RUSS, AUGUST & KABAT
Marc A. Fenster, State Bar No. 181067
Alexander C.D. Giza, State Bar No. 212327
Andrew D. Weiss, State Bar No. 232974
Fredricka Ung, State Bar No. 253794
12424 Wilshire Boulevard, 12th Floor
Los Angeles, California 90025
Tel: (310) 826-7474
Fax: (310) 826-6991
Email: mfenster@raklaw.com;
Email: agiza@raklaw.com;
Email: aweiss@raklaw.com; and
Email: fung@raklaw.com

Attorneys for NEUROGRAFIX, NEUROGRAPHY INSTITUTE MEDICAL ASSOCIATES, INC., and IMAGE-BASED SURGICENTER CORPORATION

K&L GATES LLP
Bradley W. Gunning (SBN: 251732)
10100 Santa Monica Blvd., 7th Floor
Los Angeles, California 90067
Tel: (310) 552-5000
Fax: (310) 552-5001
Email: brad.gunning@klgates.com

Attorneys for WASHINGTON RESEARCH FOUNDATION

UNITED STATES DISTRICT COURT

CENTRAL DISTRICT OF CALIFORNIA – WESTERN DIVISION

NEUROGRAFIX, a California corporation; NEUROGRAPHY INSTITUTE MEDICAL ASSOCIATES, INC., a California corporation; IMAGE-BASED SURGICENTER CORPORATION, a California corporation; WASHINGTON RESEARCH FOUNDATION, a not-for-profit Washington corporation,

vs.

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

CV11-07591 MMM(FMOx)

Case No. _____

COMPLAINT FOR PATENT INFRINGEMENT

JURY TRIAL DEMANDED

Plaintiffs NeuroGrafix and Washington Research Foundation ("WRF") (collectively, "Plaintiffs") allege as follows:

1. This case is an action for patent infringement of United States Patent No. 5,560,360 (the "'360 Patent") under the Patent Laws of the United States, as set forth in 35 U.S.C. §§271 and 280 through 285.

PARTIES

2. Plaintiff NeuroGrafix is a California corporation with its principal place of business located at 2716 Ocean Park Boulevard, Suite 3075, Santa Monica, California.

3. Plaintiff Neurography Institute Medical Associates, Inc. ("NIMA") is a California corporation with its principal place of business in Santa Monica, California.

4. Plaintiff Image-Based Surgicenter Corporation ("IBSC") is a California corporation with its principal place of business in Santa Monica, California.

5. Plaintiff WRF is a not-for-profit corporation incorporated and existing under the laws of the State of Washington.

6. On information and belief, defendant The Regents of the University of California ("The Regents") is a public corporation and agency of the State of California. The Regents is a 26-member board, established under Article IX, Section 9 of the California Constitution, which governs the University of California.

JURISDICTION AND VENUE

7. This Court has federal subject matter jurisdiction over this action under 28 U.S.C. §§1331, 1332(a)(1), 1332(c)(1) and 1338(a).

8. Venue is proper in this Court pursuant to 28 U.S.C. §§1391(a), 1391(c), and 1400(b), including without limitation because Defendant is

advertising, marketing, using, selling, and/or offering to sell products in this Judicial District.

9. On May 12, 2011, The Regents entered into a stipulation wherein The Regents waived their sovereign immunity as to the patent infringement cause of action contained in this case. The Stipulation is attached to this Complaint as Exhibit A.

FIRST CAUSE OF ACTION FOR PATENT INFRINGEMENT

10. Plaintiffs repeat and reallege the allegations contained in paragraphs 1 through 6 above, inclusive, as if fully repeated and restated herein.

11. The University of Washington, a public institution of higher education in the state of Washington, is the owner by assignment of the '360 Patent entitled "Image Neurography and Diffusion Anisotropy Imaging." The '360 Patent issued on October 1, 1999. A true and correct copy of the '360 Patent is attached as Exhibit B.

12. Aaron G. Filler, Jay S. Tsurda, Todd L. Richards, and Franklyn A. Howe are listed as the inventors of the '360 Patent.

13. WRF holds substantially all rights in the '360 Patent and has exclusively licensed substantially all rights in the '360 Patent to NeuroGrafix in December of 1998, retaining only certain potential reversion rights.

14. The Regents received notice of the '360 Patent by as late as November 1996. In 1995, inventor Aaron Filler joined the University of California – Los Angeles ("UCLA") as a Spine Fellow and continued his prior research and development in the field of neural tract imaging. In July of 1996, Dr. Filler became an Assistant Professor in Neurosurgery at UCLA. In October of 1996, the United States Patent Office ("USPTO") granted the '360 Patent. After the '360 Patent issued, Dr. Filler used the technology of the '360 Patent while at UCLA, and The Regents was aware of this fact.

15. While at UCLA, Dr. Filler continued research and development, carefully recording and publishing academic peer reviewed reports based on all imaging cases performed. However, Neil Martin – then the acting chairman of the Division of Neurosurgery at the University of California – took a firm position that the advances and developments in the '360 Patent did not merit further development by Dr. Filler. This led Dr. Filler to depart from the faculty UCLA and commence a private practice of medicine in May of 2001 to better assure the development of these technologies for the common good of patients throughout the world.

16. Just prior to his departure from UCLA, in March 2001, the Office of the President of the University of California required Dr. Filler to assign another invention to the Regents. This invention – later granted at United States Patent No. 6,560,477 for magnetic resonance imaging of joints – cites the '360 Patent on its cover page. The Regents therefore have been aware of the '360 Patent since March 2001.

17. Upon information and belief, after the departure of Dr. Filler, The Regents did not use the technology of the '360 Patent until January 2008.

18. Upon information and belief, The Regents have been and now are directly, jointly and/or indirectly infringing, by way of inducing infringement and/or contributing to the infringement of the '360 Patent in the State of California, in this judicial district, and elsewhere in the United States by, among other things, advertising, marketing, using, selling, and/or offering to sell products and services, including without limitation, the performance of and provision of equipment and methods for peripheral nerve MR Neurography and diffusion anisotropy based tractography. By making, using, importing, offering for sale, and/or selling such products, The Regents have injured the Plaintiffs and are thus liable to the Plaintiffs for infringement of the '360 Patent under 35 U.S.C. § 271. If The Regents are not deemed to directly infringe any of the claims of the '360 Patent,

those who The Regents induce to infringe and/or whose infringement to which The Regents contribute are the end users of the above-referenced products and services.

19. The Regents knowingly, willfully, and deliberately infringed and, on information and belief, continue to infringe the '360 Patent in conscious disregard of Plaintiffs' rights, making this case exceptional within the meaning of 35 U.S.C. § 285 and justifying treble damages pursuant to 35 U.S.C. § 284.

20. As a result of The Regents infringement of the '360 Patent, Plaintiffs have suffered monetary damages in an amount not yet determined, and will continue to suffer damages in the future unless The Regents' infringing activities are enjoined by this Court.

21. The Regents' wrongful acts have damaged and will continue to damage Plaintiffs irreparably, and Plaintiffs have no adequate remedy at law for those wrongs and injuries. In addition to their actual damages, Plaintiffs are entitled to a preliminary and permanent injunction restraining and enjoining The Regents and their agents, servants and employees, and all persons acting thereunder, in concert with, or on their behalf, from infringing the '360 Patent.

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs respectfully request that this Court enter:

1. A judgment in favor of Plaintiffs that The Regents have infringed, directly and/or indirectly, by way of inducing and/or contributing to the infringement of the '360 Patent;

2. An injunction enjoining The Regents and their officers, directors, agents, servants, affiliates, employees, divisions, branches, subsidiaries, parents, and all others acting in concert or privity with any of them from infringing, inducing the infringement of, or contributing to the infringement of the '360 Patent;

3. A judgment and order requiring The Regents to pay Plaintiffs their damages, costs, expenses, and prejudgment and post-judgment interest for The Regents' infringement of the '360 Patent as provided under 35 U.S.C. § 284;

4. An award to Plaintiffs for enhanced damages, as provided under 35 U.S.C. § 284, resulting from the knowing, deliberate, and willful nature of The Regents' prohibited conduct;

5. A judgment and order finding that this is an exceptional case within the meaning of 35 U.S.C. § 285 and awarding to Plaintiffs their reasonable attorneys' fees; and

6. Any and all other relief to which Plaintiffs may show themselves to be entitled.

JURY TRIAL DEMANDED

Plaintiffs hereby demand a trial by jury of all issues so triable.

Respectfully submitted,

Dated: September 14, 2011

RUSS AUGUST & KABAT

By: _____
Andrew D. Weiss

Marc A. Fenster, State Bar No. 181067
Email: mfenster@raklaw.com
Alexander C.D. Giza, State Bar No. 212327
Email: agiza@raklaw.com
Andrew D. Weiss, State Bar No. 232974
Email: aweiss@raklaw.com
Fredricka Ung, State Bar No. 253794
Email: fung@raklaw.com
12424 Wilshire Boulevard, 12th Floor
Los Angeles, California 90025
Telephone: (310) 826-7474
Facsimile:(310) 826-6991

Attorneys for Plaintiffs NEUROGRAFIX, NEUROGRAPHY INSTITUTE MEDICAL ASSOCIATES, INC., and IMAGE-BASED SURGICENTER CORPORATION

Dated: September 14, 2011

K&L GATES LLP

By: _____
Bradley W. Gunning

Bradley W. Gunning
10100 Santa Monica Blvd., 7th Floor
Los Angeles, California 90067
Tel: (310) 552-5000
Fax: (310) 552-5001
Email: brad.gunning@klgates.com

Attorneys for WASHINGTON RESEARCH FOUNDATION

COPY

CIV-110

ATTORNEY OR PARTY WITHOUT ATTORNEY (Name, State Bar number, and address):	FOR COURT USE ONLY
Carolyn Chang (CSB No. 217933) Fenwick & West LLP 801 California Street Mountain View, CA 94041 TELEPHONE NO.: 650-335-7654 FAX NO. (Optional): 650-938-5200 E-MAIL ADDRESS (Optional): cchang@fenwick.com ATTORNEY FOR (Name): The Regents of the University of California	
SUPERIOR COURT OF CALIFORNIA, COUNTY OF Los Angeles STREET ADDRESS: 111 N. Hill Street MAILING ADDRESS: CITY AND ZIP CODE: Los Angeles, CA 90012 BRANCH NAME: Central District	RECEIVED MAY 13 2011 FILING WINDOW
PLAINTIFF/PETITIONER: Neurografix DEFENDANT/RESPONDENT: The Regents of the University of California	
REQUEST FOR DISMISSAL ☐ Personal Injury, Property Damage, or Wrongful Death ☐ Motor Vehicle ☐ Other ☐ Family Law ☐ Eminent Domain ☑ Other (specify): Inverse Condemnation, Denial of Due Process, etc.	CASE NUMBER: BC447518

- A conformed copy will not be returned by the clerk unless a method of return is provided with the document. -

1. TO THE CLERK: Please **dismiss** this action as follows:
   a. (1) ☐ With prejudice (2) ☑ Without prejudice
   b. (1) ☐ Complaint (2) ☐ Petition
   (3) ☐ Cross-complaint filed by (name): on (date):
   (4) ☐ Cross-complaint filed by (name): on (date):
   (5) ☑ Entire action of all parties and all causes of action
   (6) ☑ Other (specify):* Dismissal pursuant to Stipulation and Voluntary Dismissal Without Prejudice

2. *(Complete in all cases except family law cases.)*
   ☐ Court fees and costs were waived for a party in this case. *(This information may be obtained from the clerk. If this box is checked, the declaration on the back of this form must be completed).*

Date: May 12, 2011

Carolyn Chang
(TYPE OR PRINT NAME OF ☑ ATTORNEY ☐ PARTY WITHOUT ATTORNEY)

*If dismissal requested is of specified parties only of specified causes of action only, or of specified cross-complaints only, so state and identify the parties, causes of action, or cross-complaints to be dismissed.

▶ Carolyn Chang
(SIGNATURE)

Attorney or party without attorney for:
☐ Plaintiff/Petitioner ☑ Defendant/Respondent
☐ Cross-Complainant

3. **TO THE CLERK:** Consent to the above dismissal is hereby given.**
   Date:

(TYPE OR PRINT NAME OF ☑ ATTORNEY ☐ PARTY WITHOUT ATTORNEY)

** If a cross-complaint – or Response (Family Law) seeking affirmative relief – is on file, the attorney for cross-complainant (respondent) must sign this consent if required by Code of Civil Procedure section 581 (i) or (j).

▶
(SIGNATURE)

Attorney or party without attorney for:
☐ Plaintiff/Petitioner ☐ Defendant/Respondent
☐ Cross-Complainant

(To be completed by clerk)

4. ☐ Dismissal entered as requested on (date):
5. ☐ Dismissal entered on (date): as to only (name):
6. ☐ Dismissal **not entered** as requested for the following reasons (specify):

7. a. ☐ Attorney or party without attorney notified on (date):
   b. ☐ Attorney or party without attorney not notified. Filing party failed to provide
   ☐ a copy to be conformed ☐ means to return conformed copy

Date: Clerk, by _____, Deputy

Form Adopted for Mandatory Use
Judicial Council of California
CIV-110 [Rev. July 1, 2009]

REQUEST FOR DISMISSAL

Code of Civil Procedure, § 581 et seq.;
Gov. Code, § 68637(c); Cal. Rules of Court, rule 3.1390
www.courtinfo.ca.gov

CAROLYN CHANG (CSB NO. 217933)
cchang@fenwick.com
MEREDITH ERDMAN (CSB NO. 273126)
merdman@fenwick.com
FENWICK & WEST LLP
Silicon Valley Center
801 California Street
Mountain View, California 94041
Telephone: (650) 988-8500
Facsimile: (650) 938-5200

HEATHER MEWES (CSB NO. 203690)
hmewes@fenwick.com
JENNIFER J. JOHNSON (CSB NO. 252897)
jjjohnson@fenwick.com
FENWICK & WEST LLP
555 California Street, 12th floor
San Francisco, CA 94104
Telephone: (415) 875-2300
Facsimile: (415) 281-1350

Attorneys for Defendant
The REGENTS OF THE UNIVERSITY OF CALIFORNIA

SUPERIOR COURT OF THE STATE OF CALIFORNIA

COUNTY OF LOS ANGELES - CENTRAL DISTRICT

NEUROGRAFIX; IMAGE-BASED SURGICENTER; INSTITUTE FOR NERVE MEDICINE MEDICAL GROUP; CENTER FOR ADVANCED SPINAL NEUROSURGERY MEDICAL GROUP; NEUROGRAPHY INSTITUTE MEDICAL ASSOCIATES,

Plaintiffs,

v.

The REGENTS OF THE UNIVERSITY OF CALIFORNIA; NEIL MARTIN, CHAIRMAN OF THE DEPARTMENT OF NEUROSURGERY, UCLA; DOES 1-20,

Defendants.

Case No. BC 447518

The Honorable Judge Shook, Dept. 53

STIPULATION AND VOLUNTARY DISMISSAL WITHOUT PREJUDICE

Complaint Filed: Oct. 15, 2010

WHEREAS, on October 15, 2010, Plaintiffs filed the above-referenced lawsuit against Defendants The Regents of the University of California ("The Regents"), Dr. Neil Martin ("Dr. Martin"), and DOES 1-20 for Inverse Condemnation; Denial of Due Process; Denial of Equal Protection; Trespass to Chattels; Conversion; Unjust Enrichment; Misappropriation; Unfair Competition; and Negligence in connection with The Regents' and Dr. Martin's alleged use of Neurography, including magnetic resonance neurography, diffusion weighted neurography, and diffusion tensor imaging;

WHEREAS, in exchange for dismissal of these claims and an agreement not to pursue these or any other state law claims against The Regents, Dr. Martin, or any other agent or employee of The Regents relating to their alleged use of Neurography, including magnetic resonance neurography, diffusion weighted neurography, and diffusion tensor imaging, The Regents agree to waive Eleventh Amendment sovereign immunity in federal court only with respect to a claim for infringement of U.S. Patent No. 5,560,360;

NOW THEREFORE, THE PARTIES, BY COUNSEL, HEREBY STIPULATE:

1. Plaintiffs agree to voluntarily dismiss Case No. BC 447518 ("Action") without prejudice, with each party to bear its own litigation costs and attorneys' fees related to the Action, the dismissal to be filed concurrently herewith;

2. Plaintiffs agree they will not assert against The Regents, Dr. Martin, and/or any other agent or employee of The Regents in any state or federal court any state law claims based on the alleged use of Neurography, including magnetic resonance neurography, diffusion weighted neurography, and diffusion tensor imaging by The Regents, Dr. Martin, and or any other agent or employee of The Regents; and

3. In exchange for Plaintiffs' agreement in paragraph 2 above, The Regents agree to waive sovereign immunity, whether pursuant to the Eleventh Amendment, inherent, or otherwise, and expressly consent to being sued, only with respect to a claim for infringement of U.S. Patent No. 5,560,360 that is filed within 90 days of dismissal of this Action. Except as expressly waived in this Stipulation, The Regents, Dr. Martin, and/or any other agent or employee of The Regents reserve all rights and defenses.

SO STIPULATED.

Dated: May ___, 2011

FENWICK & WEST LLP

By: _____
Carolyn Chang

Attorneys for Defendants
THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

Dated: May 12, 2011

STRASSBURG, GILMORE & WEI, LLP

By: _____ for
Justin Strassburg

Attorneys for Plaintiffs
NEUROGRAFIX; IMAGE-BASED SURGICENTER CORPORATION; INSTITUTE FOR NERVE MEDICINE MEDICAL GROUP INC.; CENTER FOR ADVANCED SPINAL NEUROSURGERY MEDICAL GROUP INC., and NEUROGRAPHY INSTITUTE MEDICAL ASSOCIATES, INC.

FENWICK & WEST LLP
ATTORNEYS AT LAW
MOUNTAIN VIEW

SO STIPULATED.

Dated: May 12, 2011

FENWICK & WEST LLP

By: Carolyn Chang /sig/
Carolyn Chang

Attorneys for Defendants
THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

Dated: May ___, 2011

STRASSBURG, GILMORE & WEI, LLP

By: _____
Justin Strassburg

Attorneys for Plaintiffs
NEUROGRAFIX; IMAGE-BASED SURGICENTER CORPORATION; INSTITUTE FOR NERVE MEDICINE MEDICAL GROUP INC.; CENTER FOR ADVANCED SPINAL NEUROSURGERY MEDICAL GROUP INC., and NEUROGRAPHY INSTITUTE MEDICAL ASSOCIATES, INC.

[PROPOSED] ORDER GRANTING STIPULATION AND VOLUNTARY DISMISSAL

Upon presentation of the Stipulation and Voluntary Dismissal, it is hereby ordered that:

1. This Action is hereby dismissed without prejudice.

DATED: _____, 2011

_____
THE HONORABLE JOHN P. SHOOK
JUDGE OF THE SUPERIOR COURT

PROOF OF SERVICE

The undersigned declares as follows:

I am a citizen of the United States and employed in San Francisco County, State of California. I am over the age of eighteen years and not a party to the within-entitled action. My business address is Fenwick & West LLP, 555 California Street, 12th Floor, San Francisco, California 94104. On the date set forth below, I served a copy of the following document:

REQUEST FOR DISMISSAL

on the interested party in the subject action by placing a true copy thereof as indicated below, addressed as follows:

Justin K. Strassburg
Strassburg, Gilmore & Wei, LLP
600 S. Lake Ave., Suite 305
Pasadena, CA 91106
Facsimile: (626) 683-9944

FENWICK & WEST LLP
ATTORNEYS AT LAW
MOUNTAIN VIEW

☒ **BY US MAIL:** by placing the document(s) listed above in a sealed envelope for collection and mailing following our ordinary business practices. I am readily familiar with our ordinary business practices for collecting and processing mail for the United States Postal Service, and mail that I place for collection and processing is regularly deposited with the United States Postal Service that same day with postage prepaid.

☐ **BY OVERNIGHT COURIER:** by placing the document(s) listed above in a sealed envelope with a prepaid shipping label for express delivery and causing such envelope to be transmitted to an overnight delivery service for delivery by the next business day in the ordinary course of business.

☒ **BY FACSIMILE:** by causing to be transmitted via facsimile the document listed above to the addressee at the facsimile number set forth above.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Date: May 13, 2011

Kim McIntyre
Kim McIntyre

US005560360A

United States Patent [19]

Filler et al.

[11] Patent Number: 5,560,360

[45] Date of Patent: Oct. 1, 1996

[54] **IMAGE NEUROGRAPHY AND DIFFUSION ANISOTROPY IMAGING**

[75] Inventors: **Aaron G. Filler**, Seattle; **Jay S. Tsurda**, Mercer Island; **Todd L. Richards**, Seattle, all of Wash.; **Franklyn A. Howe**, London, England

[73] Assignee: **University of Washington**, Seattle, Wash.

[21] Appl. No.: **28,795**

[22] Filed: **Mar. 8, 1993**

[30] **Foreign Application Priority Data**

Mar. 9, 1992	[GB]	United Kingdom	9205058
Mar. 13, 1992	[GB]	United Kingdom	9205541
Mar. 30, 1992	[GB]	United Kingdom	9207013
May 5, 1992	[GB]	United Kingdom	9209648
May 21, 1992	[GB]	United Kingdom	9210810
Jul. 31, 1992	[GB]	United Kingdom	9216383
Jan. 22, 1993	[GB]	United Kingdom	9301268

[51] **Int. Cl.**[6] **A61B 5/055**

[52] **U.S. Cl.** **128/653.2**; 324/307

[58] **Field of Search** 128/653.1, 653.2, 128/653.3; 324/307, 309

[56] **References Cited**

U.S. PATENT DOCUMENTS

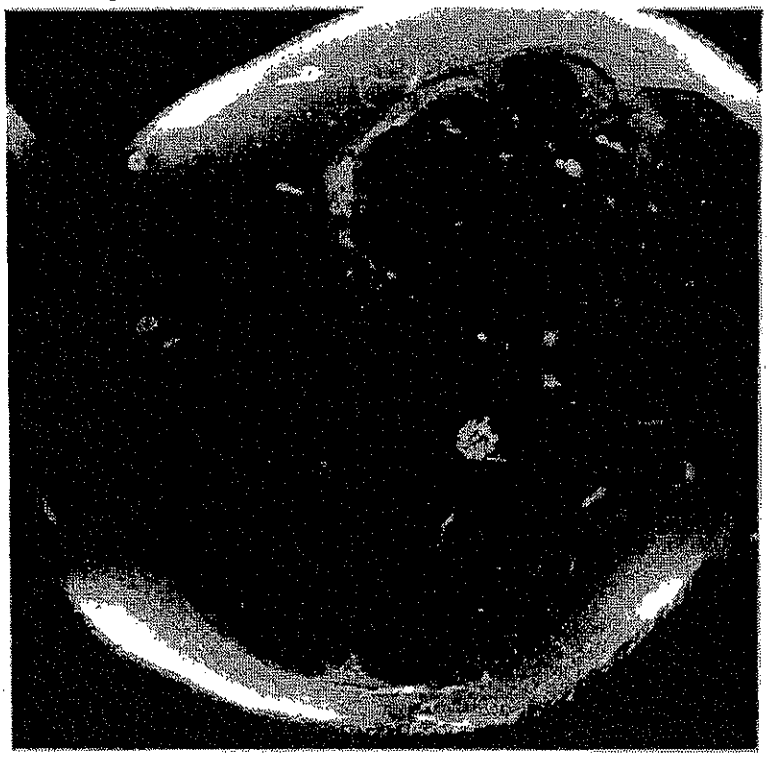
3,735,247	5/1973	Harker	128/653.1
4,902,973	2/1990	Keren	324/312
5,070,876	12/1991	Wright	128/653.3
5,078,141	1/1992	Suzuki et al.	324/309
5,079,505	1/1992	Deimling et al.	324/309
5,134,372	7/1992	Inoue	324/309
5,151,655	9/1992	Harms et al.	324/309
5,218,964	6/1993	Scpponen	324/309
5,250,899	10/1993	Listerud et al.	324/309
5,261,405	11/1993	Fossel	128/653.2

Primary Examiner—Marvin M. Lateef
Assistant Examiner—Brian L. Casler
Attorney, Agent, or Firm—Christensen, O'Connor, Johnson & Kindness PLLC

[57] **ABSTRACT**

A neurography system (**10**) is disclosed for generating diagnostically useful images of neural tissue (i.e., neurograms) employing a modified magnetic resonance imaging system (**14**). In one embodiment, the neurography system selectively images neural tissue by employing one or more gradients to discriminate diffusion anisotropy in the tissue and further enhances the image by suppressing the contribution of fat to the image. The neurography system is part of a broader medical system (**12**), which may include an auxiliary data collection system (**22**), diagnostic system (**24**), therapeutic system (**26**), surgical system (**28**), and training system (**30**). These various systems are all constructed to take advantage of the information provided by the neurography system regarding neural networks, which information was heretofore unavailable.

66 Claims, 17 Drawing Sheets



EX. B

Fig. 12.

Fig. 13.B.

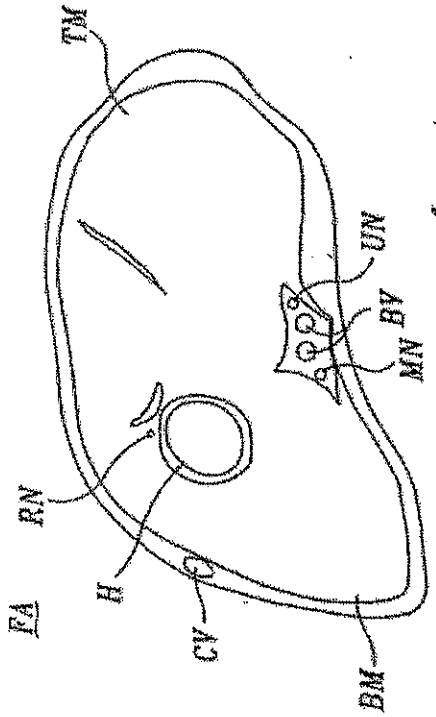


Fig. 1.

Fig. 13.A.

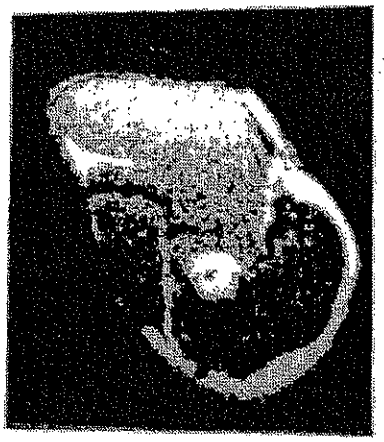


Fig. 2B.

Fig. 5B.

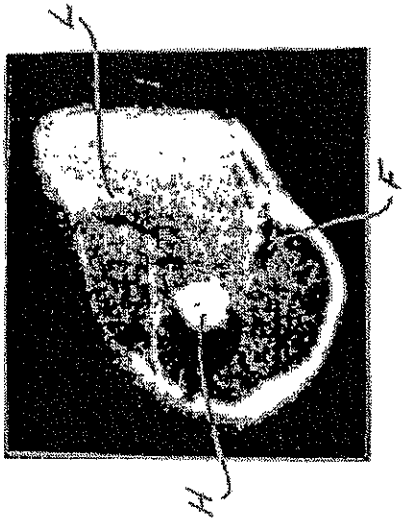


Fig. 2A.

Fig. 5A.

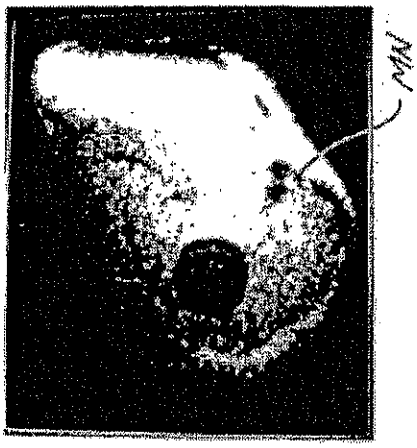


Fig. 3.

Fig. 4.

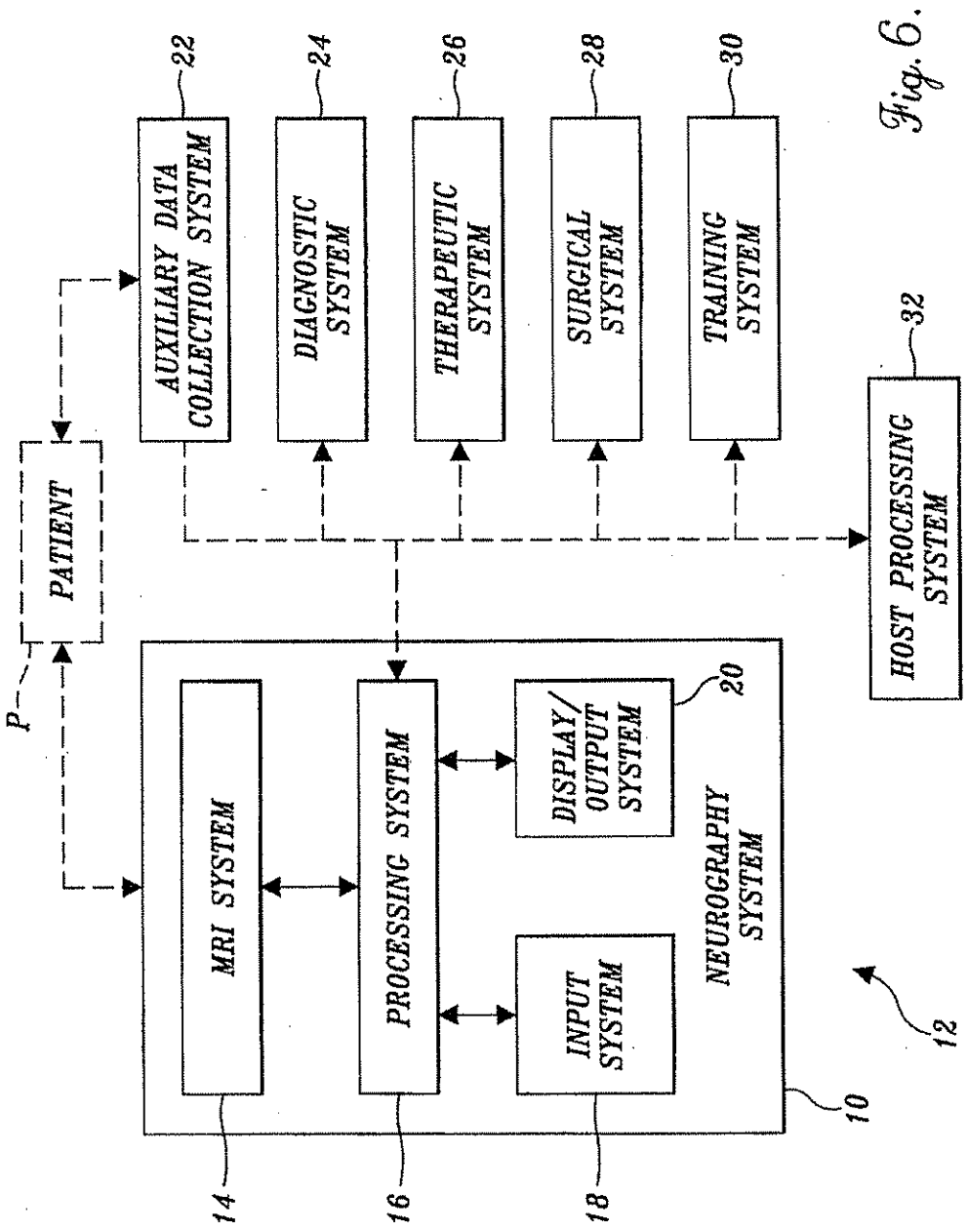

AUXILIARY DATA COLLECTION SYSTEM
22
DIAGNOSTIC SYSTEM
24
THERAPEUTIC SYSTEM
26
SURGICAL SYSTEM
28
TRAINING SYSTEM
30
HOST PROCESSING SYSTEM
32
PATIENT
P
MRI SYSTEM
PROCESSING SYSTEM
DISPLAY/ OUTPUT SYSTEM
20
INPUT SYSTEM
NEUROGRAPHY SYSTEM
12
10
14
16
18

Fig. 6.

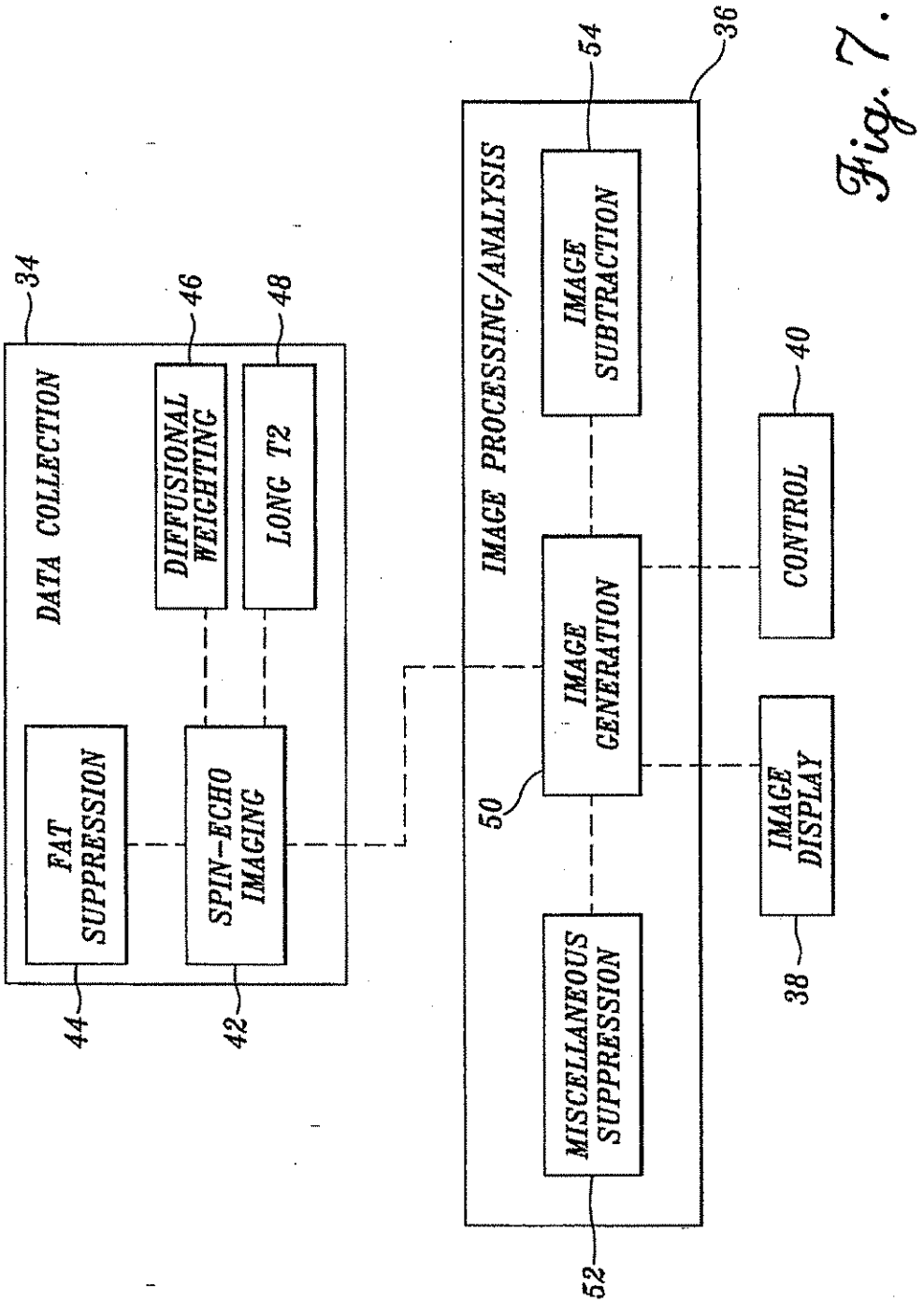
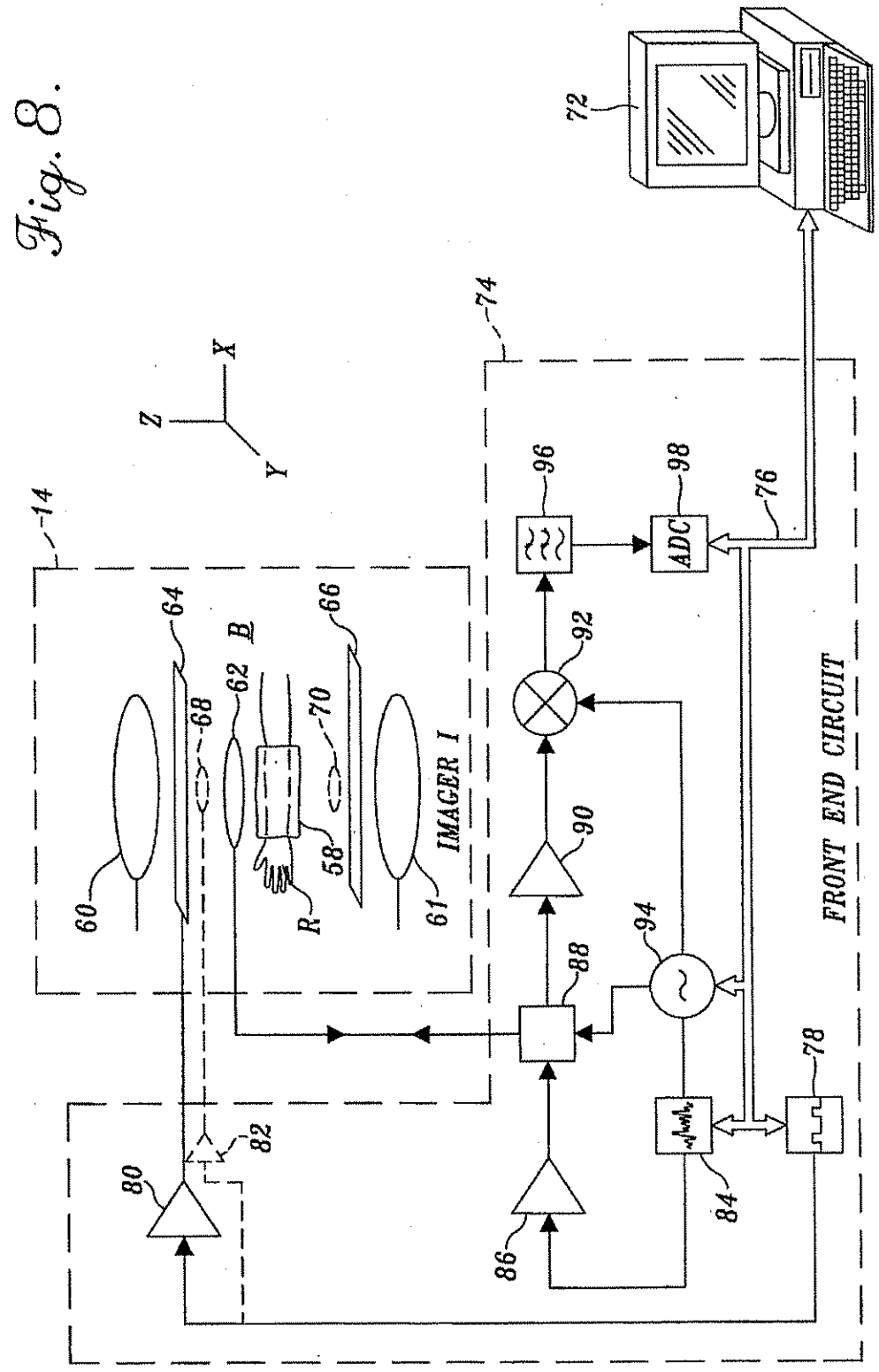

DATA COLLECTION
34
FAT SUPPRESSION
44
SPIN-ECHO IMAGING
42
DIFFUSIONAL WEIGHTING
46
LONG T2
48
IMAGE PROCESSING/ANALYSIS
36
IMAGE SUBTRACTION
54
IMAGE GENERATION
50
MISCELLANEOUS SUPPRESSION
52
CONTROL
40
IMAGE DISPLAY
38

Fig. 7.

Fig. 8.


72
74
X
Z
Y
14
96
98
ADC
76
64
B
66
62
68
70
92
IMAGER I
90
60
58
R
61
94
88
FRONT END CIRCUIT
78
82
80
84
86

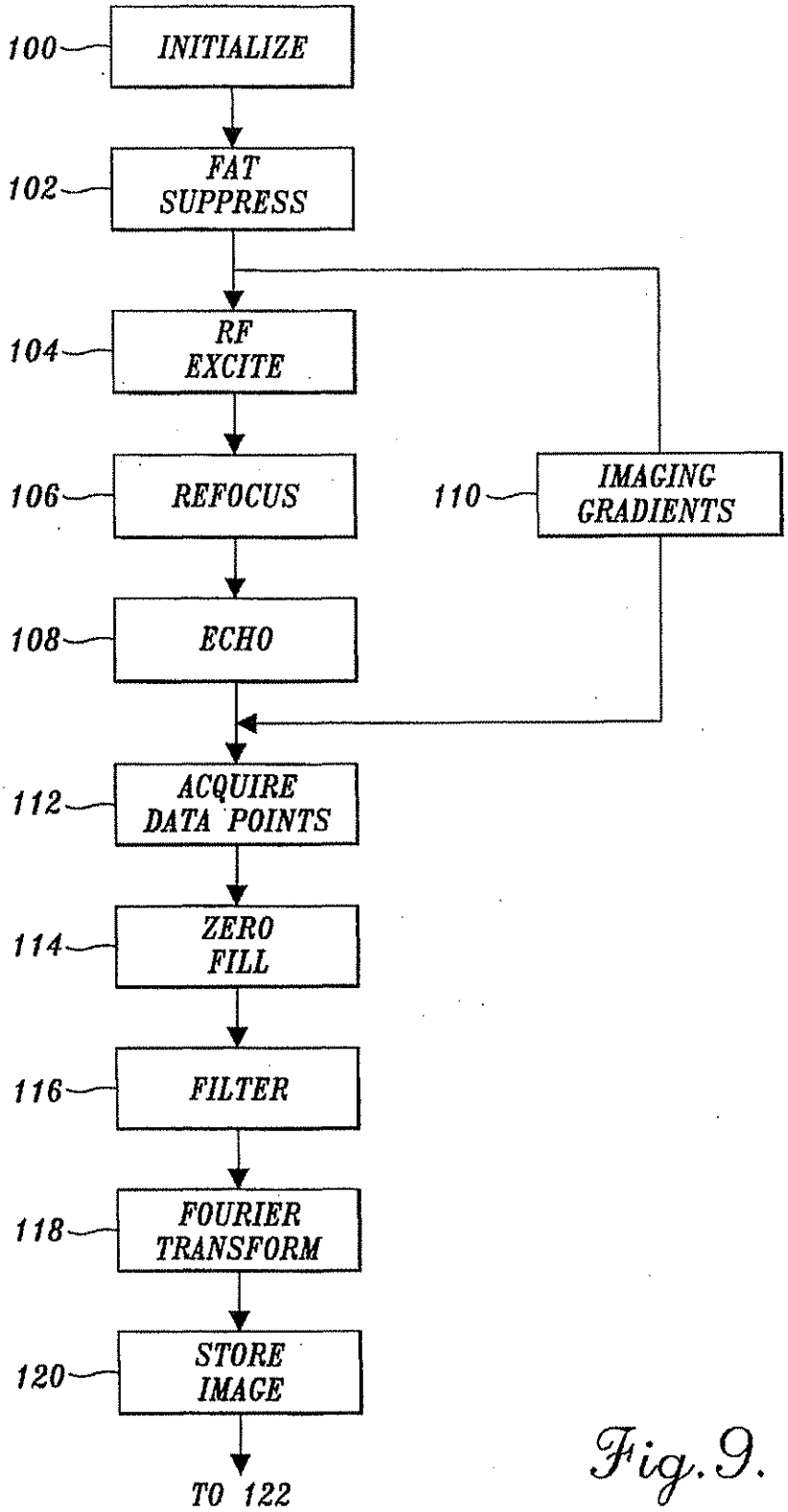

100
INITIALIZE
102
FAT SUPPRESS
104
RF EXCITE
106
REFOCUS
110
IMAGING GRADIENTS
108
ECHO
112
ACQUIRE DATA POINTS
114
ZERO FILL
116
FILTER
118
FOURIER TRANSFORM
120
STORE IMAGE
TO 122

Fig. 9.

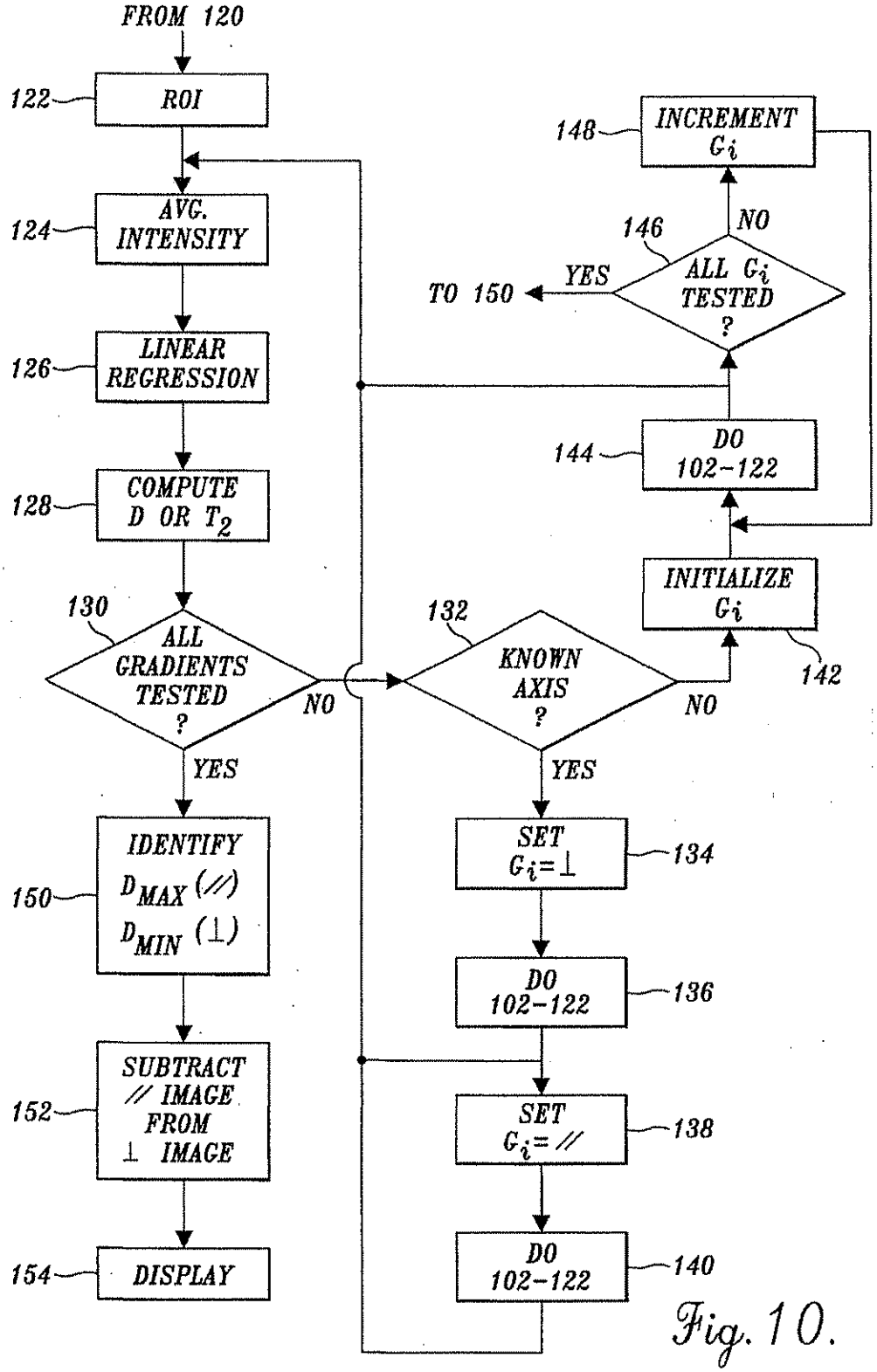

FROM 120
122
ROI
124
AVG. INTENSITY
126
LINEAR REGRESSION
128
COMPUTE D OR T_2
130
ALL GRADIENTS TESTED ?
NO
YES
150
IDENTIFY D_{MAX} (//) D_{MIN} (⊥)
152
SUBTRACT // IMAGE FROM ⊥ IMAGE
154
DISPLAY
132
KNOWN AXIS ?
NO
YES
134
SET G_i=⊥
136
DO 102-122
138
SET G_i=//
140
DO 102-122
142
INITIALIZE G_i
144
DO 102-122
146
ALL G_i TESTED ?
YES
TO 150
NO
148
INCREMENT G_i

Fig. 10.

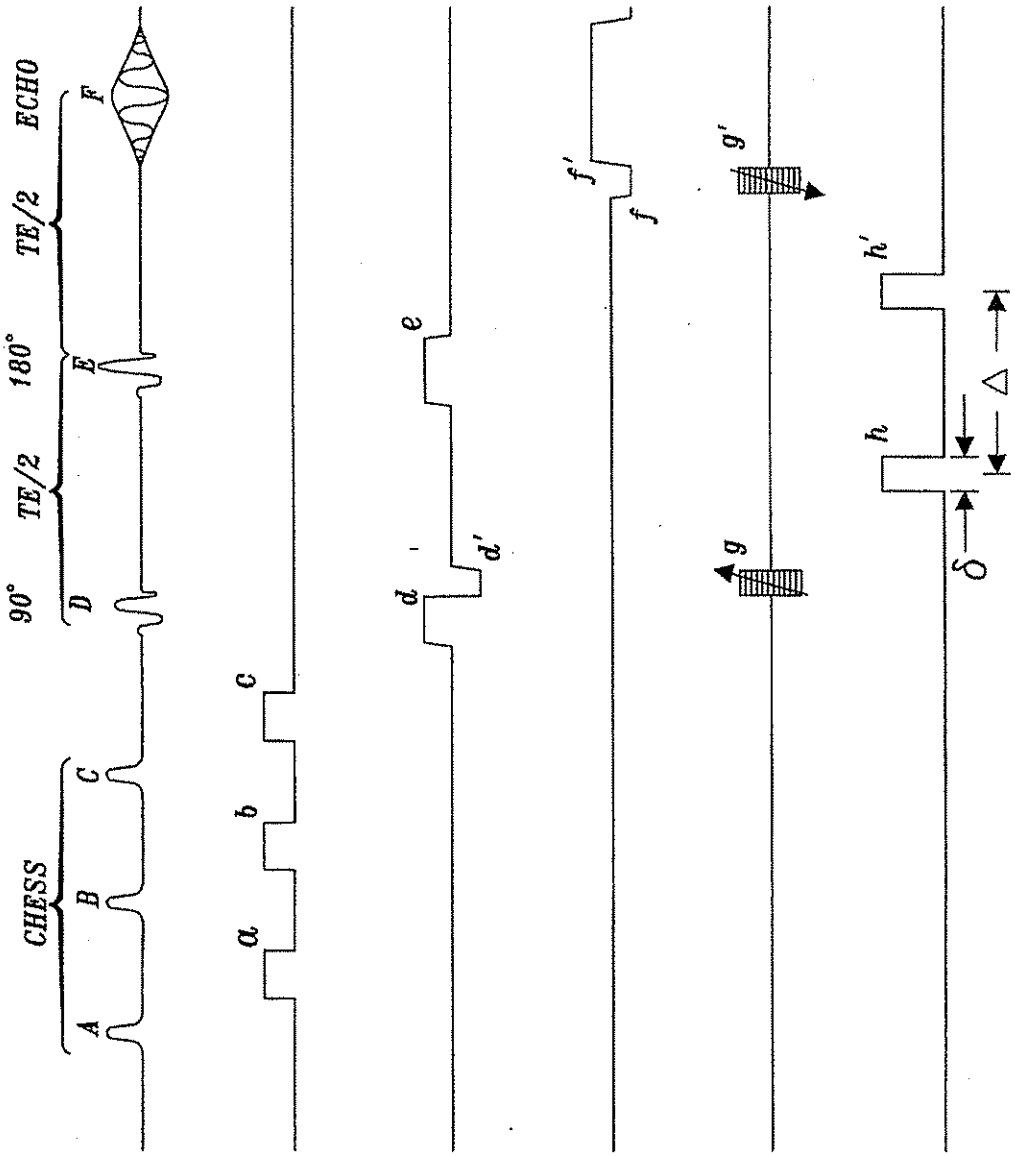


Fig. 11A. RADIO FREQUENCY PULSES

Fig. 11B. DEPHASING/ SPOILER GRADIENTS

Fig. 11C. SLICE SELECTION GRADIENTS

Fig. 11D. FREQUENCY ENCODING/ READOUT GRADIENT

Fig. 11E. PHASE ENCODING

Fig. 11F. DIFFUSION SENSITIZING GRADIENTS

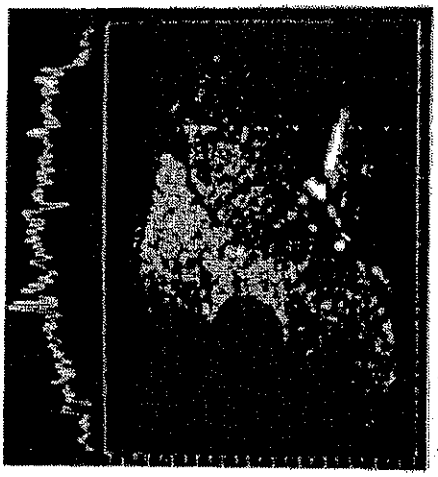


Fig. 14B.

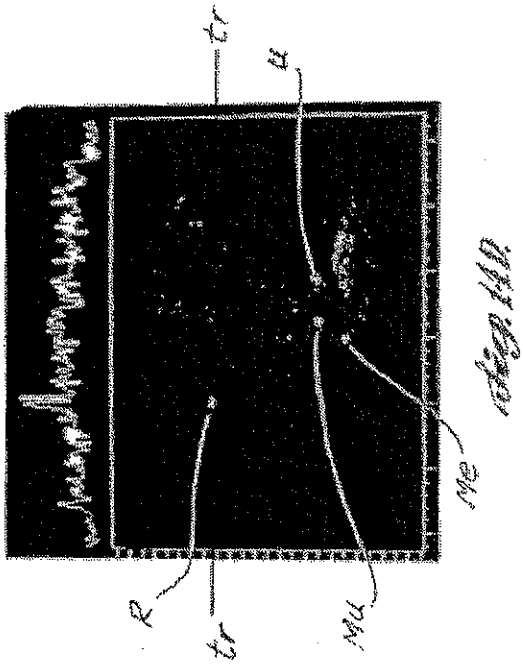


Fig. 14D.

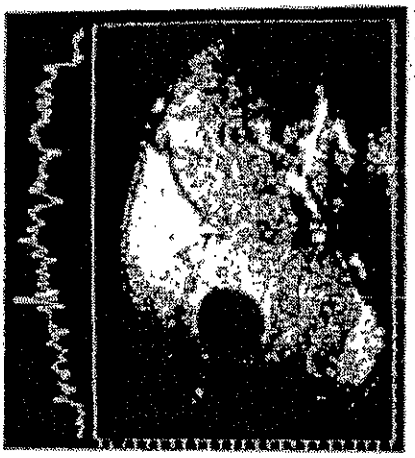


Fig. 14A.

Fig. 14C.

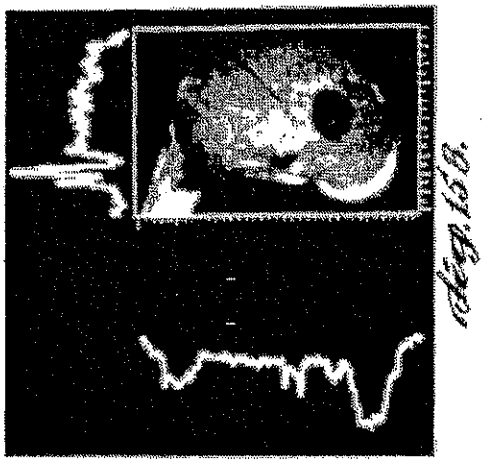


Fig. 15B.

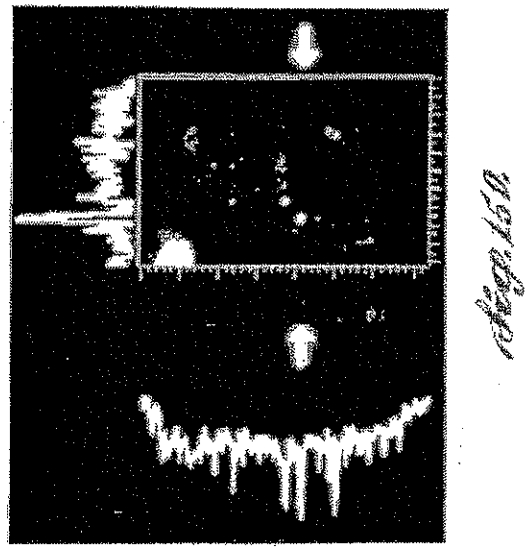


Fig. 15C.

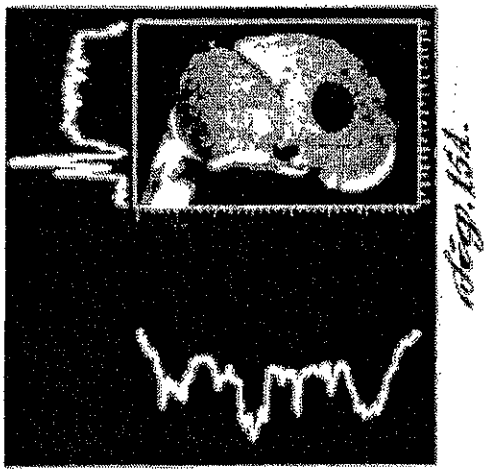


Fig. 15A.

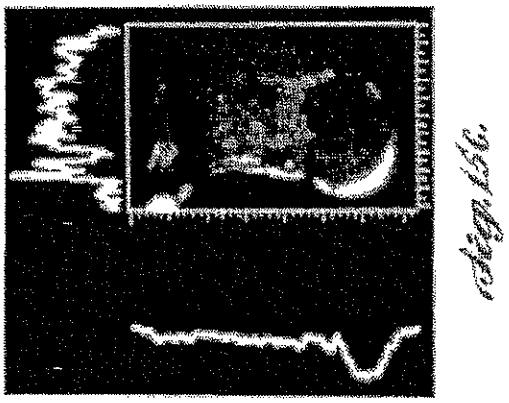


Fig. 15D.

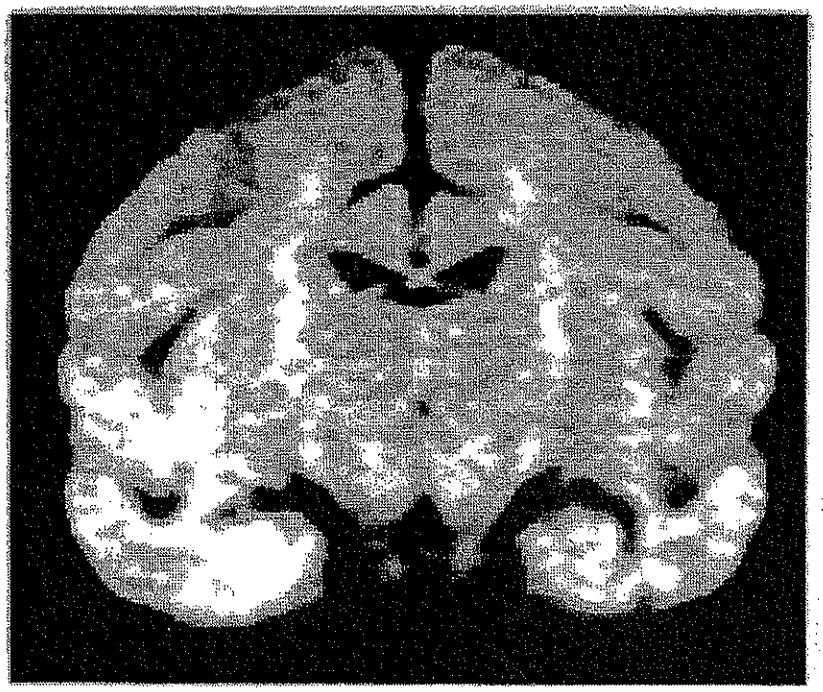


Fig. 16.

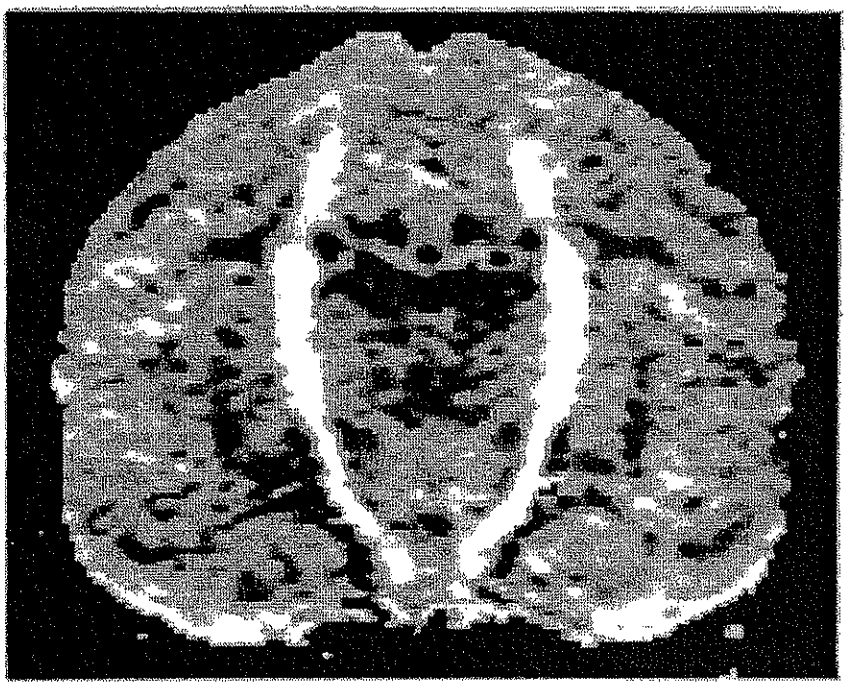


Fig. 17.

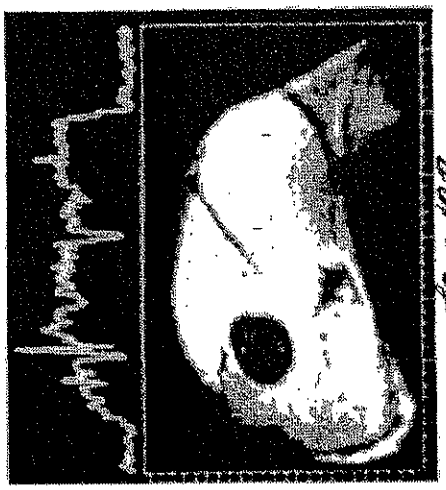


Fig. 18A.

Fig. 18B.

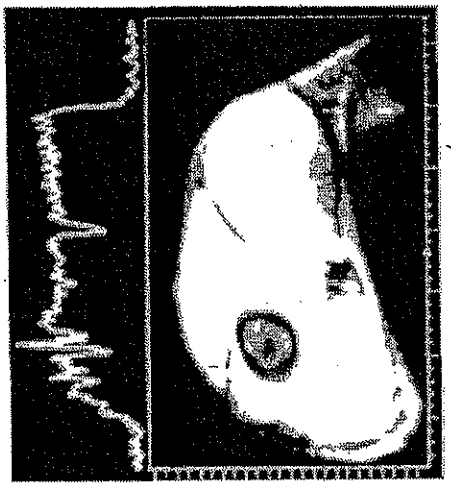


Fig. 18C.

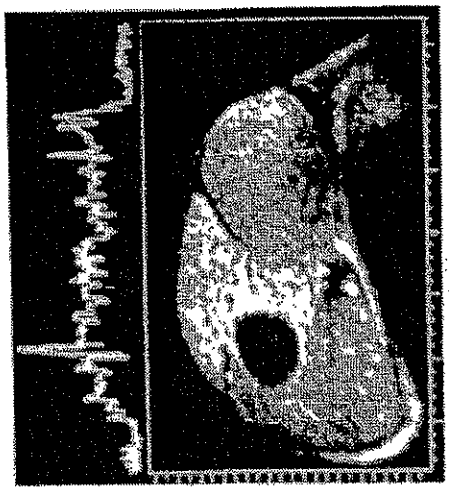


Fig. 18D.

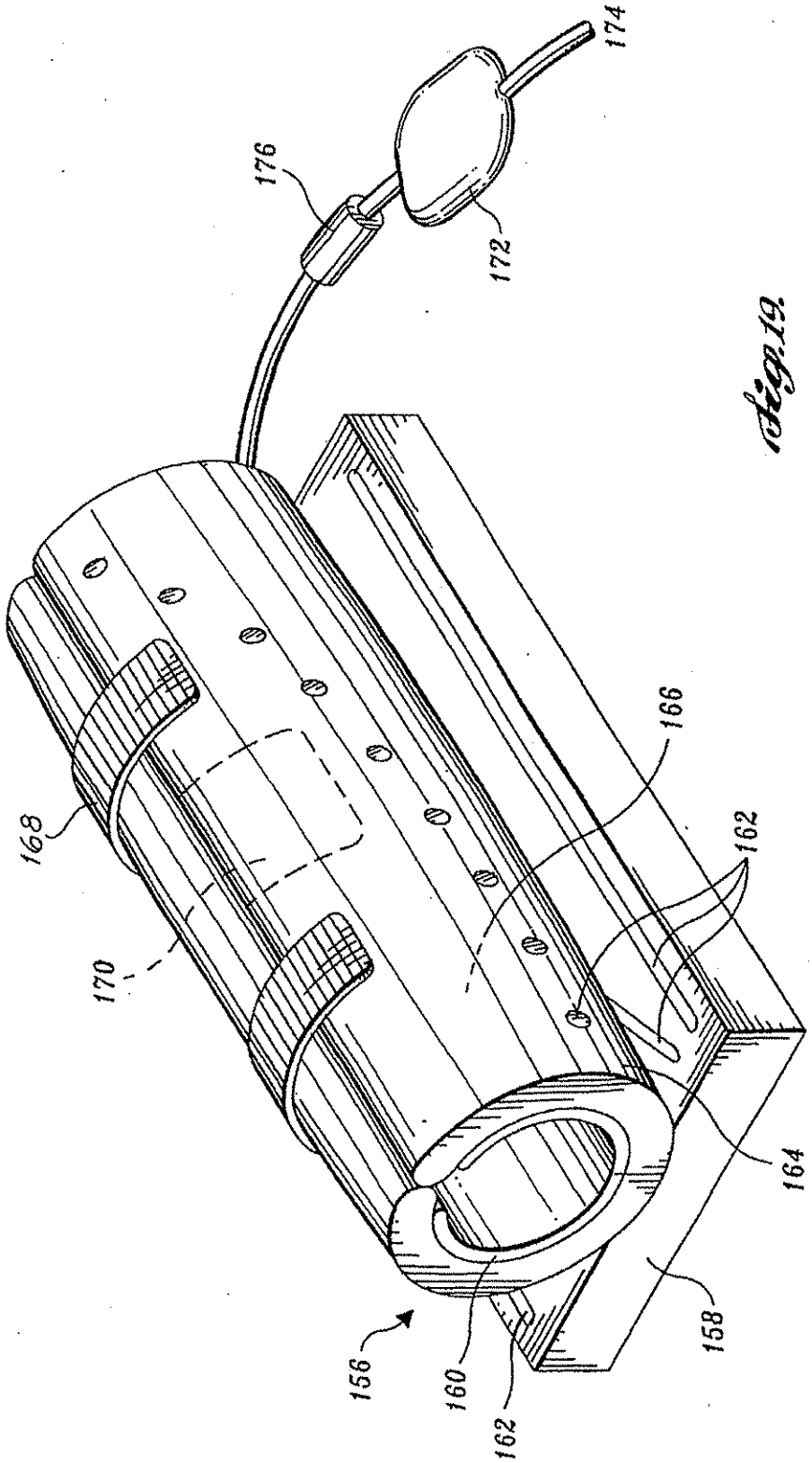


Fig. 19.

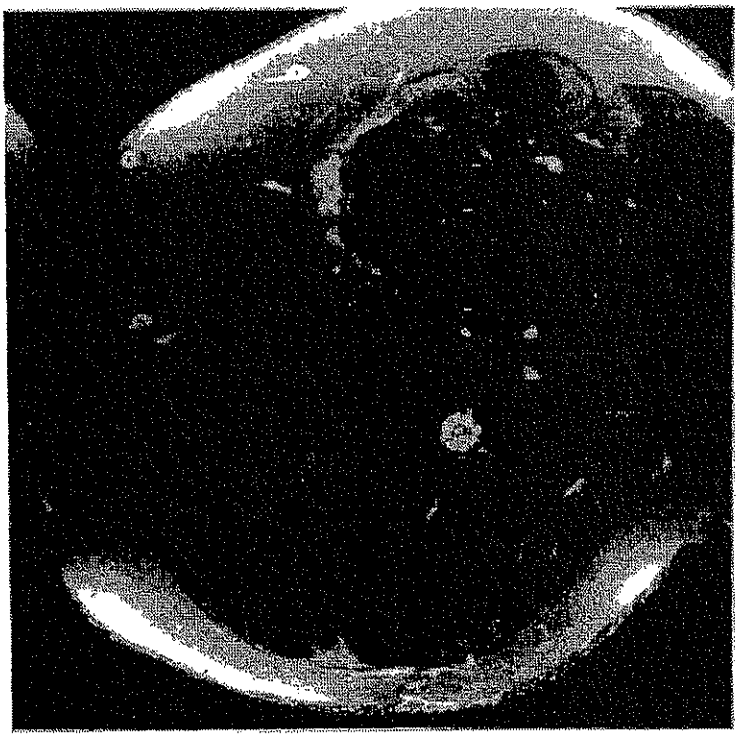


Fig. 20.

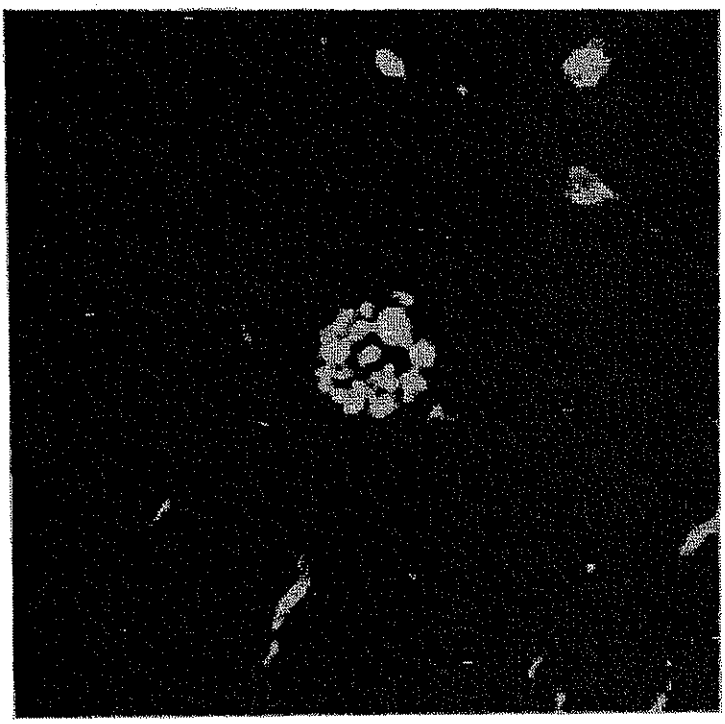


Fig. 21.

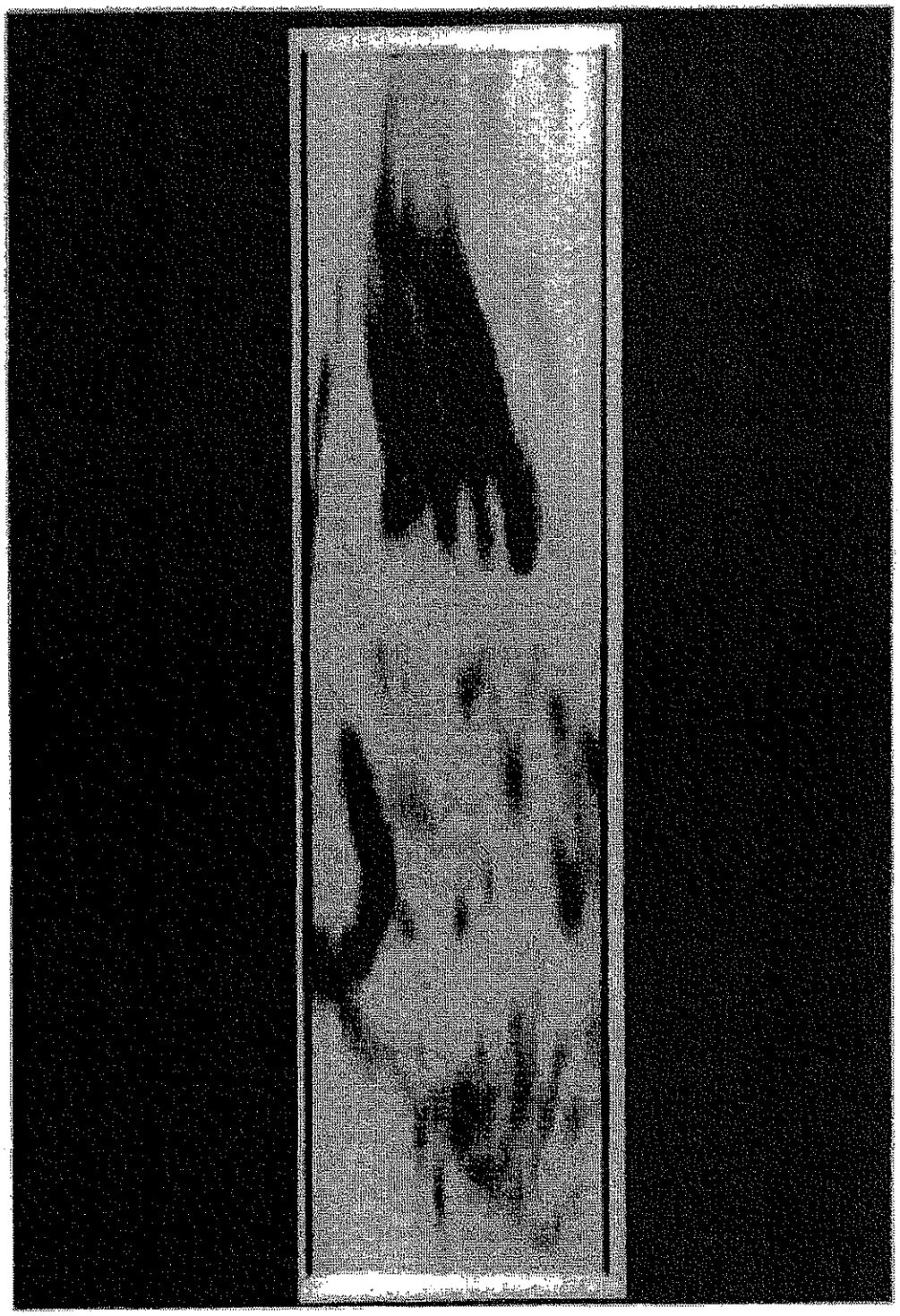


Fig. 22.

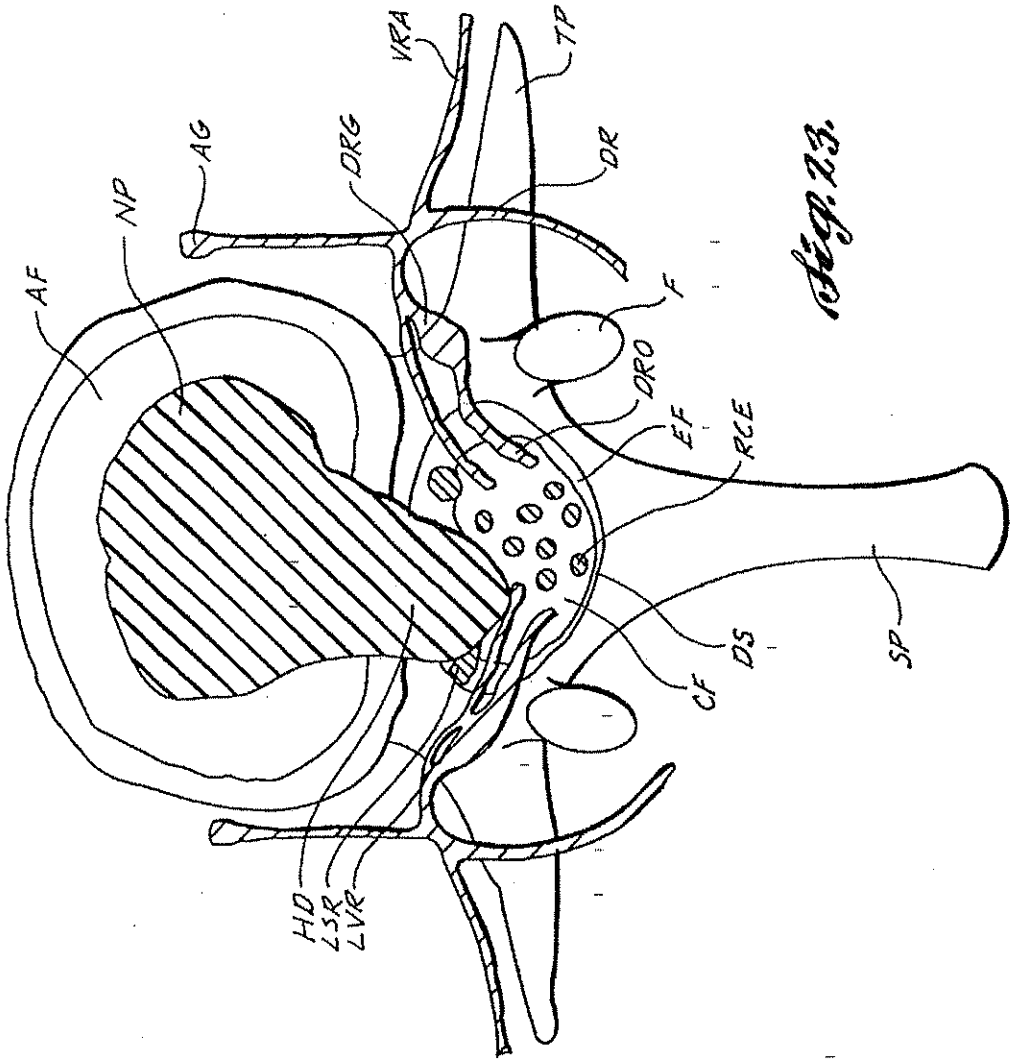


Fig. 23.

Fig. 24.