US00D734792S

(12) United States Design Patent

Santamarina et al.

(10) Patent No.: US D734,792 S
(45) Date of Patent: ** Jul. 21, 2015

(54) **DRILL BIT**

(71) Applicant: **Black & Decker Inc.**, Newark, DE (US)

(72) Inventors: **Aland Santamarina**, Columbia, MD (US); **David N. Johnson**, Doncaster (GB)

(73) Assignee: **BLACK & DECKER INC.**, Newark, DE (US)

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

(21) Appl. No.: **29/468,347**

(22) Filed: **Sep. 30, 2013**

Related U.S. Application Data

(63) Continuation-in-part of application No. 29/449,538, filed on Mar. 15, 2013.

(51) **LOC (10) Cl.** **15-09**

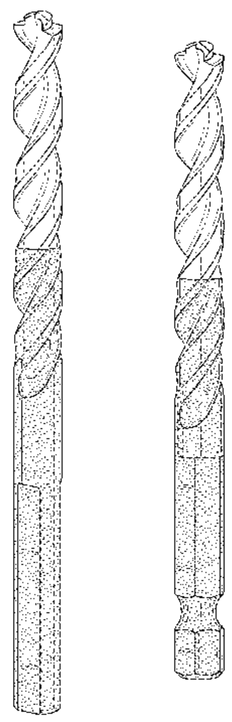
(52) **U.S. Cl.**
USPC **D15/139**

(58) **Field of Classification Search**
USPC D8/70; D15/138, 139; 83/845; 403/331, 403/381; 407/9, 33, 34, 42, 54, 63, 110, 407/113, 114, 115; 408/210–214, 219, 224, 408/226–230, 240
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

460,639	A	10/1891	Holt	
542,223	A	7/1895	Johnson	
1,350,241	A	8/1920	Routh	
1,398,156	A	11/1921	Schroeder	
1,499,584	A	7/1924	Litchfield	
1,570,650	A	1/1926	Thomson	
1,887,372	A	11/1932	Emmons	
RE19,182	E	5/1934	Emmons	
D92,385	S	6/1934	Bardwell	
1,984,839	A	12/1934	Murray	
2,101,347	A	12/1937	Robinette	
2,193,196	A	3/1940	Bannister	
2,302,069	A	11/1942	Stephens	
2,332,295	A	10/1943	Bouchal	
D137,744	S	4/1944	Gunderson	
2,652,083	A	9/1953	Emmons	
2,708,853	A	5/1955	MacLean	
2,740,974	A	4/1956	Lewis	
2,769,355	A	11/1956	Crisp	
2,936,658	A	5/1960	Riley	
3,027,953	A	4/1962	Coski	
3,085,453	A	4/1963	Mossberg	
3,387,511	A	6/1968	Ackart, Sr. et al.	
3,476,438	A	11/1969	Bower, Jr.	
3,559,513	A	2/1971	Hougen	
3,592,555	A	7/1971	Mackey, Sr.	
3,609,056	A	9/1971	Hougen	
3,648,508	A	3/1972	Hougen	
3,655,244	A	4/1972	Swisher	
3,746,396	A	7/1973	Radd	
3,779,664	A	12/1973	Caley et al.	
3,825,362	A	7/1974	Hougen	
4,144,868	A	3/1979	Heitbrink	
4,210,215	A *	7/1980	Peetz et al.	175/394
D257,511	S *	11/1980	Zahn	D15/139
4,265,574	A	5/1981	Eckle	
4,340,327	A	7/1982	Martins	
4,383,784	A	5/1983	Gulbrandsen	
D269,495	S	6/1983	Finn	
4,529,341	A	7/1985	Greene	
4,556,347	A	12/1985	Barish	
4,605,347	A	8/1986	Jodock et al.	
4,711,609	A	12/1987	Seefluth	
4,756,650	A	7/1988	Wakihira et al.	
4,762,445	A	8/1988	Bunting et al.	
4,826,368	A	5/1989	Tikal et al.	
4,878,788	A	11/1989	Wakihira et al.	
4,880,707	A	11/1989	Kohno et al.	
4,898,503	A	2/1990	Barish	
4,926,558	A	5/1990	Brace	
4,967,855	A	11/1990	Moser	
4,968,193	A	11/1990	Chaconas et al.	
4,983,079	A	1/1991	Imanaga et al.	
5,011,342	A	4/1991	Hsu	
5,056,967	A	10/1991	Hageman	
5,088,863	A	2/1992	Imanaga et al.	
5,152,642	A	10/1992	Pitts et al.	
5,230,593	A	7/1993	Imanaga et al.	
5,288,183	A	2/1994	Chaconas et al.	
D346,103	S	4/1994	Warner	
5,350,261	A	9/1994	Takaya et al.	
5,442,979	A	8/1995	Hsu	
5,580,196	A *	12/1996	Thompson	408/145
5,934,845	A	8/1999	Frey	
5,947,660	A	9/1999	Karlsson et al.	



6,007,279	A	12/1999	Malone, Jr.	
D419,575	S *	1/2000	Kouvelis	D15/139
6,045,302	A	4/2000	Orr	
6,050,754	A	4/2000	Thomas	
6,089,337	A	7/2000	Kleine et al.	
6,102,634	A	8/2000	Turner et al.	
6,113,321	A	9/2000	Mulroy et al.	
6,190,097	B1	2/2001	Thomas	
6,227,774	B1	5/2001	Haughton et al.	
6,309,149	B1	10/2001	Borschert et al.	
6,312,432	B1	11/2001	Leppelmeier	
6,443,674	B1	9/2002	Jaconi	
6,511,268	B1 *	1/2003	Vasudeva et al.	408/239 R
6,637,987	B2	10/2003	Lui et al.	
D482,252	S	11/2003	Hyde	
6,652,203	B1	11/2003	Risen, Jr.	
6,705,807	B1	3/2004	Rudolph et al.	
6,739,872	B1 *	5/2004	Turri	433/75
6,851,898	B2 *	2/2005	Ege et al.	408/67
6,857,832	B2	2/2005	Nygard	
6,981,496	B2	1/2006	Szendrovari et al.	
D525,840	S	8/2006	Bruce	
7,178,878	B2	2/2007	Rompel	
7,241,085	B2	7/2007	Frisendahl	
7,258,513	B2 *	8/2007	Gertner	408/67
7,267,514	B2	9/2007	Wetzl et al.	
7,363,922	B2	4/2008	Lang et al.	
7,398,840	B2	7/2008	Ladi et al.	
7,520,703	B2	4/2009	Rompel	
D594,306	S *	6/2009	Decker	D8/70
7,578,726	B2 *	8/2009	Gasser	451/48
7,784,381	B2	8/2010	Ladi et al.	
7,784,567	B2	8/2010	Choe et al.	
7,802,495	B2	9/2010	Oxford et al.	
7,851,067	B2	12/2010	Caliskanoglu et al.	
7,900,719	B2	3/2011	Yao	
7,913,779	B2	3/2011	Choe et al.	
D637,629	S	5/2011	Clark	
D648,356	S	11/2011	Clark	
8,168,009	B2	5/2012	Mesquita et al.	
8,201,648	B2	6/2012	Choe et al.	
D664,167	S *	7/2012	Lampe	D15/139
8,230,762	B2	7/2012	Choe et al.	
8,449,041	B2	5/2013	Monyak et al.	
D687,871	S *	8/2013	Liao et al.	D15/139
8,740,515	B2 *	6/2014	Thomas et al.	408/144
2002/0046885	A1	4/2002	Eichhorn et al.	
2002/0160235	A1	10/2002	Caminiti	
2003/0017015	A1	1/2003	Strubler	
2003/0202853	A1	10/2003	Ko et al.	
2003/0215297	A1	11/2003	Frisendahl	
2004/0052595	A1 *	3/2004	Dembicks et al.	408/226
2004/0191015	A1	9/2004	Kozak	
2004/0253379	A1 *	12/2004	Sugita et al.	427/355
2005/0053438	A1	3/2005	Wetzl et al.	
2005/0098358	A1 *	5/2005	Nadler	175/394
2005/0126829	A1 *	6/2005	Meierhofer et al.	175/395
2005/0271890	A1	12/2005	Koecher	
2006/0056930	A1	3/2006	Rompel	
2007/0062046	A1	3/2007	Hsu	
2008/0056835	A1 *	3/2008	Astrand et al.	408/144
2008/0166194	A1	7/2008	Durfee	
2008/0166914	A1	7/2008	Buzil et al.	
2008/0189957	A1	8/2008	Kasper	
2009/0133785	A1	5/2009	Ayada et al.	
2009/0283334	A1	11/2009	Durairajan et al.	
2009/0320299	A1	12/2009	Kuhn et al.	
2010/0003094	A1	1/2010	Durfee	
2010/0054881	A1	3/2010	Thomas et al.	
2010/0135741	A1 *	6/2010	Probst et al.	408/230
2010/0183391	A1 *	7/2010	Kersten	408/227
2010/0192475	A1	8/2010	Stevens et al.	
2010/0193255	A1	8/2010	Stevens et al.	
2010/0232898	A1 *	9/2010	Friedrichs	408/144
2010/0276205	A1	11/2010	Oxford et al.	
2011/0142707	A1	6/2011	Choe et al.	
2011/0168453	A1 *	7/2011	Kersten et al.	175/415
2011/0186261	A1	8/2011	Choe et al.	
2012/0003057	A1 *	1/2012	Leyba	408/226
2012/0251253	A1 *	10/2012	Saito et al.	408/18
2012/0301238	A1	11/2012	Quinn et al.	
2013/0209183	A1 *	8/2013	Chuo et al.	407/32
2014/0126972	A1 *	5/2014	Santamarina et al.	408/202
2014/0219737	A1 *	8/2014	Takai et al.	408/229

FOREIGN PATENT DOCUMENTS

CH	675842	A5	11/1990
DE	216607		11/1908
DE	453571		8/1928
DE	808001		7/1951
DE	812373		8/1951
DE	828385		1/1952
DE	764144		7/1952
DE	860784		12/1952
DE	1468790		2/1969
DE	7335696		10/1973
DE	2345965		3/1974
DE	2358048		5/1975
DE	7342602		4/1976
DE	2629130		1/1978
DE	2730596		1/1978
DE	2946103		5/1981
DE	3127740		2/1982
DE	8321414		10/1983
DE	8320045		11/1983
DE	3342135		5/1985
DE	3342137		5/1985
DE	3344720		6/1985
DE	8536123		4/1987
DE	3841128		6/1990
DE	3927615		2/1991
DE	4117486		12/1992
DE	29516413		4/1996
DE	19807609		6/1999
DE	19914522		5/2000
DE	20006156		6/2000
DE	20005730		10/2000
DE	10057124		5/2001
DE	20203232		5/2002
DE	10130681		1/2003
DE	20209797		11/2003
DE	20211589		1/2004
DE	202004012846		10/2004
DE	102006049096		4/2008
DE	102007006943		4/2008
DE	102007046759		4/2009
DE	102010031313		5/2009
EP	0156789		2/1985
EP	0249104		12/1987
EP	0455420		11/1991
EP	0586337		12/1992
EP	0522202		3/1995
EP	0743136		11/1996
EP	0855950		8/1998
EP	0925881		6/1999
EP	1238732		9/2002
EP	1260296		11/2002
EP	1413403		4/2004
EP	1016480		9/2004
EP	2058073		5/2009
FR	246853		1/1982
FR	2829715		3/2003
GB	169885		10/1921
GB	699716		11/1953
GB	705784		3/1954
GB	1360221		7/1974
GB	2193913		2/1988
JP	52050906	A	4/1977
JP	61226209		1/1986
JP	62188614		8/1987
JP	1140908		6/1989
JP	4244311		9/1992
JP	HO52881		1/1993
JP	9225720		9/1997
JP	2000043006	A	2/2000
JP	2001105216		4/2001
JP	2003225819		8/2003

JP	2004175091	6/2004
JP	4318231	8/2009
JP	3184707	7/2013
SU	0844160	7/1981
SU	1238905	6/1986
WO	WO9740965	11/1997
WO	WO0136163	5/2001
WO	WO2004011179	2/2004
WO	WO2004037472	5/2004

OTHER PUBLICATIONS

Rilliard, Arnaud—European Search Report re: corresponding European Patent Application No. 14160023.9—Dec. 18, 2014—9 pages—The Hague.
DeWALT XLR Concrete Drilling and Chiselling—p. 9—Oct. 22, 2012 (online) URL:http://www.dewalt.co.uk/DWBrochureStorage/Downloads/XLRConcrete//1/ebrochure.pdf.
Dewalt High Impact Demolition Dual-Steel Chisels—A Concord Carpenter—Jul. 4, 2012 (online)—URL: http://www.aconcordcarpenter.com/2012/07/dewalt-high-impact-demolition-chisels.html.
Twist Drills Standard (ASME B94: 11-M-1993)—The American Society of Mechanical Engineers—pp. 1-3, 7-33, 48-49, 56-59—Mar. 1, 1994.
National Aerospace Standard (NAS-907)—Aerospace Industries Assoc.of America, Inc.—pp. 1-25—1986.
Black & Decker Inc.—1983-1984 Consumer Trade Catalog—p. 28—1983.
Popov, Egor P.—"Design of Nonprismatic Beams"—Introduction to Mechanics of Solids—pp. 360-362.
Rilliard, Arnaud—European Search Report re: EP14182342—Jan. 28, 2015—10 pages—The Hague.
Mioc, Marius—European Search Report re: EP12159910—Aug. 6, 2012—8 pages—The Hague.
Mioc, Marius—European Search Report re: EP12159909—Aug. 6, 2012—7 pages—The Hague.
Mioc, Marius—European Search Report re: EP12159908—Aug. 6, 2012—7 pages—The Hague.

* cited by examiner

Primary Examiner — Patricia Palasik
(74) *Attorney, Agent, or Firm* — Scott B. Markow

(57) **CLAIM**

The ornamental design for a drill bit, as shown and described.

DESCRIPTION

FIG. **1** is a perspective view of a first embodiment of a drill bit.
FIG. **2** is a front view of the first embodiment of the drill bit.
FIG. **3** is a back view of the first embodiment of the drill bit.
FIG. **4** is a left view of the first embodiment of the drill bit.
FIG. **5** is a right view of the first embodiment of the drill bit.
FIG. **6** is a top view of the first embodiment of the drill bit.
FIG. **7** is a bottom view of the first embodiment of the drill bit.
FIG. **8** is a perspective view of a second embodiment of a drill bit.
FIG. **9** is a front view of the second embodiment of the drill bit.
FIG. **10** is a back view of the second embodiment of the drill bit.
FIG. **11** is a left view of the second embodiment of the drill bit.
FIG. **12** is a right view of the second embodiment of the drill bit.
FIG. **13** is a top view of the second embodiment of the drill bit.
FIG. **14** is a bottom view of the second embodiment of the drill bit.
FIG. **15** is a perspective view of a third embodiment of a drill bit.
FIG. **16** is a front view of the third embodiment of the drill bit.
FIG. **17** is a back view of the third embodiment of the drill bit.
FIG. **18** is a left view of the third embodiment of the drill bit.
FIG. **19** is a right view of the third embodiment of the drill bit.
FIG. **20** is a top view of the third embodiment of the drill bit.
FIG. **21** is a bottom view of the third embodiment of the drill bit.
FIG. **22** is a perspective view of a fourth embodiment of a drill bit.
FIG. **23** is a front view of the fourth embodiment of the drill bit.
FIG. **24** is a back view of the fourth embodiment of the drill bit.
FIG. **25** is a left view of the fourth embodiment of the drill bit.
FIG. **26** is a right view of the fourth embodiment of the drill bit.
FIG. **27** is a top view of the fourth embodiment of the drill bit; and,
FIG. **28** is a bottom view of the fourth embodiment of the drill bit.

The stippling and line shading show a contrast in appearance.

1 Claim, 16 Drawing Sheets

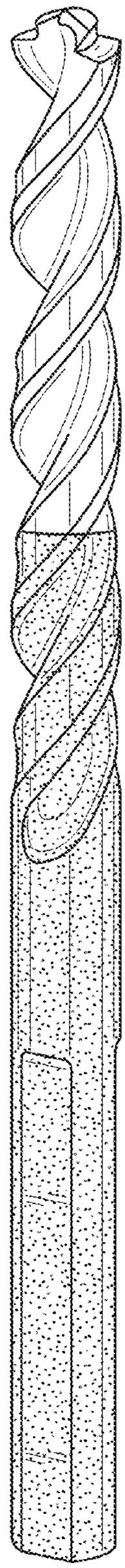


FIG. 1

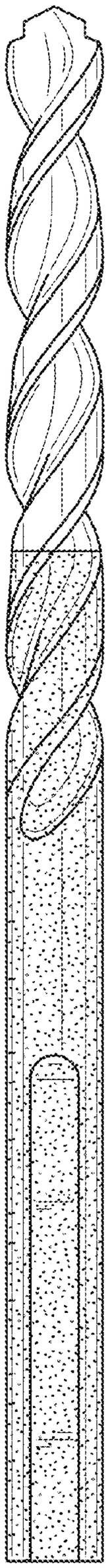


FIG. 2

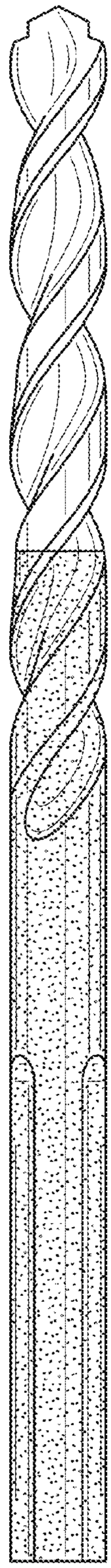


FIG. 3

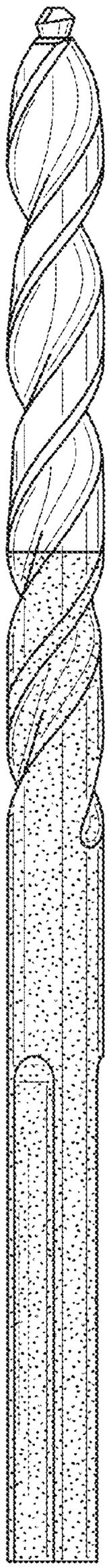


FIG. 4

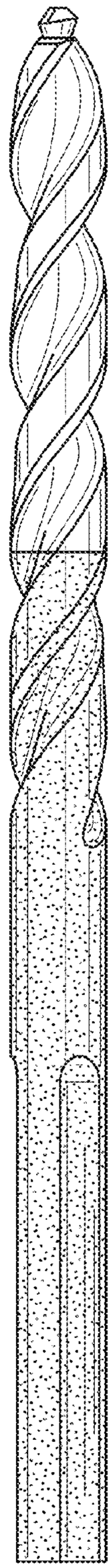


FIG. 5

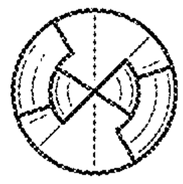


FIG. 6

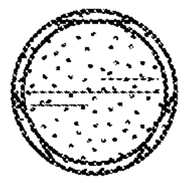


FIG. 7

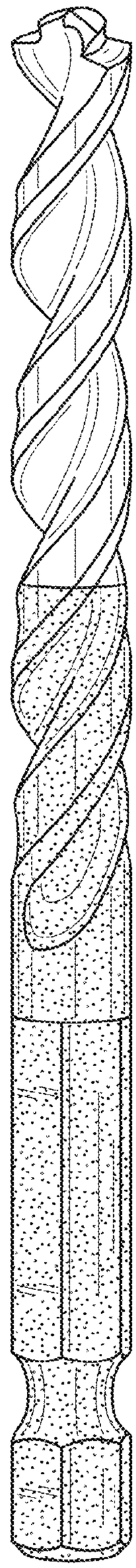


FIG. 8

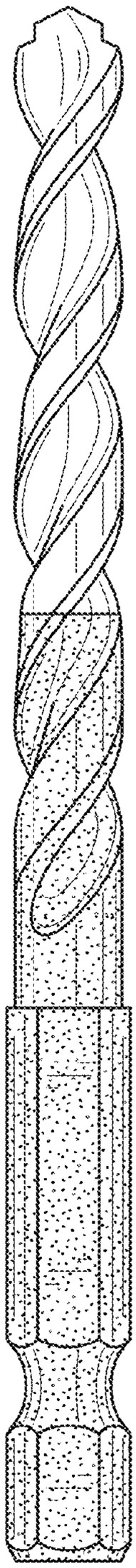


FIG. 9

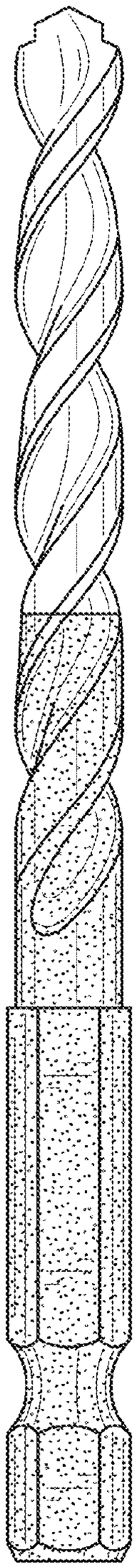


FIG. 10

FIG. 11

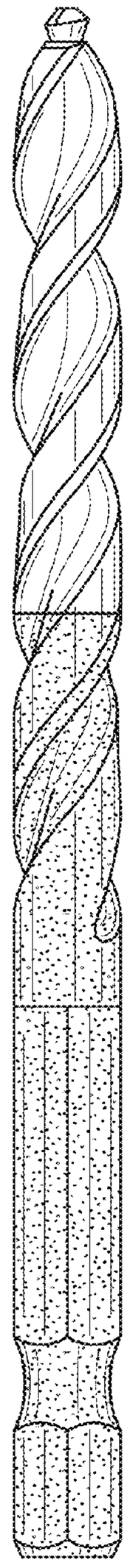


FIG. 12

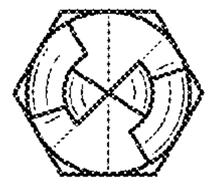


FIG. 13

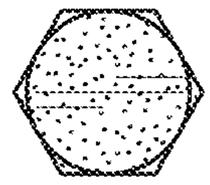


FIG. 14

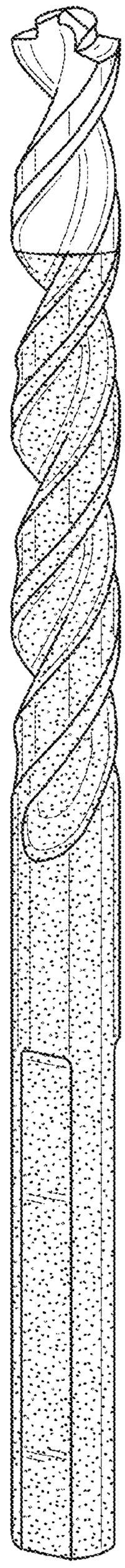


FIG. 15

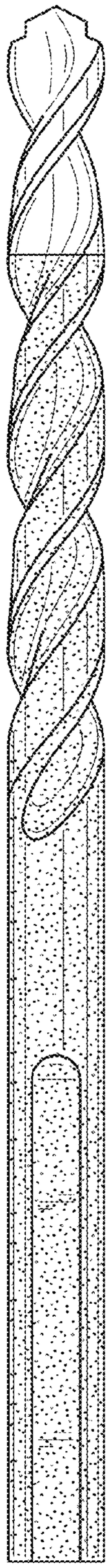


FIG. 16

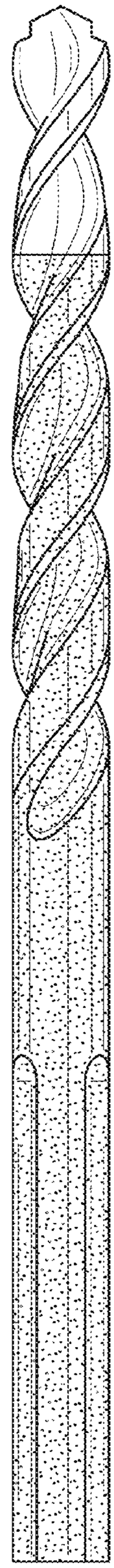


FIG. 17

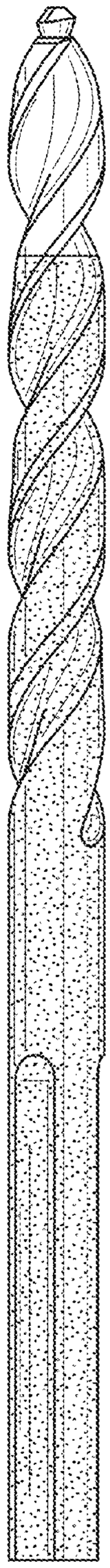


FIG. 18

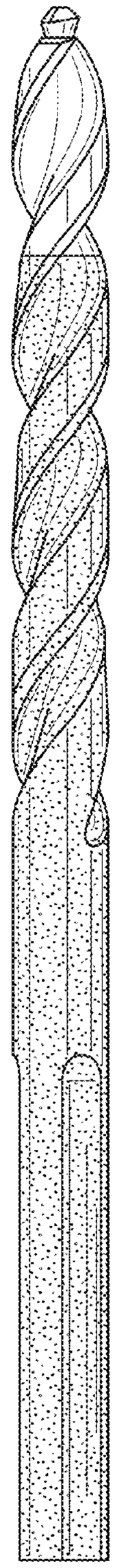


FIG. 19

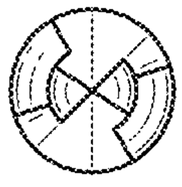


FIG. 20

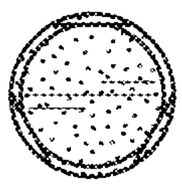


FIG. 21

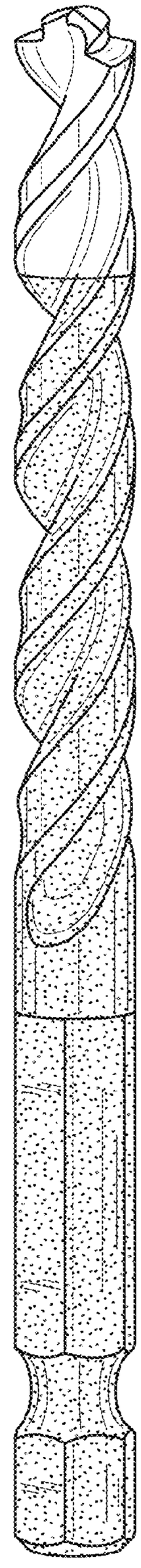


FIG. 22

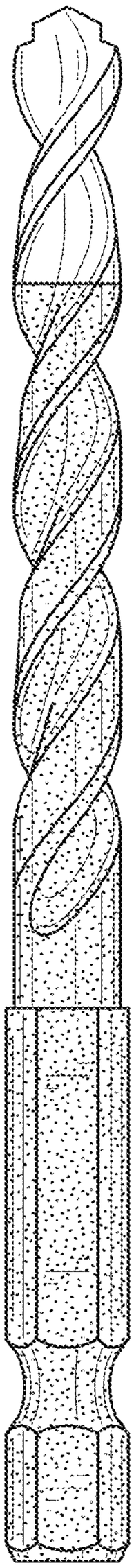


FIG. 23

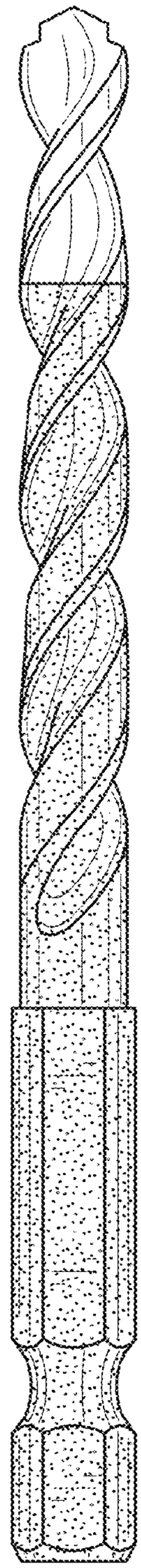


FIG. 24

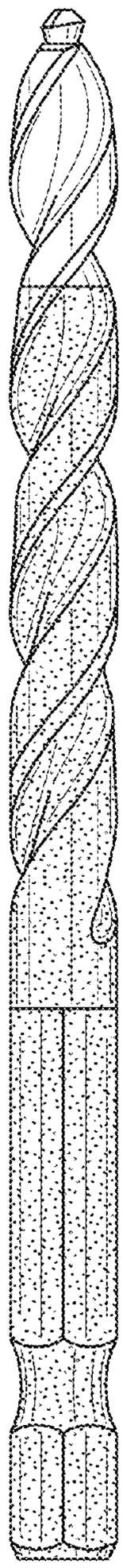


FIG. 25

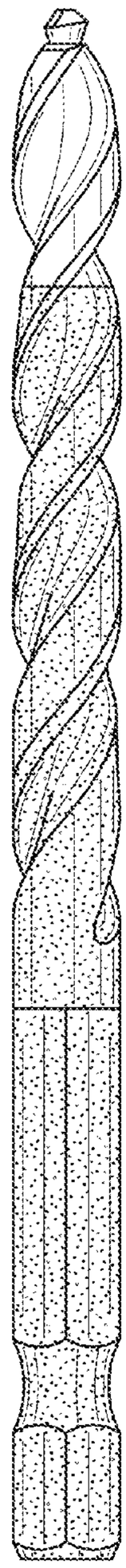


FIG. 26

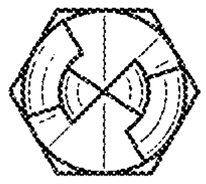


FIG. 27

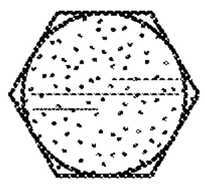


FIG. 28