

No. 10-1150

IN THE
Supreme Court of the United States

MAYO COLLABORATIVE SERVICES
(D/B/A MAYO MEDICAL LABORATORIES)
AND MAYO CLINIC ROCHESTER,
Petitioners,

v.

PROMETHEUS LABORATORIES, INC.,
Respondent.

**On Writ of Certiorari
to the United States Court of Appeals
for the Federal Circuit**

**BRIEF OF VERIZON COMMUNICATIONS INC.
AND HEWLETT-PACKARD COMPANY
AS *AMICI CURIAE* IN SUPPORT OF PETITIONERS**

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TABLE OF CONTENTS

	Page
TABLE OF AUTHORITIES	ii
INTEREST OF <i>AMICI CURIAE</i>	1
STATEMENT.....	2
INTRODUCTION AND SUMMARY OF ARGUMENT.....	5
ARGUMENT.....	7
I. THE PATENT ACT DOES NOT ALLOW A CLAIM THAT ADDS TO AN OLD PROCESS ONLY A MENTAL RECOGNITION OF A NEWLY DIS- COVERED PROPERTY OF THAT PROCESS.....	7
II. THE UNPATENTABILITY OF THE CLAIMS AT ISSUE REFLECTS FUN- DAMENTAL PRINCIPLES EMBODIED THROUGHOUT THE PATENT ACT	11
A. Section 101.....	13
B. Section 112.....	16
CONCLUSION.....	20

TABLE OF AUTHORITIES

	Page
CASES	
<i>Ansonia Brass & Copper Co. v. Elec. Supply Co.</i> , 144 U.S. 11 (1892)	9, 10
<i>Ariad Pharm., Inc. v. Eli Lilly & Co.</i> , 598 F.3d 1336 (Fed. Cir. 2010)	17
<i>Bilski v. Kappos</i> , 130 S. Ct. 3218 (2010)	11, 12, 13, 14, 15
<i>Brenner v. Manson</i> , 383 U.S. 519 (1966)	15, 16
<i>Corona Cord Tire Co. v. Dovan Chem. Corp.</i> , 276 U.S. 358 (1928)	10
<i>De Forest Radio Co. v. General Elec. Co.</i> , 283 U.S. 664 (1931)	10
<i>Diamond v. Diehr</i> , 450 U.S. 175 (1981)	11, 14, 15
<i>General Elec. Co. v. Jewel Incandescent Lamp Co.</i> , 326 U.S. 242 (1945)	7, 9, 11, 12, 14, 15, 16, 17, 20
<i>General Elec. Co. v. Wabash Appliance Corp.</i> , 304 U.S. 364 (1938)	18
<i>Gottschalk v. Benson</i> , 409 U.S. 63 (1972)	13, 14, 15
<i>Halliburton Oil Well Cementing Co. v. Walker</i> , 329 U.S. 1 (1946)	17, 18
<i>Holland Furniture Co. v. Perkins Glue Co.</i> , 277 U.S. 245 (1928)	18
<i>KSR Int’l Co. v. Teleflex Inc.</i> , 550 U.S. 398 (2007)	12
<i>Laboratory Corp. of Am. Holdings v. Metab- lite Labs., Inc.</i> , 548 U.S. 124 (2006)	12

<i>Le Roy v. Tatham</i> , 55 U.S. (14 How.) 156 (1853)	16
<i>O'Reilly v. Morse</i> , 56 U.S. (15 How.) 62 (1854)	16, 17
<i>Parker v. Flook</i> , 437 U.S. 584 (1978).....	14, 15
<i>Prater, In re</i> , 415 F.2d 1393 (C.C.P.A. 1969)	6
<i>Warner-Jenkinson Co. v. Hilton Davis Chem. Co.</i> , 520 U.S. 17 (1997)	19

STATUTES AND RULES

Patent Act of 1952, 35 U.S.C. § 1 <i>et seq.</i>	1, 6, 11, 12, 17, 20
35 U.S.C. § 100(b)	13
35 U.S.C. § 101	1, 4, 5, 6, 7, 8, 11, 13, 15
35 U.S.C. § 102	6
35 U.S.C. § 112	6, 16, 17
35 U.S.C. § 112 ¶ 6	19
Sup. Ct. R.:	
Rule 15.2	8
Rule 37.3(a)	1
Rule 37.6	1

LEGISLATIVE MATERIALS

S. Rep. No. 82-1979 (1952), <i>reprinted in</i> 1952 U.S.C.C.A.N. 2394	11-12
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INTEREST OF *AMICI CURIAE*¹

Amici curiae Verizon Communications Inc. and Hewlett-Packard Company are leading providers of high technology products and services, whose businesses – like those of many firms in the information services, communications, and electronic technological fields – depend on, make, and sell systems and devices that incorporate a large number of components and perform a variety of functions. As such, Verizon and HP must frequently defend against meritless allegations of patent infringement. Verizon and HP also each own large patent portfolios, reflecting their roles as leading innovators in the fields of information technology and communications. As both owners of intellectual property and targets of meritless patent litigation, Verizon and HP have strong interests in a patent system that rewards rather than impedes innovation.

While *amici* have no distinctive interest in the medicine-specific issues in this case, they have a strong interest in seeing that the Patent Act of 1952, 35 U.S.C. § 1 *et seq.* (“Patent Act” or “1952 Act”), is properly interpreted and enforced. The patentable-subject-matter requirement of Section 101 must be interpreted in light of the other sections of the Patent Act, which ensure that patents are limited to concrete structures or processes that are new and

¹ Pursuant to Supreme Court Rule 37.6, counsel for *amici* represent that no counsel for a party authored this brief in whole or in part and that none of the parties or their counsel, nor any other person or entity other than *amici* or their counsel, made a monetary contribution intended to fund the preparation or submission of this brief. Pursuant to Rule 37.3(a), counsel for *amici* represent that all parties have consented to the filing of this brief and that letters reflecting their consent are on file with the Clerk.

useful and that are described and claimed properly. Insisting that patents be circumscribed by these requirements presupposes, at the threshold, that merely adding a recognition of a new property to an old process or product does not create a newly patentable invention.

STATEMENT

This case concerns the validity of certain claims of patents – Nos. 6,355,623 and 6,680,302 (the '623 and '302 patents, respectively), both asserted by Prometheus – that involve administering a drug to a patient and then determining the results through analysis of the patient's blood. The common written description of these patents, together with the petition for certiorari and the brief in opposition, clarify that the following was known in the art prior to Prometheus's patents.

Drugs, known as thiopurine drugs, are useful in treating autoimmune diseases such as Crohn's disease, but can be ineffective in low doses and damaging or fatal in high doses. As a patient metabolizes these drugs, they are converted into active metabolites, including one known as 6-thioguanine and another known as 6-methylmercaptopurine. It is possible to measure the presence of these metabolites in a patient's blood through existing tests, including high pressure liquid chromatography. Both the administration of thiopurine drugs and the measuring of the two metabolites were already known in the art.

The claimed discovery by Prometheus's inventors was a range of the 6-thioguanine level outside which, and a 6-methylmercaptopurine level above which, they believed adjustment of the drug dosage was in

order. The Federal Circuit focused on the following two claims:

[623 patent claim] 1. A method of optimizing therapeutic efficacy for treatment of an immune-mediated gastrointestinal disorder, comprising:

- (a) *administering* a drug providing 6-thioguanine to a subject having said immune-mediated gastrointestinal disorder; and
- (b) *determining* the level of 6-thioguanine in said subject having said immune-mediated gastrointestinal disorder,

wherein the level of 6-thioguanine less than about 230 [picomole (“pmol”)] per 8×10^8 red blood cells *indicates a need* to increase the amount of said drug subsequently administered to said subject and

wherein the level of 6-thioguanine greater than about 400 pmol per 8×10^8 red blood cells *indicates a need* to decrease the amount of said drug subsequently administered to said subject.

Pet. App. 4a (fourth emphasis added).

[623 patent claim] 46. A method of optimizing therapeutic efficacy and reducing toxicity associated with treatment of an immune-mediated gastrointestinal disorder, comprising:

- (a) *determining* the level of 6-thioguanine or 6-methylmercaptapurine in a subject administered a drug selected from the group consisting of 6-mercaptapurine, azathiop[u]rine, 6-thioguanine, and 6-methyl-

mercaptoriboside, said subject having said immune-mediated gastrointestinal disorder, wherein the level of 6-thioguanine less than about 230 pmol per 8×10^8 red blood cells *indicates a need* to increase the[] amount of said drug subsequently administered to said subject, and

wherein the level of 6-thioguanine greater than about 400 pmol per 8×10^8 red blood cells or a level of 6-methylmercaptapurine greater than about 7000 pmol per 8×10^8 red blood cells *indicates a need* to decrease the amount of said drug subsequently administered to said subject.

Id. at 4a-5a (third emphasis added, alterations in original).

The Federal Circuit noted that claim 1 of the '302 patent is similar to claim 1 of the '623 patent, except that it covers the 6-methylmercaptapurine metabolite as well as the 6-thioguanine metabolite. *See id.* It noted, too, that, whereas claim 1 requires administering and determining, claim 46 of the '623 patent omits the administering step. *See id.*

The Federal Circuit held that these patents covered patentable subject matter under 35 U.S.C. § 101. The court rested that holding centrally on the conclusion that both the administering and the determining steps involve physical transformations (of a patient's body and of drawn blood) and therefore so did the process as a whole. *See* Pet. App. 15a-22a. In the court's view, it was accordingly immaterial for the purposes of an analysis under Section 101 that the final "wherein" clauses, as construed, involve no more than the "mental steps" of recognizing the inventors' claimed correlation

between certain metabolite levels and toxicity or efficacy of the drug. *Id.* at 21a-22a. The court did not require any actual “upward or downward adjustment” of the drug based on that recognition. *Id.* at 22a-23a.

INTRODUCTION AND SUMMARY OF ARGUMENT

As articulated by the appellate court, this case raises a Section 101 question about the fundamental boundaries separating what may and may not be patented. The Federal Circuit relied simply on the “transformation” required by certain components of the claimed processes as sufficient to make the claims patentable under Section 101. Mayo criticizes that approach as improperly allowing a patent on the natural correlation between the concentration of certain chemicals (the two drug metabolites at issue) and toxicity and efficacy in human bodies, covering anything at all a doctor might do with recognition of that correlation once a particular patient’s metabolite levels are determined (an old process).

The case should be decided on the uncontested premise that there was nothing novel about either the “administering” or the “determining” step, or the two steps taken together, and that the “wherein” clauses add only a mental step. It is longstanding law that a claim is non-patentable if it recites a prior art process and adds only the mental recognition of a newly discovered property of that process. That principle applies here and readily decides the case.

The principle is soundly based on Section 101’s limitation to processes and products that are not only “useful” but “new.” Even if what qualifies as “new” is understood as defined by the standards of

Section 102, it remains the case that Section 101 limits patents to what is “new.” Indeed, the importance of the principle is reflected in the fact that it is intertwined with and reinforced by other principles of the Act, found in Sections 101 and 112. *See, e.g., In re Prater*, 415 F.2d 1393, 1398-99, 1401-02 (C.C.P.A. 1969) (noting both that mental processes were unpatentable before the 1952 Act and that, after the 1952 Act, the Patent and Trademark Office had considered that bar as involving Sections 101, 102, and 112). And the principle is also at least closely related to, or an application of, the “subject matter” standard of Section 101, under which certain additions to unpatentable subject matter are not enough to transform the idea into patentable subject matter. Regardless, given the language of the claims and their construction below, there is no record impediment to deciding the case on this basis.

Reaffirming this principle in the context of other patent doctrines ensures that the courts will continue to limit patents to their proper scope. Specifically, the limitations imposed by Section 101 must be understood in the context of the Patent Act’s other overlapping restrictions on acceptable claims. For example, the Court has long forbidden the claiming of results, rather than the solutions for achieving results. Similarly, the Court has forbidden the use of functional claiming at the point of an invention’s novelty over the prior art. These and other established doctrines (such as the requirement that the full scope of a claim be enabled) reflect a common theme – that a patent should be limited to concrete things or ways of doing things.

New knowledge by itself is often useful, but that is not enough: newly discovered laws of nature often

fit that bill. What becomes patentable is the translation of such new knowledge into a concrete structure or process that is new and useful and described and claimed properly. The principles insisting that patent claims be limited to that kind of contribution presuppose, at the threshold, that merely adding a recognition of a new property to an old process or product does not create a newly patentable invention. This Court has squarely recognized those principles previously in a line of cases, including *General Electric Co. v. Jewel Incandescent Lamp Co.*, 326 U.S. 242 (1945); it should reaffirm them in the current case.

ARGUMENT

I. THE PATENT ACT DOES NOT ALLOW A CLAIM THAT ADDS TO AN OLD PROCESS ONLY A MENTAL RECOGNITION OF A NEWLY DISCOVERED PROPERTY OF THAT PROCESS

The claims in this case are invalid because they recite an old process to which is added only a mental step recognizing a property of that process, and such recognition does not make an old process new.

As described above, the patent claims recite only the steps of administering a drug and determining certain metabolite levels, followed by “wherein” clauses saying that certain levels “indicate” a possible meaning of certain levels for patient health. But as relevant here, Section 101 limits patentable subject matter to “any new and useful process.” In this case, there is no “new and useful process.”

As Mayo has stated, and as Prometheus has not disputed, the combination of administering the drug and determining the level of the two metabolites, specifically for patients with the immune-mediated

gastrointestinal disorders recited in the claim preambles, is an old process.² The remaining portions of the claims consist of “wherein” clauses, but these clauses prescribe no additional physical actions at all. Their language does not even purport to do so: they merely recite that certain metabolite levels (the result of the determining step) have a certain significance for health. That can be important information, but there is no recitation of an additional non-mental step. Indeed, while the district court initially stated that it read the clauses to provide for a “warning,” Pet. App. 6a (quoting district court), it clarified that it did not mean that a step of actually issuing a statement to others was required. Rather, this was a purely “mental step” of recognizing the possible health significance of the result of the determining step – a property of the (administering and) determining process. *Id.* at 7a (quoting district court). And the Federal Circuit expressly agreed that the “wherein” clauses recited only a “mental step.” *Id.* at 21a, 22a-23a.

This property-recognition step is not enough to turn the prior art process into a “new and useful process” under Section 101. Indeed, the Federal Circuit itself purported to recognize that the mental step of the “wherein” clauses was not “patent-eligible.” *Id.* at 21a. More importantly, this Court’s

² Mayo’s petition repeatedly asserted that the administering and determining steps, even together, were old. *See* Pet. 5, 24, 26. Prometheus was careful in its brief in opposition never to take issue with that assertion. *See* Br. in Opp. 3-5, 14-15, 16-18. For that reason, and because the Federal Circuit decided the case on this premise as well, Mayo’s premise may be accepted by this Court. *See* Sup. Ct. R. 15.2 (where respondent does not contest facts asserted in petition, Court may accept such facts as defining the question to be decided).

precedent squarely establishes that mere recognition of a property of an old process (or product) does not create a patentable new process (or product).

In *General Electric Co. v. Jewel Incandescent Lamp Co.*, 326 U.S. 242 (1945), the plaintiff had a patent that related to frosted glass light bulbs, in which the interior of the bulb was frosted to reduce glare without severely reducing light output. *See id.* at 243-44. The patentee recognized that multiple etchings would round out the sharp crevices of the first etching of the glass, thereby increasing light output and making the glass stronger. *See id.* at 246. The prior art disclosed such multiple etchings of the inside of a bulb, but did not recognize that this would create stronger glass. *See id.* at 246-47. The Court held that the patent was invalid because “the prior art discloses the method of making an article having the characteristics of the patented product, though all the advantageous properties of the product had not been fully appreciated.” *Id.* at 248. The Court stated that “[i]t is not invention to perceive that the product which others had discovered had qualities they failed to detect.” *Id.* at 249.

Nor does *Jewel Incandescent* stand alone on this point. In *Ansonia Brass & Copper Co. v. Electrical Supply Co.*, 144 U.S. 11 (1892), the patent at issue was on insulation for electrical wires, where the patentee discovered that an old form of insulation was also non-combustible. *See id.* at 14. The patentee argued that the patent claims to a non-combustible insulation were valid because, previously, that insulation “was not intended to be, and perhaps was not known to be, incombustible.” *Id.* at 17. The Court rejected this argument, holding that “nothing is better settled in this court than that the application

of an old process to a new and analogous purpose does not involve invention, even if the new result had not before been contemplated.” *Id.* at 18.

The patent claims in *De Forest Radio Co. v. General Electric Co.*, 283 U.S. 664 (1931), were on vacuum tubes for radios, where the vacuum tubes were made so that there was very little gas left in the tube after production. *See id.* at 670-71. Prior to the patent, people had known that increasing the vacuum made the tubes perform better. *See id.* at 680. The patentee Langmuir argued, however, that the claims were valid because he understood and explained the scientific principle behind the efficacy of a high vacuum. *See id.* at 683. This Court rejected that argument and invalidated the patent claims, holding:

Even if the asserted difference were established, it is no more than the scientific explanation of what . . . others knew, before Langmuir, of the effect of the high vacuum on the discharge, and the methods and devices for procuring the vacuum. It is method and device which may be patented and not the scientific explanation of their operation.

Id. at 684-85. *See also Corona Cord Tire Co. v. Dovan Chem. Corp.*, 276 U.S. 358, 369 (1928) (“Nor, on the other hand, does it minimize or affect the priority of completed discovery by some one else before [patentee] Weiss that the prior discoverer may not have perceived and stated all the advantages of an earlier use of [diphenylguanidine] as an accelerator.”).

Thus, adding to the old process in Prometheus’s patent claims nothing more than a mental step of recognizing the possible health (toxicity or efficacy)

significance of the result of the process does not define a “new and useful process.” This is the essence of Mayo’s argument. Prometheus has protested (Br. in Opp. 15, 18) that separation of claim elements into the old and the new is inappropriate under *Diamond v. Diehr*, 450 U.S. 175, 188 (1981). See *Bilski v. Kappos*, 130 S. Ct. 3218, 3230 (2010). But whatever *Diehr* ruled, it established no across-the-board bar on such claim parsing. In particular, it did not involve, and so did not address, the kind of claims at issue here – in which some claim elements add nothing but recognition of the property of other elements. See *Diehr*, 450 U.S. at 179 n.5. As to that particular type of claim, which is at issue in the current case, the principle of *Jewel Incandescent* and related precedents makes separation essential, and so the objection by Prometheus is meritless.

II. THE UNPATENTABILITY OF THE CLAIMS AT ISSUE REFLECTS FUNDAMENTAL PRINCIPLES EMBODIED THROUGHOUT THE PATENT ACT

The longstanding rule of *Jewel Incandescent* and related precedents is anything but peripheral to the core of patent law. Rather, it reflects fundamental principles that define what patent law is meant to protect and what it excludes. As discussed below, these principles are embodied not only in Section 101 but in other provisions of the patent law, as long understood by the Court.

In codifying prior patent case law in the Patent Act, Congress recognized that “Section 101 sets forth the subject matter that can be patented, ‘subject to the conditions and requirements of this title.’ The conditions under which a patent may be obtained follow” that provision. S. Rep. No. 82-1979,

at 5 (1952) (quoting Section 101), *reprinted in* 1952 U.S.C.C.A.N. 2394, 2399. Thus, Congress's intention was that the various principles of the Patent Act be read together in deciding when a patent is valid.

These fundamental principles perform, in overlapping and reinforcing ways, the critical function of keeping patent protection within proper bounds. Those bounds are imposed to preserve the freedom for others' investigations, innovations, and useful activities that are as important to the advancement of knowledge and progress of society as is legitimate protection for inventions. *See, e.g., Bilski*, 130 S. Ct. at 3225; *id.* at 3227, 3229 (plurality); *Laboratory Corp. of Am. Holdings v. Metabolite Labs., Inc.*, 548 U.S. 124, 126-27 (2006) (Breyer, J., dissenting from dismissal of writ of certiorari as improvidently granted) ("Patent law seeks to avoid the dangers of overprotection just as surely as it seeks to avoid the diminished incentive to invent that underprotection can threaten.").

Whether these principles are applied robustly in practice depends vitally on this Court's guidance as to their core meaning and its emphasis on their importance. Just as the Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398 (2007), set obviousness law on a more realistic and less blinkered, document-focused course, it should here reaffirm and stress the significance of a group of principles that reinforce the *Jewel Incandescent* rule. Only by reemphasizing the strength of these principles will the lower courts limit patent claims to concrete practical advances in useful technology.

A. Section 101

The Court in *Bilski* reinforced the line between unpatentable “laws of nature, physical phenomena, and abstract ideas,” on one hand, and a potentially patentable “new and useful process, machine, manufacture, or composition of matter,” on the other. *Bilski*, 130 S. Ct. at 3225 (internal quotation marks omitted). A common-sense way of capturing that distinction is to say that, for products (machines, manufactures, or compositions of matter), a claim must define a physical structure and, for processes, a claim must define physical actions. For the latter, that does not mean that a process must be tied to a particular machine or that it must achieve a transformation of some material. *See id.* at 3226-27. A series of physical actions may be capable of being carried out with any number of different machines; and a series of physical actions may not have the effect of transforming some material. But the natural import of the exclusion of “laws of nature, physical phenomena, and abstract ideas” is that the Section 101 category of “process” is restricted to things people physically do (with or without mechanical or other aids). *See also* 35 U.S.C. § 100(b) (“The term ‘process’ . . . includes a new use of a known process, machine, manufacture, composition of matter, or material.”). The Federal Circuit itself recognized the exclusion of mere “mental steps.” Pet. App. 21a-22a.

To preserve the import of this rule, it may not be circumvented by merely tacking onto well-known physical steps the novel mental steps recited in the patent claims at issue here. Thus, in *Gottschalk v. Benson*, 409 U.S. 63 (1972), this Court barred claims that merely added to a general-purpose digital

computer an otherwise-unpatentable mathematical algorithm. *See id.* at 64, 71-72. And in *Parker v. Flook*, 437 U.S. 584 (1978), the Court barred patenting of a procedure that consisted of taking a series of known chemical-process steps and making only one change, namely, adding reliance on a mathematical algorithm. *See id.* at 590. *See also Bilski*, 130 S. Ct. at 3230 (in *Flook*, the “only innovation was reliance on a mathematical algorithm”). “As the Court later explained, *Flook* stands for the proposition that the prohibition against patenting abstract ideas ‘cannot be circumvented by attempting to limit the use of the formula to a particular technological environment’ or adding ‘insignificant postsolution activity.’” *Id.* (quoting *Diehr*, 450 U.S. at 191-92).

Taken together with the *Jewel Incandescent* principle, these cases may thus be understood as reflecting this Court’s more general holding that certain additions to a patent claim do not suffice to render unpatentable subject matter patentable. *See Flook*, 437 U.S. at 590 (“The notion that post-solution activity, no matter how conventional or obvious in itself, can transform an unpatentable principle into a patentable process exalts form over substance.”).

To be sure, the Court in *Diehr* subsequently “established a limitation on the principles articulated in *Benson* and *Flook*,” in that it required consideration of the “invention as a whole, rather than ‘dissect[ing] the claims into old and new elements and then . . . ignor[ing] the presence of the old elements in the analysis.’” *Bilski*, 130 S. Ct. at 3230 (quoting *Diehr*, 450 U.S. at 188) (alterations in original). The mere fact that one of the elements of the patent claim made use of a mathematical algorithm was insufficient to invalidate the claim

“because all inventions can be reduced to underlying principles of nature.” *Diehr*, 450 U.S. at 189 n.12. But that “limitation” does not repudiate the results in *Benson* and *Flook* or the insufficiency of adding “insignificant postsolution activity” to otherwise-unpatentable matter – on which this Court pointedly relied in *Bilski*, 130 S. Ct. at 3230, 3231 (internal quotation marks omitted). The *Diehr* “limitation” thus leaves in place, without providing clear further definition, the principle that certain kinds of additions to otherwise-old processes are insufficient to bring a process within the subject matter covered by Section 101. The *Jewel Incandescent* principle that decides the present case may be understood as applying that rule to forbid the mere addition of a recognition of a property, a mental step, to what is otherwise, in full, an old set of steps.

The principle governing the present case is also reinforced by this Court’s important decision in *Brenner v. Manson*, 383 U.S. 519 (1966), which enforced Section 101’s requirement that an article or process must be not only “new” but also “useful.” *See id.* at 528-32. There, this Court held invalid a patent claim to a new process for making a chemical because the patentee failed to disclose any utility for the chemical. *See id.* at 531-32. Mere identification of new knowledge – a mental step of recognizing a newly discovered fact about the world (such as the process for making a chemical) – is not enough. Thus, it is a requirement not only that a patented process be new, but also that it have a known use besides being the object of further scientific research. To allow patenting of processes or articles, without a clear explanation of their use, “creates a monopoly of knowledge” that “may confer power to block off

whole areas of scientific development.” *Id.* at 534. That practical utility is required for an otherwise-patentable process or product reinforces the *Jewel Incandescent* principle that merely adding a mental step of recognizing a property does not create a newly patentable process or product that is otherwise old.

B. Section 112

The Court has long forbidden claiming of results, rather than a particular solution that achieves those results. For example, in *Le Roy v. Tatham*, 55 U.S. (14 How.) 156 (1853), the patent was based on the discovery that lead had the property that, when hot, it could be welded into pipes, rather than cast. *See id.* at 172. The Court held that this fundamental principle – the properties of lead – could not be patented. The Court’s concern was that, to grant a patent on this principle rather than an application of that principle, “would prohibit all other persons from making the same thing by any means whatsoever. This, by creating monopolies, would discourage arts and manufactures, against the avowed policy of the patent laws.” *Id.* at 175.

Similarly, in *O’Reilly v. Morse*, 56 U.S. (15 How.) 62 (1854), the Court rejected a patent claim “to every improvement where the motive power is the electric or galvanic current, and the result is the marking or printing intelligible characters . . . at a distance.” *Id.* at 112. The Court insisted that the patent statute limits claims to the particular means described for producing the characters at a distance and forbids a claim to “an effect produced by the use of electro-magnetism distinct from the process or machinery necessary to produce it.” *Id.* at 120. Precisely in order to avoid the restraint on others’

“attempting to improve upon the manner and process which [the patentee] has described,” such a claim “is as strongly forbidden . . . as if some other person had invented it before him,” *id.* at 120-21 – in essence the *Jewel Incandescent* principle that applies to the present case.³

Likewise, the Court has forbidden the use of functional claiming at the point of novelty over prior art, again insisting on limiting claims to concrete actions and structures that carry out the desired functions (leaving room for others to use or invent other means for carrying them out). In the major precedent pre-dating the 1952 Act, *Halliburton Oil Well Cementing Co. v. Walker*, 329 U.S. 1 (1946), the Court invalidated a patent claim on a device for measuring the distance of oil down a well using sound waves, explaining that “[t]he language of the claim thus describes this most crucial element in the ‘new’ combination in terms of what it will do rather than in terms of its own physical characteristics or its arrangement in the new combination apparatus.” *Id.* at 9. Rather than describing the inventive mechanism, the patent claim recited only a “tuned acoustical means.” *Id.* at 7 (internal quotation marks omitted). The Court held, following earlier precedents, that such language rendered the claim invalid because, “unless frightened from the course of experimentation by broad functional claims like these, inventive genius may evolve many more devices to accomplish the same purpose.” *Id.* at 12.

³ The Federal Circuit has taken some steps toward implementing this limitation on claiming results, chiefly in the chemical and related fields, through the written-description requirement of Section 112. See *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336 (Fed. Cir. 2010) (en banc).

As noted, *Halliburton* built on earlier precedents. In *General Electric Co. v. Wabash Appliance Corp.*, 304 U.S. 364 (1938), the Court invalidated a patent claim on a tungsten filament for light bulbs “made up mainly of a number of comparatively large grains of such size and contour as to prevent substantial sagging.” *Id.* at 368 n.1 (internal quotation marks omitted). The court of appeals had upheld the claim on the basis that it was not “‘wholly’ functional,” but included functional limitations as part of a larger structure. *Id.* at 371 (quoting court of appeals). This Court rejected that conclusion, holding that the “vice of a functional claim exists” when the inventor “recites what has already been seen, and then uses conveniently functional language at the exact point of novelty.” *Id.*

Likewise, in *Holland Furniture Co. v. Perkins Glue Co.*, 277 U.S. 245 (1928), the Court invalidated a patent claim on glue made from starch “having substantially the properties of animal glue.” *Id.* at 250. The Court held that the innovative “ingredient was thus described, not in terms of its own physical characteristics or chemical properties or those of the product, but wholly in terms of the manner of use of the product,” *i.e.*, as animal glue is used. *Id.* at 256. The Court explained that such functional claiming does not promote innovation because “[a] claim so broad, if allowed, would operate to enable the inventor, who has discovered that a defined type of starch answers the required purpose, to exclude others from all other types of starch, and so foreclose efforts to discover other and better types.” *Id.* at 257.

Congress responded to the *Halliburton* line of cases by reinforcing the underlying insistence on limiting patents to structures and actions. Thus,

in 1952, Congress provided expressly for a patent applicant to use functional claim language but only in a way that limited the claim scope to particular structures and actions specified elsewhere in the patent. The provision, now codified as 35 U.S.C. § 112 ¶ 6, declares:

An element in a claim . . . may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

Under this provision, the patent applicant may use functional language in the claim, but the prerequisite for doing so is that the applicant must detail the specific structure, material, or acts of the invention in the non-claim portion of the patent, and the claim term then is limited in its reach to those specific structures, materials, or acts or equivalent ones. *See Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 28 (1997) (“Section 112, ¶ 6, now expressly allows so-called ‘means’ claims, with the proviso that application of the broad literal language of such claims must be limited to only those means that are ‘equivalen[t]’ to the actual means shown in the patent specification.”) (alteration in original). The result is still that patent scope is limited to specific structures and actions (and their equivalents). The only difference is that the patent applicant now may identify such structures and actions either in the claim language *or* (under Section 112 ¶ 6) in the specification. The substantive limitation of scope to structures and actions remains.

Again, these decisions reinforce the *Jewel Incan-*
descent principle by addressing specific examples
of additions to a patent claim that are insufficient
to render unpatentable subject matter patentable.
Thus, taking the prior art as a starting point and
merely adding an expected result or functional
element at the point of novelty cannot create a valid
claim under the Patent Act. Regardless of the con-
text in which these principles are articulated, they
serve to limit the scope of claims to avoid closing off
entire areas of innovation.

CONCLUSION

Amici respectfully suggest that the patent claims
at issue are invalid because they merely add a
mental-recognition step to an old process, which
violates the related restrictions on the scope of
patents imposed by the Patent Act.

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