جامعة الإمام عبدالرحمن بن فيصل
IMAM ABDULRAHMAN BIN FAISAL UNIVERSITY


# SDG 9

# Industry, Innovation & Infrastructure

# Sustainable Development Report 2023-2024

# Table of Contents

# 1. Innovating new patent for flexible medical catheters

The college administration extends its congratulations to His Excellency Dr. Hassan bin Muhammad Al-Bishr (Department of General Surgery), for obtaining a patent for flexible medical catheters, which are characterized by flexibility and ease of guidance during diagnostic and therapeutic interventional medical procedures in several specialties.


(12) **United States Patent**
**Al Bisher**

(10) **Patent No.: US 11,779,736 B2**
(45) **Date of Patent: *Oct. 10, 2023**

(54) **ADJUSTABLE NECK CATHETER**

(71) Applicant: **Imam Abdulrahman Bin Faisal University**, Dammam (SA)
(72) Inventor: **Hassan Mohammed A. Al Bisher**, Dammam (SA)
(73) Assignee: **Imam Abdulrahman Bin Faisal University**, Dammam (SA)

( * ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 144 days.
This patent is subject to a terminal disclaimer.
(21) Appl. No.: **17/466,539**
(22) Filed: **Sep. 3, 2021**
(65) **Prior Publication Data**
US 2021/0393928 A1 Dec. 23, 2021
**Related U.S. Application Data**
(63) Continuation of application No. 16/661,430, filed on Oct. 23, 2019, now Pat. No. 11,160,959.
(51) **Int. Cl.**
***A61M 27/00*** (2006.01)
***A61M 25/00*** (2006.01)
***A61M 25/01*** (2006.01)
(52) **U.S. Cl.**
CPC ..... ***A61M 27/00*** (2013.01); ***A61M 25/0054*** (2013.01); *A61M 25/0147* (2013.01); *A61M 2025/0161* (2013.01)
(58) **Field of Classification Search**
CPC ..... A61M 27/00; A61M 25/0054; A61M 2025/0161; A61M 25/0053
See application file for complete search history.

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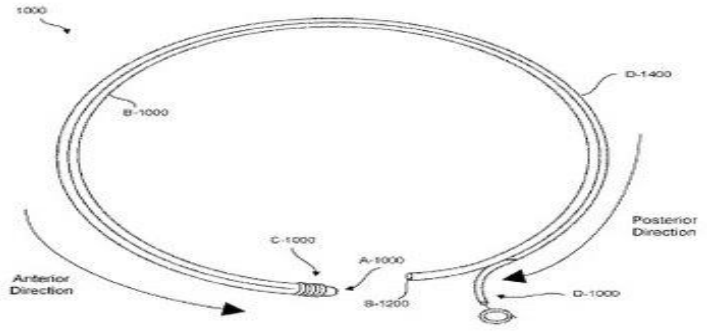
*Primary Examiner* — Susan S Su
*Assistant Examiner* — Eric Rassavong
(74) *Attorney, Agent, or Firm* — Oblon, McClelland, Maier & Neustadt, L.L.P.

(57) **ABSTRACT**

A catheter having a head with a head orifice and a head channel connected to the head orifice, a primary lumen wall that defines an internal primary lumen volume, an adjustable neck that connects the head channel to the internal primary lumen volume, an adjustment system partially enclosed in the primary lumen wall that provides an articulation of the adjustable neck between an extended position to a contracted position, wherein the articulation from the extended position to the contracted position provides a flexible tip catheter while the articulation from the contracted position to the extended position provides an ability to angulate toward a target.

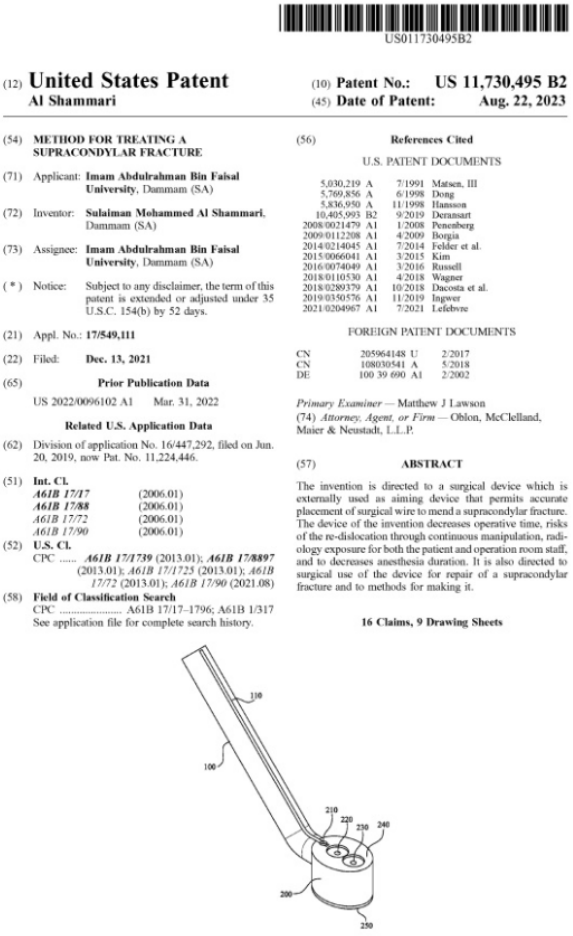
**12 Claims, 15 Drawing Sheets**




https://twitter.com/Med_iau/status/1716013713906360567

## 2. Patent for a fracture stabilization device for the elbow

The College of Medicine extends its congratulations to His Excellency Dr. Suleiman Mohammed Al-Shammari (Department of Orthopedic Surgery), obtaining a patent for a fracture stabilization device for the elbow.



US011730495B2

(12) **United States Patent**
**Al Shammari**

(10) **Patent No.: US 11,730,495 B2**
(45) **Date of Patent: Aug. 22, 2023**

(54) **METHOD FOR TREATING A SUPRACONDYLAR FRACTURE**

(71) Applicant: **Imam Abdulrahman Bin Faisal University**, Dammam (SA)

(72) Inventor: **Sulaiman Mohammed Al Shammari**, Dammam (SA)

(73) Assignee: **Imam Abdulrahman Bin Faisal University**, Dammam (SA)

( * ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 52 days.

(21) Appl. No.: **17/549,111**

(22) Filed: **Dec. 13, 2021**

(65) **Prior Publication Data**

US 2022/0096102 A1 Mar. 31, 2022

**Related U.S. Application Data**

(62) Division of application No. 16/447,292, filed on Jun. 20, 2019, now Pat. No. 11,224,446.

(51) **Int. Cl.**

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|---|---|
| ***A61B 17/17*** | (2006.01) |
| ***A61B 17/88*** | (2006.01) |
| *A61B 17/72* | (2006.01) |
| *A61B 17/90* | (2006.01) |

(52) **U.S. Cl.**
CPC ..... ***A61B 17/1739*** (2013.01); ***A61B 17/8897*** (2013.01); *A61B 17/1725* (2013.01); *A61B 17/72* (2013.01); *A61B 17/90* (2021.08)

(58) **Field of Classification Search**
CPC ..... A61B 17/17–1796; A61B 1/317
See application file for complete search history.

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*Primary Examiner* — Matthew J Lawson
(74) *Attorney, Agent, or Firm* — Oblon, McClelland, Maier & Neustadt, L.L.P.

(57) **ABSTRACT**

The invention is directed to a surgical device which is externally used as aiming device that permits accurate placement of surgical wire to mend a supracondylar fracture. The device of the invention decreases operative time, risks of the re-dislocation through continuous manipulation, radiology exposure for both the patient and operation room staff, and to decreases anesthesia duration. It is also directed to surgical use of the device for repair of a supracondylar fracture and to methods for making it.

**16 Claims, 9 Drawing Sheets**



https://twitter.com/Med_iau/status/1698263443025854626

## 3. Development of the External Spaces of the Housing units

To meet the community requirements, the students of the Department of Environmental Architecture at College of Architecture and Planning of IAU participated in the development of the external spaces of the housing units of Wahat-Mada in Dammam, one of the projects of Charity Society for Orphans Care (Benaa)in the Eastern Region in collaboration with Development Housing.

The Dean of the College, Dr. Tariq bin Ibrahim Al-Rawaf, explained that a group from the 5th year students submitted design proposals included creative ideas for the external spaces of the housing units. They divided the external spaces into 3 parking spaces, and 2 for playgrounds and outdoor recreation where each of these spaces is located between two of the 6 residential buildings under the supervision of Dr. Abdul-Baqi Al-Tisan, Dr. Muhammad Al-Abdullah, Dr. Saeed Al-Owais, and Engineer Ahmed Al-Tuwaijri. These projects were evaluated by Dr. Tofail Al-Yousef, Mr. Abdullah Al-Khalidi, General Manager of Benna charitable society, and Eng. Khaled Al-Salouli from the Mimar Association, as well as Eng. Osama Al-Houb.

Dr. Al-Rawaf stated "This effective participation comes per mission of the university and the college as well as to achieve the Kingdom's vision 2030 aiming to raise the quality of life in urban areas and based on the principle of the importance of

practicing specialization via real projects benefit both; the students and the community, and to achieve the goal of strengthening community partnership" while Dr. Abdul-Baqi Al-Taisan, the course coordinator, stated " This project came as a result for cooperation between Mimar Association and Benaa stressing that the students presented sustainable and modern design solutions match the nature of the social, cultural and economic population in an area of approximately 21,000 square meters.

Meanwhile, Mr. Abdullah Al-Khalidi, General Director of Benaa Society, stated that the project consists of six identical residential towers, each tower contains eight floors, and in each tower there are 47 apartments with a total of 282 apartments. It is noting that Benaa Society supervises 3 towers of 119 housing units.

https://www.iau.edu.sa/en/news/department-of-environmental-architecture-at-iau-develop-wahat-mada-housing

## 4. IAU participates in the Launch of Made in Saudi Arabia Exhibition

Imam Abdulrahman bin Faisal University participated among more than 100 entities in the launch of "Made in Saudi Arabia" exhibition in its second edition at Riyadh front, from 16 to 19 October, under the patronage of the Minister of Industry and Mineral Resources, Chairman of the Board of Directors of the Saudi Export Development Authority, Mr. Bandar bin Ibrahim Al-Khorayef.

This was through a pavilion outlining the efforts of Imam Abdulrahman bin Faisal University in partnerships and economic development and the most prominent projects and patents. The indicators of which have grown in recent years, thus ranking 79th internationally in patent registration.

In addition, the University participated in providing three workshops within the exhibition program that enhance integration between the education system and Saudi industry as a future vision. The Director of the Community Partnership Department, Chair of the Organizing Committee for the University's participation in the exhibition, Dr. Najah bint Saleh Al Mihemid, stated that this participation comes within the framework of cooperation between the Saudi Export Development Authority "Made in Saudi Arabia" and Imam Abdulrahman bin Faisal University.

The Department of Community Partnership organized the University's contribution in the exhibition as an affirmation that the education system and its outcomes are one of the fundamental pillars of the industrial renaissance in the Kingdom in accordance with its 2030 vision and the directions of our leaders; and on the qualitative leap of university education to innovation, creativity, application and production; in addition to supporting the University's directions in the field of investment, community innovation and its applications.

Al Mihemid noted that a corner was allocated to the College of Engineering (Engineering Manufacturing Center), the College of Architecture and Planning, the College of Designs and the College of Computer Science and Information Technology, through which the most important projects that represent pioneering and qualitative Saudi products that are unique in thought and design and have the elements of competition locally and globally were reviewed.

https://www.iau.edu.sa/en/news/iau-participates-in-the-launch-of-made-in-saudi-arabia-exhibition

## 5. IAU Signed a Cooperation Agreement with Tatweer Buildings Company "TBC"


TBC, the government corporation wholly-owned by the Public Investment Fund and the implementing arm of the Ministry of Education projects in Riyadh, has signed a memorandum of understanding (MoU) with Imam AbdulRahman Bin Faisal University.

Upon signing the MoU, IAU has been represented by the University's Vice President Dr. Saleh Bin Ali Al-Rashid while TBC has been represented by Eng.Abdel Rahman Maghrabi Vice CEO of the Department of Allocation & Vision Program Support.

On his part, the University's Vice President Dr. Saleh Bin Ali Al-Rashid has explained that the MoU aims to agree on a framework for laying down the essential principles to achieve a bilateral prospective cooperation in fields of university education & scientific research and community service in order to establish the quality of education and to enhance the efficiency of education environment so that we could make use of the outcomes of education and scientific research in achieving the Kingdom's Vision of 2030 targeting the university education and scientific research sectors as well as in community service.

Dr. Al-Rashid added that both sides' main task is, according to the MoU, to participate in community service in consistency with

the aspiring vision of 2030, exchange the relevant information, provide the mutual consultation, support and assistance and mutually be acquainted with any obstacles to implement the MoU.

"The MoU comes in the context of a series of similar memorandums of understanding which TBC has recently signed with a number of universities all over the Kingdom as instructed by the Ministry of Education", Eng. Abdel Rahman Maghrabi Vice CEO of the Department of Allocation & Vision Program Support said.

Eng./ Maghrabi added that TBC undertakes, as per such memorandums of understanding and then the cooperation agreements concluded with its partners, the establishment of higher education facilities as per standards recognized by the Ministry of Education and as per the internationally-recognized standards concerning standards of the establishment of premises-related facilities to be established by the partners of TBC from such universities concluded cooperation agreements with TBC.

https://www.iau.edu.sa/en/news/iau-signed-a-cooperation-agreement-with-tatweer-buildings-company-tbc

## 6. Tech Reveals

We will see you soon on November 9th on a journey that takes you from the present to a brilliant future full of technology


https://twitter.com/JanaAlhamri/status/1721609679812399175/photo/1