

# 強い特許づくり

(電気/電子分野)

2017. 5. 31

兪 炳 虎

特許法人 NAM&NAM

Speaking in a personal capacity – the views expressed are not necessarily those of Nam & Nam.

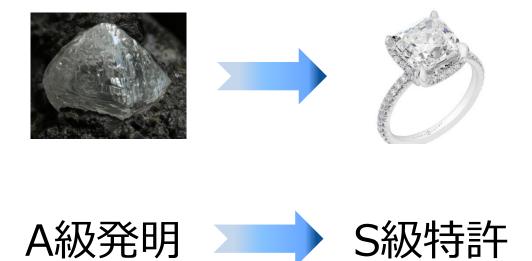


# 強い特許の 4 評価要素

- ① **回避設計の難易度** 公共に貢献する特許 → 顧客に貢献する特許
- ② 侵害立証の容易性出願のために作られた特許 → 訴訟のために作られた特許
- ③ **生存の可能性** 危険性がある特許 → 危険性がない特許
- ④ インパクト規模発明者を見て作られた特許 → 世の中を見て作られた特許



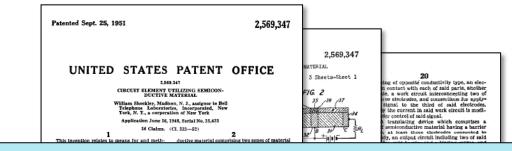
# 発明の質と特許の質は違う!



「発明はアイデアだが、特許は言語だ」



# 例示特許: US 2,569,347



## "Circuit element utilizing semiconductive material"

- ✓ 出願日: June 26, 1948
- ✓ 特許日: Sept. 25, 1951
- ✓ 発明者: W. SHOCKLEY

Another resure of the inventor persuins controlling the current flowing through a semi-conductive body by an electrical field or fields in addition to those responsible for normal current flow through the body.

An additional feature of this invention relates to a body of semiconductive material, means for

making electrical connection respectively to two making electrical connection respectively to we per pertions of said body, means for making a third electrical connection to another portion of the body intermediate said portions and circuit means including power sources whereby the in-fluence of the third connection may be made what. to control the flow of current between the other

connections.

Another feature pertains to a semiconductive body comprising successive zones of material of opposite conductivity type each separated from the other by an electrical barrier, means for maksaid zones, and means for making other con-nections intermediate to the two for controlling the flow of current scross one or more of the

sign to the earriers which convey the current through the body.

Another feature of the invention pertains to Other objects and feature of this invention. will appear more fully and clearly from the following description of Illustrative embodiments thereof taken in connection with the appended

35 drawings in which: Fig. 1 shows in section one embodiment of the invention with an appropriate circuit; Fig. 2 shows in section another embediment of

the invention with illustrative circuit connec-Fig. 3 shows in section an embodiment some-

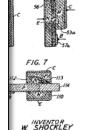
what similar to that of Fig. 2 with certain struc-tural differences and with a suitable circuit arrangement;

Figs. 3A and 3B show in fractional sections modifications of Fig. 3; Pig. 4 shows in section a modification of Fig.

nectivity type each separated from
n electrical barrier, means for mak—
onnection respectively to two of 50
Pig. 5 shows in fractional section a further modification of the type of device shown in Fig. 4 and including features of detail also applicable

he flow of current across one or more of the lectrical barriers.

Fig. 6 shows an embodiment of the invention afford feature resides in a body of semicon— a similar to that illustrated in Fig. 3 with a differ-



ATTORNEY

nd zone of the opposite conductivity type g a first junction with said first zone and i zone of said opposite conductivity type g a second junction with said first zone, a etion to said first zone, an emitter conto said second zone, a collector connec-said third zone, and means including interconnecting said connections for ap-a bias in the forward direction across said action and a bise in the reverse direction said second junction. WILLIAM SHOCKLEY.

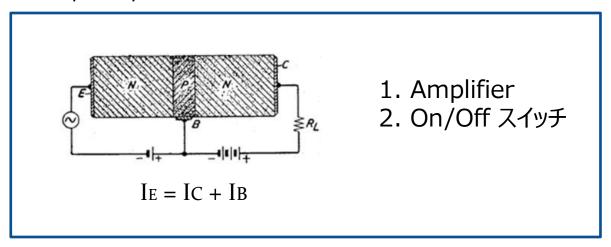
#### REFERENCES CITED

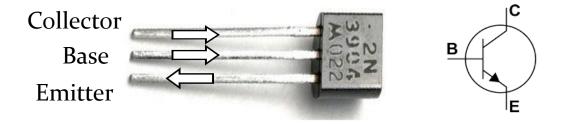
owing references are of record in the

UNITED STATES PATENTS		
	Name	Dute
15	Lilienfeld	Jan. 28, 1930
40	Litienfeld	Sept. 13, 1932
18	Littenfeld	Mnr. 7, 1933
76	Boer et al	Apr. 18, 1933
13	Weber	Feb. 27, 1934
04	Holst et al.	Sept. 26, 1939
55		July 16, 1940
40	Easeling et al	Aug. 31, 1943
01	Ohl	June 35, 1946
39	Oh1	June 25, 1946
13	Rack	July 19, 1949
76		Nov. 1, 1949



# SHOCKLEY US 2,569,347



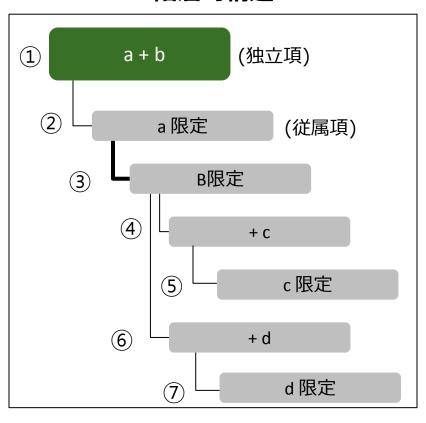


**BJT** (Bipolar Junction Transistors)



# Point 1. 請求項の水平的構造

#### 階層的構造



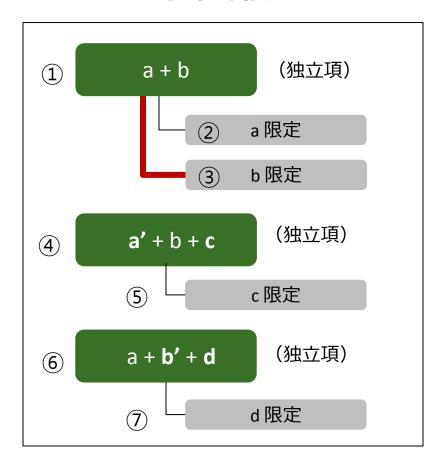
#### 長所と短所

- ▶ 発明について理解しやすい。
- ▶ 審査/分析が容易だ。
- ▶ 単一性要件の満足判断が簡単だ。
- ▶ 非侵害の従属
- 認識(誤解)
  - ① 有効性の従属
  - ② 独立項別発明の概念

※ ① → ② → ③ (hierarchical 構造)



## 水平的構造



#### 長所

- ▶「多数独立項多数発明」認識
  - (特許取引及び訴訟時)
- ▶ 用語使用の多様化 (b(tip)→b'(tapered portion))
- 損害賠償額算定のベース (付属品→装置 → システム)
- ※ 費用の差はない。(ただ、USPTO: +\$420/claim from 4th)

※ ① → ③ (hub and spoke 構造)



#### **SHOCKLEY**

#### 例) US 2,569,347 (独立項29個+従属項5個)

- 1. A solid conductive device for controlling electrical energy that comprises ...
- 21. A solid conductive device comprising ...
- 22. A solid conductor comprising three superposed layers ...
- 5. A device for controlling electric current ...
- 8. A method of controlling electric current ...
- 10. Means for controlling the flow of electric current ...
- 11. Amplifying means ...
- 16. The method of amplifying electrical energy...
- 26. A circuit element comprising a plurality of zones of ...
- 31. A circuit element which comprises a block of ...
- 4. An electrical translating device comprising ...
- 30. A translating device comprising a body of ...
- 34. A signal translating device ...

3 1. 11 bignai tranbiating device ...



# Point 2. 機能的/現象的記述

# 請求項に遠近感を付与せよ。 (独立項 v. 他独立項) (独立項 v. 従属項)

- ✓ 様々な構造を包括
- ✓ Design Around 困難
- ✓ 立証の容易性 (使用マニュアル、動作、標準)
- ✓ 同一構造が他の機能を遂行する場合
- ✓ 現象の構造/原因/物質
- ✓ 立証の容易性(明白な構成、ITC訴訟を考慮)



Picture description of an invention does not always make a great patent.

#### 構造式請求項

#### 機能式請求項

- ▶ All Element Rule 立証の容易
  - ▶ シナジー効果が無視される傾向
- ▶ 構造的詳細の同一性を要求
- ▶ 様々な回避設計が可能

- ▶ 侵害立証の容易
  - ▶ 使用者マニュアルなどの引用
- ▶ 広い保護範囲
  - ▶ 様々な構造をカバー
- ※ 構造は従属項に
  - Claim Differentiation



Glossary

## 頻繁に使われる機能用語

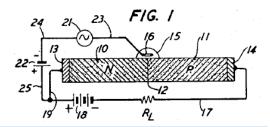
- "programmable means for"
- "capable of ..."
- "adapted to ..."
- "for mapping"
- "operable to ..."
- "suitable for"
- "configured to"

❖ (例) <u>"read"</u> vs. <u>"associate"</u>



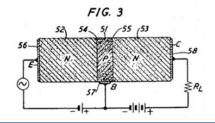
# SHOCKLEY 例) US 2,569,347

#### 現象的限定



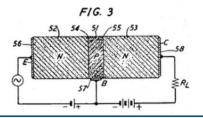
- 4. An electrical translating de vice comprising:
- *i*) ...,
- *ii)* means <u>for establishing</u> ele ctrical connections to said zon es, and
- *iii)* means including a third c onnection to said body <u>for producing in said body an electrical field substantially parallel to said barrier.</u>

#### 機能的限定



- 10. Means for controlling the flo w of electric current comprising:
- *i*) ..., and
- *iv)* variable field producing mean s for controlling the electron distribution in the intermediate zone <u>t</u> o thereby vary the current betwee <u>n the separated zone.</u>

#### 構造的限定



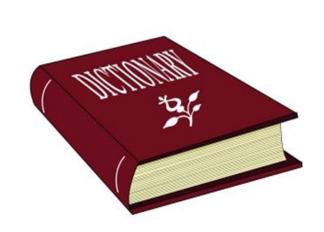
- 7. A device for controlling electric current comprising:
- *i)* a body of semiconductive mat erial having a pair of <u>spaced zone</u> <u>s</u> of the same conductivity type a nd a third zone of the opposite conductivity type, each of said pair of zones <u>forming a barrier</u> with sa id third zone,
- *ii*)...



# Point 3. よく管理できた特許用語

#### 消極的

#### 積極的



- ▶ 強い推定
  - > 一般的な通常の意味
  - ▶ 文脈

## ▶ 詳細な説明が最も強い根拠

(主な基準) [Philips, CAFC en banc '05]

- > 辞書編集者
- ▶ 均等論適用の可能性増大



# SHOCKLEY 例) US 2,569,347

#### 辞書編集者

- The term "<u>impurities</u>" is intended to include intentionally added constituents as well as any which may be included in the basic material as found in nature or as commercially avail able.
- The expression "<u>significant impurities</u>" is here used to denote those impurities which affect the electrical characteristics of the material such as its resistivity, photosensitivity, rectification, and the like,...
- The term "barrier" or electrical barrier used in the description and discussion of devices in accordance with this invention is applied to ...

#### MPF element

- 10. Means for controlling the flow of electric current comprising ...,
  - means for making substantially ohmic contact to each of said zones, ... and
  - variable field producing means for controlling the electron distribution in the intermediate zone to thereby vary the current between the separated zones.



- MPF (means-plus-function)
  - ・・・(具体的構造等ではなく)機能的に表現された部分を含む特許請求の範囲

#### MPF element

#### 取扱い

- e.g. "means for storing data"
- ▶「means」用語 → MPF (推定)
  - ❖ 機能遂行のための十分な構造が 開示されていると、推定は反覆される。
- ▶ 詳細な説明に機能遂行のための構造を 開示していなければならない。
  - ❖ 公知技術の場合、含める。
  - ❖ SW特許:必須段階を示す アルゴリズムを開示
  - 違反時:不明瞭による特許無効

- 詳細な説明に開示された 当該機能を遂行するための すべての構造が保護範囲に 含まれる。
  - ❖ 等価物を含める。



#### SHOCKLEY 例) US 2,569,347

Fig. 1 shows one embodiment of the invention with an appropriate circuit;

Fig. 2 shows another embodiment of the invention with illustrative circuit connections;

Fig. 3 shows an embodiment somewhat similar to that of Fig. 2 with certain structural differences and with a suitable circuit arrangement;

Figs. 3A and 3B show **modifications** of Fig. 3:

Fig. 4 shows **a modification** of Fig. 3 in which an embedded electrode is used;

Fig. 5 shows <u>a further modification</u> of the type of device shown in Fig. 4 and including features of detail also applicable to other embodiments;

Fig. 6 shows an embodiment of the invention similar to that illustrated in Fig. 3 <u>with a different</u> <u>arrangement for making connection</u> to part of the device; ...

Fig. 9 shows a device similar to that of Fig. 8 with a different circuit arrangement.

Fig. 10 shows <u>a two-electrode device otherwise similar</u> to that of Fig. 3, adaptable as a transit time diode with energy level diagrams useful in explaining its operation; ...



# Point 4. 禁反言 (Estoppel)

#### What did you say ...

#### MIRANDA WARNING

- 1. YOU HAVE THE RIGHT TO REMAIN SILENT.
- ANYTHING YOU SAY CAN AND WILL BE USED AGAINST YOU IN A COURT OF LAW.
- 先行技術との差別化
- 本発明の目的
- 作用効果
- 発明のメリット
  - ✓ OA 意見書
  - ✓ 出願補正

#### How will it work...

- Disclaimers or Disavowal
- Narrower claim construction
- Prosecution History Estoppel
  - ✓ Limitation of the Doctrine of E quivalents



The fewer the better

#### できるだけ

- ✓ 発明の構成を強調
  - ▶ 目的と効果はハイレベルで記述
- ✓ 背景技術及び効果の言及は最小限に
  - ▶ 当該技術の一般的現象に限定
- ✓ OA 意見書においては口を慎む
  - ▶ 発明の構成について言及するのは控える。

#### **Patent Profanity**

"the present invention," "critical," "special," "peculiar," "superior" "necessary," "essential," "key," "every," "must," "never," "only," "absolutely,"



# Thank You.

#### 兪 炳虎

Ben (Beyong-ho) Yuu Sr. Partner Patent Attorney (Korea & US) (byuu@nampat.co.kr)



Nam and Nam World Patent & Law Firm



# **Since 1952**

Special law firm in the intellectual property field

As NAM & NAM and our clients have worked together for the last fifty years, NAM & NAM looks forward to welcoming the future with YOU, our clients, and potential clients.



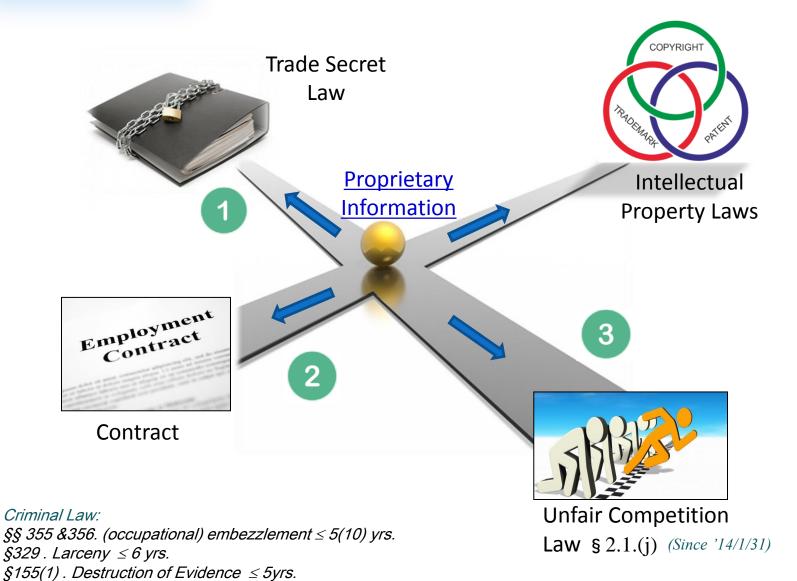
#1. Attachment

# Trade Secret & Unfair Competition

Under the Korean
UNFAIR COMPETITION PREVENTION
& TRADE SECRET PROTECTION ACT



#### **How to Protect?**



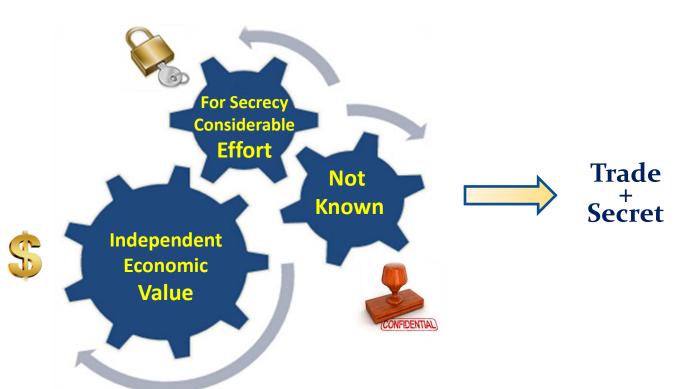




#### **Trade Secret Law**

§9-2. UNFAIR COMPETITION PREVENTION AND TRADE SECRET PROTECTION ACT

1







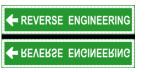


# §2(3). UNFAIR COMPETITION PREVENTION AND TRADE SECRET PROTECTION ACT





**Infringement** of Trade Secret







# §§10,11,18. UNFAIR COMPETITION PREVENTION AND TRADE SECRET PROTECTION ACT





# 1. Injunction:

- ① Prohibition / Prevention
- ② Destruction of the goods
- 3 Removal of the facilities

#### 2. Monetary Damage

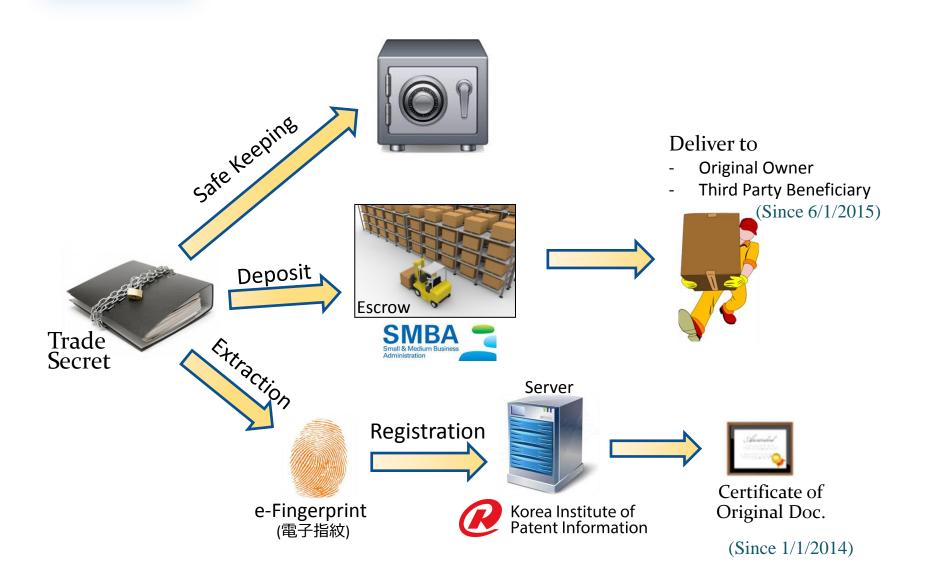
#### 3. Criminal Penalty:

- ① imprisonment for < 5 years, or
- ② a fine  $\leq$  50 million won
  - ❖ If (10 x the amount of profit) > 50 million won, a fine = (2~10 x the amount of profit)



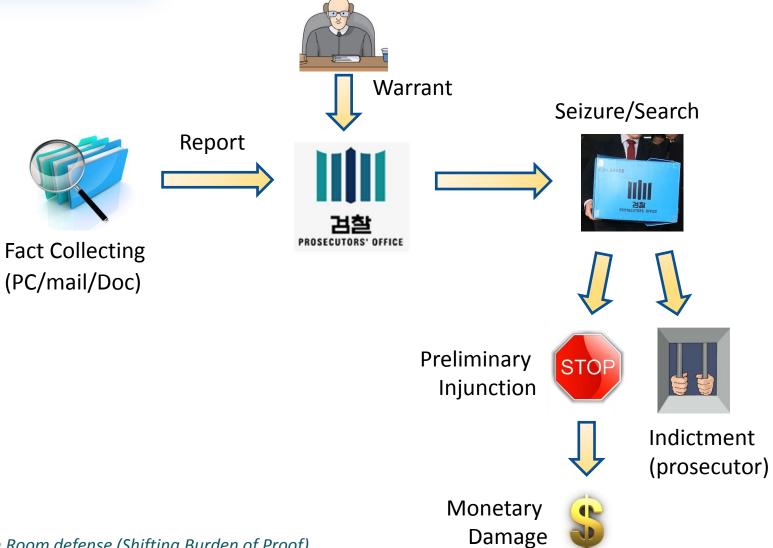
#### **Evidence**

# §2.1. ACT ON THE PROMOTION OF COLLABORATIVE COOPERATION BETWEEN LARGE ENTERPRISES AND SMALL-MEDIUM ENTERPRISES





# **Proceeding**



Clean Room defense (Shifting Burden of Proof)





#### Contract

2012 KaHab 103 Daegu District Crt., 2012

2

- Confidentiality Agreement
- Non-compete Agreement
  - 1 To protect the trade secret
  - ${f 2}$  Reasonable period ( 1  $^{\sim}$  5 yrs depending on areas)
  - 3 Contract Consideration
  - ✓ *Public policy doctrine*
  - ✓ Constitutional Rights of a freedom to choose job or business





#### Contract

# Breach of Non-compete Agreement



# 1. (Preliminary) Injunction:

- Competition Prohibition / Prevention
- If employment was involuntarily terminated, the Non-Compete Agreement is valid under the doctrine of inevitable disclosure.

# 2. Monetary Damage

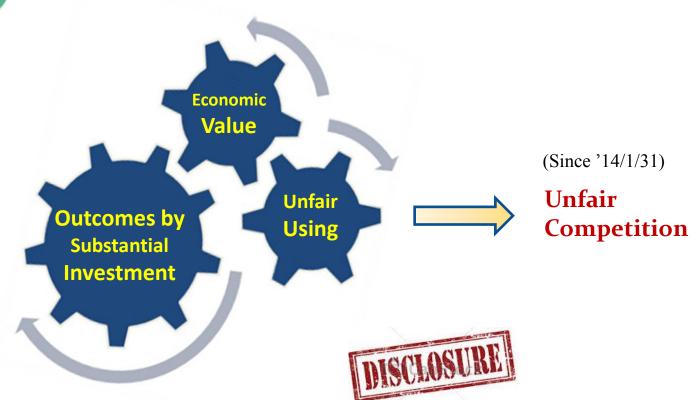




Unfair Competition Law §2.1.(j)

*§2.1(j).* UNFAIR COMPETITION PREVENTION AND TRADE SECRET PROTECTION ACT

3







# Unfair Competition Law §2.1.(j)

*§§4&*5. UNFAIR COMPETITION PREVENTION AND TRADE SECRET PROTECTION ACT

# 1. (Preliminary) Injunction:

Unfair Competition



- 1 Prohibition or Prevention
- 2 Destruction of the goods
- 3 Removal of the facilities
- 2. Monetary Damage
- No Criminal Penalty Provision



# **Best Option?**

