

- Katzin 2,192,532

- KO estimate - Mod^o 1023

- Koeman - 1,964,189

- Wenzel 2,700,105

~~W. G. - 2,105,569~~

Dutton & Ore articles

Co planer - Tr 186

Spencer shell counter and register Marshall
Tr. 210

Jack - Hows - design Tr 235

Shaded
Electrons
RDF potent -

Harris - Kotzin -
T 168 - 174

- KO -
T 175 -

DeHoul - 83 - 192
(204 - 207)

-
- 30 - Rensay Hon - cones
 - 31 ~~vertical spirals~~, logarithmic spiral
 - 32 ~~flat spiral~~ ~~cones~~ flat logarithmic spirals
 - 34 grooved cone
 - 36 type of single loop & cones
 - 37, 38 vertical spirals

(1)

all caps

1. The JFD Advertising Campaign

The record ~~includes~~ contains samples of the advertising and news release data of JFD in the period from ~~the~~ ^{the fall} ~~the~~ ^{summer and fall of} 1963 ~~through 1966~~, when BT entered the market for the first time with its long periodic DART antenna, P. Ex 10, (Trans.) ^{and after} up to the filing of the suit in late March 1966.

~~For the early~~

The widespread scope of this advertising is ~~is~~ ^{JFD} admitted in the ~~advertising~~ ^{advertising} ~~report~~ ^{of} accompanying the Fiscal Reporter, October 42, as D. Ex. 42-B-101, as accompanying

"The Technical Press... The News Press...
The Consumer Press... The Trade Press"

"... more news coverage than any TV or FM antenna has ever received."

Among the numerous technical, trade and consumer journals and news media in which JFD ~~is~~ ^{is} advertised, are listed

- Radio Electronics
- ~~Radio & Television Weekly~~
- Electronic Distributing
- NEDA Journal
- Microwave Journal
- Chicago Tribune
- PF Reporter

②

Electronic Technician
Home Furnishing Daily
Popular Science
Electronics & Appearance Specialist
NATESA Scope
Electronic Industries
Modern Electronic Service Dealer.

Other advertising exhibits show ~~the~~ the additional publicity in at least Look magazine (P.E.X. 42 - B107), the New York Worlds Fair of 1964-1965 (P.E.X. 42 - B106) and Radio & Television Weekly (P.E.X. 42 - B110).

The time periods covered by these advertising exhibits are listed thereon and, by stipulation () prove the dates thereof ~~as follows: P.E.X. 42 - B 101 - 1963~~ from 1963 through 1966, ~~Mr. [unclear], Executive Vice President of JFD,~~

From the very first of these advertisements and releases, it is evident that their purpose was at least three-fold: First, to cloak ~~the~~ JFD and its LPV television antennas with the prestige and aura of the University of Illinois and its antenna laboratory, as distinguished from ^{the role of} a mere licensee,

Secondly, to cause the readers to believe that the JFD LPV antennas being offered for sale were already covered by patents, thus to dissuade purchasing elsewhere (including from BT); and

Thirdly, to make it appear, through the use of both the ^{prestigious} scientific name of the University and the listing of patents, that the log periodic formula itself had been patented, thus

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in the reader's mind
the possibility of
to persuade anyone else ~~from~~ ^{possibly} even offering
any kind of log period antenna to the
trade (as BT was contemporaneously
starting to do in 1963, P-Ex

The LPV was Not Developed By the University, and JFD knew this

Thus, in D. Ex. 42-B-106, it ~~was~~ was prominently
framed at the top that the JFD LPV ~~and~~ TV antenna
had been

all
copied → "Developed By the Antenna Research Laboratories
of the University of Illinois"

In D. Ex. 42-B107, it is again stated that LPV came

"from the Antenna Research Laboratories of the
University of Illinois".

Again, in D. Ex 42-B108, it is prominently stated, under the picture
of the LPV antenna that this was

"Developed by the University of Illinois antenna
laboratory."

~~Similar remarks appear in D. Ex 42-B101 (sic)~~

Not only was the development of the LPV attributed
to the University, but as appears from the ~~other~~ statements of the
members of JFD (under subpoena dated of February, 1964, D. Ex. 42-B103)

JFD ~~has~~ ^{of Radio & Television Weekly}
the readers were told that JFD

"Forms alliance with the University of Illinois;
New laboratory established under the direction
of Prof. Paul E. Mays, an antenna authority"

~~It~~
It is further stated that

IP Ultimately, indeed, Mr. Finkel conceded in his deposition, in connection with this ~~mis~~ statement in DEX. 42-B106 that this was "a misstatement" (p. 37)

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"The alliance is not based on college courses... Far more dynamic in its ramifications, it prompted the creation of the JFD Research and Development Lab and a unique relationship with the University of Illinois."

That JFD ^{then} ^{absolutely} knew the falsity of each of these claims is evident from the proofs herein.

As for the fact that the JFD LPU antennas advertised for sale were not developed by the University of Illinois Antenna Laboratory, ^{Edison} Mr. Finkel ~~admitted~~, executive vice-president of JFD, conceded in his deposition, D. Ex. 42, p. 9 that

"I do not believe they (i.e. the University of Illinois Antenna Laboratory) actually had antennas as such developed at the laboratories for TV use"; and

at p. 21, 22, that the University of Illinois ~~Antenna Laboratory~~ never

"Antenna Laboratory never got into the commercial aspect of the research work..."

never into

"Home TV",

EX 42-B106A

and that Finkel and "others at JFD" knew this fact

"From the very beginning."

→ IP The Foundation itself, moreover, belatedly excused the giving of such origination to the University as "not true" (page 2, line 5 from end of letter of Oct. 14, 1964 from Mr. Colman of the Foundation to Mr. Finkel, D. Ex. 42-B106A). (It should ~~there~~ be borne in mind that Mr. Finkel admitted he "assisted in preparation" of the JFD ads in question, p. 23;

that he helped" lay them out with my Advertising Department", p. 22; and that he was "very closely involved in preparation of the similar advertisements of this era", p. 28.)

(D. Ex. 42-103)

As for the statement that Dr. Mays was ^("New Laboratory Established Under the Direction of Prof. Paul E. Mays") directing the new JFD laboratory -- clearly calculated

to cement this alleged "Alliance with the University of Illinois", again Mr. Finkel admitted ^{in his deposition, D. Ex. 42,} that he knew

this was false at the time ^{because} ~~and that~~ Professor Mays "wasn't a director at any time" (p. 19), was never "the director of the staff of scientists and engineers"

~~at the JFD Champagne, Illinois laboratory at any time" (p. 19).~~

And that no such "Alliance with the University of Illinois" ^{ever} had been established, as represented in D. Ex. 42-

103, supra, was further admitted by Finkel (p. 20) -- "It was strictly licensing arrangement". ✓

~~Thus the first deliberate false representations for the first~~

The Advertised LPU-11 ^{as related} ~~is a~~ antennas were Not Covered By The Patents listed thereunder and JFD knew this fact.

~~In, for exam~~
In, for example, the advertisement D. Ex. 42-B-108,

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there appears a picture ~~the~~ which is identified as the JFD LPV II antenna; and in the upper right-hand corner of the photograph, there prominently appears the legend

"U.S. Patents 2,958,931, 2,985,879, 3,011,168".

These patents are, respectively, patents to Dyson, du Hammell and an early patent to Isbell, copies of which are in evidence as D. Ex. From the face of ^{the} patents themselves, it is evident that none applies to the illustrated Weiss and Carroll LPV antenna, dealing rather with _____.

Insert A prompt →

Let this be interpreted as a bona fide mistake or misunderstanding ~~of~~ in connection with representing that the LPV II was covered by existing patents, the record shows that Mr. Finkel, when ^{so} using these patent numbers knew none of these patents covered the LPV II or any other antenna ^{JFD} ~~he~~ was then selling:

"At the present time we are not selling any products that come under the Dyson, Du Hammell and Isbell patents." (D. Ex. 42-B-105, p. 2. Letter of Finkel of April 21 '64)

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This same deliberate mis-marking & misleading of the reader was copiously done (D. EX. 42-B-107, B109; Fuzic's admission, p. 42 of D. EX. 42 that B-108 and 109 are "representative of the kind of patent marking of the early releases".)

Emers App. 6

In his deposition, D. EX. 42, Fuzic ~~also~~ admitted that the LPV11 antenna elements in B-108 and B-109 was the Mays and Canell configuration (p. 43) and that none of the "three patents mentioned" in these ads were the patents of "Mays and Canell" (p. 44, 45).

The Log Periodic Formula Was Not The Monopoly of JFD at the University, and JFD knew this

The clear and patently false impression that ^{JFD} the advertisements such as ^{D. EX. 42 -} B-107, were intended to convey was that the "formula" " $\frac{L(n+1)}{L_n} = r$ " was patented and the monopoly of the "Antenna Research Laboratories of the University of

and that the LPV antennas were then covered by patents ~~and~~ -- all
and ~~that~~ the log periodic formula itself
even
for the very clear purpose of representing JFD as the sole authorized source of
any kind of log periodic television antennas, and dissuading ~~others~~ ^{the purchasing from} ~~others~~ ^{others} (including BT)

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Illinois" and JFD -- this formula ~~being~~ ^{advisedly} being
closely printed ^{to} the patent numbers (false, as they
were).

The ~~source~~ innuendo desired from the readers
is obvious; ~~and its effect upon~~ ^{viz., that no one else had a} ~~an~~ ^{Am. Blunder testified}
report to make any kind of log periodic antenna,
since they all follow the formula! JFD
was the sole source.

And all this undercolor of the name of
the University itself, ^{very} (artificially)

It is no wonder that ultimately ^{these}
Foundation found these tactics to be unworthy,
and, in their letter to JFD of October 14, 1964, after two years
of these ads, complained (DEx 42 - B104, p. 2)

"Paragraph 4 is untrue. The log-Periodic
LPV formula is not patented."

Summary as to JFD Advertising Campaign

It has above been shown, that the JFD advertising campaign was
framed not just about "puffing" as legitimate ^{extolling} ~~exaggeration~~, but upon deliberately
concocted false representations designed to be cloaked ^{with} by the aura of truth and
reliability, and prestige associated with the University, misrepresenting that the LPV
antennas were the product of the University, still, and those of presumably unimpeachable quality, that the
University was allied with JFD in this design work, that its professor was directing the same, &

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False Technical Claims

(Insert before Summary on p 7)

While a certain amount of "puffing" is recognized in the selling arena, in technical fields where numerical figures of performance are presented ~~separately~~ to the customers, it is not "puffing" to put in false figures.

To say that an automobile has a ³⁵⁰ ~~400~~ horse-power engine, when in fact it had ⁹ 100 horse-power engine, would not be tolerated by the FTC or the courts for one moment -- and is certainly not in the realm of "puffing".

But that is just what JFD has done in this case. In its Radio Electronics article of June, 1963 (reprinted ~~and used~~ for advertising ~~use~~), D. EX. 42-B-102, JFD ~~also~~ baldly stated that

"the LPV-11 ... maintained a front-to-back ratio of 35 db..." (underlining added).

This was repeated in advertisement B-109 (upper right-hand corner of record sheet thereof) ^{numerically} ^{the performance of} antennas ^{in "puffing" receiving the desired television signal, much as horsepower rate an automobile} ^{side is former}

The record shows, however, that tests ~~at~~ ~~RF~~ -- as to which JFD introduced no contrary evidence ^{demonstrated} because they were true -- that the JFD LPV-11

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fell far short of producing ^{the claimed} "35 db" and, indeed, only

"about 10 to 12 db" (Trans. 822-3).

The significance of this is that, in the same 1963-4 period BT was advertising the ~~best~~ true figures of performance of its ^{high-gain} Par ~~an~~ antenna (C.C. Ref. Ex. JFD 23, p. 7, for example).

Now appears these JFD performance figures, under color of the name and prestige of the University of Illinois, ~~that the~~

trying to impress customers and potential customers that the JFD LPV ~~the~~ antenna was 3.5 times better than it actually was -- and, of course, thus far above the BT antenna performance.

What customer would ~~agree with~~ ^{not be persuaded that an allegedly} the University of Illinois Antenna Laboratory ~~designed antenna~~ and ^{allegedly} with such tremendous performance figures ~~was not~~ -- and all allegedly covered by patents and even a patented formula -- was the one to buy; not

designed by the

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that of a "Johnny-come-lately" in the antenna
field, BT?

Finally, indeed, the Foundation realized that

JFD was using its name as a gimmick and threatened to "cancel" the license (D. Ex. 42 - B-112); but the damage had irreparably been done in the market place by this extensive, ^{almost} ^{unchecked} two-year advertising campaign.

^{"publicity" and} to support its "new peak of performance" claims,



2. THE JFD-FOUNDATION

LITIGATION AND NEWS RELEASE

CAMPAIGN

Coupled with this ^{misleading} advertising campaign, and more particularly after the issuance of the Mayes and Camel and Isbell patents herein recited, the Foundation undertook (under the obligation of its license agreements with JFD, D. EX.) to police these patents by ^{numerous} law suits and threats of litigation.

There is, of course, nothing improper in bringing law suits against infringers; to the contrary, this is the whole purpose of the patent laws.

But where the suits are used to coerce the trade into dealing with JFD, ^{excessively,} where newspaper clippings of ~~the~~ litigation ~~are~~ and news releases announcing ~~the~~ litigation and threats thereof are deliberately ^{widely circulated in} sent to the trade, ^{and to customers of competitors,} and where [?] suits ~~are~~ brought knowingly without jurisdiction (as in the present case) merely to enable the issuance of

a news release mentioning BT under the
letter-head of the Foundation and ~~the mailing of~~ ^{to} the
same to BT's customers, this far transcends
the proper use of patents and patent litigation.

Now to the proofs of these serious charges.

The record shows that at least two of BT's ^{customers} ~~customers~~ ^{after suit was filed herein, a set of three documents!} received ~~in the mail~~ ^{from JFD} ~~JFD news release~~ ^{JFD Sales Bulletin}
of April 19, 1966 (D. Ex. 43-XB6a; D. Ex. 46-XB5a); University of Illinois

Foundation news release of April 7, 1966 (D. Ex. 43-XB6c; D. Ex. 46-XB5b); and a print
of a newspaper clipping (D. Ex. 43-XB6b; D. Ex. 46-XB5c)

R. M. Fernald, ^{specifically} testified, D. Ex. 42, ^{p. 78,} that the Foundation

gave "authorization... to send" the above-mentioned Foundation
^(D. Ex. 43-XB6c and D. Ex. 46-XB5b) news release ^{at intervals} to the distributors and representatives in the trade.

^{and} The JFD Sales Bulletin refers to five suits, using the name
"Bladen-Torrey Laboratories, Inc." ^{prominently} at the top. It not only announces
these suits, but threatens others:

"The Foundation is taking vigorous action in the
courts to sue all violators of the basic Log
Penicillin Patents."

Note the characterization of "basic Log Penicillin Patents" -- clearly

intended to imply, as in the previously discussed misleading advertising campaign, that no one but JFD can make a log periodic antenna (when, of course, no such basic patent exists). This is clinched by the representation:

"JFD is the EXCLUSIVE licensee of the Foundation authorized to manufacture antennas under these basic patents."

The University of Illinois Foundation news release also mentions "Bladen-Tongue Laboratories, Inc." first among the new defendants, and ^{mentions} ~~sets~~ a prior suit against Winegar, as well. It also identifies JFD as having "an exclusive license".

And the accompanying newspaper clipping from Home Furnishings Daily reports on still another suit "Antenna Patent Suit Hits JFD".

This tying of these so-called "basic log periodic antennas" in news releases and newspaper clippings with the prominent mention of BT was, it is maintained, part of the overall plan to prevent BT from entering the antenna market.

to be sent to BT's distributors & antennas

Why, except for these news releases (the Foundation's releases having been prepared within less a few days of their air dates BT), was this suit brought here in Illinois when the Foundation and JFD ^{both} knew BT had no ^{evidence of} place of business here?

Mr. Finzell testified D Ex 42, p. 79 that he told Mr. Colvin, secretary of the Foundation that

"Bladder-Tongue Laboratories was in Newark, New Jersey."

Mr. Finzell further stated that he discussed with counsel for the Foundation whether "BT" had a place of business in Illinois" (p. 79, 80) and that he ~~was~~ ^{did not think} that BT had ^a ~~no~~ branch office for sales or manufacturing or distributing antennas in Illinois. (p. 82).

And the complaint, herein, unlike any counsel has seen before, further supports this mis-use of litigation

It is not a ~~strong~~ allegation was made with an argument of proper venue on the facts. There was not proper venue and venue was pleaded. The Complaint on its face shows it to be a Court action, ^{prompt} merely to allow with publication of ^{such} a Court action in the trade. ~~This~~ ^{is} a two-faced and blatant act of using the Office of this Court to further ~~planning~~ the ends of the Foundation and its ~~economic~~ ^{economic} interests in the market place. ^{complaint}

~~The~~ ^{The act of filing such a} ~~is~~ ^{complaint} is a ~~fraud~~ ^{fraud} upon good faith and proper conduct in the circumstances and ~~and~~ ⁱⁿ which ⁱⁿ ~~this~~ ^{these} Honorable Court should not ~~allow~~ ^{allow} ~~such~~ ^{such} ~~an~~ ^{an} ~~action~~ ^{action} ~~to~~ ^{to} ~~be~~ ^{be} ~~maintained~~ ^{maintained} ~~in~~ ⁱⁿ ~~the~~ ^{the} ~~Court~~ ^{the} ~~and~~ ^{and} ~~it~~ ^{it} ~~is~~ ^{is} ~~clearly~~ ^{clearly} ~~in~~ ⁱⁿ ~~violation~~ ^{violation} ~~of~~ ^{of} ~~the~~ ^{the} ~~principles~~ ^{principles} ~~of~~ ^{of} ~~justice~~ ^{of} ~~and~~ ^{and} ~~the~~ ^{the} ~~interests~~ ^{interests} ~~of~~ ^{of} ~~the~~ ^{the} ~~public~~ ^{public} ~~and~~ ^{and} ~~the~~ ^{the} ~~country~~ ^{country}.

~~///~~

~~This is consistent with the fact admitted by Mr. Zwick at DEX 42, p. 74 that JFD's salesman ^{and} ~~representatives~~ distributors had~~

In the specific instance of the BT distributor customers (Sacramento Electronics, DEX. 43, and Main Line Cleveland, DEX. 46) ^{litigation} the record shows that this tactic of JFD and the Foundation eminently well succeeded ~~not at all~~

since BT ~~was~~, following receipt of this JFD ~~was~~ ^{news release} material ~~by~~ by the customer,

"could not sell an antenna & this account" (Trans. 838)

The context in which this ^{JFD} campaign was carried out, moreover, is important to these issues. Mr. Blundin testified that ~~the~~ ^{distribution} customers ~~was~~ also reported being threatened ^{with} ~~by~~ suit "By JFD and the University of Illinois Patent Foundation" if the distributors "were to take on our line". (Trans. 781-2).

~~he~~ ^{was aware that}

That such threats were in fact made to such distributor customers was, indeed, conceded by Mr Finkel himself at D. EX 42, 74.

Q. Are you aware that salesman and distributors of yours have made these comments?

(i.e. "if they handled anyone else's line of log periodic antennas, they would be sued")

A. It might be they have made them. This is the normal kind of selling that goes on in the field, not just this one."

Summary as to ^{the} litigative campaign

The above-described trying of law suits in news releases and the press, ~~and~~ use of the same ~~in~~ ^{and} ~~to~~ ^{for} to coerce BT's customers, coupled with the circumstances of deliberately ~~using~~ ^{using} this suit against BT with the knowledge of lack of jurisdiction ~~and~~ ^{and} for the ~~press~~ ^{press} purpose of notifying BT's customers, is another cog in the overall plan of JFD ^{improperly} to prevent competition from BT.

all capitals

JFD

→ 3. The Patent Mis-Marking Campaign

The ~~grossing~~ ^{false} use of patent numbers in

the advertising ~~campaign~~, knowing the advertised LPV antennas (and formula) was ^{then} taken to be covered by the cited patents and with the intent to dissuade customers from purchasing ^{top} ^{permissible} by ^{permissible} television antennas from any competitor of JFD, has been documented on page , supra.

But JFD did not just use these

improper patent markings in advertisements. Mr. Jural admitted, D. Ex. 42, p. 28, that ^{the patent numbers were placed on} ~~the~~ "the boxes in which the antennas ... were shipped" ~~covered the~~ and

which every distributor and homeowner ^{sees and} uses. ~~and sees~~. ^{widened, of course, the} ~~The~~ ^{discusses} scope and effect of this tactic, ^{particularly as} ~~discussed~~ coupled with the threats ^{discusses} discussed in the previous section of this brief.

admits that he did not invent that, is but that these precise angles were taught in the Carter Patent of the early 1930's. (REFERENCE)

The Mayes and Carroll patent is thus clearly invalid in all its aspects.

Even had the Mayes and Carroll patent been valid the unclean hands and fraud and gross negligence in the prosecution render the same unenforceable.

During the prosecution of the Mayes and Carroll patent the Examiner took the position that since the V structure was well-known there was no invention in modifying the Isbell antenna (as taught in an Isbell IRE paper which was cited as a reference) to use this old V dipole.

University of Illinois thereupon prepared an affidavit in which they had Dr. Mayes and Mr. Carroll (?),re Carroll) swear that they had made the invention before the publication date of this IRE paper (QUOTE).

The effect of this was to force the Patent Examiner who only knew about this paper describing Isbell's work and did not know of prior papers such as the University of Illinois published reports, to withdraw the Isbell paper as a reference. Without Isbell as a reference, the patent Examiner had to allow the case and this was the clear intent and purpose

and result of this affidavit.

But the record shows that at the time of execution of this affidavit Dr. Mayes had been thoroughly familiar with prior reports published fully one year before his date (and which Mayes himself had signed) which showed this Isbell disclosure.

The allowance of the Mayes and Carroll patent was thus obtained either deliberately fraudulently or with such gross negligence or lack of attention to known facts as to preclude any possible recovery under the Mayes and Carroll or under the Isbell patent in this suit by the University of Illinois.

(CITATIONS)

THE MAYES AND CARROLL PATENT IS FURTHER INVALID AS A PROPER REISSUE PATENT.

The law is very clear that reissue patents may only be granted under certain strict conditions (CITATIONS AND QUOTES).

The record here shows that none of those conditions obtained in the present case. To the contrary, though the University of Illinois had Dr. Mayes and Mr. Carroll sign a reissue oath stating that the original patent was "defective and inoperative" Dr. Mayes admitted that he knew of nothing

VERY ROUGH DRAFT -- BRIEF

See you
Mon.
morning

(Will you reserve
a room for me
for Mon. night?)
at Continental Plaza?
Rick

UNIVERSITY OF ILLINOIS V BT V JFD

INTRODUCTION

This suit was instituted as a patent action by the University of Illinois ^{Foundation (hereafter referred to as the Foundation)} which brought the action for patent infringement (Isbell, Patent _____ and Mayes and Carroll Patent _____) against a New Jersey Corporation, Blonder Tongue Laboratories, Inc., ^(hereafter referred to as BT) which, from the face of the complaint itself, was not subject to the jurisdiction of this Court, but which voluntarily agreed to subject itself to such jurisdiction.

BT counterclaimed against the ^{Foundation} ~~University~~ and its exclusive license in the television receiving field under the patents in suit, JFD, for declaratory judgment as to the invalidity and non-infringement of said patents and for unfair competition, anti-trust violation and infringement of a Blonder-Shenfield patent of BT itself.

THE MOTION TO DISSOLVE

The ^{Foundation} ~~University of Illinois~~ presented its proofs relating to the Isbell and Mayes and Carroll patents which are not only believed to be insufficient to establish ~~the~~ validity and

infringement, but definitely demonstrate, to the contrary, the clear invalidity of the same and the lack of infringement by the BT antennas.

The strongest kind of proof of invalidity has been presented in this suit in the form of the admissions of the witnesses for the ^{Foundation} ~~University of Illinois~~ themselves.

Before proceeding to a discussion of these proofs the attention of the Court is invited to the fact that a motion for judgement was filed at the close of the plaintiff's prima facia case to the effect that not even such a prima facia case of validity and infringement had been proved; and this Court postponed decision on that motion until this time.

In accordance with that motion it was pointed out that the Court was not apprized of a single claim that was alleged to have been infringed in the so-called prima facia proofs; the Court did not have a technical explanation of the elements and meaning of this highly scientific terminology in the claims; and apart from the generalization or conclusion that the elements of the patent (even as distinguished from the elements of the claims) existed in the Defendent's structure no explanation of the underlying facts required to show infringement of the claims.

It has long been established that in highly scientific cases the Courts are not required to engage in guesswork or to try to decipher technical language for themselves, and certainly not to guess as to what claims might or might not be asserted as infringed (CITATIONS).

In view of these patent deficiencies in the prima facie case, ~~the~~ judgement should for this reason alone be rendered for the Defendent BT.

IN VIEW OF
THE ISBELL PATENT INVALID ~~FOR~~ THE COMPLETE ANTICIPATION ~~OF~~
THE ADMITTED PRIOR WORK AND PATENT OF DUHMPELL

It is admitted that the filing date of the Duhmmell patent No. _____ antedates any possible date of invention of Isbell in connection where the Isbell patent in suit.

In the ~~Weingarten~~ ^{Weyman} suit on this same patent, Judge Stevenson did not have the benefit of this prior art patent or the testimony of Duhmmell and so had to rely on a paper of Duhmmell as part anticipation. The Duhmmell patent in this suit and the admissions of the witness Duhmmell in this suit show, however, complete anticipation of the Isbell supposed invention and claims.

At the outset it should be pointed out that the Isbell patent claims broadly recite dipole elements without any restriction as to the geometry, thickness, or shape of the dipoles.

It has been admitted by the ^{University} ~~University~~ of Illinois expert, Mr. Harris, that before ^{the} Isbell ^{no-called} invention there were many well-known types of dipoles of different geometries, and thicknesses, that all performed in substantially the same way to provide the same current ^{tribes} ~~dispositions~~ and operations; among these being cylindrical rods (as shown in the illustration of the Isbell patent) and triangles or conical elements (as shown in Fig. 5 of the Duhmmell patent).

The Isbell claims do not limit themselves to the cylindrical dipoles illustrated in the patent but broadly embrace all types of dipoles.

The ^a Duhmmell patent teaches, and Duhmmell himself has so admitted, that the antenna of Fig. 5 of the Duhmmell patent may be adjusted so that the angle of the two parts is reduced to zero.

When in such form there is then provided as shown by the model in evidence, as D. Ex. _____ every element of the Isbell claims, assuming that the upper and lower booms can be said to be substantially coplanar or that the triangle dipole elements of each pair extend substantially in the same direction or are thus colinear.

For example, claim 1 of the Isbell patent reads directly upon this thus adjusted Duhmmell structure as follows: *with same manner as it reads with Isbell structure*

If, as later pointed out, it be allowed that the Duhmmell structure is in two planes and is not substantially coplanar or the elements thereof are not colinear, then this same argument applies to the BT Dart antenna alleged to infringe (and the BT color ranger antenna as well) as will be evident from the photographs below comparing the Duhmmell structure D.Ex. _____ and the BT Dart D.Ex. _____. If therefore the Duhmmell structure does not anticipate the claims because it is a two plane structure, then neither do the BT antennas read upon the claims; but if the BT structures do read upon the claims, then the Duhmmell anticipatory structure reads in precisely the same way and constitutes a complete anticipation.

THE ISBELL PATENT IS ALSO INVALID FOR ANTICIPATION BY THE
CHANNEL-MASTER ANTENNA

It has been admitted that the Channel-master antenna D.Ex. _____ was on sale in the United States more than one year before the filing date of the Isbell patent and thus if it discloses the invention claimed in the Isbell patent constitutes an anticipation thereof.

As pointed out before, the Isbell claims broadly recite dipole elements; and the record shows that one type of dipole element in existence before Isbell's so-called invention was the folded dipole element, which is a modified form of the cylindrical dipole element shown in the Isbell patent in which the ends thereof are merely connected back upon one another by a parallel rod. The Isbell claims do not exclude such modified Isbell dipoles but to the contrary embrace any kind of dipole elements.

It has been admitted that the Channel-master antenna discloses at least three successful ^{W.P.} pairs of dipoles dimensioned and spaced in accordance with the log periodic law in precisely the same manner required by the Isbell claims.

Claim 1 of the Isbell patent, for example, is readable on these dipoles of the Channel-Master antenna in precisely the same way that it reads upon Fig. 1 of Isbell as follows:

Prof. Mayes admitted that the fact that additional antenna elements are often added to log periodic arrays does not detract from the fact that ~~that~~ ^{the} log periodic ~~so~~ ^{array} operates ~~as a~~ ^{by periodic array.}

This prior antenna thus also completely anticipates the claims of the Isbell patent.

Donald L. ...
THE WITNESSES FOR THE UNIVERSITY OF ILLINOIS HAVE ADMITTED
ALL OF JUDGE STEVENSON'S FINDINGS AS TO PRIOR ART

Mr. Harris admitted every finding of fact of Judge Stevenson as to the disclosure and significance of the Katzin patent, Duhmmell paper, etc., upon the basis of which Judge Stevenson concluded that all of the teachings necessary for anticipation in an obvious manner of the Isbell construction were well-known prior to Isbell so-called invention. A comparison of the salient findings of Judge Stevenson and the corresponding admissions of Mr. Harris follows:

Since Judge Stevenson's decision is entitled at least to ~~a~~ comity or ^a consideration of stasis ^{re} ~~stasis~~ decis in the absence of some vitally new record, (which does not here exist) it follows that the Isbell patent should be held invalid on this same reasoning also.

The attempt by Mr. Duhmmell and Prof. Mayes to allude to the possible unpredictability of the operativeness of log periodic antennas significantly dealt with esoteric shapes and combinations, such as spirals and loops and ground plane structures,.....but significantly did not bear upon the mere reduction in width of the teeth or antenna elements of admittedly prior art log periodic structures to form narrow dipoles.....which is all that Isbell purported to do.

Apart from this, lack of precise predictability is not in the law synonymous with lack of obviousness. (CITATIONS).

The contemporaneous records show that Isbell and Mayes considered the Isbell so-called invention originally to be entirely predictable.

While attempting in this Court to cast a mystery about the predictability of log periodic antennas at the time of the Isbell invention, in the contemporaneous scientific reports prepared for scientists, both Isbell and Mayes who ^{supposed} cite, for example, University of Illinois' report No. 1 (D. EX. _____) clearly states that the design and experimental criteria developed prior to Isbell had reached such a state, (to quote the report)..... entirely predictable.

This report continues that all that Isbell was doing that had any change from such prior work was to reduce by tooth width to "zero"; i. e., narrow the dipole width.

This contemporaneous scientific report prepared for the technical community clearly demonstrates the truth that these investigators regarded Isbell's proposal as entirely predictable and as a minor variant.

How correct was Judge Stevenson's conclusion of obviousness on the behalf of the prior art; and how newly concocted was the ~~University of Illinois'~~ ^{Journal's} attempted showing in this Court of supposed unpredictability. ~~In~~ ^{The} the scientific handbooks ^{and} ~~in~~ Mayes own admission in his own report D.EX _____ to the scientific community further bear out the trivial character of the minor variant suggested by Isbell, (QUOTE) and, of course, as before indicated, Duhmell had earlier completely composed this variant.

APART FROM THE MATTER OF VALIDITY THE BT ANTENNAS DO NOT INFRINGE

Even assuming that the claims of ^{the} Isbell patent had not been anticipated by the prior art or were not obvious modifications thereof, the record shows that the BT Dart (and the color ranger) have two spaced booms containing corresponding dipole elements in which the ^{boom-} spacing is deliberately made a substantial part of the wavelength, though not as great as the same.

The clear teaching of the Isbell patent is that while the construction thereof may be made with two booms these are physically to be placed as close together as possible so as to be substantially coplanar. (QUOTE)

Each of the Isbell claims, consistent with this teaching of the patent that the dipoles should all lie as close in one plane as physically possible (i.e., ~~the~~ coplanar, or the dipole elements lie in the same line and are thus colinear) excludes constructions that are deliberately not coplanar-- and, ^{no one} in fact, known prior to BT apparently had even discovered that log periodic operation could still be obtained if a

two parallel plane structure with substantial ^{plane separation} were employed, as witnessed by the fact that the Patent Office granted the ~~Blonder-~~ broader Shenfeld patent for that precise discovery (QUOTE FROM PATENT).

The testimony shows that unlike the substantial juxtaposition or coplanar or ~~colinear~~ ^{colinear} teachings of the Isbell patent and the requirements of the Isbell claims (which Mr. Harris had ~~not~~ ^s admitted would at VHF frequencies or wavelengths ~~be~~ ^{involve a ~~booms~~ separation of only} of the order of 100th of a wavelength, and thus negligible) [↑] the BT Dart (at the UHF wavelength for which it is designed) ^{uses a much greater boom separation of} is ~~only~~ spaced a 15th of a wavelength, ~~apart~~ which is a substantial portion of a wavelength and not coplanar at such wavelengths. (Similar remarks apply to the widely spaced booms of the BT color ranger).

Isbell did not make the Blonder/Shenfeld invention as embodied in the BT Dart and color ranger; he did not describe the same in ^{his specification} the explanation but to the contrary excluded such a two-plane construction; and he did not claim the same in the claims but to the contrary limited himself to the coplanar and colinear ^{construction}.

Thus ^{even} assuming the validity of the Isbell patent neither BT ^{antenna} or T can be held to infringe upon the same.

THE INVALIDITY OF THE MAYES PATENT

The Mayes and Carroll patent itself admits that the structure of the Isball patent is prior art.

The Mayes and Carrol patent further admits that the only distinction between it and the Isbell patent is the bending of the dipole elements forward into V's (whereupon an automatic 3-1/2's or other mode of operation occurs).

Dr. Mayes himself added that the only structural difference between the structure of his patent and those of the Isbell patent was this bending of the dipole into the V formation (REFERENCE).

But the record shows by Dr. Mayes own admission that the idea of bending the dipoles into the V was not ^{that} ~~all~~ Mayes and Carroll's; but was suggested to them by Mr. Turner of Wright-Paterson Air Force Base (QUOTE). Thus the Mayes and Carroll patent is invalid for the one reason that they were not the inventors ^d because the only structure ^d different ^{cc} over Isbell's that the patent covers.

Though the patent refers to ~~patent~~ optimum angles such as 114° for the five halves wavelength mode and 62° for the V angle for the three halves of the wavelength mode Dr. Mayes

discovers these angles
admits that he did ~~not invent that is~~ but that these precise angles were taught in the Carter Patent of the early 1930's. (REFERENCE)

The Mayes and Carroll patent is thus clearly invalid in all its aspects.

UNCLEAN HANDS IN THE PROCUREMENT OF THE MAYES & CARROLL PATENT
Even had the Mayes and Carroll patent been valid the unclean hands and fraud ^{or} and gross negligence in the prosecution render the same unenforceable.

During the prosecution of the Mayes and Carroll patent the Examiner took the position that since the V structure was well-known there was no invention in modifying the Isbell antenna (as taught in an Isbell IRE paper which was cited as a reference) to use this old V dipole.

The Foundation
~~University of Illinois~~ thereupon prepared an affidavit in which they had Dr. Mayes and Mr. Carroll (?re Carroll) swear that they had made the invention before the publication date of this IRE paper (QUOTE).

The effect of this was to force the Patent Examiner who only knew about this paper describing Isbell's work and did not know of prior papers, such as the University of Illinois published reports, to withdraw the Isbell paper as a reference. Without Isbell as a reference, the patent Examiner had to allow the case and this was the clear intent and purpose

and result of this affidavit.

But the record shows that at the time of execution of this affidavit Dr. Mayes had been thoroughly familiar with prior reports published ^{more than} fully one year before his ^{filed} date (and which Mayes himself had signed) which showed this Isbell disclosure.

The allowance of the Mayes and Carroll patent was thus obtained either deliberately fraudulently or with such gross negligence or lack of attention to known facts as to preclude any possible recovery under the Mayes and Carroll or under the Isbell patent in this suit by the ^{University of} ~~University of~~ Illinois. (CITATIONS)

THE MAYES AND CARROLL PATENT IS FURTHER INVALID AS AN ^{IM} PROPER REISSUE PATENT

The law is very clear that reissue patents may only be granted under certain strict conditions (CITATIONS AND QUOTES).

The record here shows that none of those conditions obtained ~~in~~ in the present case. To the contrary, though the University of Illinois had Dr. Mayes and Mr. Carroll sign a reissue oath stating that the original patent was "defective and inoperative" Dr. Mayes admitted that he knew of nothing

in the patent specification that was defective or inoperative.
(REFERENCE)

Dr. Mayes further stated that he signed this document on the representation of council ^{and} that they ^{wanted} issued a broader patent.

But the filing history shows that to the contrary the reissue was requested to have narrower claims reciting the particular 62° and the 114° angles (see claims _____ through _____ submitted with the petition for reissue).

The record further shows, however, that under the guise of getting such narrower specific claims the University of Illinois later slipped in broader claims ^{Donor claim} in specifying these angles (claims _____ and _____) and thus improperly obtained ^{that claim was} a ^{reissued} ~~patent~~ and not even supported by the reissued petition itself.

Wherefore, even had the original Mayes and Carroll patent been valid the reissued patent in suit is clearly invalid as improperly obtained contrary to law and decisions.

THE MATTER OF INFRINGEMENT

An invalid patent, of course, cannot be infringed.

Apart from this, however, each of the Mayes and Carroll claims again is restricted to (and the patent teaches only) coplanar or colinear constructions which are not present in the BT antennas.

COUNTERCLAIM I

UNFAIR COMPETITION

Briefly stated, this counterclaim involves a whole series of actions on the part of JFD, aided and abetted by the Foundation...perhaps none completely determinative of unfair competition in and of itself...but collectively establishing a pattern and plan to compete unfairly and illegally in the marketplace with counterclaimant BT; in fact, to prevent BT from getting a foothold in its relatively new venture into the antenna market, as distinguished from its previously established business in ancillary apparatus for amplifying and distributing signals from antennas.

Mr. Blonder testified that after a brief encouraging ^{start} word in 1963 in this new antenna venture with its log-periodic DART antenna, P.Ex. 10, customers declined to purchase the antennas, ascribing as reason threats of suit by JFD and the Foundation (QUOTES FROM _____ AND CORRESPONDENCE).

THE JFD ADVERTISING CAMPAIGN

At this 1963 period, the evidence shows that JFD had launched an extensive advertising program in which it made

very plain to the trade (falsely, as later shown) that *only* JFD could make log-periodic antennas, that others would be sued, etc. (QUOTE HERE PARTS OF ADS IN FINKEL, WITH DATES OF ADS AND PLACES PUBLISHED).

The wide-spread nature of this advertising program is shown by these exhibits themselves and by Mr. Finkel's and Mr. Blonder's testimony (ILLUSTRATE, QUOTE FINKEL, BLONDER _____).

These advertisements, however, by Mr. Finkel's own admissions (P.EX 42) contained untrue statements. These statements were not merely puffing --- they were untrue statements to the trade that no one else could make a log-periodic antenna, that the log-periodic formula had been patented (admitted to be untrue by the Foundation in its letter of _____), etc. (here more and specific quotes) ---all done under the imprint of the University of Illinois and/or the University of Illinois Foundation.

The clear intent of these advertisements, on their face, was to impress the customers with the prestige of the University or Foundation and thus lend credence to the false statements that the "formula" had been patented, etc. (i.e. no one else had a right to make a log-periodic antenna of any kind) and that thus no one else's antenna was any good!

In the face of this advertising onslaught, and not ^{having} being any University or Foundation to stand sponsor for such claims in its literature, clearly BT's advertisements (Exhibits _____) state^{ed} that it did have a log-periodic antenna and a good one could hardly have been effective.....; and they were not.

As if this was not enough, some of these ads contained (EXs 42.....) actual patent numbers under the picture of the Mayes and Carroll antennas (covered by the Isbell and Mayes and Carroll patents in suit) and a referral to the license from the Foundation. But Mr. Finkel admitted that none of these patent numbers were those of the Mayes and Carroll patent (QUOTE)...in fact, neither the Mayes and Carroll patent nor the Isbell patent had even then issued!

EXs f for example, shows this cross-feed antenna of Fig. 1 of the Mayes and Carroll patent in suit. In fact the exhibits also refer to this as Mayes' antenna (QUOTE). The patent numbers marked under the pictures of these Mayes' antennas are _____, _____, and _____.

This Court can see for itself from the actual patents copies (D:Ex. 65), that none are the Mayes and Carroll or Isbell patents covering the Mayes antenna, they bear rather on flat sheet antennas and spiral antennas having nothing whatever to do with the V dipole log-periodic antenna shown

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in the advertisements of JFD, and as before stated, the Isbell and Mayes and Carroll patents were not even issued in the 1963-64 era of these ads.

That JFD knew this was false patent marking is evident from Mr. Finkel's admission in his letter to the Foundation (D.EX _____) (QUOTE).

The obvious intent of the false marking was to make the trade think the JFD antennas were then covered by patents, which they were not; again to dissuade customers from dealing with BT and others.

All of this the Foundation sanctioned since it had received at least some of this material in 1963 and 1964 (Finkel says this I think).

During this period the Foundation reaped the rewards of the JFD sales under this campaign (NAME D.EX _____).

It was not until after the ads had their effect in the marketplace _____, 1964 (Foundation letter, DEX _____) that the Foundation finally complained to JFD.

The complaints were several-fold. First, there was false patent marking (D.EX _____), Secondly, there were statements that the Foundation charged mere "untrue"

unsteady
"unsteady" (QUOTE D.EX _____).

Further, that the Foundation's name was being used in the JFD advertising campaign as a "gimmick" (P.EX _____ Smith Letter). In fact, the Foundation threatened to cancel JFD's license! (P.EX _____).

At this point, JFD toned down its ads in some respects (EX. _____); but it still used the name of the University Foundation, and clearly it did not erase in customers' minds what it had put there or the threats of suit (EX _____, QUOTE); for, as Mr. Blonder stated, (QUOTE: ...customers didn't buy).

That BT customers saw these ads has already been established (Blonder _____).

The later JFD ads, moreover, still contain technical claims that were untrue, such as a "35 db" front-to-back ratio of the L-PV11, when the actual measured ratio was about "10" (record). The significance of this is that BT was advertising the truth to customers; --- a performance ratio of " " (EX _____); ;but JFD, using the name and prestige of the University of Illinois Foundation in its ad (D.EX _____) and thus giving it credence, was telling customers and potential customers it was 3.5 times better! (See if the 35 appears in any exhibits that are still in evidence)

THE FOUNDATION-JFD LITIGATES CAMPAIGN

The record shows that the Foundation brought numerous suits for its exclusive licensee JFD (Wingard-record; Finney-record; Channel-Master ad, etc,etc).

There is, of course, nothing improper in this, of itself.

But where suit is brought (against BT) in full knowledge that there was no jurisdiction, and is widely announced by the Foundation in a news release mentioning BT ^{Prominently} primarily, and where ^{with} release is sent to customers of BT by mail (along with newspaper clippings of other suits), the impropriety and connection with the other JFD campaigns becomes clear.

The complaint on its face shows no ^{al} delegation of ^{jurisdiction} over BT. The Foundation counsel thus knew there was no jurisdiction of BT.

Finkel admitted he ^{intended} deceived the bringing of suit with Foundation ^{authorities} approvals and his own counsel (P.Ex. _____) and further admitted he knew BT had "no sales, work office, etc. in Illinois."

The University of Illinois Foundation suit news release mentioning BT prominently and threatening vigorous enforcement (D.EX _____, EX _____,) was dated two days after suit (CHECK).

Finkel testified the Foundation knew JFD was going to use the release to send to the trade (D.EX _____....QUOTE).

The record shows it was received by BT customers (D.EX _____) together with a bulletin of JFD stating "_____" and a reprint of a newspaper article announcing another Foundation suit against still another party.

The record shows that Sacra ~~was~~ did not thereafter by antennas from BT (record).

Mr. Blonder testified that

[quote continuous repeated threats of suit as reason they wouldn't buy]

JFD CAMPAIGN TO RAID KEY BT ANTENNA PERSONNEL

The record shows that, following the Foundation filing of this suit, Jerome Balaser^h was the "_____" of the antenna program at BT and was "assigned the job of investigating why the customers were not purchasing antennas" including the threats of JFD (RECORD).

Though then on notice that BT was trying to join JFD in this litigation (motion to add JFD) in the midst of Mr. Balasis'^h investigation of customers and JFD threats thereto, Mr. Balasis^h was highered^h away by JFD (See if Balhowick^h defers that JFD hired them is in).

The day after Balasis^h left, Mr. Blonder (record) searched for ^{the} BT's files of Mr. Balasis'^h correspondence with the customers and couldn't find them. (The Balasis^h ^{outlet} departure (D.EX _____) shows that BT's counsel asked Mr. Balasis^h for them)

The ^{drafted} Helbranci? deposition (P.EX _____) shows that Mr. ^{Beland's} immediate superior, Mr. Helbranci^h, also looked in vain for those company files and in addition, found missing other BT company records that were under Mr. Balasis^h care; namely, (QUOTE).

(Fortunately, two memoranda that Balasis admists were his memos (Balasis Dep. _____) were ⁱⁿ other hands and thus remain; and bear out the "JFD threats" (D.EX ___ H-1).

referred to in Balasis Dep. report of JFD's threats

JFD has offered not one word of explanation by way of rebuttal!

Not only has BT been hampered in its proofs by the above circumstances, but the processes of the Court itself have thus been hampered.

JFD's threats and other threats here

But JFD was not content with hiring away Mr. Balasis, the "head" of the BT antenna sales program and the BT official charged with investigating the JFD activities in the marketplace for the ^{e.g. article} properties of BT's response in this suit.

In the heat of this litigation last summer, just before the _____ day set for trial, JFD hired away other key BT engineers, Mr. Alexander ^{Alexander} (QUOTE JOB) and Mr. Arlington Shenfeld ^{Wagon} (QUOTE JOB).

Mr. Shenfeld, indeed, was the co-inventor of Blonder-Tongue patent in suit and thus, just as trial had been set, JFD's action deprived BT of the services (and, obviously, the reliable testimony and loyalty) of its own co-inventor in its own patent in suit against JFD!

The record shows how hampered BT was in its proofs (and what interference this caused with the processes of this Court) as a result of the hiring away of co-inventor Shenfeld. Mr. Blonder testified (RECORD) that Mr Shenfeld only made the performance tests on the JFD antennas charged with infringement, and Mr. Blonder had no knowledge that qualified him to testify! And Mr. Schenfeld was now in "every" camp.

But even this was not enough in the campaign to prevent BTs emergence in the antenna field and to hinder the BT proofs in this litigation.

On the eve of the trial, JFD even hired away _____ (give job) and the West Coast sales representative of BT (record)!

Is it any wonder that BTs business deteriorated and its valued Vice President had to be let go? (RECORD)

THE FOUNDATION IS NOT A MERE LICENSOR

The Foundation has tried to maintain its innocence and a posture that it is only a licensor. *These acts were solely those of JFD.*

But a mere licensor does not permit its name to be used for advertising (as distinguished from a mere mention in a license notice) (EX ___ ads, Par. 10 license, D.EX).

And Mr. Finkel has made very plain that JFD's interpretation of the Foundation-JFD relationship is far more (quote from letter left with Sam Smith) (quote other Finkel letters that Foundation is in a corporeal^{at} venture).

And a mere licensor does not issue news releases for use as a mailing piece to the trade (D.EX ___).

And certainly a mere licensor does not bring suit where it knows it has no jurisdiction, just to produce a news release with a competitor's name as having been sued, for the purpose of having the release mailed to the trade, including competition's customers. (Quote Finkel again that Foundation knew of the issue).

CONCLUSION AS TO COUNT I

While BT would have liked to present a much stronger case, it believes it has offered sufficient reliable evidence of all of the events of the campaign above-described and alleged in the counterclaim---evidence that has not been rebutted by the counterclaim defendant in any manner whatsoever.

The actions of JFD, indeed, in hiring away Mr. Balash with the records and co-inventor Schenfeld (with his personal knowledge of BT's tests of JFD's structures), of course, greatly hindered the proofs.

COUNTERCLAIM II --

ANTI-TRUST

Mr. Finkel has admitted that JFD is the largest antenna manufacturer in the world (REF). The above acts of unfair competition were clearly designed to restrain and BT and others from competing in log-periodic antenna business. It did succeed in restraining BT's commercial activities therein as before documented (15 U.S.C.14).

This was clearly a plan in which both JFD and the Foundation partook, and ~~thys~~ involves a conspiracy, as well (15 U.S.C.1.).

~~Best~~ ~~with~~ ~~move~~ has been shown.

Mr. Finkel has frankly admitted that JFD had been using the patents in suit (covering certain log-periodic antennas only) as a threat of suit with customers and ~~trying~~ ^{tying} in the same with argument that the customer, in order to get the patented antennas, had to take a whole line, including other antennas or other products than antennas not covered by the patents.

Mr. Gilbert also so testified (QUOTE).

Mr. Finkel's admissions, _____ were verified by Mr. Cohn (P.EX.____) (QUOTE)

Here are his exact words (QUOTE)

Mr. H _____ also verified these tie-in practices (P. EX. _____) (QUOTE)

This constitutes a violation of the tie-in prohibitions of 15 U.S.C.15, admitted by the Vice President of JFD itself and verified by several other witnesses.

The counterclaim defendant JFD has offered no evidence at all to overcome these proofs.

PATENT MIS-USE-UNCLEAN HANDS

Even had the above acts not to anti-trust violations, they at the very least establish patent mis-use, patent mis-marking and unclean hands.

- a. The use of threat of suit under certain antenna patents coupled with the requirement that to purchase these antennas the customer has to take the complete line, including accessory equipment admittedly not covered by the patent, is a clear mis-use, barring any relief.
- b. The knowingly putting of wrong patent numbers on products ^{or in} ~~on~~ ads of products offered for sale, is not only mis-use, but, under 35U.S.C. 292, carries a fine of \$500 for each ad?
- c. Each of the acts (a) and (b), the false and misleading advertising campaign, the raiding of key personnel, and the hampering of proof in this case, each, at the very least constitutes unclean hands.

THE INFRINGEMENT OF THE BLONDER/SHENFELD PATENT

It has previously been shown in connection with anticipation of the Isbell patent that Duhmmell, admitted before Isbell, conceived a two-parallel ^{beam} log periodic dipole construction closely resembling the BT Dart.

Duhmmell, however, did not make certain further discoveries that bear on the BS invention though he did everything that Isbell did ^{and} ~~not have~~ earlier.

First, Duhmmell did not know that his two-planes could be rather widely separated in terms of fraction of a wavelength and still operate as a log periodic antenna without deterioration of the patent.

BS discovered that they could separate the planes sufficiently to overcome the mechanical instability and other prior log periodic structures and yet maintain log periodic operation (QUOTE FROM PATENT).

Secondly, Duhmmell did not discover how to use this kind of antenna with parallel wire transmission line which inherently has a very close ^{of} operation between the lines and thus cannot ⁰⁶ match parallel beams of such appreciable separation.

In fact, Duhmmell^g conceded in his patent that while it would be desirable to use parallel wire transmission line, he didn't know how to adapt it (QUOTE PATENT).

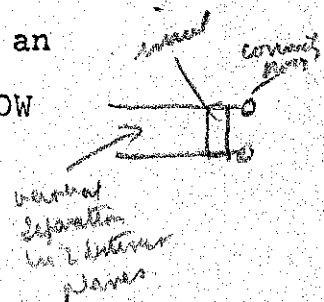
Similar admissions were made by Mr. Hefferend^{lin} and the QST technical editor (the 'surprise' of Hefferend^{lin} from desposition).

BS however discovered that if the parallel wire transmission line is carried near the front end of the antenna in a certain critical way that it will, even though the parallel wire line is of much smaller separation between its lines than the separation between the antenna beams^{oo} do obvious and surprising things (more even than Duhmmell, Hefferend^{lin} or anyone else) namely:

- a. prevent deleterious relative movement of line and antenna that upsets or ^{vanes} falls the radiation receiving field; and ^{Ph} provide a surprisingly adequate ^{wh} ~~may~~ over the frequency band of interest^p.

The critical way that BS here^{found would} ~~refer to~~ accomplish this was by:

- 1. Rigidly holding the front end apart by an insulator at the two connecting points (SHOW SKETCH AND QUOTE CLAIM WITH NUMBERS)



2. Holding the parallel wire line beneath the lower boom by means mechanically connected to this insulator-boom assembly (SKETCH WITH DEPENDING MEMBER ADDED....QUOTE CLAIM WITH NUMBERS)

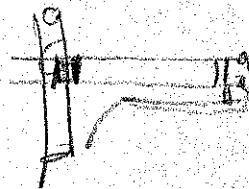


3. Carrying the end of the line from such means around the front end and spreading out the lines to join with the two connecting points (SKETCH SHOWING FRONT ADDITION....QUOTE CLAIM WITH NUMBERS)



(This ingenious technique apparently producing a transition that effects the necessary "match" from the small separation transmission line to the widely-separated beams).

4. Insuring the mounting to the mast at a region remote from the front end and near which a further insulator completes the beams at the precise separation (QUOTE CLAIM GIVE NUMBERS).



The record shows that never before BT had such a structure appeared on the market (QUOTE).

While the so-called prior art cited by the counterclaim defendants admittedly shows parallel beams (as, indeed, do *Fig 2 d* the Isbell and Mayes and Carroll patents themselves) none teaches either individually or in combination or even hints at this critical construction for use with parallel wire lines as above set forth.

As previously stated, the granting of the BS patent with the Examiner citing therein and thus fully knowing both the Isbell, ^{and} Mayes and Carroll patents, constituted a finding by the Patent Office that this was an unobvious invention over the work of Isbell, Mayes and Carroll and the other prior art of record.

INFRINGEMENT

Perhaps the best evidence of this unobviousness and of the significance of the BS improvement invention lies in the fact that after the BT Dart had been introduced on the market, JFD completely changed the design of antennas to incorporate this new BS invention.

It is significant that despite this incorporation of the BS invention JFD, both using its name and without ^{the} consent of the Foundation, using the University's name, still represented to the public in its advertisements that this ^{new} antenna ^{was} the invention of the University and JFD (REFERENCE).

Exhibit D.EX shows the coaxial-line-feed ~~close or~~ coplanar boom of the original JFD antennas following the ^{of Mayes & Carroll (?)} Isbell teachings.

JFD's
D.EX shows the later adoption of the BS construction with the relatively widely spaced booms and the critical *parallel wire* transmission line mounting arrangement above-described, as is reproduced in the following sketch. (SKETCH THE JFD ANTENNA THAT INFRINGES).

see ante Mayes(?)
Counterclaim defendants' council (~~their names(?)~~) tried to indicate to this Court that this construction was a fortuitous *accident* acquisition that fell within the scope of the BS claims since the parallel wire line of this new JFD antenna was also used for an additional purpose (QUOTE).

That additional purposes may be served, doesn't, of course, eliminate infringement where the infringing *result* is is also attained.

But the other JFD new antennas D.EX show the very same parallel wire insulation covered line used in the BT Dart line D.EX 10 and D.EX.20 of the BS patent, showing the complete spuriousness of this assertion (SIDE BY SIDE SKETCH OF JFD AND BS).

Mayes, of course, admitted that JFD changed the boom spacing after the introduction of the BT Dart. (FIG.)

A clear case of infringement has thus been made out
and each of JFD, ^{Manly} names and the University of Illinois Founda-
tion have received financial return for use of the BS inven-
tion in the changed line of JFD antennas.

* All part of the prior art to Harris's knowledge
X-Exam Rp. 135-6

* Description of Yagi antennas

Harris testy in Winegard suit - Rp. 82-83
High gain, narrow band p. 85

Scope of Isbell claims

Harris testy in Winegard suit - Rp. 123-

Averaged law values & calculated
max. deviation from the average ^{Rp. 123-4}

T_L deviation of 14.8% not too much ^{Rp. 124}

Elimination of front element would
only narrow the band coverage ^{p. 124-5}

Rp. 124 { T_L need not be the same as T_C
 T_L - .918 to .763 Av. .895
 T_C - .932 to .783 Av. .915
 T_L & T_C are substantially the same

Rp. 129- { T_S - 1 to 1.385
Not less than 1, but "the sig-
nificance is minor"

Rp. 130 { Law factor of 1 for spacing would
cause only a slightly restricted
bandwidth as compared
with a T_S of less than 1, but
bandwidth requirements for
these antennas in TV service
are such that effect is
immaterial

Rp. 130-1 { Operation would be substantially
the same with T_S of 1 and
 $T_S < 1$. Both freq. indep. operation

Channel Master "K.O." Antenna

The K.O. antenna, except only for the ~~particular~~ ~~log periodic~~ length and spacing relationships of the dipoles, satisfied all of the requirements of all of the Tebell patent claims in suit. The dipoles of the K.O. antenna decreased in length progressively from the back of the array to the front, but not by a constant scale factor. ~~and~~ The spacings, though variable, involved no consistent progression throughout the array. [#] However, considering the first five dipoles from the front ^(in the K.O. antenna) out of the total of six, (the Tebell patent claims call for no more than three such dipoles), the scale factor for dipole lengths is ~~essentially~~ ^{essentially} constant (varying only from 0.899 to 0.902) ^{within the range of 0.8 to 0.95,} that would certainly be considered "substantially constant" within the meaning of the quoted language ^{from} ~~the~~ claims 10-15 of the patent and with the degree of accuracy (not more than two significant figures) suggested by ^{the Tebell patent in} giving the limits as "from about 0.8 [one significant figure] to about 0.95 [two significant figures]." Since plaintiff selected only a few of the most nearly conforming dipoles of certain Winegard antennas in attempting to show infringement of the Tebell patent, ~~it~~ it could hardly be contended by plaintiff that the same consideration of a part of a prior art antenna is improper in comparing it with the Tebell patent.

L/D ratio of dipoles

Harris testy in Winegard Surt - R. p. 67-68

Thin wire ^{dipole} - may be 1000/1 on Ch. 2 e.g.

Increase diam. & L/D reduced

Conical type antenna would have a far greater average diam. than a simple wire antenna

* Folded dipole compared to conventional dipole

Harris testy in Winegard Surt, - R. p. 74-76

Folded dipole involves simply adding to a standard simple dipole and creating a 300 ohm impedance rather than 70 ohm.

Overall length of both is still $\frac{1}{2}\lambda$

Folded dipole could be cut for the middle of a freq band and broadbanded to cover a range of frequencies, stacking for more gain etc.

* Folded or simple multiple dipole arrays - travelling wave type mentioned R. p. 86

* Technique of Veeing a dipole to make it work on both low band and high band

Harris testy in Winegard Surt - R. p. 80-82

Veeing is one of the simplest techniques for taking advantage of the lobing effect on $\frac{3}{2}\lambda$ operation with detracting from $\frac{1}{2}\lambda$ operation.

Applicable to both simple and folded dipoles, but impedance problems becomes more involved for folded dipoles.

Relative importance of T_e , T_c , & T_s

Harris in Winegard Suit, Rp. 132-3

T_e most important

T_c next

T_s least

$T_s = \text{constant of } 1 \text{ would have "a minor" or "secondary effect on performance."}$

X-Exam

"Frequency Independent" - Definition

Harris in Winegard Suit Rp. 143

"Basic electrical characteristics remain substantially constant over a given frequency range" and "the range can be extended indefinitely by adding cells of varying size"

Then reiterates that an antenna with constant [dipole] spacing would have a restricted bandwidth but would be freq. independent

Then acknowledged that this would ^{only} be true over a narrow band Rp. 144-5

Re-direct

Relates "freq. independent" to bandwidth to be covered - Rp. 145-6

Compare Meyer
to Dep.
Piche

David
12/20

Verified generally that whether you gave
apes away of DX 7+8 was limited by no of
copies. It could not be correct to say that
~~any number of people who showed real interest~~
^{people simply showing interest}

would get a copy if available. Any other reason
intrinsic?

Could any interested member of public see the
report ^{DX 7+8} at the Univ. and lab offices upon request
^{at least}

Similar same function as: Depos. 55-7 of Maps in Flora
series

any installed was ~~not~~

Similar with handbore data for
computing of V angle for each node ^{90°} etc
derived? Get ^{sub} same angles of 62° & 114°

Terran - } Carter
 } 1974387

Use same questions as p 161-2
for maps depos. if needed

Make Stat at asky Mrs
about ~~Hayes~~ Dubanel & re
parent (after its in)

~~Explain to the court~~

~~the~~ ~~what~~ ~~at~~ ~~for~~

~~at~~

Need col. 6 line 14-16,
~~Know what~~

~~Ask him to explain to court~~
~~what~~ ~~Fig 5~~ ~~the~~ ~~lowest~~ ~~values~~
~~Fig 5.~~

If pic goes in Pg 5, do
not bars 46 + 29 become parallel
feeders.

Tranquils elevates such as 51b &
53b extend in opposite sides from feeders
in manner of dipoles.

Sweat
around
periphery
of myrat.

P170 Mays deposits in Jimmy

Residue
P170

- Mays?
Narrow down

(Sweat boundaries
> 1 cm asterisks
must)