HANGING ASSEMBLY FOR A TOOL CABINET

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ABSTRACT

A hanging assembly for a tool cabinet has two suspending rods mounted securely and separately on one side wall of the tool cabinet. Each suspending rod has a U-shaped cross section and has a base plate, two wings, multiple hanging holes and two magnets. The wings are respectively formed on and protrude from the sides of the base plate toward the side wall of the body. The hanging holes are defined in the base plate, and each hanging hole aligns with one of the hanging holes in the other suspending rod. The magnets are mounted respectively at the ends of the base plate to attach the suspending rod on the tool cabinet with the magnets. Accordingly, multiple tool racks with tools mounted thereon can be hung between the suspending rods, and the space for holding tools on the tool cabinet is enlarged.
FIG. 9
HANGING ASSEMBLY FOR A TOOL CABINET

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention
[0002] The present invention relates to a hanging assembly and more particularly to a hanging assembly for a tool cabinet to enlarge area for holding tools on the tool cabinet.
[0003] 2. Description of Related Art
[0004] A tool cabinet is used to hold and store tools to allow a user use the tools conveniently. A conventional tool cabinet has a hollow body and multiple drawers mounted slidably in the body to hold tools in the drawers. However, the convention tool cabinet can only store and hold tools in the drawers but does not have additional space for holding or hanging tools, so the space of the conventional tool cabinet for holding tools is insufficient to fit with different needs of users.
[0005] To overcome the shortcomings, the present invention tends to provide a hanging assembly for a tool cabinet to mitigate or obviate the aforementioned problems.

SUMMARY OF THE INVENTION

[0006] The main objective of the invention is to provide a hanging assembly for a tool cabinet to enlarge the space for hanging tools on the tool cabinet. The hanging assembly is mounted on one side wall of the body and has two suspending rods mounted securely and separately on a side wall of the tool cabinet. Each suspending rod has a U-shaped cross section and has a base plate, two wings, multiple hanging holes and two magnets. The base plate has two sides. The wings are respectively formed on and protrude from the sides of the base plate. The hanging holes are defined in the base plate, and each hanging hole aligns with one of the hanging holes in the other suspending rod. The magnets are mounted respectively at the ends of the base plate to attach the suspending rod on the tool cabinet with the magnets.
[0007] Other objects, advantages and novel features of the invention will become more apparent from the following detailed description when taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] FIG. 1 is a perspective view of a tool cabinet with a hanging assembly in accordance with the present invention; FIG. 2 is an exploded perspective view of the tool cabinet with the hanging assembly in FIG. 1; FIG. 3 is an enlarged side view in partial section of the hanging assembly in FIG. 1; FIG. 4 is an operational perspective view of the tool cabinet in FIG. 1 with multiple tool racks having multiple tools hung thereon being mounted between the suspending rods of the hanging assembly; FIG. 5 is an enlarged exploded perspective view of one suspending rod of the hanging assembly in FIG. 4 with a tool rack; FIG. 6 is a partially exploded perspective view of the suspending rod with the tool rack in FIG. 5; FIG. 7 is a rear perspective view of the suspending rod with the tool rack in FIG. 5; FIG. 8 is an exploded perspective view of another embodiment of a suspending rod in accordance with the present invention with a tool rack; and FIG. 9 is a rear perspective view of the suspending rod with the tool rack in FIG. 8.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENT

[0018] With reference to FIGS. 1 to 3, a hanging assembly in accordance with the present invention is mounted on a tool cabinet that has a hollow body (10), multiple drawers (12) and multiple wheels (14). The drawers (12) are mounted slidably in the front of the body (10) to hold tools inside. The wheels (14) are mounted rotatably on the bottom of the body (10) to allow the tool cabinet to be moved to any desired location easily and conveniently. Additionally, a handle may be mounted on the body (10) to allow a user to push or pull the tool cabinet for movement. The tool cabinet may be a conventional one, and the detail description of the tool cabinet is omitted.

[0019] The hanging assembly (20) in accordance with the present invention is mounted on one side wall of the body (10) of the tool cabinet. In practice, the tool cabinet has a single hanging assembly (20) mounted on one side wall of the body (10) or two hanging assemblies (20) mounted respectively on two side walls of the body (10). The hanging assembly (20) has two suspending rods (22). The suspending rods (22) are mounted securely on the side wall of the body (10) and are separately from and parallel with each other. Each suspending rod (22) has a U-shaped cross section and comprises a base plate (24), two wings (242), multiple hanging holes (26) and two magnets (27). The base plate (24) has two sides, and the wings (242) are respectively formed on and protrude from the sides of the base plate (24) toward the side wall of the body (10).

[0020] With further reference to FIGS. 8 and 9, the hanging holes (26,26A) are defined in the base plate (24) and are arranged in a line along the suspending rod (22). The hanging holes (26,26A) may be rectangular as shown in FIGS. 6 and 7, waterdrop-shaped as shown in FIGS. 8 and 9, circular or be formed in any shape to engage a hook or a protrusion or the like. Each hanging hole (26,26A) is aligned with one of the hanging holes (26,26A) in the other suspending rod (22). With reference to FIGS. 2, 3 and 5 to 7, the magnets (27) are mounted respectively at the ends of the base plate (24) to attach the suspending rod (22) on the tool cabinet with the magnets (27). To mount the magnets (27) securely on the suspending rod (22), the suspending rod (22) has two through holes (222) defined respectively through the ends of the base plate (24). Each magnet (27) has a through hole (272) and a nut recess (274). The through hole (272) is defined through the magnet (27) and aligns with a corresponding one of the through holes (222) in the suspending rod (22). The nut recess (274) is defined in the magnet (27) at a side opposite to the base plate (24) and around the through hole (272). Multiple bolts (28) are mounted respectively through the through holes (222) in the suspending rods (222) and respectively through the corresponding through holes (272) in the magnets (27). Multiple nuts (282) are screwed respectively with the bolts (28) and are held respectively in the nut recesses (274) in the magnets (27). With the bolts (28) and nuts (282), the magnets (27) are mounted securely on the suspending rods (22). Alternatively, the magnets (27) can be attached to the suspending rods (22) with the attraction force provided by the magnets (27) themselves or be attached onto the suspending rods (22) with glue. Additionally, the wings (242) of each suspending rod (22) have an extension length from the base plate (24), and the magnets (27) of the suspending rod (22) have a thickness larger than the extension length of the wings (242).
Accordingly, the magnets (27) are exposed from the U-shaped suspending rods (22) and can be attached onto the side wall of the body (10).

With reference to FIGS. 4 to 9, with the hanging assembly (20) in accordance with the present invention, multiple tool racks (50) or organizers on which multiple tools (60) are mounted can be connected and hung between the suspending rods (22) of the hanging assemblies (20). To hang a tool rack (50) on the suspending rods (22), hooks (52) or engaging protrusions (52A) are mounted on the tool rack (50) and are engaged in the aligned hanging holes (26, 26A) in the suspending rods (22). Alternatively, the tool rack (50) can be connected to the suspending rods (22) with fasteners. Accordingly, more tools (60) can be held and hung on the tool cabinet with the hanging assemblies (20) to allow a user to take and use the tools (60) easily and conveniently. Therefore, the space for holding tools (60) on a tool cabinet is enlarged, and the use of the tool cabinet is versatile.

Because the suspending rods (22) are attached to the side wall of the body (10) with magnets (27), the suspending rods (22) can be positioned at any desired location on the side wall of the body (10) based on the needs of users. Accordingly, the use of the hanging assembly is versatile. Furthermore, to define any hole or any fastening structure in the body (10) of the tool cabinet for combining the hanging assembly is unnecessary, to assemble the hanging assembly onto the tool cabinet is easy and convenient.

Even though numerous characteristics and advantages of the present invention have been set forth in the foregoing description, together with details of the structure and function of the invention, the disclosure is illustrative only, and changes may be made in detail, especially in matters of shape, size, and arrangement of parts with the principles of the invention to the full extent indicated by the broad general meaning of the terms in which the appended claims are expressed.

What is claimed is:

1. A hanging assembly for a tool cabinet comprising two suspending rods mounted separately from each other on the tool cabinet, and each having a U-shaped cross section and comprising a base plate having two ends and two sides; two wings respectively formed on and protruding from the sides of the base plate; multiple hanging holes defined in the base plate, and each hanging hole aligning with one of the hanging holes in the other suspending rod; and two magnets mounted respectively at the ends of the base plate to attach the suspending rod on the tool cabinet with the magnets.

2. The hanging assembly as claimed in claim 1, wherein each suspending rod has two through holes defined respectively through the ends of the base plate; and each magnet of each suspending rod has a through hole defined through the magnet and aligning with a corresponding one of the through holes in the suspending rod; and a nut recess defined in the magnet at a side opposite to the base plate of the suspending rod around the through hole of the magnet; multiple bolts are mounted respectively through the through holes in the suspending rods and respectively through the corresponding through holes in the magnets; and multiple nuts are screwed respectively with the bolts and are held respectively in the nut recesses in the magnets.

3. The hanging assembly as claimed in claim 2, wherein the wings of each suspending rod have an extension length from the base plate; and the magnets of each suspending rod have a thickness larger than the extension length of the wings of the suspending rod.

4. The hanging assembly as claimed in claim 3, wherein the hanging holes in each suspending rod are arranged in a line along the suspending rod.

5. The hanging assembly as claimed in claim 4, wherein each hanging hole is rectangular.

6. The hanging assembly as claimed in claim 1, wherein the wings of each suspending rod have an extension length from the base plate; and the magnets of each suspending rod have a thickness larger than the extension length of the wings of the suspending rod.

7. The hanging assembly as claimed in claim 6, wherein the hanging holes in each suspending rod are arranged in a line along the suspending rod.

8. The hanging assembly as claimed in claim 7, wherein each hanging hole is rectangular.

9. The hanging assembly as claimed in claim 1, wherein the hanging holes in each suspending rod are arranged in a line along the suspending rod.

10. The hanging assembly as claimed in claim 1, wherein each hanging hole is rectangular.