

PATENT SPECIFICATION

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(54) A TOOL HOLDER

(71) We, TULLEN INDUSTRIES LIMITED, a New Zealand Company of 192 Station Road, Penrose, Auckland, New Zealand, do hereby declare the invention for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

BACKGROUND OF THE INVENTION

10 This invention relates to a tool holder which has been devised for holding a scissor-like tool whose blades are biased to an open position by means of a spring. References throughout this specification and claims to "a tool" are references to a tool of this kind.

Hitherto, a clip or lock has been provided to hold the blades of such a tool closed against the bias of the spring for storage purposes. It is, however, difficult to manufacture an effective clip or lock. Also, quite unrelated to that problem, there is the storage problem when such tools are used around the home, especially in the kitchen, where the tool should be readily available for instant use at all times.

The applicant is not aware of any holders designed specifically for spring biased tools. Many gravity holders for non-biased tools are known and these generally take the form of a pocket to receive and protect the blades, e.g. see U.S. Patent Specifications 1,750,891, 2,508,755 and 2,664,231.

35 SUMMARY OF THE INVENTION

The tool holder of this invention was devised with the object of providing a holder to store a tool, preferably in such a manner that the blades, and thus the handles, are at least partially closed since this facilitates grasping the tool when it is to be used. The provision of such a holder eliminates the need for a clip or lock since the holder preferably shrouds the blades to prevent accidental contact with them.

According to the present invention there is provided a holder for a scissor like tool whose reciprocable blades are biased to an open position by means of a spring,

the tool holder comprising a body having:

- a) a head portion,
- b) a tail portion integral with and extending from an end of the head portion, a back surface of each of the head portion and the tail portion being substantially co-planar.
- c) mounting means enabling the body to be secured to or to rest upon a support, and
- d) tool gripping means located in said head portion, the tool gripping means comprising:
 - i) a recess which is adapted to receive the blades of said tool, the recess having at least a back and two opposite side walls, and
 - ii) an entrance to said recess, the entrance being open at the end of the head portion from which the tail portion extends; the construction and arrangement being such that the tool gripping means is adapted to hold said tool in the holder by the spring pressure of the tool causing the tool to co-act with the tool gripping means.

BRIEF DESCRIPTION OF THE DRAWINGS

Preferred forms of the invention will now be described with reference to the accompanying drawings in which:

Figure 1 is a front perspective view of a preferred tool holder,

Figure 2 is a front elevation,

Figure 3 is a side elevation,

Figure 4 is an end view in the direction IV-IV of Figure 2,

Figure 5 is a rear elevation,

Figure 6 is an end view in the direction VI-VI of Figure 2,

Figure 7 is a front perspective view with the cap removed and with a tool being shown in dotted outline as fitted to the holder,

Figure 8 is a side elevation of the cap, Figure 9 is an underneath view of the cap,

Figure 10 is a partial cross section through the cap when fitted in the plane

X-X of Figure 13,

Figure 11 is a cross sectional view in the plane XI-XI of Figure 9 of the cap alone,

Figure 12 is a cross sectional view on plane XIII-XIII of Figure 2 with the cap removed,

Figure 13 is a cross sectional view on plane XIII-XIII of Figure 2 with the cap fitted,

Figure 14 is a perspective view of part of an alternative tool holder,

Figure 15 is an elevation of part of the tail of a tool holder showing a belt slot, and

Figure 16 is a partial elevation of part of a tool in part of a holder showing an alternative means of securing the tool with in the holder via the shoulders of the handles.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

This invention may take many different forms, many of which will be apparent to those skilled in the art after the principles have been discussed below.

A preferred tool holder is illustrated in Figures 1-13 which is capable of either sitting on a horizontal surface by its mounting portion 1, which in that version is a simple planar surface, or being mounted to a vertical surface, e.g. by means of a contact adhesive, by magnetic strips incorporated on the rear surface 1 or by means of screws which may pass through the holes 10 and 11. The article is shaped to facilitate injection moulding from a plastics material such as polypropylene. For this reason the rear surface 1 may have suitable cavities in it.

The holder is provided with a thickened head portion 8 and with a tail portion 4. In the head portion 8 there is a tool gripping portion adapted to hold a tool in the holder by the spring pressure of the tool causing the tool to co-act against the gripping portion. In the preferred embodiment shown the gripping portion is in the form of a slot 3 the cross section of which can be deduced from the drawings, especially Figure 10. The cross section of the slot is not uniform but instead is shaped to allow for the fact that the blades 9 of the tool are offset from one another since of course they reciprocate past one another in use to effect a shearing cutting action.

Referring now to Figure 7, it can be seen that the tool 12 has its blades 9 located within the slot so that the spring 5 forces them against the walls 20 and 21 which are divergent and lie closer together at the blade entrance. Spacers 22 and 23 in the head 8 and cover 6 respectively allow for the fact that the blades are offset. The entrance apertures to the slot 3 are funnelled by means of small bevels to facilitate

entrance of the blades into the slot. It will be apparent that the blades could co-act against portions other than walls 20 and 21 with the same general effect, e.g. the blades could co-act with pegs.

In use, therefore, the user having used the tool simply thrusts the blades into the slot, the tool being at least partially closed at this stage, and then releases the handles. The spring force from the spring 5 will thrust the blades apart and will then ensure that the tool remains in the slot. When the tool is required for use the handles are grasped and the tool is withdrawn. It is preferable that the walls 20 and 21 are provided so that the tool, when secured, is neither fully open nor fully shut but is in an appropriate position to be readily grasped. It can also be seen from a study of Figures 12 and 13 that the handles of the tool when held in the holder will be angled away from the holder so that they may be readily grasped without the handle being interfered with by the tail portion 4.

While it would be possible to have lugs or similar arrangements to prevent the tool from being removed in a direction perpendicular to the plane of the mounting portion 1, this is preferably achieved by means of a removable cover 6 which usefully conceals the screw holes 10 and 11 and their associated screws and also conceals or shrouds the blades. To facilitate removal of the cover there is a finger aperture 24 (Figure 6) in the cover. The cover itself is held in place by means of lugs 14 and 15 which co-act with recesses 26 and 27 in the head portion 8 and also by means of hooked portions such as 16 and 17 in the cover which co-act with the corresponding hooked portion or ledge 19 in the head portion 8 so that the cover may be sprung onto the head portion. Obviously there are other ways in which the removable cover could be secured to the head.

The considerable advantages of the preferred form of the invention illustrated are:

(a) the handles of the tool are held at an angle to the holder and are easily accessible and easily grasped, e.g. if the holder is wall mounted the user does not have to wash and/or dry his or her hands first. This should be contrasted with the usual position where such tools are stored in a drawer.

(b) The removable shroud conceals the screw fastenings and also facilitates cleaning. Because it hides away dirt deposited on the holder by the blades and the blades themselves if dirty, some users will find it convenient to put the tool away dirty after use during the day and to clean the tool and holder once only at the end of a

day's work. This can effect a considerable time saving for the user and ensures that the holder is used for its intended purpose—as a handy receptacle for the tool.

- 5 (c) The holder can be positioned exactly where it is most convenient. It is easy to keep the tool out of reach of children. The holder works effectively whatever its orientation since it does not rely on gravity
10 to function.

Numerous variations are possible. For example, while the mounting portion 1 has been described as a flat surface it is apparent that it would be in the form of
15 feet or legs etc. Also, it may be desirable in some installations to have a separate bracket which held the holder and from which the holder could readily be removed.

- Furthermore, a version suitable for attachment to a tradesman's belt would provide that the handles lay more or less parallel to the plane 1 and as shown in Figure 15 a slot 31 could be provided to receive a belt 32 and there would preferably be a tongue 33 extending into the slot so that the tool holder could be clipped on the belt without the necessity of threading the belt through it. More than one such slot could be provided. In such an embodiment the head portion would hang
20 downwardly and need not necessarily be provided with a removable cap. However, if provided with a cap, the form of cap should would be quite suitable since it will
25 be seen that the lugs 15 are angled with respect to the slots 26 so that attempts to lever off the cover 6 when the tool is inserted into the slot will not be effective. The cover can only readily be removed
30 by using the finer slot 24.

While it is preferred that it is the blades which are gripped by the tool holder since this leaves the handles completely free for grasping, it is possible to have constructions where the tops or shoulders of the blades are held as shown in Figure 16. There, the shoulder 34 of the handle is shown with the customary outward flare 35 and prevents the user's fingers from sliding
45 over the upper end of the handle and these flares co-act with the stops 36 which form part of the tool holder. In such a construction the blades if required to be shrouded would simply lie inside a pocket.

- 55 From the above description it will be apparent that many variations are possible beyond those described.

An alternative form of head portion is shown in Figure 14 where spacers 22 and
60 23 in the head portion 8 and cover 6 can be eliminated. Those spacers serve to hold the tool in correct alignment. Instead, ramps 37 and 38 can be provided in such a manner that the tip of the blades ride
65 up the ramps and proper alignment of

the tool, when inserted in the holder, is thereby achieved.

WHAT WE CLAIM IS:—

1. A holder for a scissor like tool whose reciprocable blades are biased to an open
70 position by means of a spring, the tool holder comprising a body having:

- a) a head portion,
- b) a tail portion integral with and extending from an end of the head
75 portion, a back surface of each of the head portion and the tail portion being substantially co-planar,
- c) mounting means enabling the body to be secured to or to rest upon a
80 support, and
- d) tool gripping means located in said head portion, the tool gripping means comprising:

- i) a recess which is adapted to re-
85 ceive the blades of said tool, the recess having at least a back and two opposite side walls, and
- ii) an entrance to said recess, the entrance being open at the end of
90 the head portion from which the tail portion extends; the construction and arrangement being such that the tool gripping means is adapted to hold said tool in the
95 holder by the spring pressure of the tool causing the tool to co-act with the tool gripping means.

2. A tool holder as claimed in claim 1 wherein the recess is angled, towards its
100 entrance, away from the tail portion, so that with said tool fitted in the holder the handles of the tool are angled away from the holder so that they may be readily
105 grasped.

3. A tool holder as claimed in claim 1 or claim 2 wherein the side walls of the recess converge towards the entrance of the recess.

4. A tool holder as claimed in any one
110 of claims 1-3 wherein the entrance to the recess is funnelled to provide easy access for the blades of the tool.

5. A tool holder as claimed in any one of the preceding claims wherein the
115 mounting means comprises an adhesive means on the back surface of either or both of the head portion or the tail portion of the tool holder, the adhesive means enabling the tool holder to be adhered to
120 said support.

6. A tool holder as claimed in any one of the preceding claims wherein the mounting means comprises two holes in the head
125 portion of the tool holder through which fastening devices can be passed to secure the tool holder to said support.

7. A tool holder as claimed in any one of the preceding claims wherein the head
130 portion has a removable cover.

day's work. This can effect a considerable time saving for the user and ensures that the holder is used for its intended purpose — as a handy receptacle for the tool.

- 5 (c) The holder can be positioned exactly where it is most convenient. It is easy to keep the tool out of reach of children. The holder works effectively whatever its orientation since it does not rely on gravity to function.

10 Numerous variations are possible. For example, while the mounting portion 1 has been described as a flat surface it is apparent that it would be in the form of 15 feet or legs etc. Also, it may be desirable in some installations to have a separate bracket which held the holder and from which the holder could readily be removed.

Furthermore, a version suitable for 20 attachment to a tradesman's belt would provide that the handles lay more or less parallel to the plane 1 and as shown in Figure 15 a slot 31 could be provided to receive a belt 32 and there would prefer- 25 ably be a tongue 33 extending into the slot so that the tool holder could be clipped on the belt without the necessity of threading the belt through it. More than one such slot could be provided. In such an 30 embodiment the head portion would hang downwardly and need not necessarily be provided with a removable cap. However, if provided with a cap, the form of cap should would be quite suitable since it will 35 be seen that the lugs 15 are angled with respect to the slots 26 so that attempts to lever off the cover 6 when the tool is inserted into the slot will not be effective. The cover can only readily be removed 40 by using the finer slot 24.

While it is preferred that it is the blades which are gripped by the tool holder since this leaves the handles completely free for grasping, it is possible to have construc- 45 tions where the tops or shoulders of the blades are held as shown in Figure 16. There, the shoulder 34 of the handle is shown with the customary outward flare 35 and prevents the user's fingers from sliding over the upper end of the handle and 50 these flares co-act with the stops 36 which form part of the tool holder. In such a construction the blades if required to be shrouded would simply lie inside a pocket. 55 From the above description it will be apparent that many variations are possible beyond those described.

An alternative form of head portion is shown in Figure 14 where spacers 22 and 60 23 in the head portion 8 and cover 6 can be eliminated. Those spacers serve to hold the tool in correct alignment. Instead, ramps 37 and 38 can be provided in such a manner that the tip of the blades ride 65 up the ramps and proper alignment of

the tool, when inserted in the holder, is thereby achieved.

WHAT WE CLAIM IS:—

1. A holder for a scissor like tool whose reciprocable blades are biased to an open 70 position by means of a spring, the tool holder comprising a body having:

- a) a head portion,
- b) a tail portion integral with and ex- 75 tending from an end of the head portion, a back surface of each of the head portion and the tail portion being substantially co-planar,
- c) mounting means enabling the body to be secured to or to rest upon a 80 support, and
- d) tool gripping means located in said head portion, the tool gripping means comprising:

- i) a recess which is adapted to re- 85 ceive the blades of said tool, the recess having at least a back and two opposite side walls, and
- ii) an entrance to said recess, the entrance being open at the end of 90 the head portion from which the tail portion extends; the construction and arrangement being such that the tool gripping means is adapted to hold said tool in the 95 holder by the spring pressure of the tool causing the tool to co-act with the tool gripping means.

2. A tool holder as claimed in claim 1 wherein the recess is angled, towards its 100 entrance, away from the tail portion, so that with said tool fitted in the holder the handles of the tool are angled away from the holder so that they may be readily 105 grasped.

3. A tool holder as claimed in claim 1 or claim 2 wherein the side walls of the recess converge towards the entrance of the recess.

4. A tool holder as claimed in any one 110 of claims 1-3 wherein the entrance to the recess is funnelled to provide easy access for the blades of the tool.

5. A tool holder as claimed in any one 115 of the preceding claims wherein the mounting means comprises an adhesive means on the back surface of either or both of the head portion or the tail portion of the tool holder, the adhesive means en- 120 abling the tool holder to be adhered to said support.

6. A tool holder as claimed in any one 125 of the preceding claims wherein the mounting means comprises two holes in the head portion of the tool holder through which fastening devices can be passed to secure the tool holder to said support.

7. A tool holder as claimed in any one 130 of the preceding claims wherein the head portion has a removable cover.



12

8. A tool holder as claimed in claim 7 when dependent on claim 6 wherein the removable cover, when attached to the body of the tool holder, conceals the said holes.
9. A tool holder as claimed in claim 7 or claim 8 wherein said cover, when attached to the body of the tool holder provides a front wall for said recess and shrouds the blades of said tool when fitted to the holder.
10. A tool holder as claimed in any one of claims 7, 8 or 9 wherein the cover and the body of the tool holder each have means enabling the cover to be "click" or "snap" fitted to the body without the use of any separate fastening device for this purpose.
11. A tool holder as claimed in any one

- of the preceding claims wherein the tail portion has at least one slot passing through it.
12. A tool holder as claimed in claim 11 wherein a tongue enters into said slot to enable the holder to be clipped to a belt.
13. A tool holder substantially as herein described and illustrated in Figure 1-13, or Figure 14, or Figures 15 or Figure 16.
14. A combination of a scissor like tool whose blades are biased to an open position by means of a spring when secured in a tool holder as claimed in any one of the preceding claims.

J. A. KEMP & CO.,
Chartered Patent Agents,
14 South Square,
Gray's Inn,
London WC1R 5EU.

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