

#### (12) United States Design Patent (10) Patent No.: US D542,734 S Thorsteinsson et al. **\*\* May 15, 2007** (45) **Date of Patent:**

#### **ELECTRICAL TRANSFORMERS** (54)

Inventors: **Sigurdur Thorsteinsson**, Milan (IT); (75)Egil Stryken, Solbergelva (NO); Richard Tinggren, Thalwil (CH)

Assignee: ABB Technology AG (CH) (73)

14 Years (\*\*)Term:

MF Transformer srl, Oil Filled Transformer, 14 pgs., date unknown.

\* cited by examiner

Primary Examiner—Prabhakar Deshmukh Assistant Examiner—Derrick Holland (74) Attorney, Agent, or Firm—Connolly Bove Lodge & Hutz, LLP; Larry J. Hume

(57) CLAIM

Appl. No.: 29/204,775 (21)

Filed: May 5, 2004 (22)

#### (30)**Foreign Application Priority Data**

Nov. 12, 2003 (EM) ..... 000102397

- LOC (8) Cl. ..... 13-02 (51)
- (52)Field of Classification Search ...... D13/110, (58)D13/4, 11, 101, 199; 174/52 R; 220/4.02; 336/92, 94, 98, 107; 363/153, 171

See application file for complete search history.

**References Cited** (56)

#### U.S. PATENT DOCUMENTS

D188,248	S	*	6/1960	Albright et al D13/110
D188,249	S	*	6/1960	Albright et al D13/110
2,947,957	Α	*	8/1960	Spindler 336/61
D202,045	S	*	8/1965	Oberlin D13/110
3,479,563	Α	*	11/1969	Roy 361/41
4,027,279	Α	*	5/1977	Shigehara 336/90
D257,342	S	*	10/1980	Payne D13/110
D259,040	S	*	4/1981	Pierce D13/110
D290,456	S	*	6/1987	Burgher et al D13/110
6,185,811	B1	*	2/2001	Perry 29/606

The ornamental design for "electrical transformers," as shown and described.

#### DESCRIPTION

FIG. 1 is a front view of a first embodiment of an electrical transformer;

FIG. 2 is a top view of said first embodiment of an electrical transformer;

FIG. 3 is a side view of said first embodiment of an electrical transformer;

FIG. 4 is a rear perspective view of said first embodiment of an electrical transformer;

FIG. 5 is a front perspective view of said first embodiment of an electrical transformer;

FIG. 6 is a front view of a second embodiment of an electrical transformer;

FIG. 7 is a top view of said second embodiment of an electrical transformer;

FIG. 8 is a side view of said second embodiment of an electrical transformer;

#### OTHER PUBLICATIONS

ABB Inc., Power Transformers, 2003, 11 pgs. ASA Trafobau GmbH, 24 pgs., date unknown. Koncar-Distributivni I Specijalni Transformatori d.d., Power Transformers, (3,2) V 01, 8 pgs., date unknown. SGB Starkstrom and SMIT Transformers, Partners in Power, 6 pgs., date unknown.

FIG. 9 is a rear perspective view of said second embodiment of an electrical transformer;

FIG. 10 is a front perspective view of said second embodiment of an electrical transformer;

FIG. 11 is a front view of a third embodiment of an electrical transformer;

FIG. 12 is a top view of said third embodiment of an electrical transformer;

FIG. 13 is a side view of said third embodiment of an electrical transformer;

FIG. 14 is a rear perspective view of said third embodiment of an electrical transformer;





#### US D542,734 S

Page 2

FIG. **15** is a front perspective view of said third embodiment of an electrical transformer;

FIG. 16 is a front view of a fourth embodiment of an electrical transformer;

FIG. **17** is a top view of said fourth embodiment of an electrical transformer;

FIG. **18** is a side view of said fourth embodiment of an electrical transformer;

FIG. **19** is a rear perspective view of said fourth embodiment of an electrical transformer;

FIG. 20 is a front perspective view of said fourth embodiment of an electrical transformer; FIG. **26** is a front view of a sixth embodiment of an electrical transformer;

FIG. 27 is a top view of said sixth embodiment of an electrical transformer;

FIG. 28 is a side view of said sixth embodiment of an electrical transformer;

FIG. **29** is a rear perspective view of said sixth embodiment of an electrical transformer;

FIG. **30** is a front perspective view of said sixth embodiment of an electrical transformer;

FIG. **31** is a front view of a seventh embodiment of an electrical transformer;

FIG. **21** is a front view of a fifth embodiment of an electrical transformer;

FIG. 22 is a top view of said fifth embodiment of an electrical transformer;

FIG. 23 is a side view of said fifth embodiment of an electrical transformer;

FIG. **24** is a rear perspective view of said fifth embodiment of an electrical transformer;

FIG. **25** is a front perspective view of said fifth embodiment of an electrical transformer;

FIG. **32** is a top view of said seventh embodiment of an electrical transformer;

FIG. **33** is a side view of said seventh embodiment of an electrical transformer;

FIG. **34** is a rear perspective view of said seventh embodiment of an electrical transformer; and,

FIG. **35** is a front perspective view of said seventh embodiment of an electrical transformer.

1 Claim, 28 Drawing Sheets

## U.S. Patent May 15, 2007 Sheet 1 of 28 US D542,734 S



Fig. 1

#### **U.S. Patent** US D542,734 S May 15, 2007 Sheet 2 of 28

1 1 1	<b>IN</b> 1   <b>I</b>	' <b>1   (</b>					
1 1 1							
1 1 1							
		1 1 1					
F 1 1	1 1 1 1						
1 1 1		1 1 1 1					
4 1 1							
1 1							
	нии	1 1 6 1					
1 1 1		1 1 1 1					











## U.S. Patent May 15, 2007 Sheet 3 of 28 US D542,734 S





## U.S. Patent May 15, 2007 Sheet 4 of 28 US D542,734 S



## U.S. Patent May 15, 2007 Sheet 5 of 28 US D542,734 S



#### **U.S.** Patent US D542,734 S May 15, 2007 Sheet 6 of 28









Fig. 8

## U.S. Patent May 15, 2007 Sheet 7 of 28 US D542,734 S



## U.S. Patent May 15, 2007 Sheet 8 of 28 US D542,734 S



## U.S. Patent May 15, 2007 Sheet 9 of 28 US D542,734 S



#### **U.S.** Patent US D542,734 S May 15, 2007 Sheet 10 of 28





Fig. 12



## U.S. Patent May 15, 2007 Sheet 11 of 28 US D542,734 S



## U.S. Patent May 15, 2007 Sheet 12 of 28 US D542,734 S



## U.S. Patent May 15, 2007 Sheet 13 of 28 US D542,734 S



#### **U.S. Patent** US D542,734 S May 15, 2007 Sheet 14 of 28

6														
1	•		1	╹				H		i		T		
			]				[ ]						F	
							l i							
	-													
										li				





Fig. 18

## U.S. Patent May 15, 2007 Sheet 15 of 28 US D542,734 S



## U.S. Patent May 15, 2007 Sheet 16 of 28 US D542,734 S



## U.S. Patent May 15, 2007 Sheet 17 of 28 US D542,734 S



#### **U.S.** Patent US D542,734 S May 15, 2007 Sheet 18 of 28



Fig. 22





## U.S. Patent May 15, 2007 Sheet 19 of 28 US D542,734 S



## U.S. Patent May 15, 2007 Sheet 20 of 28 US D542,734 S



## U.S. Patent May 15, 2007 Sheet 21 of 28 US D542,734 S





Fig. 26

## U.S. Patent May 15, 2007 Sheet 22 of 28 US D542,734 S



## U.S. Patent May 15, 2007 Sheet 23 of 28 US D542,734 S



## U.S. Patent May 15, 2007 Sheet 24 of 28 US D542,734 S



## U.S. Patent May 15, 2007 Sheet 25 of 28 US D542,734 S



## U.S. Patent May 15, 2007 Sheet 26 of 28 US D542,734 S







## U.S. Patent May 15, 2007 Sheet 27 of 28 US D542,734 S



## U.S. Patent May 15, 2007 Sheet 28 of 28 US D542,734 S



Fig. 35