

EUROPEAN PATENT OFFICE
U.S. PATENT AND TRADEMARK OFFICE

CPC NOTICE OF CHANGES 724

DATE: AUGUST 1, 2019

PROJECT DP0136

The following classification changes will be effected by this Notice of Changes:

<u>Action</u>	<u>Subclass</u>	<u>Group(s)</u>
DEFINITIONS:		
Definitions New:	H05B	6/10
Definitions Modified:	H05B	subclass
	H05B	3/00
	H05B	6/00

No other subclasses/groups are impacted by this Notice of Changes.

This Notice of Changes includes the following *[Check the ones included]:*

1. CLASSIFICATION SCHEME CHANGES

- A. New, Modified or Deleted Group(s)
- B. New, Modified or Deleted Warning(s)
- C. New, Modified or Deleted Note(s)
- D. New, Modified or Deleted Guidance Heading(s)

2. DEFINITIONS

- A. New or Modified Definitions (Full definition template)
- B. Modified or Deleted Definitions (Definitions Quick Fix)

3. REVISION CONCORDANCE LIST (RCL)

4. CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)

5. CHANGES TO THE CROSS-REFERENCE LIST (CRL)

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2. A. DEFINITIONS (New)

Insert the following new definition.

H05B 6/10

Definition statement

This place covers:

Induction heating apparatus, other than furnaces, for specific applications

Relationships with other classification places

Further information:

H05B 6/101 relates to induction heating apparatus, other than furnaces, for local heating of metal pieces.

H05B 6/105 relates to induction heating apparatus, other than furnaces, for specific applications using a susceptor.

H05B 6/12 relates to induction cooking devices.

H05B 6/14 relates to induction tools, e.g. nozzles, rollers, calenders.

H05B 6/1218 deals with induction cooking plates with arrangements using lights for the indication of the state of the heating zones. The typical application deals with the provision of LED's on a cooking area that are switched on when the induction heating power of that cooking area is switched on.

H05B 6/1227 deals with induction cooking plates specially designed for wok pans, or similar shaped pans, also wok supports specially adapted for induction cooking (facilitating magnetic field transmission, coils provided inside the support), cook-tops with wok-shaped upper surface (so substantially concave upper surface), but also cylinder surface with coils from top to bottom; wok is also called Chinese pan.

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H05B 6/1236 deals with induction cooking plates adapted to induce current in a coil to supply power to a device and electrical heating devices. Typically the system acts as a transformer. The heating device is provided with a secondary coil for which the induction coil of the cook-top acts as primary.

H05B 6/1245 deals with induction cooking plates with special coil arrangements. The typical application deals with a particular coil material, coil shape, coil geometry, coil position within the plate or with respect to other coils.

H05B 6/1272 deals with induction cooking plates with more than one coil or coil segment per heating zone. Also different concentric coils or coil segments or section with different coil distance or winding direction are provided in different planes for the same heating zone.

H05B 6/1281 deals with induction cooking plates with flat coils. This means that the coil as a whole is constructed in a flat distribution; the coil conductor can, however, present a non-flat section. The typical application deals with coils particularly designed to be a small total thickness, normally by printing a conductor on a substrate or by having a thin conductor embedded in a substrate. The flatness of the conductor used for the coil is not relevant.

H05B6/129 deals with induction ovens. These are domestic appliances similar to kitchen ovens wherein the heating means include at least an induction coil (possibly, in addition to any of the traditional heating means resistance heating, microwave heating, convection heating), and also induction heated trolleys, for catering, for example in airplanes. This class applies to cooking, de-freezing, warming, heat treating and re-heating appliances (the temperature achieved is unimportant).

References

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Soldering by means of induction heating	B23K 1/002
Joining of preformed parts by induction heating of plastics or substances in a plastic state	B29C 65/32
Heating arrangements specially adapted for cooking plates	H05B 3/68
Heat treatment of metals or alloys by induction heating, surface hardening by electric induction, induction heating, continuous furnaces with induction heating	C21D 1/10 , C21D 1/42 , C21D 9/60

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Informative references

Attention is drawn to the following places, which may be of interest for search:

Induction heating with coil arrangements	H05B 6/36
Inductive transmission of power in general, not directly related to heating	H01F 38/14
Refining or remelting of metals by induction	C22B 9/003
Melting furnaces for glass; mineral or slag wool by induction heating	C03B 5/021
Battery chargers using inductive or capacitive converter	H02J 7/025
Furnaces, kilns, ovens or retorts and details thereof	F27B 9/067 , F27B 14/061 , F27D 11/06

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2. A. DEFINITIONS (Modified)

H05B

Definition statement

Replace: In the Definition Statement section, the word “utilising” with the following word:

using

Delete: The following paragraph in the Definition statement section.

Not only the electric elements and circuitry designs are covered by this subclass but also the electric aspects of their arrangement, where these concern cases of general application. Where heating elements are used in specific applications, please see the relevant subclasses.

Replace: In the Definition statement section, the two bulleted statements: “Electric arc lamps, electroluminescent ...of light generation” and “Circuit arrangements...light sources” with the following.

- Electric arc lamps, electroluminescent light sources and light sources using a combination of different types of light sources;
- Primary circuits, circuit arrangements and circuit elements for electric light sources.

Delete: The following paragraph in the Definition statement section.

The primary circuits of the above light sources and the elements themselves of the circuits are covered by this subclass. The above light sources when combined with light sources of a different kind are also covered by this subclass.

Relationships with other classification places

Delete: The following text from the Relationships with other classification places section.

- Electric heating:

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Uses of electric light sources are also too numerous to mention and cover all possible areas of technology. Examples of places where such uses or apparatus could be found include [A47J](#) (domestic cooking); [B21J](#), [B21K](#) (forging by heat); [C21](#), [C22](#), [C23](#) (metallurgy); [F24](#) (domestic heating and stoves); [F27](#) (furnaces and ovens). See also the references below.

Delete: The following text (under the heading: Electric lighting) in the Relationships with other classification places section.

Uses of electric light sources are also too numerous to mention and cover all possible areas of technology.

Replace: In the Relationships with other classification places section, the paragraph: “Class [F21](#) covers the material arrangement of the various...light source, electric or otherwise” with the following revised paragraph.

Differently from this subclass, Class [F21](#) covers the mechanical arrangement of the various electric elements, i.e. their geometrical or physical position in relation to one another, as well as the structures or constructional features of lighting devices incorporating a light source, be it electric or otherwise.

Limiting References

Delete: The entire Limiting references section: heading, preamble, and table.

References out of a residual place

Delete: The following three rows in the References out of a residual place table.

Electric lighting	Numerous areas of technology, e.g. F21 .
Semiconductor devices with at least one particular jump barrier or surface barrier, specially adapted for light emission	H01L 27/15 , H01L 33/00
Stimulated-emission devices	H01S

Insert: The following two replacement rows in the References out of a residual place table.

Semiconductor devices with at least one particular jump barrier or surface barrier,	H01L 27/15 , H01L 33/00
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pecially adapted for light emission, e.g. LEDs	
Lasers	H01S

Insert: The following new row in the Informative references table.

Regulating electric characteristics of arcs in general	G05F 1/02
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Insert: The following new Special rules of classification section.

Special rules of classification

In this subclass the use of indexing codes H05B 2203/00 – H05B 2214/04 is mandatory.

H05B 3/00

Definition statement

Replace: Only the first and second paragraphs in the Definition statement section with the following paragraphs.

Heating by applying a voltage to a material with a certain conductivity, so that an electric current is generated that, according to the resistivity of the material will dissipate energy in form of heat (Joule heating).

Accordingly, the heat can be generated in the same object that needs to be heated. Otherwise, the heat has to be transferred to the object that needs to be heated by a further process of radiation, conduction, or convection.

Insert: The following new Relationships with other classification places section.

Relationships with other classification places

Further information about subgroups:

- H05B3/0033 - H05B3/009 cover heating devices using lamps.

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- [H05B3/06](#) does not cover connectors (suitable) for heating elements, but covers the particular cases when the heater is structurally combined with the technical means allowing the electrical connection, otherwise only the classification in connectors, i.e. in [H01R](#), applies.
- [H05B3/10](#) deal with heater elements characterised by the composition or nature of the materials or by the arrangement of the conductor.
- [H05B3/34](#) covers car seat heaters.
- [H05B3/345](#) covers any heater to be used in a textile material (even if they are not clothes).
- [H05B3/50](#) covers any car air heater (independently of the structure of the heater).
- [H05B3/62](#) - [H05B3/66](#) deal with heating elements specially adapted for furnaces.
- [H05B3/62](#) - [H05B3/82](#) only cover electrical details, or details about the generation or transmission of heat. For other mechanical details, classification is directed to the corresponding groups of classes [F24](#) or [F27](#).
- [H05B3/68](#) - [H05B3/76](#) deal with heating arrangements specially adapted for cooking plates or analogous hot-plates.
- [H05B3/78](#) - [H05B3/82](#) deal with heating arrangements specially adapted for immersion heating
- [H05B3/84](#) deal with heating arrangements specially adapted for transparent or reflecting areas

Limiting references

Delete: The entire Limiting references section: heading, preamble, and table.

Insert: The following new Application-oriented references section.

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Electric cigarettes	A24F 47/008
Devices for radiation therapy	A61N
Electrothermic treatment of ores	C22B 4/00

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Ironing	D06F 61/00
Combustion engines heaters	F02M 31/00
Arrangements of heating elements in furnaces	F27D 11/00
Heat exchangers	F28F 21/00
Apparatus for thermal treatment of semiconductor or solid-state devices or of parts thereof	H01L 21/67

Insert: The following new Special rules of classification section.

Special rules of classification

Usage or orthogonal indexing codes.

- Aspects relating to Ohmic resistive heating covered by group [H05B 3/00](#) are classified in [H05B 2203/00](#) and subgroups.
- Aspects relating to both to resistive heating and to induction heating, covered by [H05B 3/00](#) and [H05B 6/00](#) are classified in [H05B 2213/00](#) and subgroups.
- Aspects relative to resistive heating, induction heating and heating using microwaves, covered by groups [H05B 3/00](#), [H05B 6/00](#) are classified in [H05B 2214/00](#) and subgroups.

H05B 6/00

Limiting references

Delete: All of the rows in the Limiting references table except for the following two rows (keep these two rows).

For therapeutic purposes	A61N 5/00
Joining of preformed parts by heating of plastics or substances in a plastic state	B29C 65/02

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Insert: The following new section: Application-oriented references

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Relationships with other classification	C30B 13/20
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Insert: The following new rows in the existing Informative references table.

Soldering	B23K 1/002
Laser engraving of inorganic materials	B41M 5/262
Removing dry paint by electrically heating	B44D 3/168
Sealing of packages by induction welding	B65B 51/227
Containers, packaging elements or packages specially adapted to be heated by microwaves	B65D 81/3446
Melting furnaces	C03B 5/021
Heat treatment of metals or alloys	C21D 1/10 , C21D 1/42 , C21D 9/60
Refining or remelting of metals	C22B 9/003
Heating of pipes	F16L 53/34
General details of cooking plates not related to the generation or transmission of heat	F24C 7/00
Tube through flow heaters	F24H 1/105
Furnaces, kilns, ovens or retorts and details thereof	F27B 9/067 , F27B 14/061 , F27D 11/06
Inductive transmission of power in general, not directly related to heating	H01F 38/14
Battery chargers using inductive or capacitive power transmission	H02J 7/025

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Delete: The following rows from the existing Informative references table.

Induction heating of molten crystal zone	C30B 13/20
Doors specially adapted for stoves or ranges	F24C 15/02
Sealings for doors or transparent panels (for doors specially adapted for stoves or ranges)	F24C 15/021
Latches (for doors specially adapted for stoves or ranges)	F24C 15/022
Mounting of doors, e.g. hinges, counterbalancing (for doors specially adapted for stoves or ranges)	F24C 15/023
Handles (for doors specially adapted for stoves or ranges)	F24C 15/024
Coils in general	H01F 5/00
Waveguides; resonators, lines, or other devices of the waveguide type	H01P
Inductive charging batteries from ac mains by converters	H02J 7/025

Insert: The following new Special rules of classification section.

Usage of orthogonal indexing codes.

- Additional aspects relating to induction heating, as covered by group [H05B 6/02](#), are classified in [H05B 2206/00](#).
- Additional aspects relating to heating, as covered by [H05B 6/64](#), are classified in [H05B 2206/02](#).
- Additional aspects relating to both resistive heating and induction heating, as covered by [H05B 3/00](#) and [H05B 6/00](#), are classified in [H05B 2213/00](#).
- Additional aspects relating to resistive heating, induction heating and microwave heating, as covered by groups [H05B 3/00](#) and [H05B 6/00](#), are classified in [H05B 2214/00](#).

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Delete: The entire Glossary of Terms section.