

United States District Court,
D. New Jersey.

MARS, INCORPORATED,
et al Plaintiff.

v.

COIN ACCEPTORS,
INC. Defendant.

No. CIV A 90-49 JCL

Nov. 3, 2000.

Lanny Steven Kurzweil, McCarter & English, LLP, Newark, NJ, for Plaintiff.

Elizabeth J. Sher, Pitney, Hardin, Kipp & Szuch, LLP, Florham Park, NJ, for Defendant.

**POST-TRIAL OPINION WITH RESPECT TO CLAIM CONSTRUCTION AND INFRINGEMENT
OF ELEMENT (f) OF CLAIM 1 AND CLAIMS 2-3, 6 AND 11 OF THE '137 PATENT, AND
VALIDITY**

LIFLAND, District Judge

The court heard evidence with respect to the method of operation described in the patent and with respect to the accused devices, which operate generally in accordance with certain Coinco patents. See Agreed Facts 41-43. While the evidence was extensive, it appears that there is little factual dispute on these issues (except with respect to a Claim 11 issue which arose during the presentation of evidence, and as to which a previous stipulation was withdrawn with permission of the court). Thus, while the court denied summary judgment because it then felt that there were issues of fact as to element (f), it now appears that the dominant issues are legal issues of claim construction. The court now proceeds to resolve those issues.

There is no dispute raised by the record as to what the parties have referred to as elements (a),(b),(d), and (e) of Claim 1. Element (c) has already been addressed and ruled on. The elements of Claim 1 have been defined by the parties as follows:

1. A method for examining conductive coins with respect to both their authenticity and their denomination within a set of acceptable coins of various denominations comprising the steps of

[a] generating a first electromagnetic field of a low frequency range,

[b] subjecting the coin to the first field,

[c] generating a second electromagnetic field of a substantially higher frequency range than that of the first

field,

[d] subjecting the coin to the second field,

[e] producing signals indicative of the degree of interaction of the coin with each field, and

[f] producing a signal indicative of the acceptability of the coin and selective of its denomination within the set only if the degree of each interaction is within predetermined tolerances of those of acceptable coins of one of the denominations of the set.

CLAIM CONSTRUCTION

With respect to Claim 1(f), the claim construction issue to be decided is whether claim 1 requires that the signal which is selective of coin denomination be derived solely from the examination of the coin in electromagnetic fields. Coinco's position is that the claim so requires and that there can be no infringement because in the accused devices denomination has already been established by non-electromagnetic means, i.e. optical sizing, by the time examination of the coin in the electromagnetic fields is conducted.

A related issue is involved in construction of the Preamble to Claim 1, because Coinco argues that the method of examination claimed is not employed as to denomination of coins.

What does "selective of denomination" mean?

Element (f) of Claim requires a signal selective of denomination. The Court interprets that requirement to mean nothing more than that the signal identifies and relates only to, i.e., selects, a particular denomination. Obviously, a signal that related to more than one denomination would be useless in a vending machine, which must be told by the coin acceptance mechanism whether a coin having the appropriate denomination has been deposited. Thus, in the context of application of the invention, the foregoing claim interpretation is appropriate and indeed necessary.

Must the signal which is indicative of acceptability and selective of denomination be derived solely from electromagnetic testing?

The Court concludes that the answer is no, though it is a requirement of Claim 1(f) that the results of the electromagnetic testing be utilized in producing the signal which is indicative of the acceptability of the coin and selective of its denomination.

The claim does not preclude the participation of some other mechanism in the selection of denomination. It is well-settled that when a patent claim uses the phrase "comprising the steps of", that phrase is a term of art which means that the named steps are essential, but adding additional steps will not defeat infringement. *Genentech v. Chiron*, 112 F.3d 495, 501 (Fed.Cir.1997). Nothing in the record suggests any other meaning for "comprising" in Claim 1. Thus, Claim 1(f) does not require that the degree of interaction of the coins with the electromagnetic fields described in the claim be the only basis for selecting a particular denomination.

Coinco correctly points out that in the '137 size is addressed and evaluated solely by measuring the degrees of interaction between the coin and electromagnetic fields. Mr. Kesner testified that the eddy currents which

are induced depend on the conductivity of the coin and to a lesser extent on the size of the coin relative to the coil. Tr. 9/94. Column 1, lines 16-17 of the '137 patent refer to evaluations of ranges of diameter, and it is implicit in the discussion of inductance changes at Column 2, lines 54-64 that the diameter of the coin is a relevant variable. Concentricity between the inductors and the coins to be examined is discussed at Column 4, lines 49-60, suggesting that diameter of the coin is critical. As Mr. Kesner testified, the E core 1114 "is located just above the coils 1112 and 1113, and its position on the track which is higher means that it will interact much more strongly with the larger coins than the smaller ones." Tr. 9/101/13-16.

Nonetheless, it is not a limitation of Claim 1 that size be addressed and determined in this way in order to produce the element (f) signal. Indeed, the language of Claim 1 does not even mention size specifically, though a given size is undoubtedly a characteristic of an acceptable coin of a given denomination. Of course, the interpretation of the claim might be different, given the '137 patent's use of electromagnetic fields to evaluate size, if the claim language suggested a direct and exclusive relationship between coin size and electromagnetic testing, but it does not. There is nothing in the prosecution history or the prior art to suggest this limitation. Since it is the claims which define the invention, subject to interpretive factors not present here, the foregoing interpretation of Claim 1(f) is appropriate.

With respect to the Preamble to the steps of Claim 1, the interpretation question suggested by Coinco is whether the Preamble (and therefore the Claim, Coinco argues) requires that examination of the coins with respect to denomination be by electromagnetic means. The court disagrees with Coinco's suggestion; at most, the Preamble requires that coins be examined with respect to their denomination and that steps 1(a) through 1(f) take place.

Thus, the court concludes that it is not a limitation of claim 1 that the element 1(f) signal which is indicative of acceptability and selective of denomination be derived solely from the examination of the coin in the electromagnetic fields described in Claim 1.

INFRINGEMENT CLAIM 1(f)

There is no doubt that Coinco's accused products employ the steps claimed in 1(a), 1(b), 1(d) and 1(e), and the court has decided that they employ the step claimed in 1(c). Infringement of Claim 1(f) is now addressed.

The electromagnetic testing taught in the '137 patent consists of the detection of frequency shifts of free running oscillators to determine coin characteristics. Coinco's accused devices employ a decaying ringing wave form of a tank circuit. It is not suggested by Coinco that these different methods of electromagnetic testing support a finding of non-infringement. Mars ascribes the differences to advances in technology since the date of the '137 patent.

Coinco's accused products pre-select candidates for particular denominations by optical sizing means and then confirm that selection by electromagnetic means. If the optical sizing means identifies a particular object as a candidate for a particular denomination because of its size (diameter), the electromagnetic tests can only establish that it is a valid or invalid coin of that particular denomination. The operation of Coinco's 9300-series acceptors was described by Coinco's employee Toennies, in response to questions from Mars' counsel, as follows: (9/28/16-9/30/22)

Q. "So would you briefly explain to us now just what the major steps in testing are as a coin comes down

the track and passes those various devices?

A. As a coin rolls down the coin path, it will block the light that's emitted from the pair that's indicated by L1. It will then pass through and then it will block the light that's-and as the coin clears, clears L1, that path will now be connected, or the interruption will end.

Based on that, there is a preliminary sizing [done] on the coin and at that point, once it passes, once the trailing edge of the coin passes the L1 pair, the A coil is used to determine or to check, based on preliminary sizing, if that coin, indeed, is the coin that preliminary thinks it is.

Then once that coin passes L2, the same thing is done to B, it confirms or denies that that coin does meet the requirements of the preliminary sizing that was determined.

Q. And are the calculations that make these determinations done through this software that you worked on?

A. Yes.

Q. So if we had a 25 cent coin come down, just as it has completed passing L1, then there would be some determination that this might be a 25 cent coin that's come down the track?

A. There would be some determination of that.

Q. And it would say possibly? The concept associated with the determination is this is possibly a 25 cent coin?

A. That's a correct statement.

Q. If a piece of cardboard of the same diameter as a 25 cent coin came down the track and it went past L1, it would also be tentatively determined to be possibly a 25 cent coin?

A. That's correct.

Q. And if it were a metal disk of the same or approximately the same diameter, it also would be the same determination of possibly a 25 cent coin?

A. That's also correct.

Q. And then as I understand it, your subsequent tests are to determine whether or not that possibility is correct?

A. Yes.

Q. At the time when the possible determination is made, you don't give 25 cents worth of credit, do you?

A. No.

Q. Why not?

A. Because there are other tests that we need to do to verify the initial value, if you will, of the coin.

Q. So you know something about the diameter, that it's in a category of diameters, but you don't know if it's worth anything yet?

A. Right.

Q. And you can't give it a denomination, say this is a 25 cent coin, unless you've done the other tests?

A. Right

Q. And so really the validity of the coin, the denomination is a mixed question?

A. Could you repeat that?

Q. I said, and so the validity and denomination of a coin is a mixed question?

A. Yeah, it really is."

The operation of the Coinco 880 series is similar.

Coinco's expert, Dr. Morley, argued that selection as to denomination is made prior to a coin's examination in electromagnetic fields and that therefore the signal produced after electromagnetic evaluation in Coinco's accused devices is not selective of denomination because selection of denomination is done earlier by optical means. The court disagrees. Dr. Morley is confusing denomination with size; it is only size (and therefore just candidacy for a particular denomination) that is addressed prior to examination of a coin in the electromagnetic fields in the accused devices.

Dr. Morley also testified that he does not believe that Coinco's devices produce a single signal anywhere that is both indicative of acceptability of the coin and also selective of its denomination. 14/21/19-25. He agrees that the signal at plug P-1 of the 880 is indicative of acceptability and "indicative" of denomination, but argues that there is a difference between being "indicative" of denomination and selective of denomination. 14/22/1-7. His reasoning is that "selective" means that the signal selects, and that denomination was not selected by that signal at that point, because selection of denomination was made much earlier, in the optical sizing test.

The Court does not endorse what it regards as Dr. Morley's semantic quibble, i.e. that there is a difference between being "indicative" of denomination and being "selective" of denomination. The Court sees no meaningful difference, when what is happening is that the candidacy of a particular denomination is validated. The optical sizing means in the accused devices does nothing more than react to the differences in size (diameter) of various coins and propose a candidate. That candidate is "elected" after it passes the electromagnetic tests for that particular denomination. The signal that is produced after electromagnetic evaluation is thus "selective of ... denomination", as required by Claim 1(f).

As indicated above under Claim Construction, it is not a limitation of Claim 1(f) that electromagnetic evaluation be the only method used to collect information which is used to produce the signal which is

indicative of the acceptability of the coin and selective of its denomination. The accused devices still perform the examinations described in steps (a) through (e) and produce the signal described in (f) only if the degree of each interaction is within predetermined tolerances.

Electromagnetic testing participates in the determination of a coin's denomination, because it validates the candidacy of a flat round object for an acceptable coin of a particular denomination, and the resulting signal (after examination in the electromagnetic fields) indicates an acceptable coin of a particular denomination. The optical sizing does not finally determine the denomination, because optical sizing can only determine the diameter of an object deposited in the acceptor, not its metallic composition and therefore its validity as a coin. As Coinco's witness Toennies put it, no test says by itself what the denomination is (Tr. 9/31/3-5), and the determination of denomination and validity is a "mixed question" (9/30/20-22).

After the electromagnetic tests, there is a signal which is indicative of acceptability and selective of denomination:

Q. "Is there any one of these tests that by itself says this is the denomination of the coin?"

A. No.

Q. Is there, at the end of the line, a final signal that says, we've got or an indication that says we've got a valid coin of this denomination, such as nickel, dime, quarter?"

A. There is no one test that does that.

Q. When all the tests are done, is there an indication, for example, by a signal to an accumulator or register, give credit for this amount?"

A. When all the tests are done, that signal is present, yes."

Toennies, 9/31/6-14.

A claim interpretation difference between the parties arose in colloquy: Coinco believes that "producing" a signal "requires a positive action of producing rather than just finding something already in existence." Mars' view is that when you take information found at a point in the program (e.g. the GOOD 1 step) and make use of it, a signal is produced at that point. 12/64/4-19. The court accepts Mars' view. A signal is "produced" when the program examines information at a point in the program and uses that information to move on in the program. The program will not move on without a signal.

Mr. Kesner, Mars' expert, identified several places in the Coinco 9300 and 880 where a signal indicative of the acceptability of the coin and selective of its denomination, as required by claim 1, appears. He identified the ADD CREDIT routine in the code of the 9300 (Exhibit P-3) at page 48, where a value (COIN TYPE) is added to an accumulator. He also identified the connector on the 9300L. Also, there is such a signal in the 9300 code at line 334, page 14 of P-3, where the DOOR CONTROL routine is called. 12/81/24-12/84/8. As to the 880, he identified the signal at plug 1, and an earlier signal which occurs at MOV R1, A within the YES-1 subroutine on page 6 of plaintiff's exhibit 195, the code for the 880. In the 880, which is an acceptor and not an acceptor-changer, the code also generates such a signal on leads or lines depicted on Exhibit D-144 (the schematic for the 880), which are part of the P-1 connector when those leads are pulsed in a

sequence to indicate value. Another such signal is the value of register R-2 coming into the routine called GOOD 1 on page 5 of Exhibit P-195.

There was no serious disagreement with this testimony from Mr. Hoormann or Mr. Toennies, and the court accepts Mr. Kesner's testimony. Mr. Hoormann was the designer of the hardware and the software on the 880 acceptor, and Mr. Toennies worked on the software for the 9300 series. If disagreement with Mr. Kesner's testimony in this respect were appropriate, the court would have expected it from Messrs. Hoormann or Toennies.

At trial Coinco did not dispute that the operating method of its accused products satisfied claim 1(f)'s requirement that its signal be produced "only if the degree of each interaction is within predetermined tolerances...." The evidence clearly showed such use of the ranges fixed in memory (880) or set in software (9300).

Accordingly, the court finds that the accused devices literally infringe all elements of Claim 1.

INFRINGEMENT-CLAIMS 2, 3 & 6

In Agreed Facts 77-79, the parties agreed that dependent claims 2, 3 and 6 would also be infringed if Claim 1 is infringed. The parties were then focusing on the court's ruling that infringement of Claim 1(c) under the doctrine of equivalents was present. The court subsequently withdrew that ruling and found literal infringement of Claim 1(c) and has now found literal infringement of the balance of Claim 1 and its preamble.

No reason is suggested why a finding of literal infringement of Claim 1 should not result in a finding of literal infringement of dependent Claims, 2, 3 and 6, and the Court sees none.

Accordingly, the Court finds literal infringement of dependent Claims 2, 3 and 6.

INFRINGEMENT-CLAIM 11

With respect to dependent Claim 11, the first question is whether Coinco constructions include the step of mechanically segregating acceptable coins from unacceptable coins in response to the acceptability indicative signal.

Initially, there is a claim interpretation issue, which involves the meaning of "in response to." The court construes that element of Claim 11 as requiring that the step of mechanical segregation be affected or controlled in some way by the acceptability indicative signal, much as counsel for Coinco seems to have construed that requirement in his questioning at 11/19/25-11/20/3.

Mr. Kesner ultimately testified that, in the 9300 code on page 14 at line 334, validation is complete, denomination has been determined, and a signal is produced which satisfies the step of mechanically segregating acceptable coins from unacceptable coins in response to the acceptability indicative signal. Line 334, page 14 is a part of the WATCHDOG routine, which involves coin validation. At line 334, validation is complete and denomination has been determined, and a signal calls the DOOR CONTROL routine (i.e., the coin segregation mechanism), and the routine uses the value COIN TYPE to determine how the doors are controlled. 12/7/22-12/11/5. As to the 880, Mr. Kesner testified that the signal to which mechanical segregation is responsive is putting the value in R2 in the GOOD 1 subroutine at page 5 of P-195. The

DOOR CONTROL code uses the value in R2 to determine which doors to open, i.e. how to segregate the coins. 12/5/18-12/6/22.

The court accepts this testimony.

As to the Claim 11 requirement of a "signal indicative of the completion of segregation of an acceptable coin, and recording the value of the coin's denomination in response to the segregation signal," the evidence established that the accused products do not give credit until completion of the DOOR CONTROL subroutine, which causes coins to be mechanically segregated. 11/19/6-17, 11/26/7-33/10. The signals identified in the "ADD CREDIT" routine within the microprocessor of the 9300 series, in the "YES 1" routine within the microprocessor of the 880 series, and the dollar, dime, nickel, and quarter signals on pins 9, 11, 13, and 5 of the connector plug of the 880 series satisfy that requirement. The ADD CREDIT subroutine occurs subsequent to the DOOR CONTROL subroutine in the 9300. Monetary value is then added to the accumulator. 12/10/20-12/11/5. Mr. Toennies agreed that when all the tests are done, there is a signal to give credit for the denomination of the coin. 9/31/10-22.

Accordingly, the Court finds literal infringement of Claim 11.

VALIDITY

Anticipation. At trial, it was Coinco's burden to show that a single item of prior art discloses each and every limitation that is found in any of the asserted claims. *Kloster Speedsteel AB v. Crucible, Inc.*, 793 F.2d 1565, 1571 (Fed.Cir.1986). The principal prior art references which Coinco has asserted as independently disclosing all elements of one or more asserted claims are Lochstampfer, Bovey, Mallick, and Meloni '443, all discussed below. Mr. Kesner offered his report and testimony at trial with respect to those references and others. The Court accepts Mr. Kesner's testimony.

French Patent Application No. 2,001,962 to Lochstampfer discloses acceptance of coins of two or more denominations if one of them is magnetic and one of them is non-magnetic. It discloses three testing stations, one for ferromagnetic coins, another for non-ferromagnetic coins and a sizing station. If a coin is a magnetic coin, it is tested to see if it is a valid magnetic coin of the type that the circuit has been designed to detect, and it outputs a signal indicating that it is a valid coin of the magnetic type. If it is a non-ferromagnetic coin, it will be tested by the non-ferromagnetic test and if it is within the range of the non-ferromagnetic coin that the circuit is designed for, then the circuit will output a "valid" signal. The sizing circuit puts out a signal indicating whether it has detected a coin of the size of the ferromagnetic type or the size of the non-ferromagnetic type. To be an acceptable coin of either type, the coin does not have to pass tests in two fields of substantially different frequencies, nor does it have to pass two magnetic tests indicating if a coin is of the same denomination in order to be an acceptable coin. There is nothing in Lochstampfer that discloses that one should use two different frequencies with respect to the same kind of coin. As to claim 11, Lochstampfer discloses a form of mechanical segregation between good coins and unacceptable objects, but there is nothing in Lochstampfer to indicate whether or not it envisions the recording of the value of the coin only after a signal indicating completion of such segregation is received.

U.S. Patent No. 2,495,627 to Bovey has nothing to do with testing of coins, but deals with sorting metallic articles. It does not teach how to test in the same apparatus for multiple different acceptable objects. The Bovey mechanism is for sorting different materials and not for testing or evaluating. The interaction of the coil with the material is indicated on a meter whose reading the operator evaluates, and the operator then

determines whether or not the material is of a certain type. Bovey does not teach employing two different fields in the testing of the same object. Nor does it teach the use of two frequencies, though it does teach that it would be useful to look at the response of each of the materials versus different frequencies and choose a single frequency which yields the biggest difference between the two materials, i.e., selecting one frequency for a given test.

U.S. Patent 3,686,564 to Mallick teaches distinguishing between classes of metal objects, such as, on the one hand, guns, and on the other hand, relatively thin metal elements. The size of Mallick's device is inappropriate for coin testing and nothing in Mallick suggests that it could be useful for coin testing.

U.S. Patent No. 3,481,443 to Meloni tests coins of either of two acceptable denominations. For either of these two kinds of acceptable coins the acceptable coin has to pass only one test. The acceptability test for such a coin does not occur in two fields of substantially different frequencies. Meloni '443 authenticates coins based on the cessation or continuation of oscillations, not on the use of two different frequencies. When oscillations cease, no field exists and there can be no evaluation, within predetermined tolerances, of the degree of interaction of the coin with a non-existent field, as required by element 1[f]. The arrangement of a different test site for each separate denomination in Meloni '443 does not teach or suggest the use of two or more frequencies in evaluating a coin with respect to a single denomination. The Court need not evaluate the opinion of Mr. Kesner that none of the Meloni circuits are even operative for coin recognition, or whether the inoperability of the circuits described in Meloni '443, if otherwise anticipatory of Fougere '137, would negate that anticipatory effect. Meloni '443 does not anticipate '137 for the reasons stated above. As to claim 11, in Meloni there is no disclosure regarding the mechanical segregation of good coins from unacceptable coins or of recording the value of coins only after there is a signal indicative of mechanical segregation.

U.S. Patent No. 3,401,780 to Jullien-Davin does not disclose a method which would accept coins of two or more different denominations. It compares the coins being tested with a reference coin or with a resistor value in a bridge circuit. It does not disclose that acceptable coins must pass two different tests in two fields of substantially different frequencies. Nor does it disclose a method in which there is an output signal indicative of denomination or the use of electromagnetic fields in two different locations.

U.S. Patent No. 3,599,771 to Hinterstocker was cited by the Examiner and describes a method for testing coins using a reference coin. If the inserted coin matches the characteristics of the reference coin, then the inserted coin will be accepted. The method disclosed by Hinterstocker is not suitable for multi-denomination testing because it identifies only one coin, the coin of the reference type. Also, Hinterstocker's method does not involve an acceptable coin having to pass tests in two fields of substantially different frequencies, nor does it produce an output signal that is indicative of denomination. Hinterstocker's method does have a means for segregating mechanically acceptable coins from unacceptable coins, but it does not have a means for recording the value of the coins after some signal is produced indicating that the segregation has been accomplished.

U.S. Patent No. 3,059,749 to Zinke was cited by the Examiner. Zinke's method does test for coins of multiple denominations, but does not require that acceptable coins must pass tests in two fields of substantially different frequencies. A coin that is entered into the system is compared with a reference coin in a bridge circuit whose output will go to near zero or zero when the inserted coin matches the reference coin. Multiple test stations can be utilized to test for multiple denominations. Zinke does not disclose doing two different tests at two different frequencies, both of which must be indicative of the same denomination.

Zinke discloses an output signal indicative of denomination. Zinke segregates acceptable coins from unacceptable coins, but does not disclose a provision for recording the value of an acceptable coin only after there is a signal indicating that segregation has been accomplished.

U.S. Patent No. 3,373,856 to Kusters discloses a method for testing of coins. It does not disclose multi-denomination coin testing in the sense of a method for testing and identifying coins of two or more different denominations. It does not disclose that in order to be an acceptable coin the coin must pass tests in two different fields of substantially different frequencies. As to claim 11, it does not disclose recording the value of a coin only after a signal is produced indicating that the segregation of good coins from unacceptable objects has been accomplished.

U.S. Patent No. 3,229,198 to Libby has nothing to do with testing coins. It has to do with evaluation and analysis of materials that have some conductivity. The object being tested is balanced against some similar object (a reference object) and the difference between the object in the test and the reference object is amplified and then the signal that results from that amplification is analyzed. Various parameters about the material that is being examined can then be determined, such as conductivity, thickness, distance from the coil to the material, and defects. Nothing in this patent involves testing of two objects in order to provide some kind of acceptability signal for both objects as part of the same method, there is no question of passing or failing a test, and only one type of specimen is examined at a time. This patent discloses no output signal indicative of denomination and no magnetic fields at two different locations to which the object is subjected. As to claim 11, no segregation between acceptable and unacceptable objects is taught since this is solely a measurement apparatus.

The Libby papers identified as items 2(F)(G)(H) & (I) in plaintiff's exhibit 48, one of Mr. Kesner's expert reports, deal with non-destructive examination of various parameters of materials by using different frequencies and different mathematical means of getting data from the information that can be extracted from the coil interaction with the material. There is no reference to testing of coins nor is there anything in those papers which deals with trying to test, as opposed to making academic measurements. Mr. Upchurch, one of Coinco's experts, took the position that some of the Libby articles could apply to the testing of coins, or at least that there is nothing in those articles which prevents the application of the teachings of these articles to coins. In other words, you can use the materials-testing technology described in the articles for coin analysis. However, Mr. Upchurch agreed that Libby does not suggest the use of his technology or specifically teach the use of his technology in connection with coins, nor does he suggest or teach the combination of claim 1. Also, Mr. Upchurch has never tried to analyze whether the Libby references suggest all the elements of claim 1, even without a reference to coins.

The Court agrees with Mr. Kesner that none of the prior art referred to in his report, in the reports of Dr. Morley and Mr. Upchurch, defendant's experts, or otherwise in the record, is as relevant as the patents and publications discussed above. The Court also agrees with his conclusion that, with respect to that whole range of prior art, there was no suggestion or teaching therein of the combination which is disclosed in claim 1. Anticipation is not established.

Obviousness. A patent claim may be invalid for obviousness under 35 U.S.C. 103 if the differences between the patent claim and the prior art are such that the claimed subject matter as a whole would have been obvious to one of ordinary skill in the art to which the subject matter pertains. The foregoing testimony of Mr. Kesner as to the various items of prior art relied on by Coinco was not even subjected to cross-examination, nor did Coinco present a meaningful showing of how one or more items of prior art disclosed

or suggested all of the steps of any of the asserted claims or would have been obvious to one of ordinary skill in the art. While the evidence indicated that the testing of metallic materials was known in 1972, and that a 1948 patent (Andrews, Coinco exhibit 167) had disclosed magnetic testing of shell casings and the use of the same technology for coin testing, this at most suggests a relationship between metal testing and coin testing. The Andrews patent taught nothing about two-frequency testing as in the '137. Moreover, the unrefuted testimony was that the level of skill in the art of coin recognition was low in 1972, further suggesting that the '137 invention would not have been obvious at that time.

Mars presented evidence of secondary factors relevant to obviousness, such as commercial success and long-felt need. That evidence was unrefuted. Both Mars and Coinco have enjoyed commercial success with products employing the two-frequency technology of the '137 patent. Mars' witness Badger established that there was a need for improved reliability and accuracy in coin testing at the time of the '137 patent, compared to the then-prevalent mechanical and electromechanical coin acceptors, and that the Mars constructions incorporating the '137 invention commanded a premium price. Hoormann testified that two-frequency testing was desirable for accurate results.

Obviousness is not established.

Inventorship. Coinco asserts invalidity arising out of improper naming of inventors, and contends that Mars was not diligent in seeking correction of inventorship. Mars contends that there is no requirement of diligence for the correction of inventorship of an issued patent, absent circumstances not present here.

Certain facts are not in dispute. Agreed Facts 87-96 are incorporated herein. Coinco sought summary judgment on these facts, which was denied.

The question now before the Court is whether the issues raised by Coinco about inventorship require further presentation of evidence. At trial, the Court asked the parties for their respective positions on whether additional evidence would be necessary, and the parties have responded.

Unlike most, if not all, of the reported cases upon which both parties rely, there is no dispute here about inventorship. The Court's prior opinion referred to resolution of questions of inventorship by agreement of all concerned, including the PTO. The Court now faces a challenge to the validity of the '137 patent based solely upon Mars' delay in seeking correction of inventorship under 35 U.S.C. Section 256 and 37 C.F.R. Section 1.324. Those sections deal with correction of inventorship with respect to an issued patent and do not expressly incorporate any requirement of diligence on the part of the party seeking correction. This is in contrast to 35 U.S.C. Section 116 and 37 C.F.R. Section 1.48, both of which deal with inventorship correction as to a patent application where diligence is an absolute obligation. *Stark v. Advanced Magnetics Inc.*, 29 F.3rd 1570, 1574 (Fed.Cir.1994). Neither 35 U.S.C. Section 256 nor 37 C.F.R. Section 1.324 requires that an omitted inventor of an issued patent must diligently bring a lawsuit to correct inventorship or be forever barred from doing so. Whether diligent action is required in a particular case must be determined on the facts of that case. *Id.* at 1575.

Coinco has proffered evidence that it contends proves that Mars did not diligently correct inventorship of the '137 patent. It says that it can prove that the error in inventorship was known or should have been known by Guy L. Fougere and or the attorney prosecuting the applications that resulted in the '137 patent even while such applications were pending in the PTO.

The issue that this Court must resolve is whether, given this proffer and assuming such facts were proved, the Court would have a basis for invalidating the '137 patent.

As noted above, this is not a case where someone who claims to be an inventor or a co-inventor seeks to correct an issued patent to reflect that status long after the issue date. It is a case in which a company whom the Court has found to be an infringer of otherwise valid claims of an issued patent asserts invalidity solely because of delay in seeking the PTO's resolution of a question of inventorship, at the joint request of all parties claiming inventorship status. In this Court's view, this context is relevant to evaluation of the authorities presented by the parties on this issue.

In *Advanced Cardiovascular Systems Inc. v. Scimed Life Systems Inc.* 988 F.2d 1157(Fed.Cir.1993), an intervenor sought a declaration that he was a joint inventor and sought correction of the patent document. The District Court dismissed the claim with prejudice, on the ground of laches, having found unreasonable delay and prejudice. The Court of Appeals reversed, noting that the mere lapse of time does not constitute laches. The Court discussed the delay of the intervenor in asserting his rights, noting that under 35 U.S.C. Section 256 inventorship may be corrected at any time (whether by direct application to the Commissioner or by the Court) since the defense of patent invalidity based on incorrect inventorship can be raised at any time. The Court of Appeals also assessed the prejudice element of laches and endorsed the traditional equitable abhorrence of a forfeiture, which a finding of invalidity on this basis would engender. The Court found that as a matter of law there was no prejudice and therefore reversed the District Court's dismissal of the Section 256 Claim.

In the instant case, none of the facts proffered by Coinco even approach a basis for a finding of prejudice to Coinco or anyone else, and the Court finds that there was no prejudice to anyone from the belated application to the PTO for correction of inventorship. This litigation was commenced and proceeded independently of that PTO proceeding and nothing in that PTO proceeding had any substantial impact upon the progress of this litigation.

In *Stark v. Advanced Magnetics Inc.*, 29 F.3rd 1570 (Fed.Cir.1994) (*Stark I*) and 119 F.3rd 1551 (Fed.Cir.1997) (*Stark II*), Dr. Stark claimed to be the sole inventor of the subject matter covered by one patent and the joint inventor of the subject matter disclosed in 5 other patents. His complaint requested correction of inventorship under 35 U.S.C. Section 256. The Court built on its previous discussion of laches and observed that "... equity disfavors undue and prejudicial delay by a person *who may have an interest in the property of another. Synthesizing these equitable interests, the defenses of laches and estoppel have been applied in actions under Section 256.*" (emphasis added). Clearly, Coinco has no interest in the property of another in these circumstances; it merely seeks to capitalize on the delay in correction of inventorship without asserting or showing any prejudice to itself from that delay. Coinco is an infringer, not an inventor or co-inventor.

In *Pannu v. Iolab Corporation*, 155 F.3d 1344 (Fed.Cir.1998), the Court of Appeals for the Federal Circuit recognized that Section 256 may be invoked to save the patent from invalidity even during trial of an infringement claim, where a Section 102(f) defense was asserted. In *Pannu*, the facts make clear that there was a delay of several years between the 1989 knowledge of the alleged co-inventor that the patent had issued without his being named as a co-inventor, and the trial in 1997. Neither the Court, nor as far as the Opinion discloses, any party, expressed concern over that period of delay.

Furthermore, the Court notes, as did *Pannu*, that Section 256 is a savings provision. That observation,

coupled with *Stark's* and *Advanced Cardiovascular's* observations about the disfavor of forfeiture through a holding of invalidity, suggests to this Court that the right to correction of inventorship should not be grudgingly interpreted. Here, Coinco argues that the PTO's evaluation of the circumstances and finding of no deceptive intent are irrelevant, and that delay, and delay alone, should lead to invalidity of the '137 patent. No authority supports that view, and the authorities discussed above clearly point the other way.

The Court does not read *Stark I* as broadly as Mars would suggest i.e., that delay is irrelevant under Section 256 because neither Section 256 nor 37 C.F.R. Section 1.324 requires that an omitted inventor of an issued patent must diligently bring suit to correct inventorship or be forever barred from doing so (*Stark I* at 1575). While there is no statutory requirement of diligence, the *Stark* Court indicated that whether diligent action is required in a particular case must be determined on the facts of that case. The Court interprets that as meaning that laches and its requirements of unreasonable delay and prejudice should be evaluated.

Finding no prejudice in this case, or any allegation or proffered facts suggesting prejudice, the Court sees no reason to re-open the trial to address the issue of invalidity under 102(f). Accordingly, Coinco's defense of invalidity under Section 102(f) is rejected.

A damages hearing will be convened.

D.N.J.,2000.

Mars, Inc. v. Coin Acceptors, Inc.

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