

(19)



(11)

EP 3 659 753 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
03.06.2020 Bulletin 2020/23

(51) Int Cl.:
B25F 1/02 (2006.01)

(21) Application number: **19211563.2**

(22) Date of filing: **26.11.2019**

(84) Designated Contracting States:
**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO
PL PT RO RS SE SI SK SM TR**
Designated Extension States:
BA ME
Designated Validation States:
KH MA MD TN

(30) Priority: **30.11.2018 GB 201819611**

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(54) TOOL ASSEMBLY HAVING A TORCH

(57) A tool assembly comprises a first tool (1) having a torch (5) at a first end and a first working part (2) extending in front of the torch and a second tool (7) having a first working part (8). The first tool (1) is releasably

attachable to the second tool (7) by means of a connector on at least one of the tools such that the first working part (8) of the second tool (7) extends in front of the torch (5).

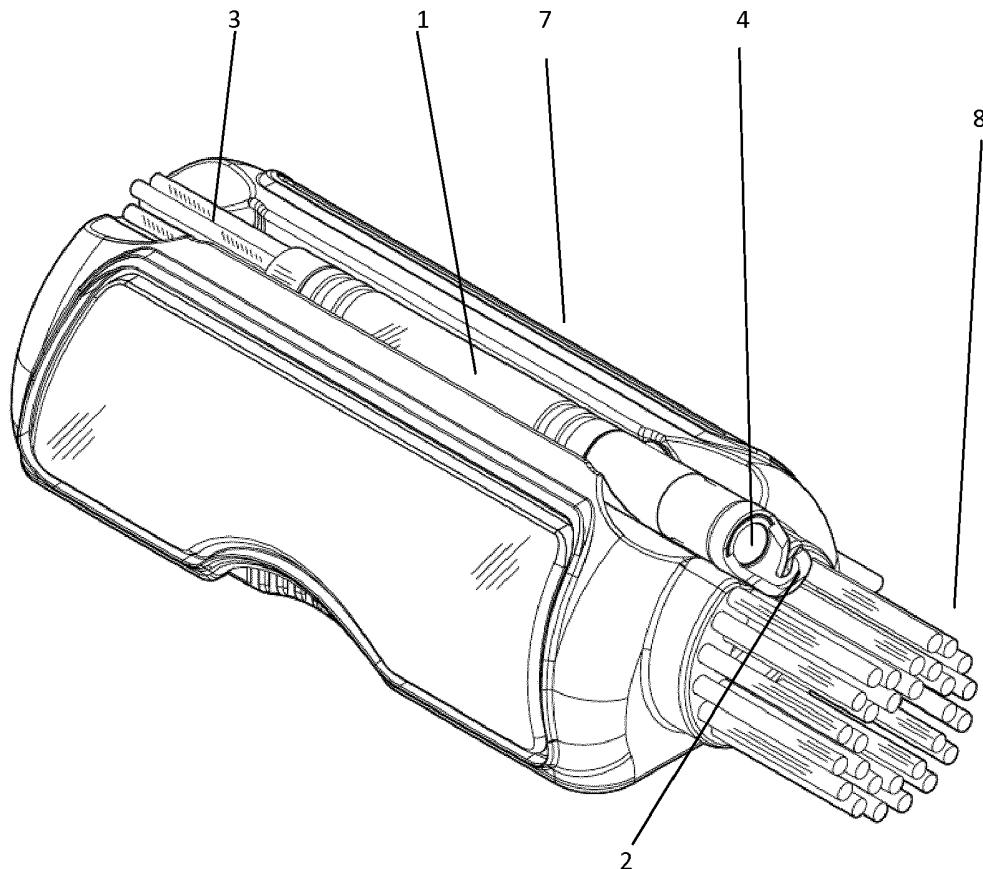


Figure 4

Description

[0001] The present invention relates to improvements in tools. In particular the present application relates to a tool assembly.

[0002] Often tools must be used in conditions of low lighting and the provision of a torch or other lighting is desirable.

[0003] For example, the maintenance and cleaning of the interior of cars is an environment in which additional lighting may be desirable as the lights provided within cars are geared towards use by passengers thereof, and a variety of dark spaces and alcoves exist in cars.

[0004] According to a first aspect of the present invention there is provided a tool assembly comprising:

a first tool having a torch at a first end and a first working part extending in front of the torch;
a second tool having a first working part; wherein the first tool is releasably attachable to the second tool such that the first working part of the second tool extends in front of the torch.

[0005] In some embodiments the first working part of the first tool is at a second end of the first tool.

[0006] In some embodiments the first working part of the first tool is a brush or a hook.

[0007] In some embodiments the first tool comprises a second working part at an opposing end to the first working part.

[0008] In some embodiments the second working part of the first tool is a brush or a hook.

[0009] In some embodiments the first tool is releasably attachable to the second tool such that the second working part of the first tool is located adjacent to the first working part of the second tool.

[0010] In some embodiments the first working part of the second tool is a brush.

[0011] In some embodiments the second tool comprises at an opposing end a second working part.

[0012] In some embodiments the first tool is releasably attachable to the second tool such that the second working part of the second tool extends in front of the torch.

[0013] In some embodiments the first tool is substantially elongate and linear

[0014] In some embodiments the first tool is telescopically extensible.

[0015] In some embodiments to releasably attach the first tool to the second tool the first tool snap fits to the second tool.

[0016] In some embodiments to releasably attach to the second tool the first tool the first tool snap fits into a channel formed on the second tool.

[0017] According to a second aspect of the present invention there is a provided a kit of parts for assembling the tool assembly of any preceding claim.

[0018] In order that the present invention may be more fully understood a specific embodiment will now be de-

scribed by way of example with reference to the accompanying drawings, of which:

Figure 1 is a side view of a first tool of a tool assembly made in accordance with an embodiment of the present invention;

Figure 2 is a perspective view of a second tool of a tool assembly made in accordance with an embodiment of the present invention;

Figure 3 is an end view of the tool of Figure 1;

Figure 4 is a perspective view of the tool of Figure 1 attached to the tool of Figure 2 in a first configuration;

Figure 5 is a perspective view of the tool of Figure 1 attached to the tool of Figure 2 in a second configuration; and

Figure 6 is a perspective view of the tool of Figure 1 in when extended.

[0019] Referring to the drawings, a first tool 1 is substantially tubular, elongate and linear, and comprises at a first end a hook 2.

[0020] First tool 1 comprises at a second opposing end a brush 3.

[0021] Adjacent to hook 2 and configured to provide a beam of light onto and adjacent hook 2 along and dispersing from longitudinal axis of first tool 1 is lens 4 of LED torch 5.

[0022] Torch 5 is operable by means of on/off button 6 located on a side of first tool 1.

[0023] The tubular body of first tool 1 provides an ideal housing for batteries to power torch 5.

[0024] Hook 2 is curved in cross-section and positioned around a portion of the circumference of tool 1 such that light from torch lens 4 is not obstructed from passing hook 2 and is therefore able to illuminate an area in front of hook 2.

[0025] As illustrated in Figure 6, first tool 1 is telescopically extensible.

[0026] Second tool 7 is substantially tubular, elongate and linear, and comprises at a first end a brush 8 that extends along the longitudinal axis of tool 7.

[0027] Second tool 7 is larger in cross-section than first tool 1 and comprises at one side a channel 9 that is parallel to the longitudinal axis of second tool 7 and is adapted to releasably house first tool 1.

[0028] Turning to Figures 4 and 5 it can be seen that first tool 1 may be attached to second tool 7 by being releasably snap fit into channel 9 of second tool 7. In this manner channel 9 acts as a connector that permits first and second tools 1, 7 to be releasably attached together.

[0029] As first tool 1 is substantially tubular it is reversibly attachable to second tool 7. That is to say that first tool 1 may be attached to second tool 2 such that hook 2 of first tool 1 is adjacent brush 8 of second tool 7 as illustrated in Figure 4, and that first tool 1 may be attached to second tool 2 such that brush 3 of first tool 1 is adjacent brush 8 of second tool 7 as illustrated in Figure 5.

[0030] Turning to the tool assembly comprising first

tool 1 and second tool 7 in use in cleaning, for example, a car, a user is able, if they so desire, to use first tool 1 alone. Hook 2 of first tool 1 may be used to retrieve items such as keys and coins from the underneath and sides of passenger chairs. First tool 1 may be extended and retracted as necessary.

[0031] Furthermore, in order to assist a user in hooking an item to be retrieved a user may activate torch 5 such that hook 2 and the working area is illuminated.

[0032] In a second mode of use a user may attach first tool 1 to second tool 2 in the configuration as illustrated in Figure 4. Advantageously in this configuration torch 5 is operable by a user to illuminate an area that is being worked upon by brush 8.

[0033] In a third mode of use a user may attach first tool 1 to second tool 2 in the configuration as illustrated in Figure 5. Advantageously in this configuration brush 3 may act alongside brush 8 to assist in cleaning.

[0034] In some embodiments a torch and brush may be at the first end of a first tool allowing a user to use a small brush or without illumination and to use a small and large brush in conjunction with or without illumination.

[0035] In other embodiments a first tool might comprise only a hook and no brush. In such embodiments the benefits of having additional brushing capability.

[0036] However, in such an embodiment a first tool having solely a torch and hook at an end would still provide a user with the ability to illuminate the working area of the hook and to illuminate the working area of a brush on the second tool.

[0037] In the present embodiment 'working part' is intended to mean a part of the tool that directly interacts with the item being worked upon.

[0038] In order for the first tool to be releasably attachable to the second tool at least one of the tools comprises a connector that is adapted to connect the tools together.

[0039] In the embodiment illustrated in the present application a connector is provided in the form of channel 9 of second tool 7 that allows first tool 1 to snap fit thereto.

[0040] However, in other embodiments an attachment part may be of a different form, such as a sprung clip. In some embodiments both tools 1 and 7 may each comprise a connector such as first and second magnets.

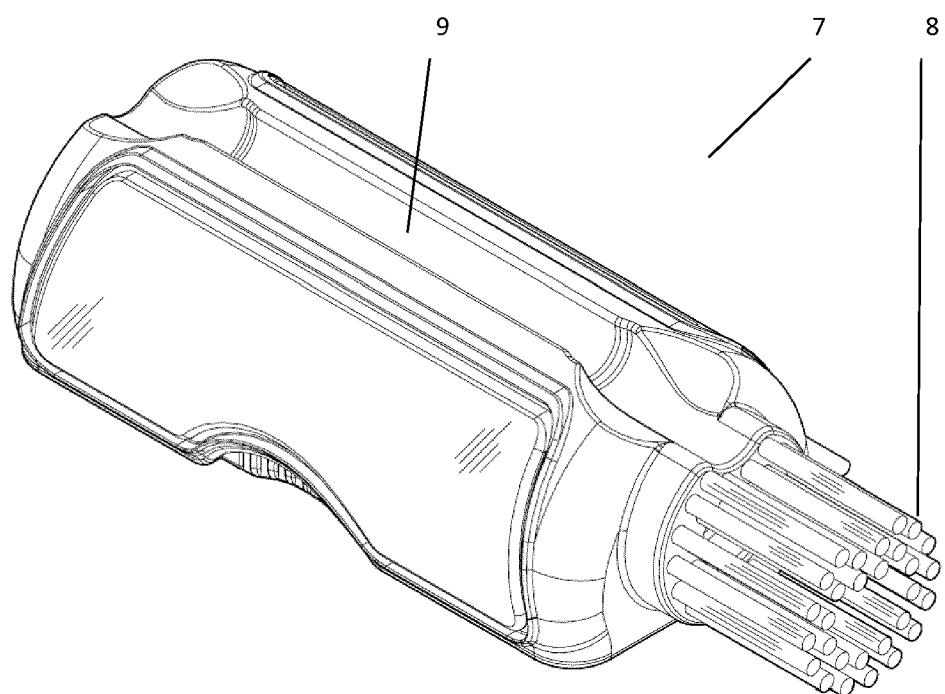
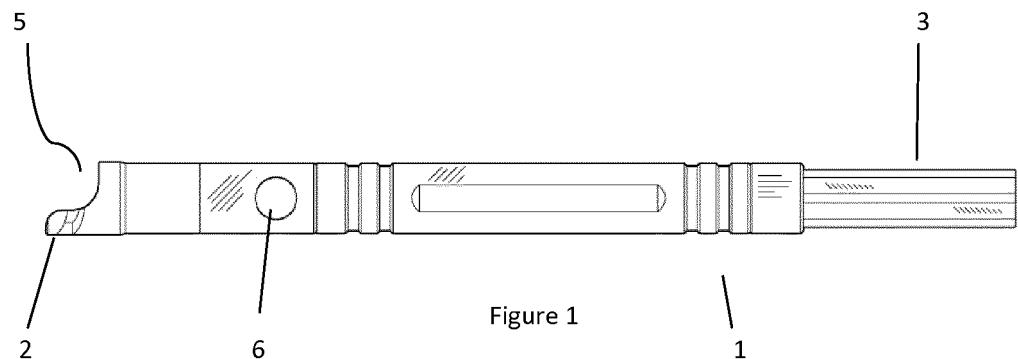
[0041] Many variations are possible without departing from the scope of the present invention as defined in the appended claims.

Claims

1. A tool assembly comprising:

a first tool having a torch at a first end and a first working part extending in front of the torch;
 a second tool having a first working part; wherein
 the first tool is releasably attachable to the second tool such that the first working part of the second tool extends in front of the torch.

2. The tool assembly of claim 1 wherein the first working part of the first tool is at a second end of the first tool.
3. The tool assembly of any preceding claim wherein the first working part of the first tool is a brush or a hook.
4. The tool assembly of any preceding claim wherein the first tool comprises a second working part at an opposing end to the first working part.
5. The tool assembly of claim 4 wherein the second working part of the first tool is a brush or a hook.
- 10 6. The tool assembly of claim 4 or 5 wherein the first tool is releasably attachable to the second tool such that the second working part of the first tool is located adjacent to the first working part of the second tool.
7. The tool assembly of any preceding claim wherein the first working part of the second tool is a brush.
- 15 8. The tool assembly of any preceding claim wherein the second tool comprises at an opposing end a second working part.
9. The tool assembly of claim 8 wherein the first tool is releasably attachable to the second tool such that the second working part of the second tool extends in front of the torch.
- 20 10. The tool assembly of any preceding claim wherein the first tool is substantially elongate and linear.
11. The tool assembly of any preceding claim wherein the first tool is telescopically extensible.
- 25 12. The tool assembly of any preceding claim wherein to releasably attach the first tool to the second tool the first tool snap fits to the second tool.
13. The tool assembly of any preceding claim wherein to releasably attach to the second tool the first tool the first tool snap fits into a channel formed on the second tool.
- 30 40 45 14. A kit of parts for assembling the tool assembly of any preceding claim.



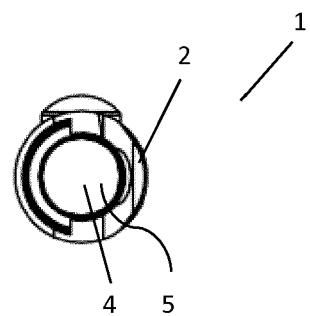


Figure 3

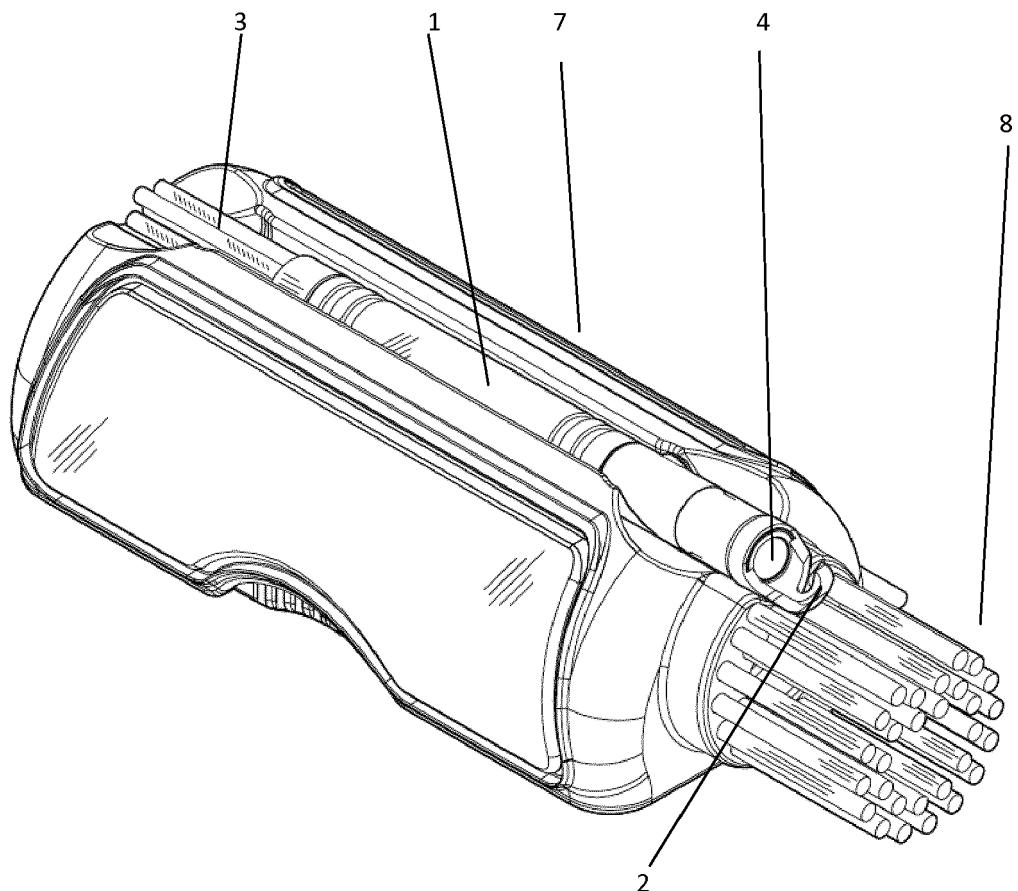


Figure 4

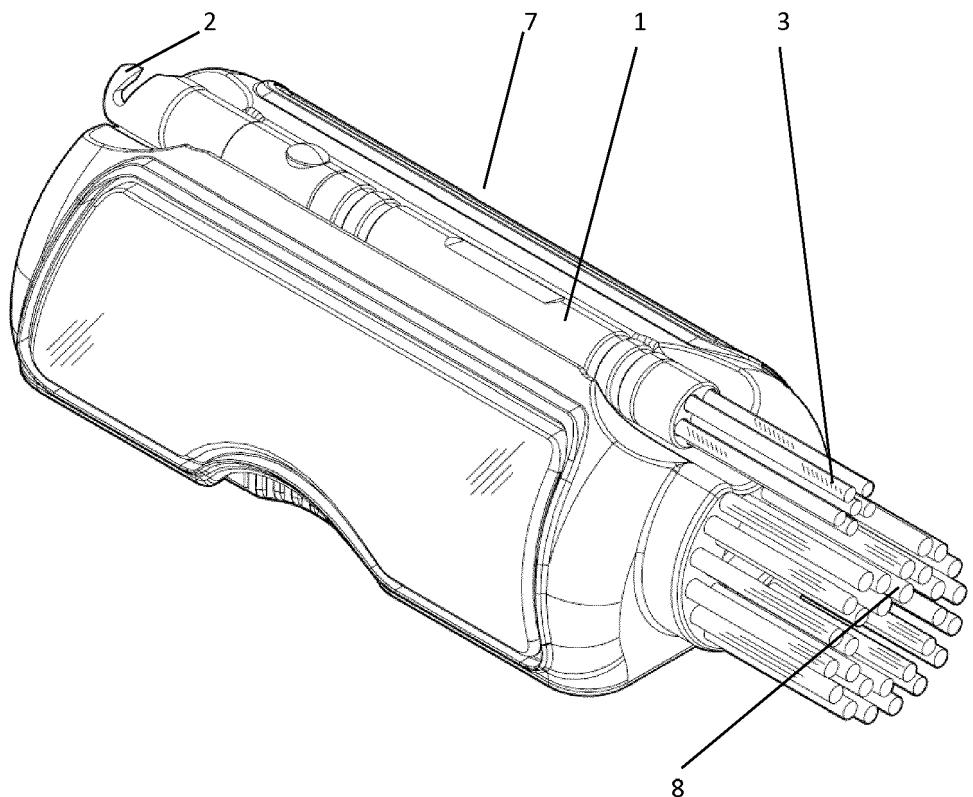


Figure 5

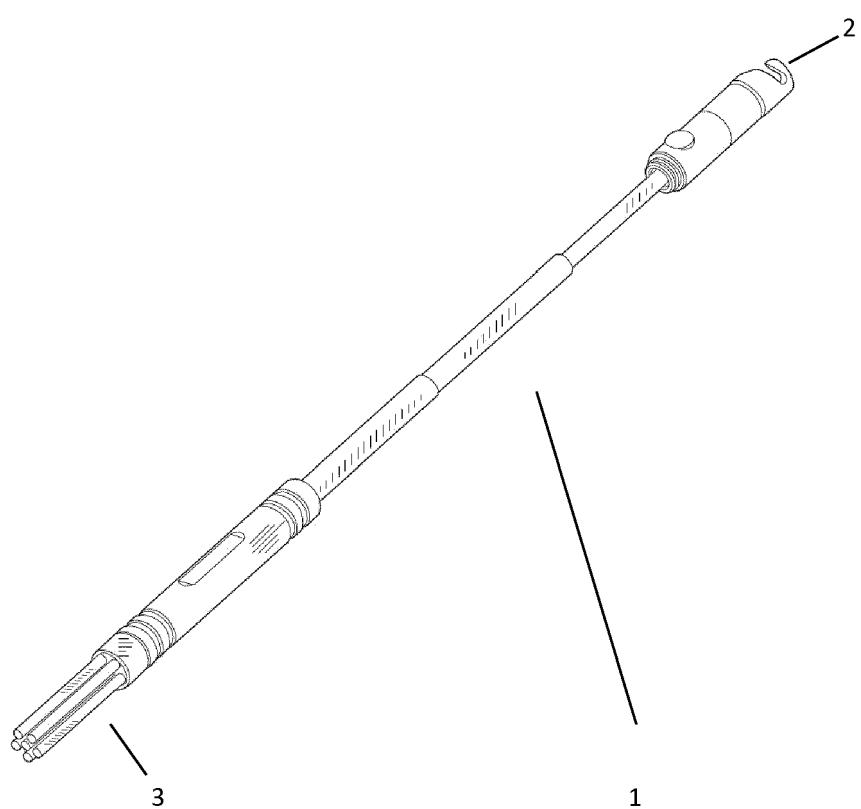


Figure 6



EUROPEAN SEARCH REPORT

Application Number

EP 19 21 1563

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
10 X	US 2009/013477 A1 (AGRONIN MICHAEL L [US] ET AL) 15 January 2009 (2009-01-15) * paragraphs [0021], [0022], [0025], [0029], [0031] * * figures 3,11 *	1-14	INV. B25F1/02
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20 A	----- US 2010/178856 A1 (CRUZ OMAR JESUS [US]) 15 July 2010 (2010-07-15) * paragraphs [0033], [0034], [0040] * * figures 1-6 *	1	
25 A	----- GB 2 212 428 A (YANG TAI HER) 26 July 1989 (1989-07-26) * page 4, line 19 - page 6, line 22 * * page 8, lines 1-22 * * figure 1 *	1	
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50 1	The present search report has been drawn up for all claims		
55	Place of search The Hague	Date of completion of the search 15 April 2020	Examiner Bonnin, David
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ON EUROPEAN PATENT APPLICATION NO.**

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5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

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