

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RICHARD G. HYATT, JR.
DOUGLAS TRENT
and CHARLES HALL

Appeal No. 95-0143
Application 07/865,849¹

ON BRIEF

Before JERRY SMITH, FLEMING and TORCZON, ***Administrative Patent Judges***.

FLEMING, ***Administrative Patent Judge***.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1 through 20, all of the claims present in the application. Appellants' invention relates to electronic

¹ Application for patent filed April 9, 1992. According to appellants, this application is a continuation-in-part of Application 07/522,017, filed May 11, 1990.

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security systems in which access to a lock is granted through passing of appropriate data from an electronic key to an electronic lock.

Independent claims 1, 10 and 17 are reproduced as follows:

1. An electronic security system, comprising:

a lock, including

a lock memory storing therein an identification number of said lock, an encryption code associated with said lock, and a seed number, and

means for encrypting said stored seed number with said encryption code to generate an encrypted seed number;

key means couple with said lock for communicating therewith, including;

a key memory storing therein a list of lock identification numbers and corresponding encryption codes,

means for receiving said identification number of said lock and said seed number from said lock,

means for encrypting said received seed number with an encryption code retrieved from said key memory corresponding to said received identification number to generate an encrypted seed number, and

means for transmitting said encrypted seed number to said lock;

said lock further including

means for comparing said encrypted seed number received from said key means with the encrypted seed number generated in said lock, and

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means for enabling said key means to open said lock upon determination by said means for comparing that said encrypted seed numbers match.

10. A lock mechanism, comprising:

a bolt movable between a locked and an unlocked position;

a lock cylinder having a bolt cam in contact with said bolt to prevent said bolt from moving when in a locked position, and operable upon actuation to move said bolt to said unlocked position;

retractable blocking means in contact with said bolt for preventing said bolt from moving to said unlocked position when unretracted by blocking motion of said bolt to said unlocked position and allowing said bolt to be moved to said unlocked position when retracted;

an electrically powered solenoid operable to retract said blocking means upon switching of power thereto; and

means for selectively powering said solenoid, comprising a portable key means for operating said lock cylinder and including a power supply.

17. An electronic security system, comprising:

a lock, including

an access memory for storing access data<

a data communication terminal coupled to a communication channel,

microprocessor means for receiving data from said data communication terminal transmitted over said communication channel including access data, and for storing received access data in said access memory,

means for receiving access data from an electronic key,

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means for comparing access data received from said communication channel and stored in said access memory, and

means for releasing said lock to allow access by a holder of said electronic key if the access data received from said electronic key matches the access data received over said communication channel and stored in said access memory; and

remote data processor means for sending data to said microprocessor means over said communication channel.

The references relied on by the Examiner are as follows:

Clarkson et al. (Clarkson)	4,789,859	Dec. 6, 1988
Cargile et al. (Cargile)	4,819,267	Apr. 4, 1989
Clark et al. (Clark)	4,829,296	May 9, 1989
Barrett et al. (Barrett)	4,887,292	Dec. 12, 1989
Pogue et al. (Pogue)	5,144,667	Sep. 1, 1992
Todd	WO 89/02507	Mar. 23, 1989

Claims 1 through 6 and 8 stand rejected under 35 U.S.C. § 103 as being unpatentable over Pogue and Clark. Claim 7 stands rejected under 35 U.S.C. § 103 as being unpatentable over Pogue, Clark and Barrett. Claim 9 stands rejected under 35 U.S.C. § 103 as being unpatentable over Pogue, Clark and Cargile. Claim 10 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 5,140,317. Claim 10 also stands rejected under 35 U.S.C. § 103 as being unpatentable over Clark and Todd. Claims 11 and 13 through 15 stand rejected under 35 U.S.C. § 103 as being unpatentable over Pogue. Claim 12 stands rejected under 35

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U.S.C. § 103 as being unpatentable over Pogue and Clarkson. Claim 16 stands rejected under 35 U.S.C. § 102 as being anticipated by Clark. Claims 17, 18 and 20 stand rejected under 35 U.S.C. § 102 as being anticipated by Barrett. Claims 17 through 19 stand rejected under 35 U.S.C. § 103 as being unpatentable over Barrett and Clark.

Rather than repeat the arguments of Appellants or the Examiner, we make reference to the briefs² and the answer for the details thereof.

OPINION

After a careful review of the evidence before us, we agree with the Examiner that Claim 10 is properly rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 5,140,317. and also is properly rejected under 35 U.S.C. § 103 as being unpatentable over Clark and Todd. We also agree with the Examiner that Claims 17, 18 and 20 are properly rejected under 35 U.S.C. § 102 as being anticipated by Barrett and claims 17

² Appellants filed an appeal brief on March 10, 1994. We will reference this appeal brief as simply the brief. Appellants filed a reply appeal brief on June 13, 1994. We will refer to this reply appeal brief as the reply brief. The Examiner stated in the Examiner's letter dated June 20, 1994 that the reply brief has been entered and considered but no further response by the Examiner is deemed necessary.

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through 19 are properly rejected under 35 U.S.C. § 103 as being unpatentable over Barrett and Clark. Thus, we will sustain the rejection for these claims but we will reverse the rejection of remaining claims on appeal for the reasons set forth *infra*.

At the outset, we note that Appellants have indicated on page 6 of the brief the groupings of the claims. In particular, Appellants state that claims 18 and 19 do not stand or fall together with claim 17. We note that Appellants have argued separate patentable issues pertaining to claims 18 and 19 but do not argue separate patentable issues pertaining to claim 20. 37 CFR § 1.192 (c)(5) amended June 23, 1988 states:

For each ground of rejection which appellant contests and which applies to more than one claim, it will be presumed that the rejected claims stand or fall together unless there is a statement otherwise, and in the appropriate part or parts of the arguments under subparagraph (c)(6) of this section appellant presents reasons as to why appellant considers the rejected claims to be separately patentable.

As per 37 CFR § 1.192 (c)(5) amended June 23, 1988, which was controlling at the time of Appellants' filing the brief, we will, thereby, consider Appellants' claim 20 to stand or fall together with claim 17.

On pages 6 through 11 of the brief, Appellants argue that the rejection of claims 1 through 6 and 8 as being unpatentable

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over the combination of Pogue and Clark is improper because those of ordinary skill in the art would not be motivated by Pogue or Clark to modify the Pogue apparatus as suggested by the Examiner's proposed modification. Appellants point out that Pogue fails to teach storing in the lock an identification number of a lock as well as storing in the lock any encryption code associated with the lock. Appellants further point out that Pogue does not teach storing in the key a list of lock identification numbers and corresponding encryption codes. Finally, Appellants point out that Pogue does not teach a key including means for receiving the identification number of a lock and a seed number from the lock and means for encrypting the received seed number with an encryption code retrieved from the key memory corresponding to the received identification number to generate an encrypted seed number as recited in Appellants' claim 1.

The Examiner argues that Clark teaches storing a list of lock identification numbers and corresponding encryption codes in the key. The Examiner argues on pages 3 and 4 of the answer that it would have been obvious to modify the Pogue system so that the key would store a list of lock and corresponding encrypting codes for the ability to operate multiple locks.

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The Appellants argue that Pogue teaches away from such a modification. Appellants point out that Pogue teaches that one of the objects of the Pogue invention is to keep the key as simple and low-power consuming as possible and as a result Pogue's key only has to store two numbers, the secret key S and the key's identification number.

It is the burden of the Examiner to establish why one having ordinary skill in the art would have been led to the claimed invention by the reasonable teachings or suggestions found in the prior art, or by a reasonable inference to the artisan contained in such teachings or suggestions. ***In re Sernaker***, 702 F.2d 989, 995, 217 USPQ 1, 6 (Fed. Cir. 1983). In addition, the Federal Circuit states that "[t]he mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." ***In re Fritch***, 972 F.2d 1260, 1266 n.14, 23 USPQ2d 1780, 1783-84 n.14 (Fed. Cir. 1992), ***citing In re Gordon***, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

"Additionally, when determining obviousness, the claimed invention should be considered as a whole; there is no legally recognizable 'heart' of the invention." ***Para-Ordnance Mfg. v.***

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SGS Importers Int'l, Inc., 73 F.3d 1085, 1087, 37 USPQ2d 1237, 1239 (Fed. Cir. 1995), *citing* **W. L. Gore & Assocs., Inc. v. Garlock, Inc.**, 721 F.2d 1540, 1548, 220 USPQ 303, 309 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). In addition, the Federal Circuit reasons in **Para-Ordnance Mfg v. SGS Importers International**, 73 F.3d at 1087-88, 37 USPQ2d at 1239-40, that for the determination of obviousness, the court must answer whether one of ordinary skill in the art who sets to solve the problem, and who had before him in his workshop the prior art, would have been reasonably expected to use the solution that is claimed by the Appellants.

To answer this question, we first must determine what the prior art places before the skilled artisan in his workshop. Pogue teaches in column 1, lines 39-57, that one of the objectives of the invention is a high level of security even if all communications can be monitored and all aspects of the design are known. Pogue also teaches that another objective of their invention is that one key may be used with an unlimited number of locks. Pogue teaches that each unit can operate at very low power and complete the normal functions in a fraction of a second.

Pogue further teaches in column 2, lines 56-66, that these objectives are accomplished by a method in which the key only stores a secret key number and a unique key ID. In column 2, line 67, through column 4, line 63, Pogue teaches the initialization mode which allows a single key to operate with an unlimited number of locks. The initialization mode is only done once to introduce the key to a lock. During the initialization mode, information Q is determined by encrypting the key's secret key, S, by a private key P and the key's ID is transferred to the lock. The key does not store the private key, P, but only stores the secret key, S, and the key's ID. The lock stores the key's ID, the private key, P, and information Q where $Q=P(S)$. Pogue teaches in column 4, lines 64-67, that this process allows the key to only store the secret key, S, and its ID.

In column 5, lines 9-23, Pogue teaches the authentication method as diagrammed in Figure 4. To start this mode, the lock wakes up the key by sending out key IDs. If one of the key IDs matches the key's ID stored in the key, the key sends a reply. Upon receiving a reply, the lock enters into the authentication mode to verify that the key is an authorized unit. During this mode, the lock sends a random number R and the Q which corresponds to the ID which was matched in the key. The key

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decrypts Q using the secret key, S, to get P and encrypts R using P to get X. The key then sends X back to the lock. The lock encrypts R using P to get X and compares the two. If there is a match, the lock allows entry.

Using this process, Pogue meets the above mentioned objectives, the private key as well as the secret key are never transmitted. This provides a high level of security even if all communication can be monitored and all aspects of the design are known. In addition, only the key's ID and the secret key are stored in the key. This provides a simple design for the key that can operate at very low power.

On the other hand, Clark does not meet these objectives. Clark stores lock ID codes and their corresponding access codes in the key which requires a much larger amount of memory storage in the key. In addition, Clark does not provide a high level of security as taught by Pogue because Clark transmits the access code which can be intercepted by someone monitoring the transmission, thereby allowing unauthorized persons to defeat the security of the lock.

Those skilled in the art having both the teachings of Pogue and Clark before them would have been led away from using the Clark security system which does not provide a high degree of

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security as well as requiring much more power consumption for the key. Furthermore, we do not agree with the Examiner that those skilled in the art would have found it desirable to use the Clark lock ID codes and lock access codes in the Pogue system because this will allow the ability to operate more than one lock. As pointed out above, the Pogue security system allows for one key to operate an unlimited number of locks. See Pogue, column 4, lines 30-33. In addition, the modification would have eliminated the advantages of the Pogue security system by providing a less secure system that requires more power consumption. Therefore, we find that it would not have been obvious to one skilled in the art to modify the Pogue security system by providing the Clark lock IDs and access code system to obtain Appellant's invention as recited in claims 1 through 6, and 8.

We will not sustain the Examiner's rejection of claims 1 through 6 and 8. In addition, we note that the Examiner used the same reasoning in the rejections of claims 7 and 9. Therefore, we will not sustain the Examiner's rejections of claims 7 and 9 as well.

Claim 10 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 5,140,317. Appellants argue that a

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claim may be rejected under the obviousness-type double patenting doctrine only if there is some clear evidence, relating to why the variation would have been obvious. Appellants argue that the Examiner has not presented evidence as to why it would have been obvious to modify the claimed invention of patent claim 1 to achieve the invention set forth by Appellants' claim 10.

The Examiner has found that Appellants' claim 10 is broader than patent claim 1. We also find that Appellants' claim 10 is broader than patent claim 1.

While the narrowing limitations added to the claim 1 of the patent may render those claims unobvious over the claim 10 of this application, the reverse is not necessarily true. As the Examiner has noted, the claim 10 on appeal here is broader than the corresponding claims of the patent. We note that the Examiner has only determined one-way obviousness and not two-way obviousness.

The difference between the application of one-way obviousness determinations and two-way obviousness determinations have been clarified by the courts. In *In re Braat*, 937 F.2d 589, 594, 19 USPQ2d 1289, 1293 (Fed. Cir. 1991), the court held that a two-way obviousness determination must be satisfied in a situation where an applicant is not at fault that narrower claims

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may have issued before broader ones. However, in this case, Appellants elected to take the patent on the narrower claim 1 of the patent and to continue prosecution on the broader claim 10 in this application. Thus, the facts of this case are distinguishable from **Braat**.

In **In re Goodman**, 11 F.3d 1046, 1053, 29 USPQ 2d 2010, 2016 (Fed. Cir. 1993), the court held that where appellants choose to accept narrower claims to file a continuing application of the broader claims rather than to appeal the rejection of the broader claims, the two-way obviousness determination was not required. The court noted that "[a] second application ... 'containing a broader claim, more generic in its character than the specific claim in the prior patent' ... typically cannot support an independent valid patent." **In re Goodman**, 11 F.3d at 1053, 29 USPQ2d at 2016.

We find that a one-way obviousness determination is the proper determination. Furthermore, we find that upon reviewing the patented claim 1, that Appellants' broader claim 10 is obvious over the narrower patented claim 1. Therefore, we will sustain the Examiner's rejection of claim 10 under the judicially created doctrine of obviousness-type double patenting.

Claim 10 also stands rejected under 35 U.S.C. § 103 as being unpatentable over Clark and Todd. Appellants argue that there is no suggestion or motivation present in the prior art to modify the Todd key so that the key provides power to the lock arrangement as taught by Clark.

Appellants argue on page 17 of the brief that the Todd arrangement already includes a power supply for the lock so there would be no reason to modify Todd. We disagree.

Clark teaches in column 2, line 33, that the key includes a power supply 20. Clark teaches in column 2, lines 61-62, that the electrical power is provided from the key to the lock via line 40 shown in Figure 1. Clark teaches in column 3, lines 9-15, that the key powers the lock when it is not convenient to provide a power supply for the lock. Clark teaches in column 2, lines 22-32, that one such application is a lock system for parking meters where it would be difficult to provide a power supply to each meter.

Todd teaches on page 1 that their invention provides a small, economical and easily installed conversion kit for conventional types of mechanical device locks which greatly increases the security of the conventional lock at a fraction of the cost. Todd further teaches that the applications for the

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lock are retrofitting existing safes locks, house door locks and hotel room door locks. These retrofit applications present the same problems that Clark has solved in that it is not convenient to provide a power supply for these existing locks when retrofitting these locks with the Todd system. Therefore, we find that those skilled in the art would have found it desirable to use the Clark system of providing the power from the power supply provided in the key in the Todd system in order to solve the problem of providing power to the lock.

Appellants further argue on pages 17 and 18 of the brief that Todd's applications are convenient to provide power to the lock. We disagree. Todd teaches, as pointed out above, that the application is for retrofitting mechanical locks in safes, house doors and hotel room doors. Under these conditions, there is not a convenient way to provide power to the lock.

Appellants argue that Todd teaches away from the proposed modification because Todd teaches powering the key from a battery in the lock. However, we do not find that this teaching by itself teaches to those skilled in the art to power the lock from a power source in the lock as the only way to provide power. Todd does not teach that it would not be just as advantageous to

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power the lock from the key as taught by Clark. Thus, we do not find that Todd teaches away from the Clark teachings.

We fail to find that Appellants have presented any arguments that have persuaded us that those skilled in the art would not have reasons to modify Todd by providing the power to the lock from a power supply in the key as taught by Clark. Therefore, for the reasons above, we will sustain the Examiner's rejection of claim 10 under 35 U.S.C. § 103 as being unpatentable over Clark and Todd.

Claims 11 and 13 through 15 stand rejected under 35 U.S.C. § 103 as being unpatentable over Pogue. Claim 12 stands rejected under 35 U.S.C. § 103 as being unpatentable over Pogue and Clarkson. Appellants argue on page 19 of the brief that Pogue fails to teach or suggest a means for replacing a stored code number with a modified code number when an input code number matches a modified code number, key means for storing a predetermined algorithm that is also stored in the controller means of the lock mechanism and means for operating the lock mechanism when enabled by controller means in the lock as recited in claim 11. In response to Appellants' arguments, the Examiner argues on page 14 of the answer that Pogue suggests that any known means can be used to ensure security when programming the

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devices. However, the Examiner has not pointed to any teachings or suggestions by Pogue to provide these means. Furthermore, upon a careful review of Pogue, we fail to find that Pogue teaches or suggests these means. Therefore, we will not sustain the Examiner's rejections of claims 11 through 15.

Claim 16 stands rejected under 35 U.S.C. § 102 as being anticipated by Clark. Appellants argue on pages 21-22 of the brief that Clark fails to disclose key means comprising a hand held computer and interface module detachably coupled to the hand held computer for interfacing the computer with the lock. We agree and thereby we will not sustain the Examiner's rejection of claim 16.

Claims 17, 18 and 20 stand rejected under 35 U.S.C. § 102 as being anticipated by Barrett. Claims 17 through 19 stand rejected under 35 U.S.C. § 103 as being unpatentable over Barrett and Clark. Appellants argue on page 23 that Barrett fails to disclose a lock wherein a remote data processor means sends data including access data to a data communication terminal of a microprocessor means of the lock over a communication channel.

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The Examiner views the lock as the Barrett lock system that includes the lock box 12 installed in the stand 16. Barrett teaches in column 7, lines 27-37, the lock system is designed to communicate with a remote computer over conventional telephone lines. Therefore, we find that Barrett teaches a lock including a data communication terminal coupled to a communication channel and microprocessor means for receiving data from said data communication terminal transmitted over said communication channel as recited in Appellants' claim 17.

Appellants further argue on page 23 of the brief that the Barrett system requires that the lock box be removed from the door and assembled in the lock system (the stand 16 including local stand 16a and computer 18). However, we note that the Appellants' claim 17 does not set forth any limitations that requires that the lock must be accessed while the lock box is on the door. Therefore, we will sustain the Examiner's rejections of claim 17 under 35 U.S.C. §§ 102 and 103.

Appellants argue on page 24 of the brief that Barrett fails to teach a modem means as recited in claim 18. Upon a careful

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review of Barrett, we find that Barrett teaches in column 7, lines 27-55, that the lock includes a modem 74 as shown in Figure 18b as recited in Appellants' claim 18. Therefore, we will sustain the Examiner's rejections of claim 18 under 35 U.S.C. §§ 102 and 103.

Appellants argue that neither Barrett nor Clark suggest using the lock in a public telephone set as recited in Appellants' claim 19. However, Clark teaches in column 1, lines 5-11, applications for electronic locks which include pay telephones. Therefore, we find that from this suggestion found in Clark, it would have been obvious to those skilled in the art to use the Barrett electronic lock as a lock for a public telephone set. Therefore, we will sustain the Examiner's rejection of claim 19.

In view of the foregoing, the decision of the Examiner rejecting claims 10 and 17 through 20 is affirmed; however, the decision of the Examiner rejecting claims 1 through 9 and 11 through 16 is reversed.

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

AFFIRMED-IN-PART

JERRY SMITH)	
Administrative Patent Judge)	
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MICHAEL R. FLEMING)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS
)	AND
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