

# (19) United States

# (12) Patent Application Publication (10) Pub. No.: US 2023/0230745 A1 Englmann et al.

Jul. 20, 2023 (43) **Pub. Date:** 

### (54) ELECTRICAL APPLIANCE COMPRISING A **BOILER HAVING A SHAPE** COMPLEMENTARY TO THE ACTIVE PART

(71) Applicant: SIEMENS

AKTIENGESELLSCHAFT, München

(DE)

(72) Inventors: **Tobias Englmann**, Freystadt (DE);

David Weber, Weilersbach (DE); Viktor Wins, Wilhermsdorf (DE); Oliver Meckel, Schwaig (DE); Aime Mbuy, Nürnberg-Weiherhaus (DE)

18/011,270 (21) Appl. No.:

(22) PCT Filed: Jun. 19, 2020

(86) PCT No.: PCT/EP2020/067205

§ 371 (c)(1),

Dec. 19, 2022 (2) Date:

### **Publication Classification**

(51) Int. Cl. H01F 27/06 (2006.01)H01F 27/02 (2006.01)

H01F 27/10	(2006.01)
H01F 27/26	(2006.01)
H01F 27/28	(2006.01)
H01F 27/30	(2006.01)

(52) U.S. Cl.

CPC ...... H01F 27/06 (2013.01); H01F 27/02 (2013.01); H01F 27/10 (2013.01); H01F 27/266 (2013.01); H01F 27/2876 (2013.01); H01F 27/306 (2013.01)

#### (57)ABSTRACT

An electrical appliance for connecting to a high voltage includes an active part, which is provided with a magnetizable core and at least two winding assemblies, each surrounding a core section of the core and having windings that are inductively coupled to one another. The active part is entirely arranged a tank, which can be filled with an insulating fluid. The tank has two end casings and a central part arranged between the end casings. The electrical appliance is compact and has a low tare weight. The central part forms a hollow body for each winding assembly, through which a respective one of the core sections extends, which is surrounded by an associated winding assembly. The hollow bodies are connected to one another on the inside and only via the internal volume of the end casings.

