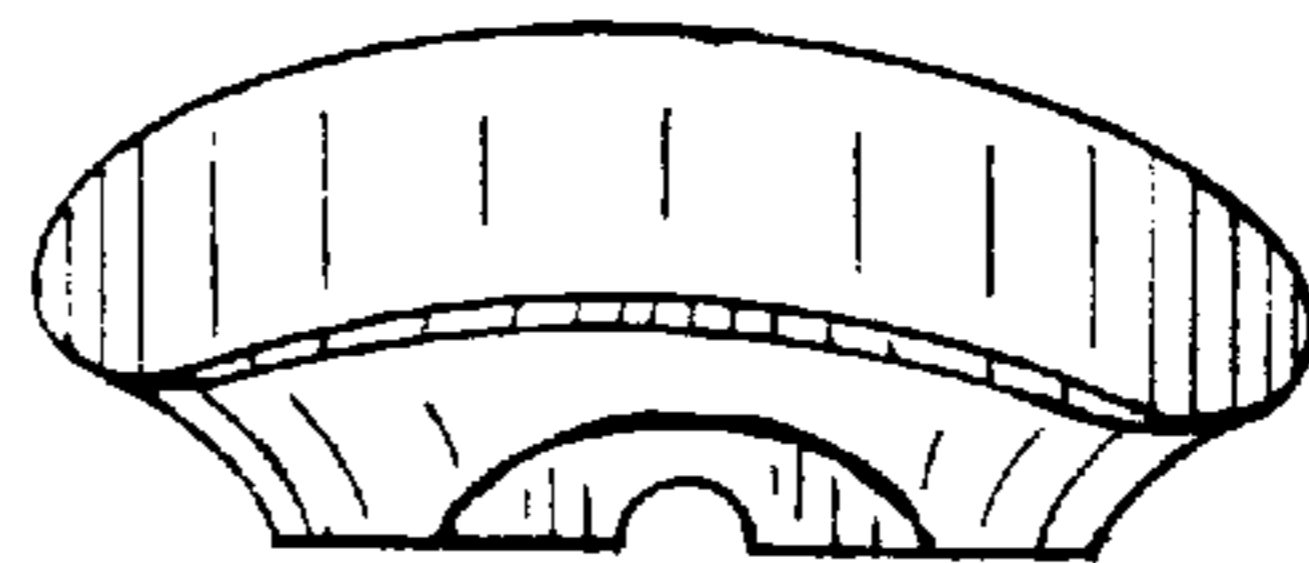


FIG. 7.