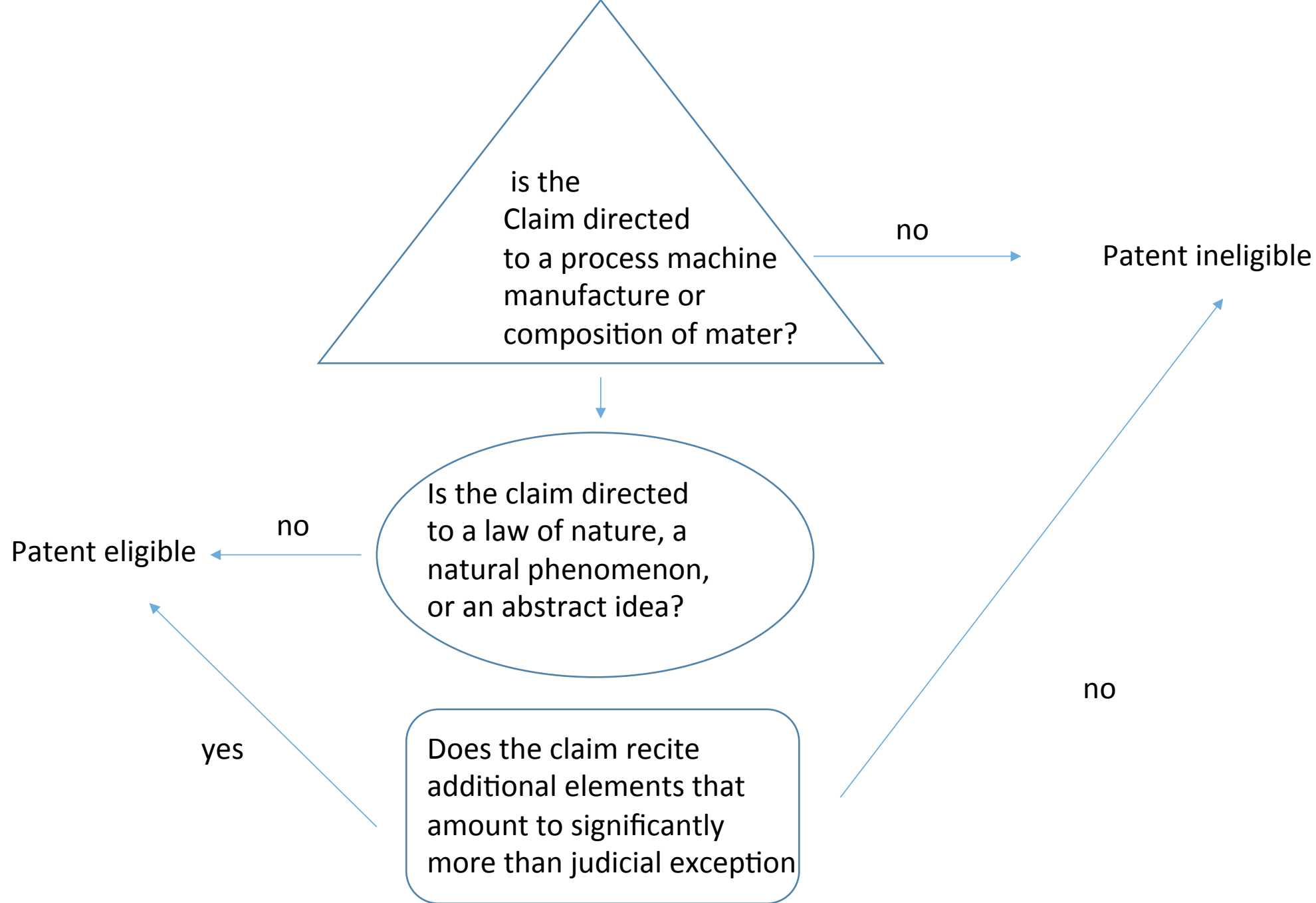


101 Analysis

According to the USPTO



Machine, Process, Manufacture, Composition of Matter?

- Likely most things fit under this but not all –
- In re Furguson (558 F.3d 1359 Fed Cir. 2009)
 - Marketing company markets software from plurality of software companies carries out and pays for marketing activities gets in return a share of “total income stream from marketing”
 - Not a process as no series of steps
 - Lesson: Business methods – make sure claims have a series of steps
- In re Nujitin (515 F.3d 1361 Fed Cir. 2007)
 - A signal with embedded supplemental data signal being encoded in a certain way allows methods of encryption
 - Attempt to claim the signal itself not process of making or using the signal
 - Not a manufacture or new type of matter despite energy = matter, being created by man. Manufacture not “tangible” matter so not manufacture
 - Lesson: when claiming computer readable medium find some way not to include transitory electromagnetic waves

Example – would this fit in a machine, process or manufacture?

- A communication comprising visual notations drawn simultaneously from opposing ends toward each other paired with auditory cues that modify the meaning of the visual notations.

Natural Phenomena/Law of Nature/Product of Nature

- Three terms used interchangeably generally mean same thing – something that existed before we found it in nature? If so – not patentable
- Things found to be laws of nature natural products
 - Supreme Court
 - Unmodified DNA newly discovered genes – Myriad (569 U.S. _ 2013)
 - Correlations between drug amount and treatment success – Mayo (132 S. Ct. 1289 (2012))
 - Electromagnetism to transmit signals – Morse (56 U.S. 62 1854 – but cited still today)
- Federal Circuit post Mayo
 - Noninvasive Prenatal diagnosis – Arisa Diagnosis v. Sequenom Inc. (788 F. 3d 1371 Fed. Cir. 2015)
 - Intron sequence analysis method for detection of adjacent and remote locus alleles as haplotypes – Genetic Tech Ltd. v. Merial LLC (818 F. 3d 1369 Fed. Cir. 2016)

Warning signs natural product/product of nature

- Chemical entity has a correlation in nature – even if you have mixture of natural products (see *parker v. flock* 437 US 584 1978)
- Correlations of chemical amounts for known chemical to human/animal reactions (*Mayo* 132 S. Ct. 1289 (2012))
- Correlation of known amounts of chemical to presence of disease

Significantly different characteristics than product of nature

- If characteristics significantly different – not a product of nature
 - Compare to natural product in its natural state
 - Nonlimiting examples of things considered
 - Biological or pharmacological activities
 - Chemical and physical properties
 - Phenotype including structural and functional characteristics
 - Structure and Form whether chemical genetic or physical

Significantly different characteristics?

- Vaccine carrying mixture of three types of live flue viruses when usually types not seen together in nature?
 - (funk bros 333 US 127 1948 – but still cited today)
- Vaccine carrying mixture of three types of live flue viruses that usually kill each other – viruses are engineered so they do not kill each other
- Natural peptide mixed with a pharmaceutical acceptable carrier
 - May 2016 life sciences examples

Abstract idea

- Does not mean abstract in dictionary sense of not specific
- Have to determine by comparing to things seen as abstract in the past
- Patent office places cases into four broad categories
 - Mathematical relationships/formulas
 - Fundamental Economic Practices
 - An Idea of itself
 - Certain methods of organizing human activity

Mathematical Relationships/Formulas

- Algorithm for converting binary coded decimal to pure binary – Gottschalk v. Benson (409 US 63 1972 – still cited)
- Formula for computing an alarm limit – Parker v. Flock (437 US 584 1978)
- Formula for describing certain magnetic standing wave phenomena – Mackay Radio (306 US 86 1939)
- Arrhenius equation use – Diamond v. Diehr (450 US 175, 1981 – still cited)

Fundamental Economic Practices

- Hedging – Bilski v. Kappos (561 US 593 2010)
- Mitigating settlement risk – Alice Corp v. Cls Bank (573 US _ 2014)

An Idea of Itself (federal circuit)

- Collecting or comparing known information – Classen Immunotheripies (659 F. 3d 1057 (Fed. Cir 2011))
- Using categories to store and transmit information – CyberFone v CNN interactive group (Fed. Cir. 2014)
- Displaying advertisements in return for access to classified material – Ultramercial Inc. v. Hulu- (772 F. 3d 709 2014)

Certain Methods of organizing Human Activity (federal circuit)

- Computing the price of a fixed income assets generating financial analysis report – Graff Ross Holdings v. Federal Home Loan Mortgage Corporation (893 F. Supp. 2d 28 2012)
- Creating a contractual relationship – buySAFE inc v. Google (765 F. 3d 1350 2014)

Abstract Idea?

- Mathematical formula used to measure “ability” to throw on the run incorporates running speed, speed of hand to ball transfer, and speed of thrown ball
- Website that sells licensed products organized by licensor then type of product
- Bimodal language with both a verbal and written component where the verbal component can change the meaning of the written component
 - Morse

Aspects included in Significantly more analysis

- Improvements to another technology or technical field
- Improvements to computer (or other machine) itself
- Use of exception with a particular machine (careful)
- Other meaningful limitations other than limiting to particular technical environment
- Differences between last two – slim
 - OK – use of Arrhenius Equation with a rubber curing machine to constantly update cure times (Diamond v. Diehr 450 US 175, 1981 – still cited)
 - Not OK - Updating alarm limits in a catalytic conversion process by constantly measuring temperature, pressure, and flow rate. (Parker v. Flook 437 US 584 1978)

- Representative claim in Diamond v. Diehr
 - A method of operating a rubber molding press for precision molded compounds with the aid of a digital computer comprising: providing said computer with a data base for said press including at least natural logarithm conversion data ($\ln$), the activation energy constant (C) unique to each batch of said compound being molded, and a constant (x) dependent upon the geometry of the particular mold of the press, initiating an interval timer in said computer upon the closure of the press for monitoring the elapsed time of said closure, constantly determining the temperature (Z) of the mold cavity in the press during molding, constantly providing the computer with the temperature (Z) repetitively calculating in the computer, at frequent intervals during each cure, the Arrhenius equation for reaction time during the cure, which is $\ln v = CZ + x$, where v is the total required cure time, repetitively comparing in the computer at said frequent intervals during the cure each said calculation of the total required cure time calculated with the Arrhenius equation and said elapsed time, and opening the press automatically when a said comparison indicates equivalence.

- Representative claim in Parker v. Flook
 - A method for updating the value of at least one alarm limit on at least one process variable involved in a process comprising the catalytic chemical conversion of hydrocarbons wherein said alarm limit has a current value of $B_a + k$ wherein B_a is the current alarm base and K is a predetermined alarm offset which comprises: (1) Determining the present value of said process variable said present value being defined as PVL (2) Determining a new alarm base B_1 using the following equation $B_1 = B_0(1.0 - F) + PVL(F)$ where F is a predetermined number greater than zero and less than 1.0 (3) Determining an updated alarm limit which is defined as $B_1 + GK$ and thereafter (4) adjusting said alarm limit to said updated alarm limit value.

- Differences according to the patent office/courts
 - Diehr
 - included physical act of measuring temperature, claimed repetitive computer recalculation of cure time using constantly updated measurements provide something more than mere computer calculation of equation. Act in concert to transform raw uncured rubber to cured molded rubber. Formula improves current technological process
 - Parker v. Flook
 - Only limit is gathering the input variables carrying out calculation to update number describing alarm limit. Determination of chemical process variables and use of a generic computer to calculate values is routine and conventional in field of chemical processing. Adjusting alarm limit merely post solution activity could be attached to any formula limiting to petrochemical and oil refining field of use not enough. Considered as a whole only computer implementation of formula.

Danger signs of abstract idea without more

- Use of a computer to automate an all ready known process
- Use of a computer to do something that could theoretically be done by humans even if not technically feasible for humans to do it due to processing speed
- No inclusion of a particular way to solve a problem or achieve a desired outcome just a claim of the desired outcome or idea of a solution
- Only addition of well known understood and routine activities to judicial exception
 - Sequenom v. Ariosa amplifying and detecting routine and conventional so natural product of cell free fetal DNA not transformed into a patentable invention

Final Takeaways

- Emphasize physical nature of process, system ect.
 - Flook maybe saved if claim included variables had physical counterparts (pressure or volume) and they were constantly measured
- Emphasize particularity of implementation not just field of use but specific process in field
 - Patent office noted Flook didn't have any disclosure related to catalytic conversion processing system chemical processes at work, means of setting off an alarm or adjusting an alarm system
- Specification SUPER important
 - Enfish largely decided on specification saying software changed how hardware operated faster load and search times, etc.
 - McRO also decided based on specification where it was discussed how specific rules improved animation from human subjective determination. That humans didn't use these rules very important