

Patent #: **US 6073750**
Title: **Needle transfer device;**
Report Date: **8/20/2010**

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2. Economic Patent Value (as a computed share of the Protected Market)
3. Economic value of the market protected by the patent (as a computed share of the US Gross Domestic Product)

The Patent Value Report Terms (PDF) help interpret the data presented in this report, and are considered an integral part of this Patent Value Report.

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Patent Value Summary
Patent Value Projected Market Size Estimated Size of Patent Projected Market: \$3,358,657.18
Patent Value Projected Patent Valuation Predicted Patent Value: \$687,876.17
Patent Value Legal Summary Remaining Life of Patent: 6 year(s), 9 months

Patent Bibliography

Patent #: US 6073750

Document Kind: A1

Title: Needle transfer device;

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Patent Enforceability Status: Enforceable

US Classifications / Sub Classes:

198/431 198/803.7 901/009

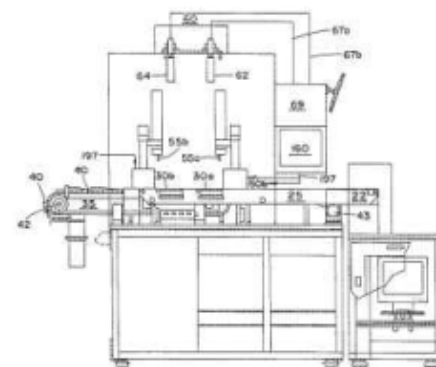
IPC Classifications / Sub Classes:

B65G/4726 B21G/00100 B25J/00916
A61B/01706 B21G/00108 G06T/00700

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Abstract:

A needle sorting device includes an infeed device which first singulates a bulk supply of surgical needles into single file with an intermittently driven vibratory feed bowl assembly, and then individually separates and deposits the needles on a first conveyor for transmission to a processing station with a linear slide discharge mechanism. The first conveyor is translucent and during transit, one or more cameras obtain an image of the individual deposited needles. The image is digitized and the digital signals are transmitted to a control system computer which evaluates the position and orientation for needles and processes the information to obtain data for communication to one or more robot assemblies having grippers. Utilizing the position and orientation data, the robot assembly grippers removes selected needles from the first conveyor and transfers each needle to an engagement device located upon a second precision conveyor. This second precision conveyor is provided with additional devices to further orient the needle transferred thereto. A moveable hard stop is provided at the end of the precision conveyor to provide precise positioning of the needle to an accuracy of 0.001 inch at needle hand-off. Each oriented and precisely positioned needle is conveyed by the second conveyor to an automatic swaging station where sutures are automatically attached.



Patent Family & Legal Information:

Publication	Title	Filed	App #	Status
AU1014995A	Needle sorting device	1/11/1995	1014995	Enforecable
CA2139995A1	NEEDLE SORTING DEVICE	1/11/1995	2139995	Not Enforecable
	Gazette Date 1/11/2000	Code FZDE	Description (remarks) DEAD	
EP0663271A3	Needle sorting device.	1/13/1995	95300200	Not Enforecable
	Gazette Date 1/20/1999	Code 18D	Description (remarks) DEEMED TO BE WITHDRAWN	
	11/12/1997	AK	DESIGNATED CONTRACTING STATES:	
	7/19/1995	AK	DESIGNATED CONTRACTING STATES:	
JP3688324B2		1/13/1995	2110095	Enforecable
JP8033638A	DEVICE AND METHOD FOR ARRANGEMENT OF SUTURAL NEEDLE LOCATION	1/13/1995	2110095	Enforecable
US2004007445A1	Needle sorting device	8/20/2003	64466503	Enforecable
US5511670A	Needle sorting device	1/13/1994	18160094	Enforecable
	Gazette Date 1/13/1994	Code AS02	Description (remarks) ASSIGNMENT OF ASSIGNOR'S INTEREST	
US5727668A	Needle sorting device	9/19/1996	71579096	Enforecable
US6073750A	Needle transfer device	2/24/1997	80403897	Enforecable
	Gazette Date	Code	Description (remarks)	

	5/4/1998	AS	ASSIGNMENT			
	8/25/1997	AS	ASSIGNMENT			
US6123185A	Needle sorting device			2/24/1997	80403997	Enforecable
	Gazette Date	Code	Description (remarks)			
	5/4/1998	AS	ASSIGNMENT			
	8/25/1997	AS	ASSIGNMENT			
US6644464B1	Needle sorting device			4/5/2000	54369300	Enforecable
US6997305B2	Needle sorting device			8/20/2003	64466503	Enforecable