

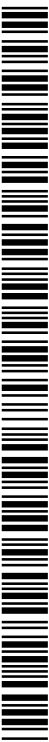


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(54) Title: A DEVICE TO FACILITATE TAKING SELF-PORTRAIT PHOTOGRAPHS AND RELATIVE INSTRUCTIONS FOR USE

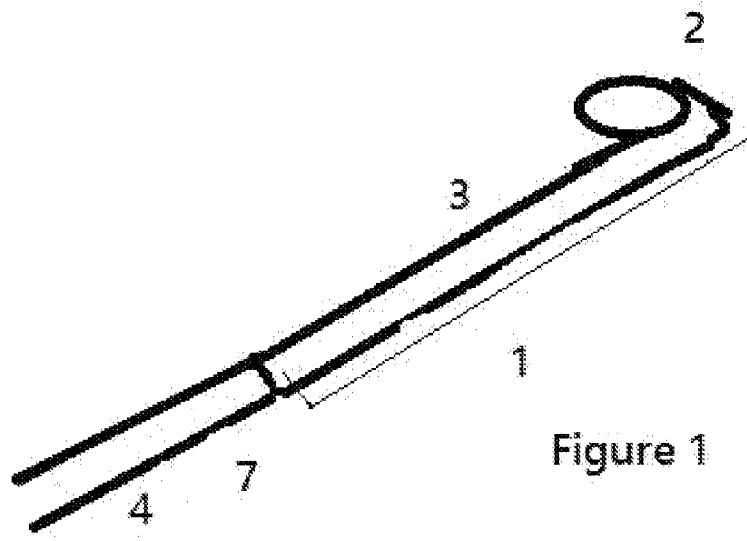


Figure 1

(57) Abstract: The present invention concerns a device to facilitate taking self-portrait photographs, nowadays commonly known by the term "selfies", characterized by the fact that it comprises a compact camera/video recorder, mounted at the end of a support, possibly extendible, or otherwise suitably placed on the same, such that it can be pointed towards the subject so as to appropriately capture the picture, and that the device can be an integral part of the photographic device (smartphone, tablet, digital camera or other device), and as such conceived as a native accessory, or rather in various ways it can be connected to the photographic device's case or to another accessory to be attached to the photographic device, or it can even be independent of the photographic device, or another option.

A device to facilitate taking self-portrait photographs and relative instructions for use

The present invention concerns a device to facilitate taking self-portrait photographs, nowadays commonly known by the term "selfies", the relative instructions for use and operational apparatus.

The "selfie" is a self-portrait photograph, or self-snapshot, made by turning the camera towards oneself (or towards a mirror).

More precisely, the selfie is typically taken using a compact digital device for capturing images, such as, for example but not limited to, a digital camera, a smartphone, a tablet or a webcam.

The phenomenon of selfies has grown in importance in recent years, simultaneous to the increase in social networks, especially those platforms based on the social sharing of images, which usually exist for that sole purpose. For this same reason, the selfie is often taken with a device that not only takes pictures, but also allows the social sharing of images, for example by sending and uploading them to one or more social networks.

Often, therefore, the devices used to take a selfie, in addition to having a camera and/or video recorder, are able to connect to the internet and/or transmit the captured data by other means, such as, for example but not limited to, Bluetooth, Wi-Fi, NFC or other ways. Most commonly, the devices more frequently used to take a selfie are smartphones and tablets, especially those equipped with a front camera/video recorder.

Typically, the selfie is captured by turning the device towards oneself at arm's length, in order to reach an effective distance suitable for the camera. Or, when suitable and depending on the intended framing, by capturing the image in a mirror.

However, since none of these options is particularly easy, a number of solutions and devices have been studied to facilitate taking a selfie and improve the image captured.

One of the proposed devices is a telescopic rod, extendible, for example, up to 60- 100 cm, to the tip of which can be fixed the photographic device, in order to enable the image to be taken from a distance even further than an arm's length. Normally, these accessories are also equipped with a remote control, which can trigger the photographic device to take the image without the need to directly touch any controls on the device itself (smartphone, tablet or other device). The image to be captured can be viewed directly on the device's screen or by using a mirror that reflects the screen itself, supplied together with the telescopic rod.

Another device proposed for the same purpose of taking a selfie is a tripod, onto which the photographic device is fixed, then placed at the desired distance and triggering the picture by a remote control similar to that described above.

Cases designed to facilitate taking a selfie have also been invented and are available on the market, particularly for smartphones and tablets.

Some of these cases are equipped with a sort of handle, which facilitate holding the photographic device by hand, facing it towards oneself at arm's length.

Other cases allow the photographic device to be temporarily secured to a surface, such as glass, a wall, or another surface, so as to capture the image from a distance without having to hold the device. Generally in these cases, a remote control is also used to trigger taking the picture.

Presently, none of the solutions proposed to facilitate taking a selfie is really effective and/or without its problems.

Telescopic rods, tripods and other accessories to which the photographic device can be fixed, even though they are designed to be small, are still cumbersome. Also, one has to remember to take them along, as a separate piece of equipment to the photographic device, and every time one wants to take a selfie one needs to attach the device to the accessory itself. All of this involves planning and demands time and preparation, this is at odds with the often spontaneous nature of the selfie phenomenon.

The case which facilitates manually supporting the photographic device isn't really any better than simply holding it at arms length, while those cases that allow you to temporarily secure the device to a surface obviously require the presence of a suitable surface.

Therefore, the present invention seeks to make available a device capable of facilitating taking a selfie that solves the above mentioned problems and features of existing devices. In particular, the present invention seeks to make available a device to facilitate taking a selfie which can be attached, permanently or not, to the photographic device, without the need to be carried separately and mounted on to the device.

The present invention also seeks to create a procedure for using said device.

Furthermore, the present invention seeks to make available operational apparatus for the use of said device.

According to the invention this goal is achieved with a device characterized by the fact that it comprises a compact camera/video recorder, mounted at the end of a support, possibly extendible, or otherwise suitably placed on the same, such that it can be pointed towards the subject so as to appropriately capture the picture. For example, but not limited to this, the camera may have an installation, fixed or detachable, a periscope-shaped support, which can be directed towards the subject. The device can be an integral part of the photographic device (smartphone, tablet, digital camera or other device), and as such conceived as a native accessory, or rather in various ways it can be connected to the photographic device's case or to another accessory to be attached to the photographic device, or it can even be independent of the photographic device, or another option.

According to the invention said camera/video recorder placed on the support sends the data to the photographic device.

The present invention seeks to make available an innovative product, able to greatly improve the technique of taking a selfie.

These and other features of the present invention shall be made more apparent in the following detailed description of an example of its practical use, illustrated in but not limited to the accompanying drawings, wherein:

Figure 1 shows a schematic embodiment of the device to facilitate taking a self-portrait according to the present invention.

Figure 1 shows the following elements that make up the embodiment of the device 1: the camera/video recorder 2, a support, possibly extendible 3

attached, attachable or not to a photographic device 4 or case 7

In the embodiment illustrated above, the device 1 can be an integral part of a photographic device (smartphone, tablet or other device), as more clearly shown in Figure 2, in which the device 1 is shown accommodated in the photographic device 2, in whatever position or with whatever way it is effective, therefore being fixed, for example but not limited to the inside, the outside, partly inside, to the side, the front, or to the back of the photographic device 4.

According to this embodiment, the device 1 can be used in the following way. When the user intends to take a selfie, through commands of any type (voice, by pressing a button, touchscreen, or any other command), automatically or in any other available way, the extendible support 3 of the device 1 is extended, in whole or in part, as shown in Figure 3, resulting that, as shown in Figure 4, the camera/video recorder 2 is facing towards the person taking the selfie, who then takes the picture. This can be achieved through, for example but not limited to, an arm, movable or not, a joint, an angle, single or multiple, or other 5, or any other available thing for this purpose, placed between the camera 2 and the extendible support 3.

Favourably, in order to allow a perfect shot of the subject to be taken, the device 1 may be equipped with one or more moving parts, so as to point the camera/video recorder 2 towards the subject to be captured. As illustrated by way of a non-exhaustive example in Figure 5, this may be achieved for example with one or more movable joints 6 inserted for example along the extendible support 3 and/or along the arm 5 and/or in any other available position, in order to vary across one or more levels the position of the

camera/video recorder 2. Instead, or as well, as still shown in Figure 5 the support 3 can rotate on one or more levels around its base B, as happens for example with adjustable extendible antennas.

Both the extension of the support and the direction of the camera/video recorder can be done manually, by moving it, or in mechanized way, using, for example but not limited to, actuators of any type.

Figure 6 illustrates another way in which the device 1 is attached to the case 7 of the photographic device 4. The device 1 can be accommodated in and/or placed in the case 7 in any position and in any way effective for its use.

Also favourably, the device 1 can be wholly or partly accommodated in the case and extracted and/or extended only when required to take a selfie.

Figure 7 illustrates a further way in which the device 1 is independent of the photographic device 4.

The diverse ways of embodiment can lead to some differences in the features of the device 1.

For example but not limited to, in the specification in which the device 1 is from the outset attached to the photographic device 4, the two devices can be directly connected, physically, for example by means of electric cables or by other means, be that for the transmission, even two-way, of data or power supply. Moreover, in another non-exhaustive example, the photographic device 4 may contain programs and/or applications to manage the use of the device 1. However, even in this specific embodiment, the device 1 can if necessary communicate with the device 4 via Wi-Fi, Bluetooth, NFC or other ways.

However, in the specification in which the device 1 is attached to an

accessory, such as for example a case, it may be necessary, still as a non-exhaustive example, to provide a way for the device 1 and the photographic device 4 to interact with each other. As a non-exhaustive example, the case 7 can accommodate a cable, such as a micro USB or other connector, which allows the device 1 to connect to the photographic device 4, to exchange data and/or power supply. Instead, or as well, the device 1 can be easily equipped with a wireless means of connecting to the photographic device 4, for example via Bluetooth and/or Wi-Fi and/or NFC or other ways. Similarly, the device 1 can be equipped with a battery, rechargeable by connecting, permanently or temporarily, the device 1 to the photographic device 4, or by connecting the device 1 to another power source. Or it can be equipped with a non-rechargeable battery or another way to charge.

However, even in the specification in which the device 1 is independent of the photographic device 4, it may be necessary, still as a non-exhaustive example, to provide a way for the device 1 and the photographic device 4 to communicate with each other. For example, the device 1 can be connected by a cable, such as a micro USB or other connector, to the photographic device 4, for the exchange of data and/or power supply. Instead, or as well, the device 1 can be easily equipped with a wireless means of connecting to the photographic device 4, for example via Bluetooth and/or Wi-Fi and/or NFC or other ways. Similarly, the device 1 can be equipped with a battery, rechargeable by connecting, permanently or temporarily, the device 1 to the photographic device 4, or by connecting the device 1 to another power source. Or it can be equipped with a non-rechargeable battery or another way to charge.

In order to allow the device 1 to interact with the photographic device 4, even in cases in which the two devices are not attached from the outset or designed in conjunction, it may be useful to create and provide one or more programs or applications or other software, that enables the photographic device 4 to receive the images captured by the device 1 and to communicate with it, for example but not limited to, to point the camera/video recorder towards the subject.

For example, using the buttons on the device 4 or the touchscreen or other way, it may be possible to point the camera.

The software can also provide systems for automatic shot, face detection, optimization and other features.

Various accessories can be added to the device 1, for example, remote controls, additional objectives, devices to play back the image being captured (a mirror, a screen or other) or others still.

Various alternative embodiments can ensure that the support 3 is flexible, adjustable, extendible, non-extendible, with arms, without arms, or that the camera is retractable or not, or adjustable to different positions.

A manual will be supplied, in either printed, digital or online format, as well as possible software, for the retrieval and/or modification and/or storage and/or sharing of images.

Claims

1. A device to facilitate taking self-portrait photographs, the device comprising:
a compact camera or video recorder; and
a support;
wherein the camera or video recorder is mounted at the end of the support, or
otherwise suitably placed on the same support, such that the camera or video
recorder can be pointed towards a subject so as to appropriately capture a picture,
and
the camera or video recorder is configured to send data to a photographic device.
2. The device as claimed in claim 1 wherein the device is an integral part of the
photographic device.
3. The device as claimed in claim 2 wherein the device is a native accessory of the
photographic device.
4. The device as claimed in claim 2 or 3 wherein the photographic device is arranged to
accommodate the device.
5. The device as claimed in claim 4 wherein the photographic device is arranged to be
accommodated by being fixed to the inside, the outside, partly inside to the side, the front or
the back of the photographic device.
6. The device as claimed in any of claims 2 to 5 wherein the device and photographic
device are arranged to be directly connected, physically.
7. The device as claimed in claim 6 wherein the device and photographic device are
arranged to be directly connected by means of electric cables.

8. The device as claimed in claim 6 or 7 wherein the device and photographic device are arranged to be directly connected for the transmission, optionally two-way, of data or power supply.
9. The device of any preceding claim wherein the photographic device is configured to manage the use of the camera or video recorder.
10. The device as claimed in any preceding claim wherein the device is arranged to communicate with the photographic device via Wi-Fi, Bluetooth or near field communication "NFC".
11. The device as claimed in any preceding claim wherein the support is an extendible support.
12. The device as claimed in claim 11 wherein an arm, movable or not, a joint, an angle, single or multiple is placed between the camera and the extendible support.
13. The device as claimed in claim 11 or 12 wherein the extendible support is extended manually.
14. The device as claimed in claim 11 or 12 wherein the support is extended in a mechanized way.
15. The device as claimed in claim 14 wherein the support is extended in a mechanized way using actuators of any type.
16. The device as claimed in any one of claims 12 to 15 wherein the joint is moveable and inserted along the arm and/or in any other available position, in order to vary across one or more levels the position of the camera or video recorder.
17. The device as claimed in any preceding claim wherein the support is arranged to rotate on one or more levels around a base.

18. The device as claimed in any preceding claim wherein the device is arranged to be connected to a case for the photographic device or another accessory to be attached to the photographic device.
19. The device as claimed in claim 18 wherein the device is accommodated in and/or placed the case.
20. The device as claimed in claim 18 or 19 wherein the device and the photographic device are arranged to interact with each other.
21. The device as claimed in claim 20 wherein the case is arranged to accommodate a cable, optionally a micro USB or other connector, which allows the device to connect to the photographic device, to exchange data and/or power supply.
22. The device as claimed in claim 20 or 21 wherein the device comprises a wireless means of connecting to the photographic device.
23. The device as claimed in claim 22 wherein the wireless means of connecting to the photographic device is via Bluetooth and/or Wi-Fi and/or near field communication "NFC".
24. The device as claimed any of claims 18 to 23 wherein the device is equipped with a battery, rechargeable by connecting, permanently or temporarily, the device to the photographic device or by connecting the device to another power source.
25. The device as claimed in any of claims 18 to 23 wherein the device is equipped with a non-rechargeable battery.
26. The device as claimed in any of claims 18 to 25 wherein the device is arranged to be connected by a cable, such as a micro USB or other connector, to the photographic device, for the exchange of data and/or power supply.

27. The device as claimed in any of claims 18 to 26 wherein the support is flexible, adjustable, non-extendible, with arms, without arms, or the camera is retractable or not, or adjustable to different positions.
28. The device as claimed in any preceding claim wherein the photographic device comprises one or more programs or applications or other software, that enables the photographic device to receive images captured by the device and to communicate with the device
29. As claimed in claim 28 wherein the one or more programs or applications or other software communication with the device to point the camera or video recorder towards the subject.
30. The device as claimed in claim 29 wherein the camera is pointed using buttons on the device or a touchscreen of the device or another way.
31. The device as claimed in any of claims 28 to 30 wherein the other software provide systems for automatic shot, face detection, optimization and other features.
32. The device as claimed in any preceding claim wherein the device further comprises remote controls, additional objectives or devices to play back the image being captured (for example, a mirror, a screen or other).

Figure 1

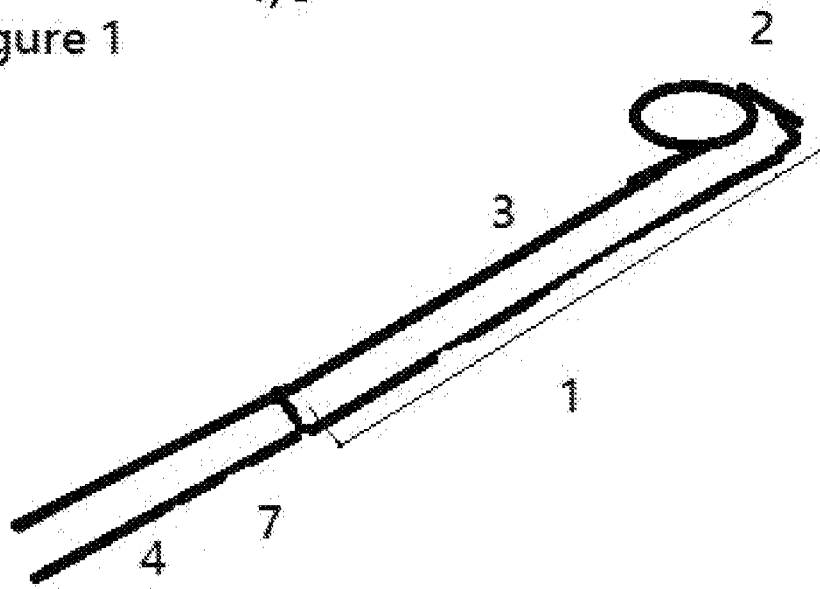


Figure 2

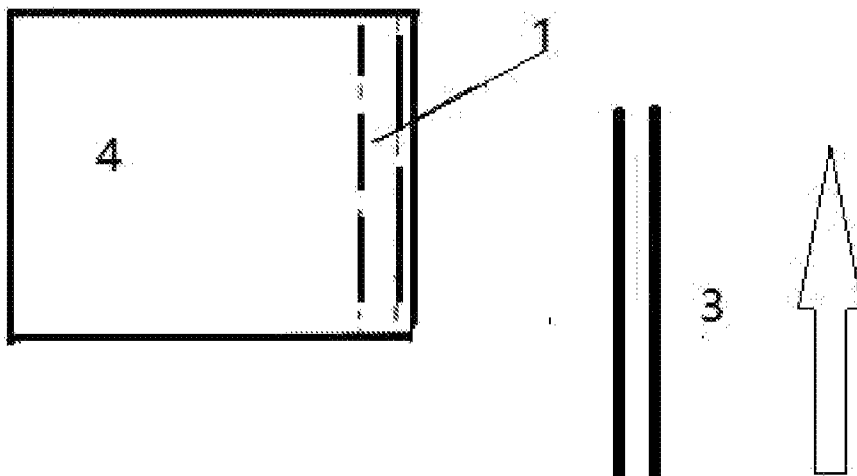
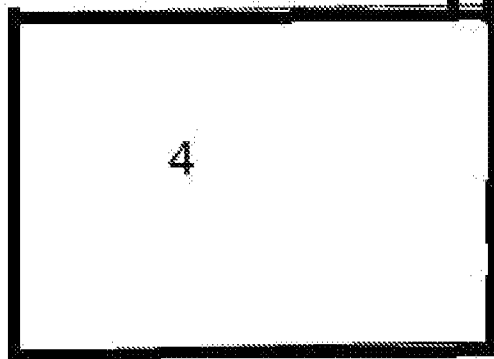


Figure 3



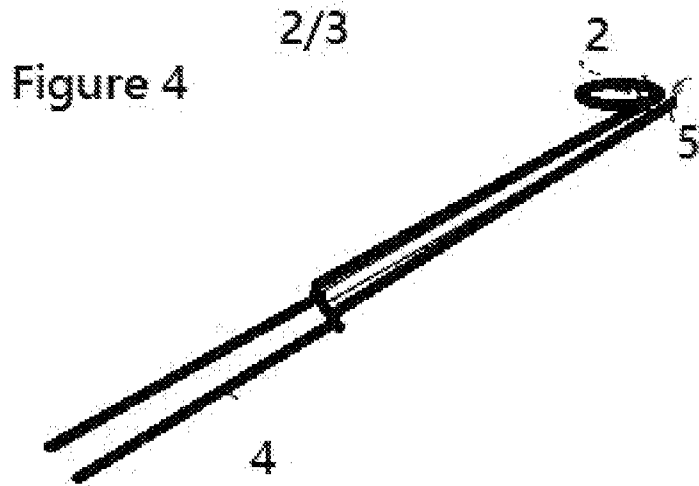


Figure 5

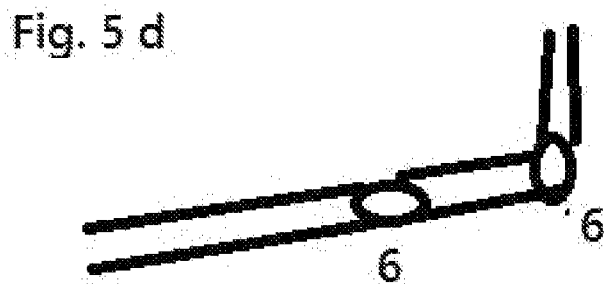
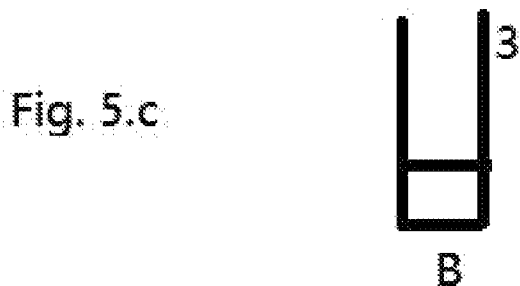
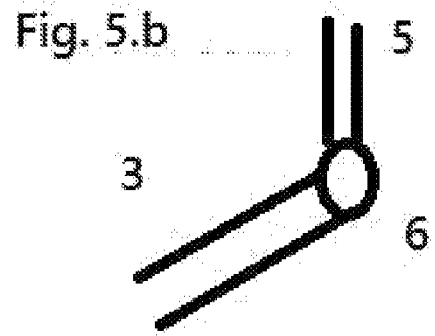
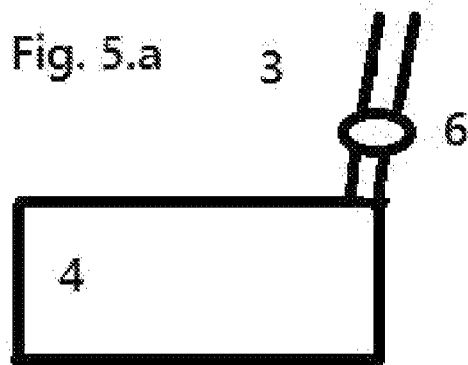


Figure 6

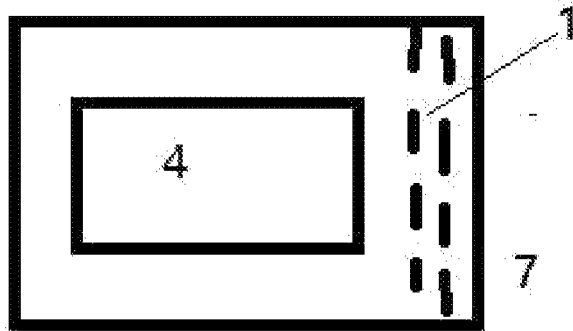
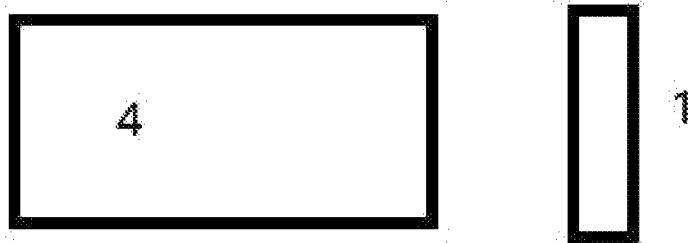


Figure 7



INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2016/060361

A. CLASSIFICATION OF SUBJECT MATTER
INV. G03B17/00
ADD.
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED
Minimum documentation searched (classification system followed by classification symbols)
G03B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	US 2009/003822 A1 (TYNER FRANK [US]) 1 January 2009 (2009-01-01) abstract figures 1, 2, 3 paragraphs [0014], [0015], [0017]	1,11-21, 24-32 10,22,23
X	US 2008/205875 A1 (BARABE JONATHAN [CA]) 28 August 2008 (2008-08-28) abstract figures 1,2 paragraphs [0024] - [0033]	1
X	US 5 539 453 A (DAVID DAN [IT] ET AL) 23 July 1996 (1996-07-23) abstract figures 3,6 columns 4-6	1-9
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Further documents are listed in the continuation of Box C.

See patent family annex.

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Date of the actual completion of the international search 27 July 2016	Date of mailing of the international search report 10/08/2016
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Seifter, Achim

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2016/060361

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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A	US 2004/223752 A1 (GHANOUNI AMIR SAIED [US] ET AL) 11 November 2004 (2004-11-11) the whole document -----	1-32

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

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