Oct. 20, 1953 E. T. KUMP 2,656,210

HANDLE

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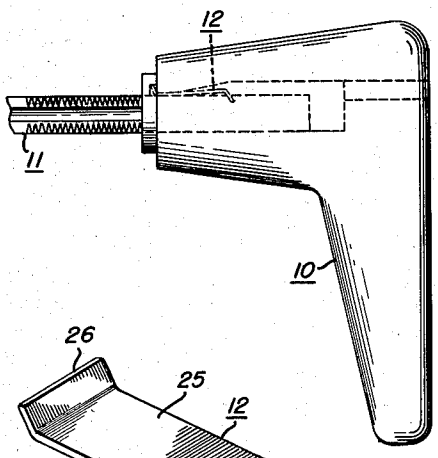


Fig. 1

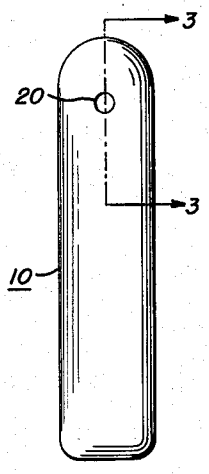


Fig. 2

Fig. 6

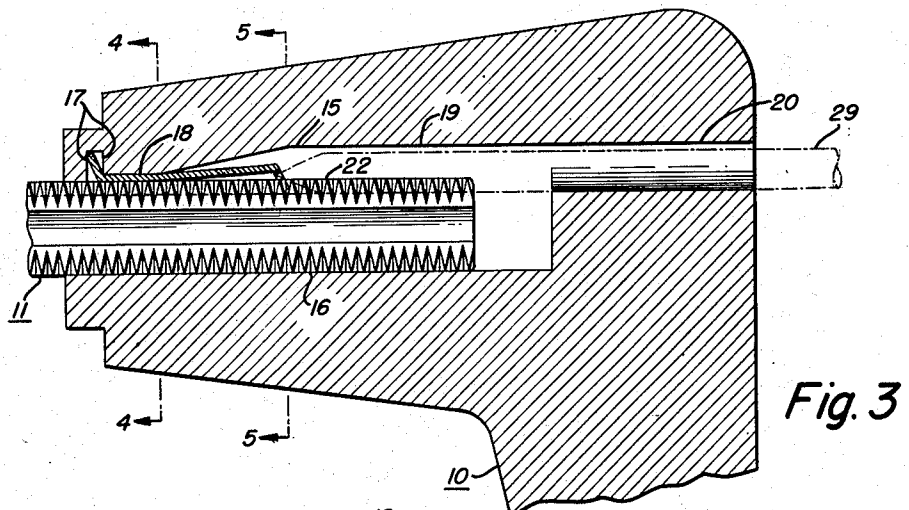


Fig. 3

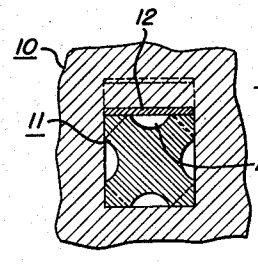


Fig. 4

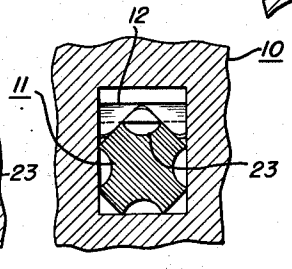


Fig. 5

INVENTOR.
Edward T. Kump
BY
Woodling and Kost
attys

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HANDLE

Edward T. Kump, Euclid, Ohio

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2 Claims. (Cl. 292—353)

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The invention relates to a handle and in particular to a fastening of a handle on a member.

One of the objects of the invention is to provide a handle which may be quickly assembled without the use of tools and which will not fall apart.

Another object of the invention is to provide a handle which may be quickly and easily assembled without the use of tools and which may be easily separated with a small tool.

Another object of the invention is to provide a simple and inexpensive handle.

Other objects and a fuller understanding of this invention may be had by referring to the following description and claims, taken in conjunction with the accompanying drawing, in which:

Figure 1 is an elevational view of the handle;

Figure 2 is an end view of the handle;

Figure 3 is an enlarged cross-sectional view along the line 3—3 of Figure 2;

Figure 4 is an enlarged cross-sectional view along the line 4—4 of Figure 3;

Figure 5 is an enlarged cross-sectional view along the line 5—5 of Figure 3; and

Figure 6 is an enlarged perspective view of the holding member.

Throughout the figures of the drawings, similar reference characters refer to the same parts which are shown as the preferred assembly of the parts to teach the details and construction of the invention as hereinafter claimed. The entire handle consists of a handle body 10 mounted on a member 11 by a holding member 12.

The handle body 10 may be formed of wood, metal or moldable materials which may be cast or formed into the shape illustrated and described herein. Although the handle illustrated is of somewhat L-shape over all, it is understood that the outside shape of handle body 10 may be any desired shape and that the handle may be used for many purposes such as door knobs and cupboard handles. The handle body 10 includes an abutment wall 15 and a backing wall 16 spaced apart and facing each other as best illustrated in Figure 3. At one end of the abutment wall 15 is a pair of anchor walls 17 spaced apart and extending away from the backing wall 16. The abutment wall is described as including a first portion 18 and a second portion 19 which are generally in end to end relationship. The first portion 18 is next to the anchor wall 17 and is closer to the backing wall 16 than the second portion 19. The second portion 19 is spaced further from the backing wall 16 than the first portion 18 as illustrated in Figure 3. All of these walls

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are integrally joined by the body 10 into a unitary structure. This body 10 also has an aperture 20 extending therethrough and merging with the space between the second portion 19 of the abutment wall 15 and the backing wall 16. This aperture 20 preferably is smaller than the space between the abutment wall and the backing wall so that it will not leave a big hole in the face of the handle, thus providing a neat handle surface. The member 11 illustrated herein is a part commonly used to support door knobs on doors of dwellings. However, it is understood that members of other shapes and sizes may be used without departing from the spirit and scope of the invention. In the present instance, the member 11 is of generally square cross-section and threaded to provide teeth 22. The teeth 22 may be in the form of threaded teeth or may be in the form of rack teeth appearing on only one side of the member 11. When the member 11 has a non-circular cross-section, it will turn with turning of the handle body 10. Thus, the member 11 and the handle body 10 may be said to have cooperating means or they may have cooperating flat surfaces preventing the turning of one relative to the other. In this instance, the member 11 also has a longitudinal slot 23 in the side thereof facing the abutment wall 15. This slot 23 provides a guide and makes it easier for using a tool in removing the handle body 10 from the member 11 as will be hereinafter described. The holding member 12 is best illustrated in the perspective view in Figure 6 of the drawing. This holding member 12 comprises a body portion 25 of spring-like material having an outturned anchor end 26 on one end thereof and having an outturned tooth end 27 on the other end thereof. These outturned ends 26 and 27 may be extended transversely from the end of the body portion 25 or they may be at an angle other than a right angle to the body portion 25. One end extends outwardly from one side of the body portion 25 and the other end extends outwardly from the other side of the body portion 25 as is best illustrated in Figure 6. The tooth end 27 has a notch 28 therein alignable with the slot 23 when the entire handle is assembled. In assembling the handle, the holding member 12 is inserted against the first portion 18 of the abutment wall 15 with the anchor end 26 between the anchor walls 17. The member 11 is then inserted in the handle body 10 between the abutment wall 15 and the backing wall 16. As the member 11 is inserted between the walls 15 and 16, it holds the holding member 12 against the first portion 18 of the abutment wall 15 with the anchor end 26 between the anchor walls 17.

Since the second portion 19 of the abutment wall 15 is spaced further from the backing wall 16 than the first portion 18, the tooth end 27 of the holding member 12 will be cantilevered in the recess thus formed between the member 11 and the second portion 19 of the abutment wall 15. The spring-like properties of the holding member 12 bias and urge the tooth end 27 thereof into latching engagement with the teeth 22 of the member 11.

In the illustration in the drawings, the tooth end 27 is at an angle so that the outturned tooth end 27 and the teeth 22 have cooperating means allowing the outturned end 27 to slip over the teeth when member 11 is inserted in the handle body 10. The angles of these teeth and the outturned tooth end 27, however, prevent slipping of the outturned tooth end 27 over the teeth 22 upon attempted removal of the member 11 from the handle body 10. If a person ever desires to take the handle body 10 off the handle 11, he simply inserts a nail or other pointed tool, as illustrated by the phantom lines 29 in Figure 3 in the aperture 20. This tool 29 will slide through the aperture along the slot 23 and into the notch 28 in the outturned tooth end 27. The tool may be used to unlatch the outturned tooth end 27 from the teeth 22 of the member 11 so that the member 11 may be slipped longitudinally out of the handle body 10.

In the present disclosure, it is noted that no tools are required to assemble the handle unit and that any simple tool, such as a nail, small screw driver, or other similar article may be used to quickly or easily separate the parts to disassemble the handle unit. It is also understood that the aperture 20 illustrated herein as extending generally longitudinally of the member 11 may be positioned to extend through the side of the handle body 10, thus transversely of the handle member 11. Similarly, other minor changes may be made without departing from the teachings of the invention as herein illustrated and described.

Therefore, although this invention has been described in its preferred form with a certain degree of particularity, it is understood that the present disclosure of the preferred form has been made only by way of example and that numerous changes in the details of construction and the combination and arrangement of parts may be resorted to without departing from the spirit and the scope of the invention as hereinafter claimed.

What is claimed is:

1. A handle for use with a shank having transverse teeth, comprising a handle body having an abutment wall and a backing wall defining a shank receiving recess extending inwardly from the rearward end of said handle body, a tool receiving aperture longitudinally parallel but spaced from said shank receiving recess extending from the forward end of said handle body into said shank receiving recess, a spring-like member having a body portion and an outturned end, said body portion fitted in said shank receiving recess adjacent said abutment wall with said outturned end extending toward said backing wall to receive a shank therebetween, said outturned end having first and second spring teeth with a groove therebetween on the extremity thereof with said spring teeth engageable with transverse teeth on a shank and with said groove spaced from such shank, said spring teeth camming past said shank teeth upon relative longitudinal movement of said handle body and a shank in a given direction to permit a shank to be received in the shank receiving recess of said handle body, said shank incapable of movement completely through said handle body because of non-alignment of said tool receiving aperture and shank receiving recess, said spring teeth effecting interlocking engagement with transverse teeth on a shank to prevent relative longitudinal movement of said handle body and a shank in a direction opposite to said given direction, said tool receiving aperture being substantially aligned with said groove whereby a pointed tool may be longitudinally inserted from the forward end of said handle body to engage said groove and cammingly disengage said outturned end and said shank solely by longitudinal movement of said tool.

2. A handle for use with a shank having transverse teeth, comprising a handle body having an abutment wall and a backing wall defining a shank receiving recess extending inwardly from the rearward end of said handle body, a tool receiving aperture longitudinally parallel but spaced from said shank receiving recess extending from the forward end of said handle body into said shank receiving recess, anchor walls transversely extending away from said shank receiving recess near said handle body rearward end, a spring-like member having a body portion and first and second outturned ends, said body portion fitted in said shank receiving recess adjacent said abutment wall with said first outturned end thinner than the space between said anchor walls and extending diagonally across into engagement with said anchor walls, said second outturned end extending toward said backing wall to receive a shank therebetween, said second outturned end having first and second spring teeth with a groove therebetween on the extremity thereof with said spring teeth engageable with transverse teeth on a shank and with said groove spaced from such shank, said spring teeth camming past said shank teeth upon relative longitudinal movement of said handle body and a shank in a given direction to permit a shank to be received in the shank receiving recess of said handle body, said shank incapable of movement completely through said handle body because of non-alignment of said tool receiving aperture and shank receiving recess, said spring teeth effecting interlocking engagement with transverse teeth on a shank to prevent relative longitudinal movement of said handle body and a shank in a direction opposite to said given direction, said tool receiving aperture being substantially aligned with said groove whereby a pointed tool may be longitudinally inserted from the forward end of said handle body to engage said groove and cammingly disengage said second outturned end and said shank solely by longitudinal movement of said tool.

EDWARD T. KUMP.

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