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AUXILIARY TOOL HANDLE

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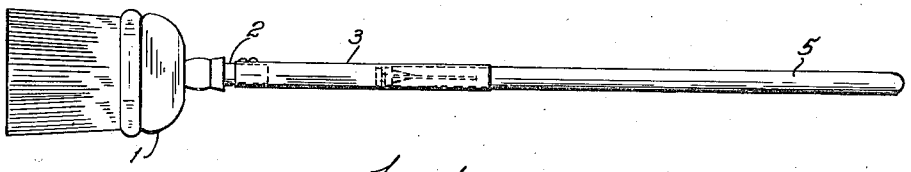

Fig. 1.

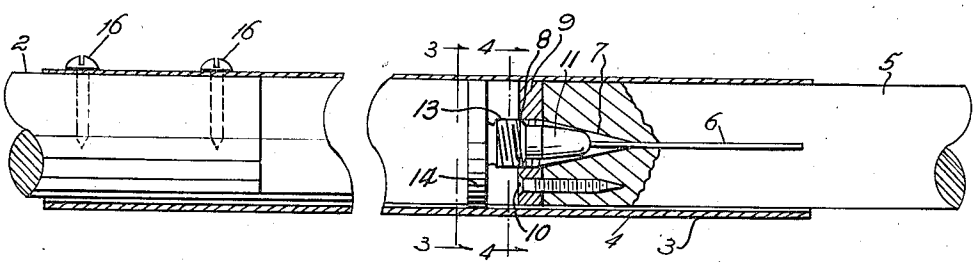

Fig. 2.

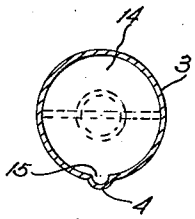

Fig 3.

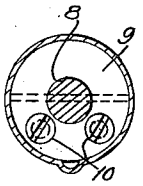

Fig. 4.

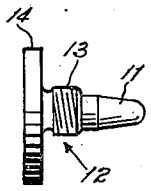

Fig. 5.

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AUXILIARY TOOL HANDLE

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3 Claims. (Cl. 287—119)

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This invention relates to improvements in handles and more particularly to an auxiliary or extension handle which may be substituted for a broken handle, used to extend a stub handle, or for like purpose and that is adapted particularly for use in connection with such articles as broom-heads, shovels, hand rakes, hoes and the like. One object is to provide an extension handle that may be detachably secured to a stub or broken handle and that in itself is adjustable to provide a handle of any length desired.

A further object is to provide an extension handle that is attractive in appearance, durable in use, inexpensive to manufacture, of light weight and efficient in operation. Other objects, novel features and advantages of arrangement, construction and design comprehended by the invention are hereinafter more fully pointed out or made apparent from the following description of a preferred embodiment as illustrated in the accompanying drawing wherein like reference characters denote corresponding parts throughout.

In the drawing:

Fig. 1 is a view in side elevation of a broom-head with stub or broken handle showing the application of the instant extension handle.

Fig. 2 is an enlarged fragmentary sectional view of Fig. 1 more clearly illustrating its construction and assembly.

Fig. 3 is a cross sectional view of Fig. 2 on the line 3—3, looking in the direction of the arrows.

Fig. 4 is a view similar to Fig. 3 but taken on the line 4—4 of Fig. 2, and,

Fig. 5 is a view in side elevation of an expander, so called, employed.

In the instant case the auxiliary or extension handle is shown as applied to the stub or broken handle 2 of the broom-head 1. The extension handle includes a tube or sleeve 3 of an interior diameter to snugly receive the handle 2 and is formed with a longitudinally extending outwardly bulging concavo-convex rib 4 extending from end to end of said tube, said rib being parallel to the tube or sleeve axis. Received in said sleeve is the round bar 5 snug fitting but adjustable longitudinally and capable of rotation therein and formed with a longitudinally extending slot 6 of diametrical width, the side walls thereof being spaced but a slight distance apart and parallel throughout, said slot extending inwardly from one end of said bar and bisecting a relatively wide tapered recess 7 longitudinally, said recess opening in the bar end common to slot 6.

Received flush upon the said end of bar 5 and formed with a threaded central perforation 8 of

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the same diameter as the mouth of recess 7 is the resilient disc 9 of the same diameter as bar 5, said disc and bar being secured together by screws 10, preferably two in number, said bar receiving in its recess 7 the inner slightly tapered shank end 11 of the expander screw 12, the shank thereof having the enlarged threaded portion 13 and terminating in the head 14 formed with the rounded protuberant nose 15 formed complementary to said rib 4 and snugly and movably received therein, said threaded shank portion 13 adapted to be screwed into the threaded disc perforation 8. In the application of the extension handle one end of sleeve 3 receives the stub or broken end 2 of the broom-head 1 which is secured in position by the screws 16. The extension handle assembly comprising the round bar 5, disc 9 and expander 12 are introduced into the opposite end of said sleeve with the nose 15 of expander head 14 in the concave side of rib 4.

By means of the bar 5 this assembly may be advanced longitudinally of sleeve 3 to any point desired to serve in co-operation with stub handle 2 as a means of using the tool or broom-head 1 in conventional manner. Instant adjustment of the bar 5 may be had by moving it manually longitudinally of tube or sleeve 3, while rotation of bar 5 in the sleeve, after the expander shank has engaged disc 9, will cause the two end portions of bar 5 separated by slot 6 to grip the inner surface of the sleeve 3.

What is claimed is:

1. In an auxiliary tool handle, a sleeve for attachment to the original handle, a round bar snugly received in said sleeve for rotation and movement longitudinally thereof, said bar formed with a longitudinal slot in one end and with a recess in said end registering with said slot, a disc in said sleeve flush with and secured to said bar and formed with a threaded perforation aligned with said bar recess, and an expander in said sleeve adjustable longitudinally thereof and locked against rotation therein, said expander having a threaded portion for engagement with said threaded disc perforation.

2. In an auxiliary tool handle, a sleeve for attachment to the stub of the original handle, a round bar snugly received in said sleeve for rotation and movement longitudinally thereof, said bar formed with a longitudinal slot extending inwardly from one end thereof of bar-diameter with and with a tapered recess in said end bisected by said slot, a resilient disc in said sleeve flush with and secured to said bar and of the same diameter and formed with a threaded per-

foration of the same diameter as the mouth of said bar recess and flush therewith, and an expander in said sleeve adjustable longitudinally thereof and keyed against rotation therein, said expander having a threaded portion for engagement with said threaded disc perforation.

3. In an auxiliary tool handle, a sleeve for attachment to the stub of the original handle, a concavo-convex rib extending longitudinally of said sleeve, a round bar snugly received in said sleeve for rotation and movement longitudinally thereof, said bar formed with a longitudinal slot extending inwardly from one end thereof of diameter width and uniform throughout and with a tapered recess in said end bisected by said slot, a resilient disc in said sleeve flush with and secured to said bar and of the same diameter and formed with a threaded perforation aligned with

the mouth of said bar recess and of like diameter, an expander in said sleeve adjustable longitudinally thereof, said expander having a threaded portion for engagement with said threaded disc perforation, and a nose upon said expander engaging said rib.

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The following references are of record in the file of this patent:

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