

**THIS OPINION WAS NOT WRITTEN FOR PUBLICATION**

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 26

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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**Ex parte** GARY K. MICHELSON

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Appeal No. 97-2888  
Application 08/389,077<sup>1</sup>

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ON BRIEF

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Before ABRAMS, McQUADE and GONZALES, **Administrative Patent Judges.**

GONZALES, **Administrative Patent Judge.**

**DECISION ON APPEAL**

This is a decision on appeal from the examiner's final rejection of claims 1-8, 13-23, 27, 32-36, 40-46 and 61-64 under

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<sup>1</sup>Application for patent filed February 14, 1995. According to appellant, this application is a continuation of application 08/108,885, filed August 18, 1993, now abandoned.

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35 U.S.C. § 103. Claims 9-11, 24-26, 37-39 and 58-60 have been

allowed. Claims 28-31 and 47-54 have been withdrawn from consideration as being directed to a nonelected invention. Claims 12 and 55-57 have been canceled.

Appellant's invention relates to an adjustable surgical frame for supporting a patient on an operating table during spinal surgery. Except for claim 27, the claims on appeal have been reproduced in "Appendix A" attached to appellant's Brief (Paper No. 20). A copy of claim 27 is appended to this decision.<sup>2</sup>

#### THE REFERENCES

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Heffington, Jr. (Heffington)	4,391,438	Jul. 05, 1983
Michelson (Michelson '943)	4,481,943	Nov. 13, 1984

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<sup>2</sup> We note the following errors in the claims on appeal: in claim 32, line 8, "said" (second occurrence) should be deleted; in claim 44, line 2, after "member" (first occurrence), --and-- should be inserted. In the event of further prosecution, the examiner should require correction of these errors.

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Michelson (Michelson '892)            4,908,892                            Mar. 20, 1990

**THE REJECTIONS**

Claims 1-7, 13-23, 27, 32-35, 40-46 and 61-64 stand rejected under 35 U.S.C. § 103 as being unpatentable over Michelson '943 in view of Heffington.

Claims 8 and 36 stand rejected under 35 U.S.C. § 103 as being unpatentable over Michelson '943 in view of Heffington and further in view of Michelson '892.

The rejections are explained in the Examiner's Answer (Paper No. 21).

The opposing viewpoints of the appellant are set forth in the Brief.

**OPINION**

We shall sustain the examiner's § 103 rejection of claims 18, 20, 22, 27, 32, 35, and 44-46 based on Michelson '943 in view of Heffington and the § 103 rejection of claim 36 based on Michelson '943 in view of Heffington and Michelson '892. We do not, however, sustain the § 103 rejection of claims 1-7, 13-17, 19, 21, 23, 33, 34, 40-43 and 61-64 based on Michelson '943 in view of Heffington or the § 103 rejection of claim 8

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based on

Michelson '943 in view of Heffington and Michelson '892. With respect to claims 1, 6, 8, 16, 17, 21, 23, 34, 41, 42 and 61-64, we enter new grounds of rejection under the provisions of 37 CFR

§ 1.196(b). We begin with the new grounds of rejection under 35 U.S.C. § 112, second paragraph.

Claims 1, 6, 8, 16, 17, 21, 34, 41, 42 and 61-64 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the appellant regards as the invention.

**Claim 1** calls for an adjustable surgical frame having means for cantilevering at least a portion of the surgical frame off the end of an operating table (the cantilevering means is described in the specification at page 17 as including the pivoting legs **146, 148, 150** and **152**). Claim 1

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also recites a plurality of pivoting legs pivotally attached to first and second frame members. Our difficulty with these claim limitations is that claim 1 recites the cantilevering means as if it were separate from the claimed pivoting legs **146, 148, 150 and 152**. Yet, it is the pivoting legs **146, 148, 150 and 152** that perform the function of cantilevering at least a portion of the surgical frame off the end of an operating table.

Thus, it is not clear to us how the cantilevering means and the pivoting legs can be read on the disclosed invention without reading the cantilevering means and the pivoting legs on the same elements or parts. Since the specification states that it is the pivoting legs that allow the surgical frame to be cantilevered off one end of the operating table, it appears that appellant has claimed the same elements twice. Thus, claim 1 and its dependent **claim 17** are rendered indefinite by the double inclusion of the same elements. See Ex parte

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Kristensen, 10 USPQ2d 1701, 1703 (Bd. Pat. App. & Int. 1989).

A claim containing a means-plus-function element is indefinite under 35 U.S.C. § 112, second paragraph, if the specification does not contain an adequate disclosure of structure corresponding to the function of the claims. In re Dossel, 115 F.3d 942, 946, 42 USPQ2d 1881, 1885 (citing In re Donaldson Co. Inc., 16 F.3d 1189, 1195, 29 USPQ2d 1845, 1850 (Fed. Cir. 1994) (en banc)).

Claim 1 further calls for a means for changing the position of the pivoting legs relative to first and second frame members.

It is not clear to us what structure disclosed in the specification corresponds to this means-plus-function language. With reference to appellant's Figures 2 and 6-10, the specification (pages 14-15) describes the pivoting legs as follows:

Pivoting leg 146 is identical in construction to the other legs 148, 150, 152 so that they are interchangeable. The pivoting leg 146 has an

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extension plate 220 that receives a hex bolt 215 at one end and an attach-ment post 222 that projects perpendicularly from the other end of the extension plate 220. The extension plate 220 is flat and fits closely with the horizontal lower side rods 110, 112 of the side frame members 102, 104. In order to loosen and secure the pivoting leg 146, the hex bolt 215 attaches the extension plate 220 of the pivoting leg 146 to the bottom of the side frame members 102, 104. The hex bolt may be tightened or loosened by a hex key K.

We can find no specific description of the structure for changing the position of the pivoting legs relative to first and second frame members. We do not know whether the means for changing the position of the pivoting legs relative to first and second frame members is the hex bolt 215, the hex bolt and the attachment plate 220 or includes additional or different structure. For the additional reason set forth above, we cannot determine the scope of the invention sought to be patented by claim 1 and its dependent claim 17 with a reasonable degree of certainty. Thus, the scope of claims 1 and 17 is not clearly defined.

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Assuming the structure corresponding to the means for changing the position of the pivoting legs relative to the first and second frame members includes the attachment plate 220, which is disclosed in the specification as forming a part of both the pivoting legs and the cantilevering means, the attachment plate is recited in claim 1 three different times. Such multiple inclusions of the same element also renders claim 1 and its dependent claim 17 indefinite.

**Claims 6, 21 and 34** are dependent on and, thus, incorporate by reference all the limitations of independent claims 2, 18 and 32, respectively. Claims 2 and 32 call for an adjustable surgical frame having a plurality of pivoting legs pivotally attached to first and second frame members. Claim 18 calls for an adjustable surgical frame having a plurality of legs extending downward from and pivotally attached to first and second frame members. Claims 6, 21 and 34 further call for means for cantilevering at least a portion of the adjustable surgical frame off the end of an operating table. Thus, for the reasons given

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above with respect to claims 1 and 17, claims 6, 21 and 34 are also rendered indefinite by the double inclusion of the same elements. **Claims 62 and 63** are dependent on claim 6 and are likewise indefinite.

**Claims 8 and 16** are indefinite because there is no apparent antecedent basis for "said major posterior support member."

**Claim 41 and claims 42 and 64**, which depend on claim 41, are indefinite because there is no apparent antecedent for "the side" recited in line 2 of claim 41.

**Claim 61** is clearly incomplete because it is dependent on claim 55 which was previously canceled.

In some instances, it is possible to make a reasonable, conditional interpretation of claims adequate for the purpose of resolving patentability issues to avoid piecemeal appellate review. In the interest of administrative and judicial economy, this course is appropriate wherever reasonably possible. See Ex parte Saceman, 27 USPQ2d 1472, 1474 (Bd. Pat. App. & Int. 1993); Ex parte Ionescu, 222 USPQ 537, 540

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(Bd. App. 1984). In other instances, however, it may be impossible to determine whether or not claimed subject matter is anticipated by or would have been

obvious over references because the claims are so indefinite that considerable speculation and assumptions would be required

regarding the meaning of terms employed in the claims with respect to the scope of the claims. See In re Steele, 305 F.2d 859, 862, 134 USPQ 292, 295 (CCPA 1962).

For the reason discussed above, we consider the appellant's claims 1, 6, 8, 16, 17, 21, 34, 41, 42 and 61-64 to be sufficiently indefinite that application of the references applied by the examiner in rejecting the claims under 35 U.S.C. § 103 is not possible. On this basis, we will not sustain the rejections of claims 1, 6, 8, 16, 17, 21, 34, 41, 42 and 61-64 under 35 U.S.C. § 103. It should be understood that this reversal is not a reversal on the merits of the rejections, but rather is a procedural reversal predicated upon the indefiniteness of the claims.

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We will, however, sustain the rejection of claims 18, 20, 22, 27, 32, 35 and 44-46 under 35 U.S.C. § 103 as being unpatentable over Michelson '943 in view of Heffington.

Michelson '943 discloses an adjustable surgical frame comprising first and second brackets **10** and **12** (corresponding to

the claimed first and second side frame members) each being in the form of a closed loop and having a forward vertical member **14**

and a bottom horizontal member **16**, a posterior support member **24**

(corresponding to the major posterior support member recited in claims 18 and 32), a locking member **32** which is adjustable (col. 4, lines 28-31) to a variety of positions and interchangeable

(col. 3, line 53 to col. 4, line 2) with member **24**

(corresponding to the minor posterior support member of appellant's claim 32), a plurality of mounting rods or legs **42**

extending downwardly from the bottom horizontal members **16** and a plurality of rail clamps **44** for removably mounting the surgical frame to a conventional operating table. The reference also discloses that the height of the frame over the operating table may be adjusted by varying the depth that the mounting rods **42** are inserted in the rail clamps **44** (col. 4, line 10-14).

Heffington discloses a patient support attachment for an operating table to facilitate surgery of the spine comprising an adjustable platform **12** for supporting the legs of a prone patient, a pair of adjustable swivel clamps **18** carried by the

operating table, a pair of elongated support rods **15** adjustably held in the side swivel clamps, a support panel **14** for the buttocks and thighs of a patient disposed between said support rods, and a second pair of opposite side adjustable swivel clamps **18** carried by the support panel for the buttocks and thighs and being adjustably engaged with the support rods and the support panel. The support rods are provided with

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intermediate lateral offsets **16** whereby the rods can be rotationally adjusted to fit operating tables of different widths (col. 2, lines 58-64).

The examiner finds correspondence between the structure disclosed in Michelson '943 and appellant's **claims 18 and 32**, except for the pivoting legs. It is the examiner's position that

Heffington, Jr. teaches that the problem of fitting surgical supports to operating tables of different widths was known in the art and a solution to this problem was to provide the frame with pivotal mounting rods . . . . From the teaching in Heffington, Jr., it would have been obvious to one skilled in the art to substitute the pivoting rods shown in Heffington, Jr. for the mounting rods disclosed in Michelson . . . . (Answer, page 5)

It is the appellant's position that neither reference shows pivoting legs attached to a surgical frame and that Heffington's support rods are attached to a padded buttocks support, not to a surgical frame as recited in the independent claims.

We do not find appellant's argument to be persuasive. The test for obviousness is what the combined teachings of the

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references would have suggested to one of ordinary skill in the art. See In re Young, 927 F.2d 588, 591, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991) and In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1881). Nonobviousness cannot be established by attacking the references individually when the rejection is predicated upon a combination of prior art disclosures. See In re Merck & Co. Inc., 800 F.2d 1091, 1097, 231 USPQ 375, 380 (Fed. Cir. 1986). We view appellant's argument as an attack on Heffington individually.

We agree that Heffington does not show the support rods **15** attached to a frame on which buttocks support panels are mounted. However, Michelson '943 clearly shows a plurality of mounting rods or legs **42** extending downwardly from the bottom horizontal members **16** of a frame on which buttocks support panels are mounted. The examiner cited Heffington as evidence that it would have been obvious to a person of ordinary skill in the art at the time of appellant's invention to substitute support rods having lateral off-sets for the straight rods or legs **42** taught by

Michelson '943 and to mount the support rods on the brackets

**10**

and **12** shown in Michelson '943 using swivel clamps as taught by Heffington. The motivation for modifying Michelson '943 in such a manner is found in Heffington's teaching that the use of

rotatably adjustable support rods provided with intermediate lateral offsets can be used to mount patient supports to operating tables of different widths.

With regard to the "plurality of universal rail clamps" recited in claim 18,<sup>3</sup> we note that no specific structure of the clamps is recited for performing the function of "removably mounting the surgical frame to a variety of conventional operating tables having different widths and different sized side rails." Accordingly, we agree with the

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<sup>3</sup> We observe that the preamble of independent claim 18 is inconsistent with the body of that claim. That is, the preamble sets forth "[a]n adjustable surgical frame" whereas the body of the claim, in addition to setting forth details of the adjustable surgical frame, also sets forth a "plurality of universal rail clamps." Accordingly, we interpret independent claim 18 to be directed to the combination of an adjustable surgical frame and a plurality of universal rail clamps.

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examiner that the limitation is met by the clamps **18** shown in Heffington, since the clamps disclosed by the reference are clearly capable of being mounted to a variety of conventional operating tables having different widths and different sized side rails, i.e., side rails having different lengths.

In view of the above, we will sustain the examiner's rejection of claims 18 and 32.

**Claims 20, 22 and 27** (dependent on claim 18) and **claims 35, 44, 45 and 46** (dependent directly or indirectly on claim 32) have not been separately argued by appellant as required in 37 CFR § 1.192(c)(8)(1996). Accordingly, we have determined that these claims must be treated as standing or falling with their respective independent claim. See In re Nielson, 816 F.2d 1567, 1572, 2 USPQ2d 1525, 1528 (Fed. Cir. 1987). Thus, it follows that the examiner's rejection of claims 20, 22, 27, 35, 44, 45 and 46 is also affirmed.

We will also sustain the rejection of claim 36 under 35 U.S.C. § 103 as being unpatentable over Michelson '943 in view of Heffington and further in view of Michelson '892.

**Claim 36** depends from claim 35 (which depends from claim 32) and further calls for a pair of lateral support panels extending from the major posterior support member. Appellant, in addition to arguing that the limitations of claim 32 are not taught or suggested by the applied references, also argues (Brief, pages 15

and 16) that none of the references disclose means for adjusting the height of the surgical frame relative to the surface of an operating table as recited in claim 36.<sup>4</sup>

We have already considered and found unpersuasive appellant's arguments with respect to claim 32 above. As to the height adjusting means of claim 36, Michelson '943 clearly teaches that the height of the frame over the operating table

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<sup>4</sup> The means for adjusting the height of the surgical frame relative to the surface of an operating table is actually found in claim 35 from which claim 36 depends.

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may be adjusted by controlling the depth that the mounting rods 42 are inserted in the rail clamps 44 (see col. 4, lines 10-13). Accordingly, we will sustain the § 103 rejection of claim 36 based on Michelson '943, Heffington and Michelson '892.

We will not, however, sustain the § 103 rejection of claims 2-5, 7, 13-15, 19, 23, 33, 40 and 43 based on Michelson '943 in view of Heffington.

**Claim 2**, as well as **claims 3-5 and 7** dependent therefrom, and **claims 19 and 33** recite first and second side frame members each comprising a forward vertical member, a bottom horizontal member, a top horizontal member parallel to the bottom horizontal

member, a rearward vertical member parallel to the forward vertical member and an angled rearward member connected to the top horizontal member and to the rear vertical member, i.e., a five-sided closed loop construction.

Michelson '943 discloses first and second side frame members each comprising a three-sided closed loop construction. The examiner's position is that the shape of the first and second side frame members is a matter of design choice.

Appellant, on the other hand, argues that the specification identifies an advantage of the five-sided construction over the three-sided construction shown by the prior art, e.g., that the five-sided construction permits the use of a shorter bottom horizontal member, but retains the strength and stability of the three-sided construction. As appellant points out, the specification discloses that, as a result of a shorter bottom horizontal member, the appellant's frame may be positioned closer to the end of the operating table to provide the surgeon with improved access to the patient's spine when the operating table is pitched at a 45E angle (specification, pages 3, 4 and 9). Accordingly, the specific five-sided frame construction solves a

known problem in the art. Thus, we do not agree that the examiner has a valid basis for asserting that it would have been

an obvious matter of mechanical "design choice" to construct the first and second brackets **10** and **12** shown by Michelson '943 as a five-sided closed loop.<sup>5</sup>

With respect to **claims 13-15, 40 and 43**, each of these claims calls for the pivoting legs to each include an extension

plate **220**. The examiner acknowledges (Answer, page 6) that Heffington's elongated support rods **15** are of a unitary construction, but argues that they "could" be made of three parts.

The appellant argues (Brief, page 13) that there is no teaching or suggestion in the prior art of making Heffington's support rods out of three pieces and that the examiner's rejection is based on impermissible hindsight. We agree. In that regard, the examiner has not cited any evidence that

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<sup>5</sup> Cf. In re Kuhle, 526 F.2d 553, 555, 188 USPQ 7, 9 (CCPA 1975) wherein the court indicated that the rationale of "obvious matter of design choice" applies when a modification is made which "solves no stated problem".

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would have led an artisan to construct the support rods shown by Heffington as multi-piece elements including the extension plates recited by claims 13-15, 40 and 43. It is our view that the

examiner's determination of obviousness is based on speculation, unfounded assumption and/or impermissible hindsight reconstruction to supply the deficiencies in the factual basis for the rejection.<sup>6</sup>

With respect to **claim 23**, appellant argues (Brief, page 15) that neither Michelson '943 nor Heffington disclose or suggest a pair of lateral support panels extending from the major posterior support member. We agree. Accordingly, we will not sustain this ground of rejection.

For the foregoing reasons, the examiner's rejection of

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<sup>6</sup> Rejections based on § 103 must rest on a factual basis with these facts being interpreted without hindsight reconstruction of the invention from the prior art. The examiner may not, because of doubt that the invention is patentable, resort to speculation, unfounded assumption or hindsight reconstruction to supply deficiencies in the factual basis for the rejection. See In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 177 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968).

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claims 2-5, 7, 13-15, 19, 23, 33, 40 and 43 under 35 U.S.C. § 103 over Michelson '943 in view of Heffington is reversed for failure to establish a prima facie case.

Under the provisions of 37 CFR § 1.196(b), the following new ground of rejection is entered against claim 23:

Claim 23 is rejected under 35 U.S.C. § 103 as unpatentable over Michelson '943 in view of Heffington and further in view of Michelson '892.

**Claim 23** is dependent on claim 18 which we have concluded is unpatentable over Michelson '943 in view of Heffington for the reason set forth above. Claim 23 further recites a pair of lateral support panels extending from the major posterior support member. Michelson '892 is evidence that the use of lateral support panels in combination with a surgical frame for supporting a patient on an operating table during spinal surgery was known in the art and described in a printed publication more than one year prior to the filing date of the present application. Based on the evidence in the file, we conclude that it would have been obvious to a person of

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ordinary skill in the art at the time appellant made his invention to use the support panels disclosed by Michelson '892 with the surgical frame disclosed by Michelson '943 in order to provide lateral support for the hips of a patient during surgery.

#### **CONCLUSION**

To summarize our decision, we have affirmed the examiner's rejections of claims 18, 20, 22, 27, 32, 35, 36 and 44-46 under 35

U.S.C. § 103, but reversed the examiner's rejection of claims 2-5, 7, 13-15, 19, 23, 33, 40 and 43 under 35 U.S.C. § 103 on the

merits. In addition, we have reversed the examiner's rejection of claims 1, 6, 8, 16, 17, 21, 34, 41, 42 and 61-64 under 35 U.S.C. § 103 on a procedural ground predicated upon the indefiniteness of the claims and, pursuant to 37 CFR § 1.196(b), we have entered a new ground of rejection against claims 1, 6, 8, 16, 17, 21, 34, 41, 42 and 61-64 under 35 U.S.C. § 112, second paragraph, and claim 23 under 35 U.S.C. §

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103.

In view of the above, the decision of the examiner is affirmed-in-part.

This decision contains a new ground of rejection pursuant to 37 CFR § 1.196(b)(amended effective Dec. 1, 1997, by final rule notice, 62 Fed. Reg. 53131, 53197 (Oct. 10, 1997), 1203 Off. Gaz. Pat. Office 63, 122 (Oct. 21, 1997)). 37 CFR § 1.196(b) provides, "A new ground of rejection shall not be considered final for purposes of judicial review."

37 CFR § 1.196(b) also provides that the appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of proceedings (37 CFR § 1.197(c)) as to the rejected claims:

(1) Submit an appropriate amendment of the claims so rejected or a showing of facts relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the application will be remanded to the examiner. . . .

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(2) Request that the application be reheard under § 1.197(b) by the Board of Patent Appeals and Interferences upon the same record. . . .

Should the appellant elect to prosecute further before the Primary Examiner pursuant to 37 CFR § 1.196(b)(1), in order to preserve the right to seek review under 35 U.S.C. §§ 141 or 145 with respect to the affirmed rejection, the effective date of the affirmance is deferred until conclusion of the prosecution before the examiner unless, as a mere incident to the limited prosecution, the affirmed rejection is overcome.

If the appellant elects prosecution before the examiner and this does not result in allowance of the application, abandonment or a second appeal, this case should be returned to the Board of Patent Appeals and Interferences for final action on the affirmed rejection, including any timely request for rehearing thereof.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

**AFFIRMED-IN-PART/196(b)**

NEAL E. ABRAMS	)	
Administrative Patent Judge	)	
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	)	BOARD OF PATENT
JOHN P. McQUADE	)	APPEALS AND
Administrative Patent Judge	)	INTERFERENCES
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	)	
JOHN F. GONZALES	)	
Administrative Patent Judge	)	

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Lewis Anten  
The Law Office of Lewis Anten  
Suite 411  
16830 ventura Boulevard  
Encino, CA 91436

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**APPENDIX**

27. The adjustable surgical frame of claim 18 further including a rear cross bar connecting said first and said second side frame members.