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GB 1496524 GB 0686252
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GB 0895505 GB 0200856
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(58) Field of search
B4K

(54) **A device for increasing the effective length of a handle of a tool, e.g. garden shears**

(57) A transversely ribbed plastics strip 26 extends around the slotted portion of a tube 12 and passes through a guide 30 which is shaped to fit around part of the tube. A threaded nut 32 is screwable onto the free ends of the ribbed strip 26 which are separated by a spacer forming part of the guide. By rotating the nut 32, the ends of the strip 26 are drawn through the guide 30 and the strip deforms the upstanding portions 24 inwardly.

In use, the handle of a tool is placed in the slotted end of the tube 12 and the nut 32 is rotated to deform the upstanding portions 24 which grip the handle of the tool. Thus, the effective length of the tool is increased.

The lower portion of the tube is provided with towelling 14 which affords a good grip.

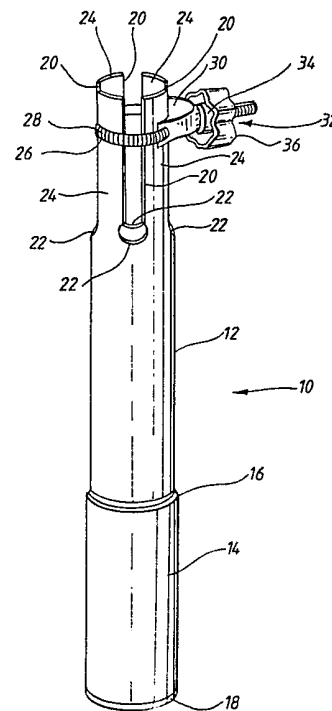


Fig.1.

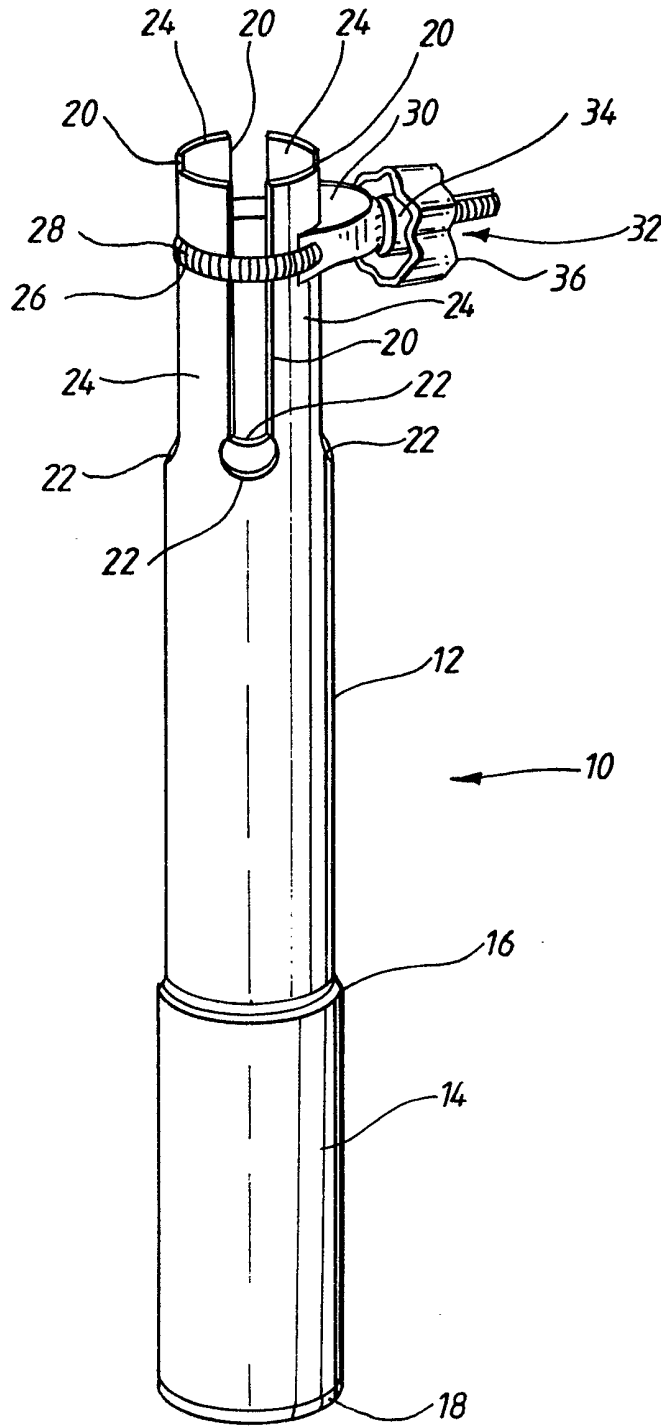


Fig.1.

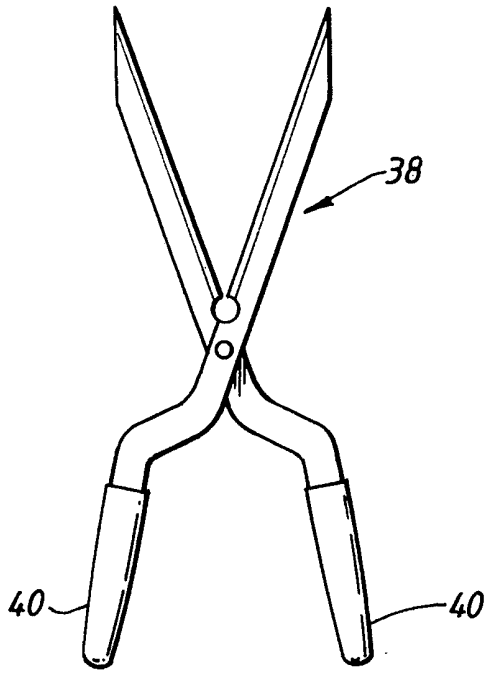


Fig. 2.

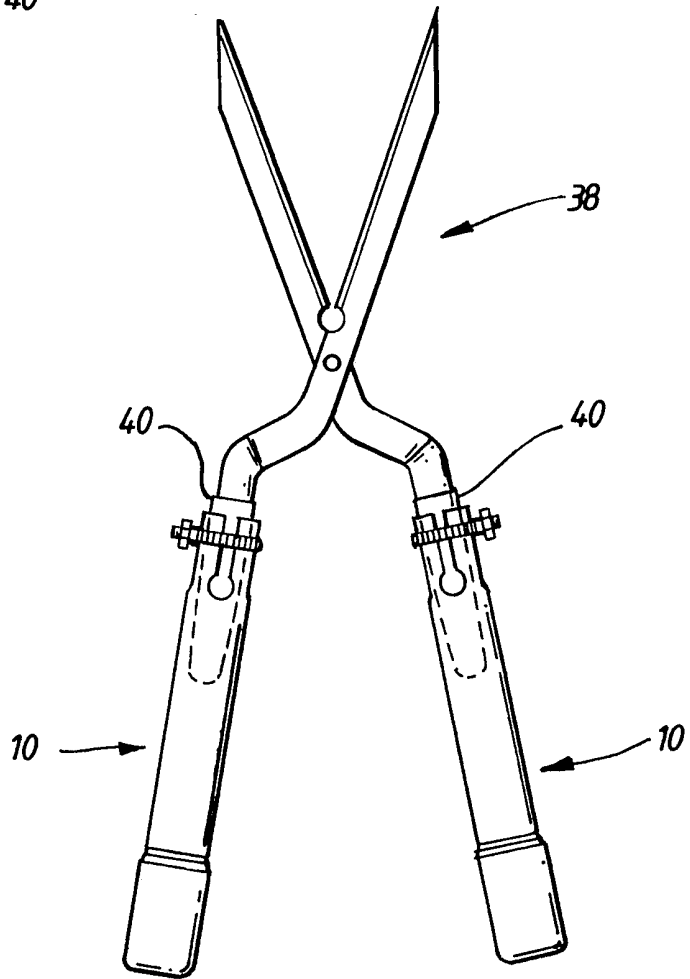


Fig. 3.

SPECIFICATION

Extension for Tools

The invention relates to extensions for tools, in particular to extensions for hand tools.

5 In most applications, hand tools, e.g. garden shears, can be used comfortably and safely from a standing position, e.g. to clip a hedge. However, there are occasions when a user needs to use a tool at a location which is out of the user's convenient reach when standing, for example to clip a very high hedge or clip the bottom of a hedge. On such occasions, it may be necessary to stand on a ladder, chair or other support, or kneel down, in order to reach the desired location. Not only may this be uncomfortable, especially for elderly or disabled people, but it may also be dangerous for the user if he or she has to stand on a support in order to reach a high location, since the danger of falling is always present.

20 Accordingly, the invention provides a device for increasing the effective length of a tool, comprising an extension securable to part of the tool.

25 Preferably the extension is releasably securable.

Preferably the extension is positioned around part of the tool when in use.

Preferably the extension is securable to a handle of the tool.

30 The extension may comprise a tube.

Preferably the tool is held in position by securing means positioned around the tube.

Preferably the securing means comprises an adjustable strip.

35 The tube may be provided with at least one slit in its upper portion to allow deformation of the tube, in order that material of the tube may bear upon part of the tool in order to secure the extension of the tool.

40 Preferably four slits are provided, evenly spaced apart around the upper part of the tube. The effect of this is to allow the tube to close at the top so that when the securing means is tightened the tube will close to grip firmly around the tool irrespective of the size of the tool.

45 The tube may be of plastics.

Alternatively the tube may be of metal, for example, aluminium.

50 The device may be provided with an insert which may be placed in the tube when the tube is not in use (e.g. during storage or transport) so that the upper portion of the tube may be supported to prevent accidental deformation and possible damage of the tube.

55 The insert may have a portion which protects the outer surface of the upper portion of the tube.

60 Preferably the insert comprises a tube with a sleeve projecting from one end, the sleeve being capable of being turned back to protect the outer surface of the upper portion of the tube.

Preferably the tube is of plastics and the sleeve is of rubber.

The extension may be provided with a hand grip.

65 Preferably the hand grip is of towelling material.

The invention includes a tool in combination with a device according to the invention.

70 By way of example, a specific embodiment of the invention will now be described, with reference to the accompanying drawings, in which:—

Figure 1 is a general view of an extension handle according to the invention;

75 Figure 2 is a plan view of a pair of conventional garden shears; and

Figure 3 is a plan view of the shears in Figure 2 when fitted with handles as in Figure 1.

80 Referring firstly to Figure 1, an extension handle indicated generally at 10 comprises an elongate plastics tube 12 made from PVC and about eighteen inches in length and one and a half inches in diameter. Towelling material 14 is wrapped around the base of the tube 12 and is secured to the tube 12 by short lengths of rubber tubing 16, 18 which are fitted over both the towelling 14 and the tube 12 and are secured by glueing.

90 Four elongate slots 20, each about four inches long and half an inch across, are cut parallel to the longitudinal axis of the tube 12 at the top of the tube. The slots are spaced apart evenly around the tube and they terminate at their lower end in a nearly-circular cut-out portion 22. Thus four upstanding, elongate arcuate portions 24 project longitudinally at the upper end of the tube 12.

95 Passing around the portions 24 is a flexible plastics strip 26 which is provided with a plurality of transversely extending arcuate ribs 28. The ribs are arcuate in the sense that when the strip is looked at in a transverse cross-section the ribs form part of a circle. The two ends of the strip 26 pass through a guide 30 which is shaped to fit around part of the tube 12. The two ends of the strip are brought closer together by the guide but are always separated by a spacer (not shown) which forms part of the guide. This allows a nut 32, which is in the form of an internally threaded tube portion 34 attached to an outer knurled knob 36 to mesh with the arcuate ribs 38 on the strip since the two ends of the strip pass either side of the spacer. The threaded tube portion 34 abuts the shaped portion of the guide 30. Hence, rotation of nut 32 in one direction causes both ends of the strip to be drawn through the guide 30 and nut 32 and hence causes the strip to grip the upstanding portions 24 tightly. Rotation of the nut 32 in the other direction loosens the grip of the strip on the portions 24. Hence an object, for example a handle of a garden tool, may be secured by placing it in the tube 12 and turning the nut 32 so that the portions 24 are resiliently deformed inwardly and thus grip the handle. The portions 24 are free to be resiliently deformed because of the gaps 20 and cut-out portions 22.

125 Referring now to Figure 2, a pair of conventional garden shears 38 is illustrated. In order to increase the effective length of the handles 40 each handle is provided with an

extension handle 12 as described. Each handle 40 of the shears is placed in the upper end of the extension handle 12 and is secured therein by tightening the strip 26 around the upper end of extension handle 12 using the knurled knob 36. The portions 24 are deformed inwardly and grip the handles 40 of the shears, the result being illustrated in Figure 3. The shears may now be used to reach places which previously were either inaccessible or required a ladder. The towelling 14 gives a good grip on the extension handles.

The invention is not restricted to the details of the foregoing embodiment.

For example the towelling 14 may extend up the tube 12 for some ten inches so that an operator may move his grasp up the extension handle so that he can get a good, firm balance when the shears are unusually heavy.

The tube 12 may be of metal, for example aluminium, or of other material. The lower part of the tube 12 need not be hollow. The strip 26 and nut 32 may be replaced by a different securing device. Also, the device need not be used with shears, but may be used with any tool, for example trowels, and hand forks. The width of the device in the region where it is held may be less than the width of the rest of the device.

There may be different types of handgrip instead of the towelling. The handgrip may be of rubber tubing, may be extruded, may be an injection moulded plastics grip or may be of self-adhesive towelling or adhesive tape.

The extensions may be provided in combination with a support piece which fits into the tube to allow the tube to be clamped up to protect the elongate arcuate portions 24. The support piece may have a rubber or other sleeve which can be positioned over the outside of the portions 24 so that the portions 24 are protected inbetween the sleeve and the support piece.

The extensions may be sold separately for use on existing garden shears or may be sold in combination with new garden shears.

CLAIMS

1. A device for increasing the effective length of a tool, comprising an extension securable to part of the tool.

2. A device as claimed in Claim 1, in which the extension is releasably securable.

3. A device as claimed in Claim 1 or Claim 2, in which the extension is positioned around part of

the tool when in use.

4. A device as claimed in Claim 3, in which the extension is securable to a handle of the tool.

5. A device as claimed in any of the preceding claims, in which the extension comprises a tube.

6. A device as claimed in Claim 5, in which the tool is held in position by securing means positioned around the tube.

7. A device as claimed in Claim 6, in which the securing means comprises an adjustable strip.

8. A device as claimed in any one of Claims 5 to 7, in which the tube is provided with at least one slit in its upper portion to allow deformation of the tube, in order that material of the tube may bear upon part of the tool in order to secure the extension to the tool.

9. A device as claimed in Claim 8, in which four slits are provided, evenly spaced apart around the upper part of the tube.

10. A device as claimed in any one of Claims 5 to 9, in which the tube is of plastics.

11. A device as claimed in any one of Claims 5 to 9, in which the tube is of metal.

12. A device claimed in Claim 11, in which the metal comprises aluminium.

13. A device as claimed in any one of Claims 5 to 12, in which an insert is provided which may be placed in the tube when the tube is not in use so that the upper portion of the tube may be supported to prevent accidental deformation and possible damage of the tube.

14. A device as claimed in Claim 13, in which the insert has a portion which protects the outer surface of the upper portion of the tube.

15. A device as claimed in Claim 14, in which the insert comprises a tube with a sleeve projecting from one end, the sleeve being capable of being turned back to protect the outer surface of the upper portion of the tube.

16. A device as claimed in Claim 15, in which the tube is of plastics and the sleeve is of rubber.

17. A device is claimed in any one of the preceding claims, in which the extension is provided with a hand grip.

18. A device as claimed in Claim 17, in which the hand grip is of towelling material.

19. A device constructed and arranged substantially as herein described, with reference to the accompanying drawings.

20. A tool in combination with a device as claimed in any one of the preceding claims.