ABSTRACT OF THE DISCLOSURE

Devices for fitting under the arms in support of an invalid at a workbench or the like while working at the workbench and wherein the devices have controlled swinging movement in supports therefor. Further, wherein the supports are detachable with respect to couplings on the workbench and the devices are adjustable coupled with the supports to suit different operators.

BACKGROUND OF THE INVENTION

(1) The invention deals with underarm devices for use by invalids having difficulty to stand at a workbench or the like and in detachably and adjustably coupling the devices with tubular supports; further, wherein said tubular supports are detachable with respect to the workbench or the like.

(2) Articles of manufacture of the type defined employing a cushioned top and an offset and depending short tubular shank, including a spring-pressed pin, are believed by applicant to be new and he is not aware of any prior art.

SUMMARY OF THE INVENTION

In summarizing, underarm devices of the character defined fulfill a much needed want in providing invalids and handicapped people with a means to enable them to perform, with safety and confidence, work operations and maneuvering which, heretofore, they would not have the courage to attempt. Briefly, the invention comprises an underarm device which is adjustable in its support and also has controlled rotary movement in the support. Further, the support can have a detachable mounting in connection with a workbench or the like in order that the workbench may be cleared for any desired other use.

The novel features of the invention will be best understood from the following description, when taken together with the accompanying drawing, in which certain embodiments of the invention are disclosed and, in which, the separate parts are designated by suitable reference characters in each of the views and, in which:

FIG. 1 is a diagrammatic perspective view showing part of a workbench top, illustrating spaced couplings thereon for support of underarm devices as the illustration of one device in FIG. 3 of the drawing.

FIG. 2 is a perspective view of a tubular support member.

FIG. 3 is a diagrammatic view of a workbench showing the top of the workbench in section and illustrating a complete assemblage of the parts in support of one of the underarm devices.

FIG. 4 is an enlarged diagrammatic section on the line 4—4 of FIG. 3 and indicating, in dot-dash lines, the swinging or rotary movement of the underarm device in the support member; and

FIG. 5 is a reduced slightly perspective view of one of the devices, with part of the construction shown in section.

In illustrating one adaptation and use of the invention, I have shown in FIG. 1 a partial perspective view of a workbench top 10 and, in FIG. 3, the top 10 is shown in section. At 11, FIG. 3, is indicated part of the workbench support.

Fixed to the front edge of the top 10 at spaced intervals is a pair of coupling sockets 12 having downwardly contracted coupling channels 13. Detachable with the sockets 12 are coupling members 14 on coupling sleeves 15. The members 14 have bevelled and downwardly contracted sides 16 forming a dovetailed contour to the members 14. The sleeves 15 are fixed to lower ends of tubular support members 17, having longitudinally spaced apertures 18, which, in the construction shown, are horizontally elongated, as clearly seen in FIGS. 2 and 4.

In the drawing, only one of the support assemblages comprising 15, 17 are shown. As both will be the same, there is no need of duplication in the showing. The same will apply to the underarm devices employed. One of these devices is shown at 19 in FIGS. 3 and 5 of the drawing and, in section, in FIG. 4.

The device 19 comprises a tube fashioned to form a short straight shank 20 supporting a spring-pressed coupling pin 21, the U-shaped flat spring of which is indicated, in part, at 21 in FIG 4. Extending upwardly from the shank is an angularly offset portion 22 substantially equal in length to the length of said shank and having a rounded upper end extending to downwardly and upwardly extending portions collectively forming an underarm top 23 of the device. The contour of the top 23 may be said to be reversely curved. This top has a rubber or other cushioned sleeve 24 which extends the full length of the top 23 and partially onto the portion 22. This reversely curved contour of the top 23 forms an upper recess 25 for fitting under the arm, thus preventing shifting or displacement of the top from the arm of the user.

It will also be apparent that the rounded portion of the top forms a recess 26 for hanging the devices near the workbench when detached from the support members 17. Further, the support members 17 can also be detached from the sockets 12 when it is desired to clear the workbench for other uses.

Where long workbenches prevail, many coupling sockets 12 can be spaced longitudinally of the workbench and an operator can move along the workbench by shifting the devices 19 and support members 15, 17 to the various sockets 12 that are employed.

By employing the elongated apertures 18, it will be seen that the devices 19 can be rotated in the members 17, as indicated by the dot-dash lines 27, FIG. 4. This will provide more freedom of movement of the operator when operating over the workbench.

The underarm devices 19 can be used in connection with any type and kind of tubular support members having longitudinally spaced apertures for adjustable coupling of the devices. The support members can also be coupled with tables, sinks and the like. Positioning of the pins 21 in different apertures 18 will care for locating the top 23 of the device 19 properly under the arm to provide the most comfortable support for the operator.

In some instances, the devices 19 can also be used as handgrips associated with different articles. In such and other uses, the apertures 18 will be round to prevent rotation of the devices in the members 17.

The devices 17 constitute articles of manufacture that will be manufactured and sold and used by many independent operators and the support members coupled with the bench or the like can be used by different operators coupling and uncoupling their own devices therewith. It will, thus, be apparent that a much greater number of the devices 19 will be made than the support members 17.

Considering FIG. 3 of the drawing, it will be apparent that the pin 21 projects from the shank 20 at approximately 180° to the projection of the top 23 of the device.
with respect to said shank and that the apertures 18 of
the member 17 are in vertical alinement with the
dovetailed coupling 14, thus arranging the underarm top of
the device forwardly beyond the edge of the workbench
10, to which the sockets 12 are attached. This, naturally,
locates the operator properly at the front of the work-
bench. In some instances, the angularity of the offset por-
tion 22 can be varied in controlling the positioning of
the operator.

Having fully described my invention, what I claim as
new and desire to secure by Letters Patent is:

1. A workbench support for invalids, comprising a pair
of underarm devices, each device comprising a one-piece
tube having a straight shank lower end, a curved and
recessed top joining the shank in an angular offset portion,
said angular offset portion being substantially equal in
length to the length of said shank, the top of the device
having a resilient sleeve covering, a spring actuated pin
projecting from said shank adjacent the lower end thereof,
a tubular support member for each device, the lower
portion of said member having a dovetailed coupling
detachably engaging a socket fixed to a workbench, said
member having vertically spaced circumferentially elon-
gated apertures providing controlled rotation of the device
in said tubular member, and said pin on the shank en-
gaging said apertures in adjusting the position of the de-
vice in said support member.

2. An article of manufacture comprising an underarm
device consisting of a one-piece tube having a straight
shank end, a reversely curved recessed top joining the
shank in an angularly disposed portion, said angularly
disposed portion being substantially equal in length to
the length of said shank, a cushion covering on said top,
said cushion covering comprising a rubber sleeve extend-
ing the full length of the top and partially onto said angu-
larly disposed portion, a second tube having an open end
for telescopically receiving the straight shank of said first
tube, means at the other end of said second tube for de-
tachably mounting the same in vertical orientation with
respect to a support, said second tube having a plurality
of vertically spaced and circumferentially elongated open-
ings, and the straight shank of said first tube having a
spring actuated pin protruding therefrom for operative
engagement with said vertically spaced openings in pro-
viding both vertical adjustment and limited rotary move-
ment of said first tube with respect to said second tube.

References Cited

UNITED STATES PATENTS

<table>
<thead>
<tr>
<th>Patent Number</th>
<th>Date</th>
<th>Inventor</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,307,058</td>
<td>6/1919</td>
<td>McGrath</td>
<td>297—5</td>
</tr>
<tr>
<td>1,894,146</td>
<td>1/1933</td>
<td>Baker</td>
<td>248—224</td>
</tr>
<tr>
<td>2,539,577</td>
<td>1/1951</td>
<td>Hack</td>
<td>297—5</td>
</tr>
<tr>
<td>2,642,250</td>
<td>6/1953</td>
<td>Kasonwich</td>
<td>5—317</td>
</tr>
<tr>
<td>2,707,478</td>
<td>5/1955</td>
<td>Davies</td>
<td>135—52</td>
</tr>
<tr>
<td>2,759,525</td>
<td>8/1956</td>
<td>Ries</td>
<td>297—6</td>
</tr>
<tr>
<td>2,766,463</td>
<td>10/1956</td>
<td>Bendersky</td>
<td>5—327</td>
</tr>
<tr>
<td>2,801,142</td>
<td>7/1957</td>
<td>Adams</td>
<td>269—328</td>
</tr>
<tr>
<td>3,063,752</td>
<td>11/1962</td>
<td>Moore</td>
<td>297—411</td>
</tr>
<tr>
<td>3,157,187</td>
<td>11/1964</td>
<td>Murcroft</td>
<td>135—52</td>
</tr>
<tr>
<td>2,711,183</td>
<td>6/1955</td>
<td>Lofstrand</td>
<td>135—50</td>
</tr>
<tr>
<td>2,788,793</td>
<td>4/1957</td>
<td>Abbott</td>
<td>135—49</td>
</tr>
</tbody>
</table>

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