QUICKLY DETACHABLE BELT FASTENER FOR HANDHELD ELECTRIC TOOL

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ABSTRACT

A belt fastener has a fastener body, a hook-shaped tongue and a triangular groove. The fastener body is embedded in a slot on the tail end of the housing of the electric tool through the hook-shaped tongue. The hook-shaped tongue and the triangular groove ensure stable embedding state of the fastener. The fastener can be conveniently removed by pressing the hook-shaped tongue. The fastener can be randomly embedded on the right or right side of the housing according to handedness, and then suspended and fastened at any position on the belt of a user.
Figure 1 Schematic view of composition of the belt fastener.

Figure 2 Schematic view of plug-in mounting of belt fastener (both left and right sides are applicable)
Figure 3  Partial schematic view of the belt fastener in use.
QUICKLY DETACHABLE BELT FASTENER FOR HANDHELD ELECTRIC TOOL

CROSS REFERENCE TO RELATED APPLICATIONS


INCORPORATION BY REFERENCE

[0002] Chinese application Serial No. 201320842733.0 entitled “QUICKLY DETACHABLE BELT FASTENER FOR HANDHELD ELECTRIC TOOL.” filed Dec. 19, 2013, is hereby expressly incorporated by reference herein in its entirety to form a part of the present disclosure.

FIELD OF THE INVENTION

[0003] The invention relates to a quickly detachable belt fastener for fastening a handheld electric tool in a suspending way on left and right sides of the waist of a person without extra tools. The buckle is made by rolling and bending high-quality spring stainless steel.

BACKGROUND OF THE INVENTION

[0004] At present, most of the handheld electric tools are not configured with portable devices, while those configured with the portable devices are usually fixed at the tail ends of handles of the electric tools with extra tools. Electric tools are carried out depending on extra tools. However, it is inconvenient to remove

BRIEF SUMMARY

[0005] The belt fastener can be removed randomly and embedded on the left or right side of the tail end of the housing of an electric tool such that a user can suspend and fasten the electric tool on the left or right side of his/her waist according to his/her handedness. The belt fastener can be quickly removed and conveniently used, thus effectively solving a series problems concerning carrying of the handheld electric tools.

[0006] The invention provides a directly detachable belt fastener for a handheld electric tool, which can be randomly embedded on the left or right side of the tail end of the housing of the electric tool, and brings convenience to users to randomly suspend and fasten the electric tool on the waist side according to handedness without any extra tools.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] FIG. 1 is a schematic view of composition of the belt fastener.
[0008] FIG. 2 is a schematic view of plug-in mounting of the belt fastener.
[0009] FIG. 3 is a partial schematic view of the belt fastener in use.

DETAILED DESCRIPTION

[0010] To solve a series of problems concerning carrying of handheld electric tools, the invention provides a belt fastener mainly comprised of a fastener base 1, a fastener body 2, a hook-shaped tongue 3 and a triangular groove 4. The fastener body 2 is embedded in a slot on the tail end of the housing of the electric tool through the hook-shaped tongue 3. The hook-shaped tongue 3 and the triangular groove 4 ensure stable embedding state of the belt fastener. The belt fastener can be conveniently removed by pressing the hook-shaped tongue 3. The belt fastener can be randomly embedded on the right or left side of the housing according to handedness, and then suspended and fastened at any position of the belt through the fastener base 1.

[0011] The belt fastener made by rolling and bending high-quality spring stainless steel is durable, easy to process and operate, low in production cost, simple, practical, suitable for mass production, and capable of being widely applied to various handheld electric tools.

[0012] Refer to FIG. 1 for structure of an embodiment of a belt fastener according to the invention. The belt fastener comprises a fastener base 1, a fastener body 2, a hook-shaped tongue 3 and a triangular groove 4. The fastener body 2 is plugged into the slot on the tail end of the housing of the electric tool. The two ends of the slot are symmetrical. The belt fastener can be embedded on the left or right side of the electric tool according to the user’s handedness. See FIG. 2 for the plug-in mounting process. The hook-shaped tongue 3 has an 8.6 degrees upward inclined angle, and the groove dimension in the middle of the slot is matched with that of the triangular groove on the belt fastener, so when the fastener body 2 is completely plugged into the slot, the hook-shaped tongue 3 returns the normal upward inclined angle after being completely plugged into the groove due to features of the spring stainless steel. The bent surface of the end of the springing hook-shaped tongue 3 is pressed against the inner side of the slot on of the housing of the electric tool, and then completely locks the fastener body 2 together with the triangular groove 4 on the belt fastener, thus ensuring stable and solid state of the belt fastener embedded in the electric tool. The belt fastener can be conveniently removed by pressing the hook-shaped tongue 3. See FIG. 3 for the normal service state. Finally, the user can randomly suspend and fasten the electric tools at any position of the belt through the fastener base 1.

What is claimed is:
1. A belt fastener for a handheld electric tool, said belt fastener, comprising:
a fastener base and a fastener body, the fastener body having a hook-shaped tongue and a triangular groove; the dimensions of the hook-shaped tongue and the triangular groove are matched with the dimension of a slot on the tail end of the housing of the electric tool, ensuring stable and solid embedding state of the belt fastener.
2. The belt fastener for a handheld electric tool according to claim 1, wherein the fastener body corresponding to the symmetric slot on the tail end of the housing of the electric tool can be stably and solidly embedded on both left and right ends of the electric tool, conforming to handedness of users.
3. The belt fastener for a handheld electric tool according to claim 1, wherein the belt fastener is made by rolling and bending high-quality spring stainless steel, and is locked by certain elasticity of the spring stainless steel.

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