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(54) Title: BIPOLAR SURGICAL PENSET WITH MULTIPLE TIPS

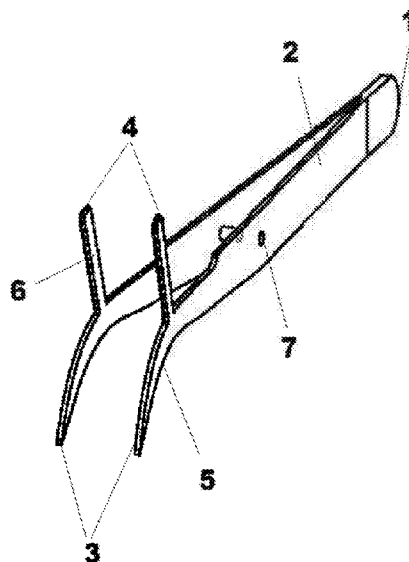


Figure 1

(57) Abstract: This invention is a surgical penset with diverse tips that can be used bi-directionally and is related to a surgical instrument that allows utilization of different tips on the same instrument by means of integrating two pensets having different tips.



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BIPOLAR SURGICAL PENSET WITH MULTIPLE TIPS

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This invention is a surgical penset with diverse tips that can be used bi-directionally and is related to a surgical instrument that allows utilization of different tips on the same instrument by means of integrating two pensets having different tips.

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Pensets are among the most commonly used instruments by surgeons during surgeries.

25

Basic manipulations such as grabbing and suspension of tissues, along with attaining exposure is most commonly achieved through utilization of

pensets.

30

The current technique involves utilization of pensets with different tips for manipulation of tissues and veins of different diameters during the

surgery. Pensets utilized for surgical purposes come in numerous different structures such as fine, thick, indented and unindented tips; plated or non-plated

bodies, and curved or flat tips. These

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structures consist of two tips for grabbing the tissue, two axles compatible with human ergonomics, and a point of attachment that joins these axles.

40

Surgery recently evolved towards minimally invasive approaches and this evolution increased the need for the production of novel and more innovative surgical instruments.

5 Exchange of instruments during surgery prolong the duration of surgery, disrupt surgeon's concentration and frequent exchange of instruments might also cause the instruments to fall, which in turn spoil their sterilized state.

10 With the bipolar surgical penset with multiple tips that is the subject of this invention, it is aimed to eliminate all these disadvantages encountered through the usage of the current technique and to facilitate surgical operations

in line with the evolving minimal approach.

15

Attachment points of two different pensets with different tips were integrated with the aim of utilizing the same instrument for two different purposes by the bipolar surgical penset with multiple tips.

20

Bipolar surgical pensets with multiple tips that are created for fulfilling the aim of this invention are shaped as shown in attached figures, where

25 Figure 1- Is the outlook of parts that constitute the bipolar surgical penset with multiple tips that is the subject of this invention.

Description of references in figures

30

1. Attachment body

2. Mobile ring system

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3. Axle

3.1 Fine-tipped axle

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3.2 Coarse-tipped axle

5 4. Gripping end

4.1 Fine-grip tip

4.2 Coarse-grip tip

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5. Gripping surface

5.1 Fine-grip surface

15 5.2 Coarse-grip surface

6. Dentations

The bipolar surgical penset with multiple tips that is subject to this invention consists of
20 an Attachment body (1), a Fine-grip surface (5.1) following the attachment body, a
Coarse-grip surface (5.2), a Fine-grip tip (5.2),

a Coarse-grip tip, a mobile ring system (2) of the proper diameter of the mobile ring
system (2) for stabilization of axles on the non-utilized tip (3) and to facilitate utilization
25 of surgeon while holding instrument from this point; a fine-tip axle (3.1) and a coarse-
tip axle (3.2) that ensures attachment of the Mobile ring (2); and dentations (6) located
in the middle of the structure. The mobile ring (2) is shifted to the passive side from
which the surgeon will be holding the instrument, and the Axle (3) is pushed until it
reaches the Dentations (6) located in the middle. Hence, the same instrument can be
30 utilized for two different purposes.

CLAIMS

1.The invention is a bipolar surgical penset with multiple tips that is characterized by comprising of an; Attachment body (1), a Mobile ring system (2), an Axle (3), a Fine-tip axle (3.1), a Coarse-tip axle (3.2), a Gripping tip (4), a Fine-grip tip (4.1), a Coarse-tip grip (4.2), a Gripping surface (5), a Fine-grip surface (5.1), a Coarse-grip surface (5.2) and Dentations (6).

2. The invention is a bipolar surgical penset with multiple tips as described in Claim 1, characterized by comprising of a proper-diameter mobile ring system (2) that ensures the stability of axles on the non-utilized side (3).

3.The invention is a bipolar surgical penset with multiple tips as described in Claim 1, characterized by comprising of Dentations (6) located in the middle of the Fine-tip axle and Coarse-tip axle that ensures the stability of the Mobile ring.

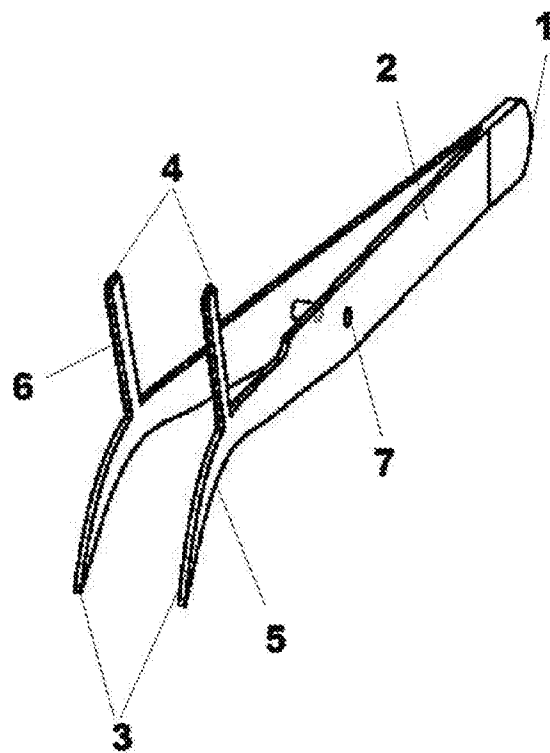


Figure 1

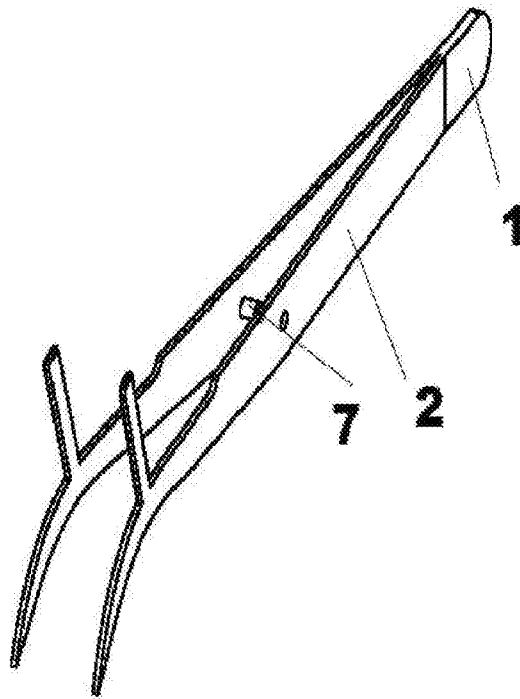


Figure 2.

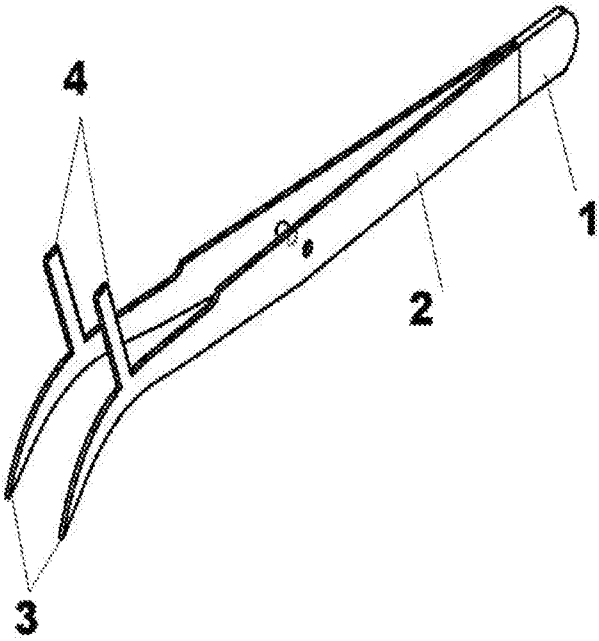


Figure 3

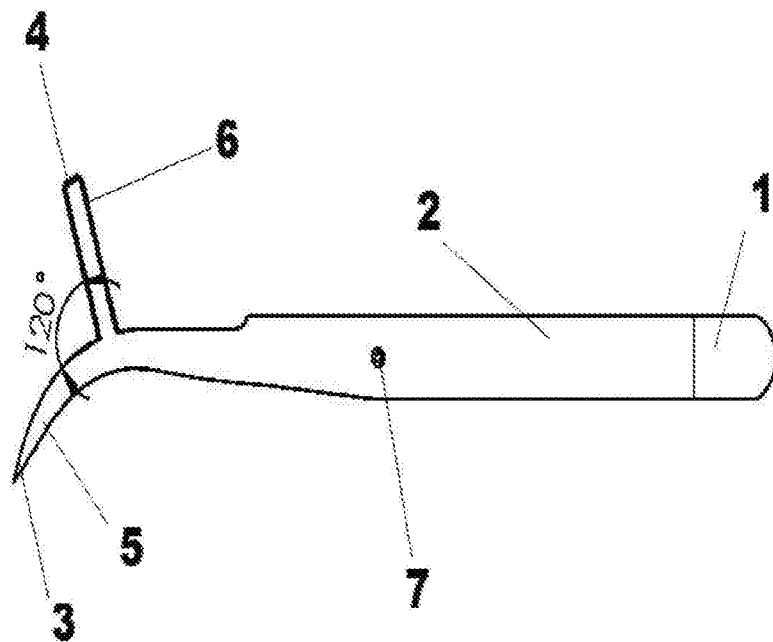


Figure 4

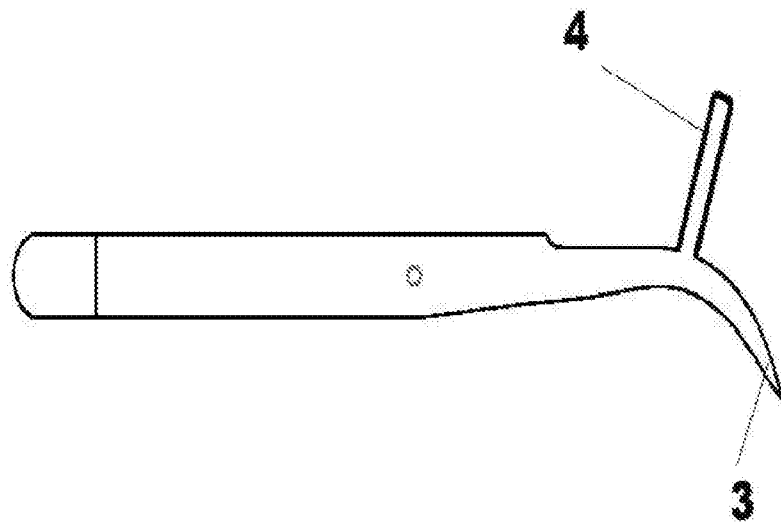


Figure 5

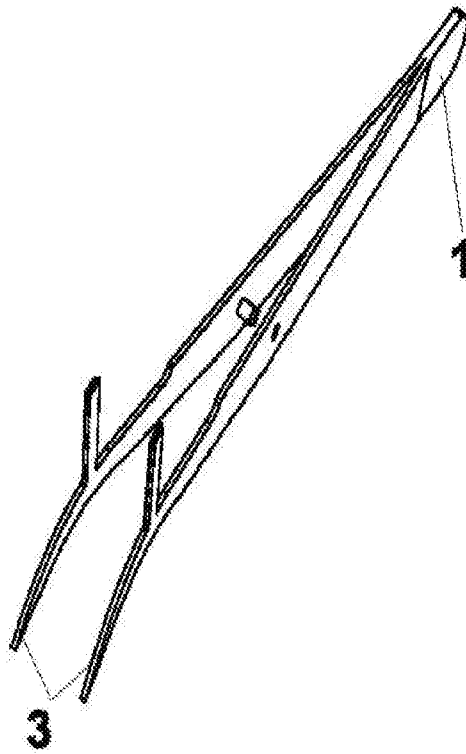


Figure 6

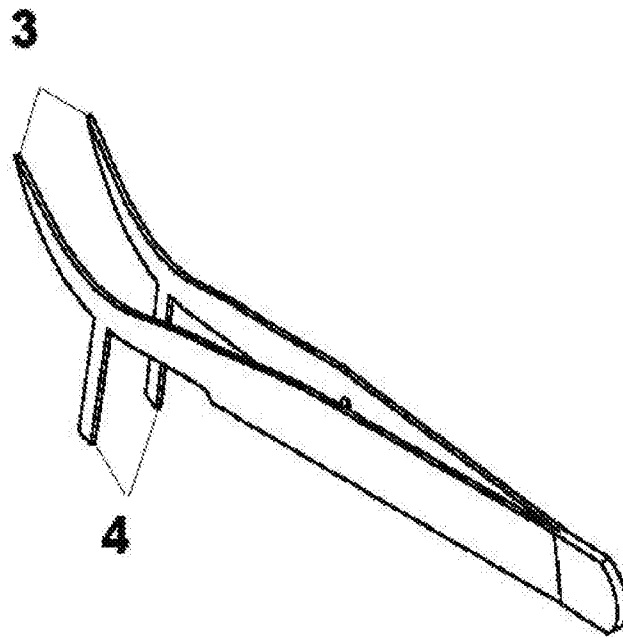


Figure 7

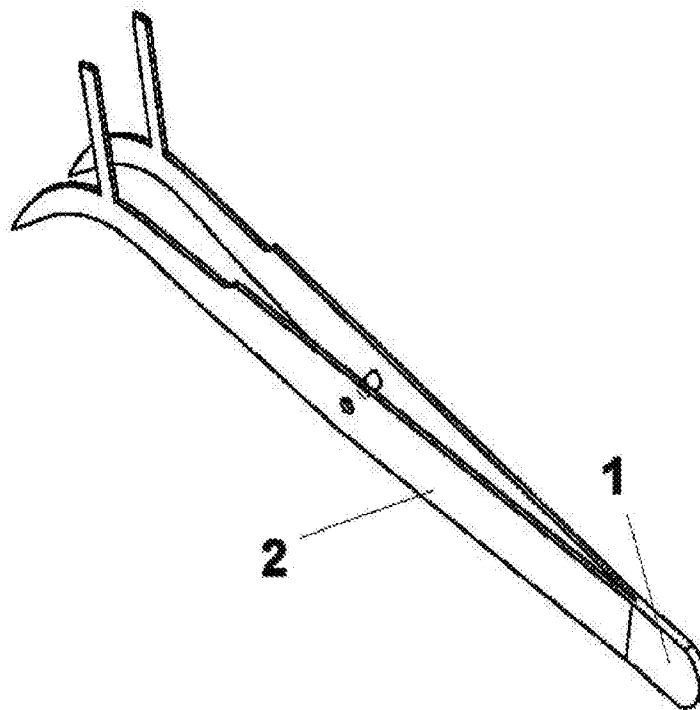


Figure 8

INTERNATIONAL SEARCH REPORT

International application No.

PCT/TR2018/050333

A. CLASSIFICATION OF SUBJECT MATTER

A61B 17/30 (2006.01)i; A61B 17/28 (2006.01)i

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)

A61B

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)

WPI, EPODOC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2011121592 A1 (CHO YONG HOON [US]) 26 May 2011 (2011-05-26) The whole document	1-3
Y	US 2018064459 A1 (ALSHEMARI HASAN [KW]) 08 March 2018 (2018-03-08) The whole document	1-3
Y	US 2017360465 A1 (DIVYZE INC [US]; SMITH RYAN D [US]) 21 December 2017 (2017-12-21) Abstract, paragraphs [0045]-[0052], [0074]-[0077], [0098]-[0103], [0112]-[0121], [0131]-[0141], [0144], [0161], [0193], [0198]-[0202], [0210], [0217]	1-3
A	US 2009102214 A1 (CHO YONG HOON [US]) 23 April 2009 (2009-04-23) The whole document	1-3



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:

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“&” document member of the same patent family

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Name and mailing address of the ISA/TR

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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

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Patent document cited in search report			Publication date (day/month/year)	Patent family member(s)			Publication date (day/month/year)
US	2011121592	A1	26 May 2011	NONE			
US	2018064459	A1	08 March 2018	US	10188416	B2	29 January 2019
				US	2018193048	A1	12 July 2018
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				WO	2017223113	A1	28 December 2017
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