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ANDERSON'S — *BLACK ROCK INC. v. PAVEMENT SALVAGE CO.*: A. & P. REVISITED,
OR A BLESSING IN DISGUISE?

By JACQUES M. DULIN*

It is evident to patent practitioners that the vast majority of general, mechanical and electrical utility patents are directed to combinations of old elements. This generalization may also be true to only a slightly lesser extent for patents directed to electronic subject matter, and to a degree applies to chemical cases, particularly those directed to compositions. With this in mind, it is clear that the recent Supreme Court decision in *Anderson's — Black Rock v. Pavement Salvage Co.*,¹ adjudicating invalidity of a mechanical combination, has far-reaching implications for the practitioner. *Anderson's* may be as significant as the recent cases² which put the Supreme Court's stamp of constitutional approval on non-obviousness³ as one of the tests of patent validity.

The patent in *Anderson's* was valid in the brief period before the Supreme Court reversed the Court of Appeals for the Fourth Circuit to reinstate the district court's determination of invalidity.⁴ During that brief moment the court of appeals' decision was hailed in some circles as an exhilarating advance in judicial appreciation of §103 by rejecting the ghostly apparition of *Great A. & P. Tea Co. v. Supermarket Equipment Corp.*⁵

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¹ 396 U.S. 57 (1969).

² *Graham v. John Deere Co.*, 383 U.S. 1 (1966) and *United States v. Adams*, 383 U.S. 39 (1966).

³ 35 U.S.C. §103 (1964), Conditions for patentability: non-obvious subject matter, which states:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

⁴ *Pavement Salvage Co. v. Anderson's — Black Rock, Inc.*, 404 F.2d 450 (4th Cir. 1968).

⁵ *Great A. & P. Tea Co. v. Supermarket Equipment Corp.*, 340 U.S. 147 (1950), [hereinafter cited as *A. & P.*]. The ghost is embodied in Justice Douglas who delivered the opinion of the Court in *Anderson's — Black Rock, Inc. v. Pavement Salvage Co.* and who had earlier concurred in tough language in *A. & P.*

which held *inter alia* that it is improbable that there can be intervention in an assembly of old elements, until the "whole in some way exceeds the sum of its parts."⁶ Conversely, the Supreme Court's ruling of invalidity has been regarded generally as Pavement Salvage's bad day at Black Rock. Clearly, it is critical for the patent bar to understand whether by virtue of *Anderson's*, the A. & P. test is applicable to the other recent tests.⁷ Further, if applicable, it is important to know the extent of applicability and whether it is by way of limitation or addition. This article is an attempt at insight into these questions from the point of view of patent litigation rather than patent prosecution.

THE TEST OF VALIDITY OF A COMBINATION PATENT AS ARTICULATED IN ANDERSON'S

In *Anderson's* the patentee was concerned with solving the problem of a cold joint created between adjacent strips of bituminous pavement occasioned by the fact that the first strip cools before the second can be laid. The patentee combined on a single chassis: 1) a radiant heat burner for heating the exposed edge of the cold strip of pavement, 2) a spreader for placing fresh bituminous material against that strip, and 3) a tamper and screed⁸ for shaping the new material to the desired contour and surface. Each of the elements combined in the patent was separately known in the prior art.

The Court addressed itself to the question of whether the combination of the old elements created a valid combination patent within the standard of non-obviousness set forth in section 103. The test is whether the putting together of the elements into combination produces a new or different function: "The combination of putting the burner together with the other elements in one machine, though perhaps a matter of great con-

⁶ A. & P. at 152.

⁷ *Graham and Adams*, note 2 *supra* identify basic factual inquiries and secondary considerations in connection with §103:

While the ultimate question of patent validity is one of law, A. & P., *supra*, at 155, the §103 condition, which is but one of law, A. & P., each of which must be satisfied, lends itself to several basic factual inquiries. Under §103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or non-obviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or non-obviousness, these inquiries may have relevancy.

Graham, *supra* at 17-18.

⁸ The lower courts counted this assembly as two elements. 396 U.S. 57, 58 (1969).

venience, did not produce a 'new or different function,' within the test of validity of combination patents."⁹

The Court was also careful to distinguish the utility of the function from the novelty of the function. A utility of convenience is not persuasive of the non-obviousness of the combination: "We conclude that while the combination of old elements performed a useful function,⁴ it added nothing to the nature and quality of the radiant burner already patented."¹⁰

The Court's footnote significantly cross-references the issue before it to the section 101 requirement of novelty, stating:

⁴ 35 U.S.C. §101 provides:

"Whoever invents or discovers any *new and useful* process, *machine*, manufacture, or composition of matter, or any *new and useful improvement* thereof, may obtain a patent therefor, subject to the conditions and requirements of this title."

"Absent here is the element "new." For as we have said, the combination patent added nothing to the inherent characteristics or function of the radiant-heat burner."¹¹

Thus, patent validity is not a question of mere usefulness, or so-called section 101 utility alone.¹² It is not enough that a new combination might be *more* useful than the old combination which it succeeds. Instead, the new combination must produce a new or different result which is unexpected and not obvious.

Basing the claim largely on the testimony of two experts in the asphalt paving field *Anderson's* patentee urged its device was not obvious. Their testimony was that they had been doubtful that radiant heat would solve the problem of the cold joint. This is reminiscent of *United States v. Adams*¹³ wherein the Signal Corps scientists who observed the demonstrations of Adams' battery and conducted further tests themselves did not believe the battery was workable. A year later, another government expert still expressed doubts. Thereafter the Signal Corps changed its mind as to the feasibility of the battery and contracted for its procurement, albeit without telling or compensating Adams. The Adams battery patent was held valid.

In *Adams* the Court found the experts' doubts significant, but not so in *Anderson's*. In *Anderson's* the Court indicated that the doubts of the experts were not conclusive of the unexpectedness of results:

. . . Thus the dialogue between Witkoski (the unbelieving ex-

⁹ *Id.* at 60.

¹⁰ *Id.* at 62.

¹¹ *Id.* at 62, footnote 4 (emphasis added).

¹² For discussion of the utility requirements under 35 U.S.C. §101, see *Brenner v. Manson*, 383 U.S. 519 (1966); *In re Kirk*, 153 U.S.P.Q. 48 (C.C.P.A. 1967); *In re Joly*, 153 U.S.P.Q. 45 (C.C.P.A. 1967); *In re Sureau*, 153 U.S.P.Q. 66 (C.C.P.A. 1967).

¹³ 383 U.S. 39 (1966).

pert) and Neville (the patentee) focused exclusively on the properties of the radiant heat burner.

. . . Thus the Crowley (another expert) — Neville discussion also focused entirely on the radiant heat burner, and not on the combination of the burner with the other elements of a bituminous paver.¹⁴

The difference between *Adams* and *Anderson's* is that in the latter there was a failure of proof — the doubts expressed were not *relevant* to the combination in issue. Quite simply, no one doubted the combination would work if the heater was adequate. The experts were not convinced the radiant heater would do the job.

In sum, *Anderson's* holds that a combination, to be valid under the obvious-non-obvious standard of section 103, must perform a new or different function, adding something unexpected to the nature and quality of the old elements; and the evidence of unexpectedness must relate to the new or different function in the combination. The inherent problem is to what extent under this test there can possibly be a new and different function in the use of well-recognized and predictable properties of mechanical or electrical elements in a combination. The history of the *Anderson's* test makes its scope clear.

THE HISTORICAL BASIS FOR THE TEST OF "NEW OR DIFFERENT FUNCTION"

An examination of past cases shows that the patent philosophy articulated in *Anderson's* is a restatement of an historical attitude of the Court toward combination patents. The starting point must be the basic constitutional standard of validity for any patent. The Constitution authorizes Congress "To promote the Progress of . . . useful Arts" by allowing inventors monopolies for limited times.¹⁵

Now, this standard must also be recognized as a policy statement. As such it shapes the Court's attitude and is reflected in its decisions as a dominant thread.¹⁶ *Anderson's* shows this wherein the Court notes that under the constitutional power, Congress may neither enlarge the patent monopoly without regard to the innovation, advancement or social benefit gained thereby, nor authorize issuance of patents whose effects are either to remove existent knowledge from the public domain, or to restrict free access to materials already available.¹⁷ This is also reflected in *Graham v. John Deere Co.*¹⁸ wherein the court stated:

¹⁴ *Anderson's — Black Rock, Inc. v. Pavement Salvage Co.*, 396 U.S. 57, 60 (1969).

¹⁵ U.S. CONST. art., I §8.

¹⁶ 383 U.S. 1, 6 (1966).

¹⁷ 396 U.S. 57, 61 (1969).

¹⁸ 383 U.S. 1 (1966).

[I]nnovation, advancement, and things which add to the sum of useful knowledge are inherent requisites in a patent system which by constitutional command must "promote the Progress of . . . useful Arts." This is the *standard* expressed in the Constitution and it may not be ignored.¹⁹

In *Lincoln Engineering Co. v. Stewart-Warner Corp.*,²⁰ the Court considered a combination patent on an apparatus for lubricating bearings, especially automobile bearings. The Court analyzed the patent and determined that the fundamental combination was for: 1) a fitting or nipple to connect to the bearing being lubricated, 2) a gun for propelling the lubricant under high pressure, 3) a conduit connecting the gun and fitting, and 4) a chuck or coupling member for attaching the conduit to the fitting. After analyzing the prior developments in the field, the Court said that the invention, if any, of the patentee was an improvement in the coupling member. The Court then focused on the combination, stating that:

[H]aving hit upon this improvement (in the coupling member) he did not patent it as such but attempted to claim it in combination with other old elements which performed no new function in his claimed combination. The patent is therefore void as claiming more than the applicant invented. The mere aggregation of a number of old parts or elements which, in the aggregation, perform or produce no new or different function or operation than that theretofore performed or produced by them, is not patentable invention. And the improvement of one part of an old combination gives no right to claim that improvement in combination with other old parts which perform no new function in the combination.²¹

Earlier, in *Reckendorfer v. Faber*,²² Justice Hunt had declared that "The combination, to be patentable, must produce a different force or effect, or result in the combined forces or processes, from that given by their separate parts. There must be a new result produced by their union: if not so, it is only an aggregation of separate elements."²³ Justice Strong, in *Hailes v. Van Wormer*,²⁴ stated the following about the results of a combination:

But the results must be a product of the combination, and not a mere aggregate of several results each the complete product of one of the combined elements. Combined results are not necessarily a novel result, nor are they an old result obtained in a new and improved manner. Merely bringing old devices into juxtaposition, and there allowing each to work out its own effect, without the production of something novel, is not invention.²⁵

¹⁹ *Id.* at 6.

²⁰ 303 U.S. 545 (1938).

²¹ *Id.* at 549-50.

²² 92 U.S. 347 (1875).

²³ *Id.* at 357.

²⁴ 87 U.S. (20 Wall.) 353 (1873).

²⁵ *Id.* at 368.

These themes were later repeated in *A. & P. Justice Jackson*, holding a combination patent invalid, stated:

The conjunction or concert of known elements must contribute something; only when the whole in some way exceeds the sum of its parts is the accumulation of old devices patentable. Elements may, of course, especially in chemistry or electronics, take on some new quality or function from being brought into concert, but this is not a usual result of uniting elements old in mechanics. This case is wanting in any unusual or surprising consequences from the unification of the elements here concerned, and there is nothing to indicate that the lower courts scrutinized the claims in the light of this rather severe test.

[N]either court below has made any finding that old elements which made up this device perform any additional or different function in the combination than they perform out of it.²⁶

The Court continued, relating the severity of the test for validity of a combination patent to the function of a patent under the Constitution, stating:

Courts should scrutinize combination patent claims with a care proportioned to the difficulty and improbability of finding invention in an assembly of old elements. The function of a patent is to add to the sum of useful knowledge. Patents cannot be sustained when, on the contrary, their effect is to subtract from former resources freely available to skilled artisans. A patent for a combination which only unites old elements with no change in their respective functions, such as is presented here, obviously withdraws what already is known into the field of its monopoly and diminishes the resources available to skillful men. This patentee has added nothing to the total stock of knowledge, but has merely brought together segments of prior art and claims them in congregation as a monopoly.²⁷

It is possible to detect within this historical thread two lines of cases. There are the substitution cases, perhaps best exemplified by *Lincoln Engineering Co. v. Stewart-Warner Corp.*²⁸ wherein an improved element, whether or not invented by the patentee, is inserted in an old combination.²⁹ For this type of invention an index of a new or different function is whether or not the presence of the added element in combination with the other elements is critical or essential to the functioning of that element in solving the problem. In *Anderson's* the Court observed:

There is uncontested evidence that the presence of the radiant burner in the same machine with the other elements is not critical or essential to the functioning of the radiant burner in curing the

²⁶ *Great A. & P. Tea Co. v. Supermarket Equipment Corp.*, 340 U.S. 147, 152 (1950).

²⁷ *Id.* at 152-53.

²⁸ 303 U.S. 545 (1938).

²⁹ As a caveat to the practitioner involved in patent prosecution, the proper use of Jepson type of claims in this situation is recommended. It remains to be seen what interpretation the Supreme Court would put on such a claim. However, the argument of extension of monopoly by claiming more than the inventor had a right to claim, which appeared highly effective in the cases studies, would be substantially weakened by such claim format.

problem of the cold joint. For it appears that a radiant burner operating in a tandem fashion would work as well.³⁰ Stated another way: does the element perform the new function only in the combination? If so, then a new or different function may be evidenced.

The second line is the addition invention type of case wherein one or more new or old elements are added to an old combination to make the new combination.³¹ This line is typified by *A. & P.* wherein an extension and rack were added to a standard grocery counter. An index of new or different function in this type of case is whether or not the combination exhibits synergism: that is, are the effects in the combination greater than the sum of the parts. As noted in *Anderson's*:

A combination of elements may result in an effect greater than the sum of the several effects taken separately. No such synergistic result is argued here.³²

The patented combination in *Anderson's* falls within the addition class. Thus, the citation of both tests for addition and substitution would appear to muddle the distinction. However, that is precisely the point. Regardless of the type of combination — addition or substitution — the same policy and new and different function test of validity applies. It does not suffer in repetition. The standard of validity for *any* patent is basically constitutional. The courts must look for a new or different function in the combination to satisfy the inherent requirement of the

³⁰ *Anderson's* — *Black Rock, Inc. v. Pavement Salvage Co.*, 396 U.S. 57 (1969).

³¹ If the inventor invented a new element, then he should claim it as such, the subcombination being broader than the combination. If the element is old, Jepson form claims are again recommended. But it must be recognized that this type of combination has fragile validity, and the ingenuity of the attorney in drafting the claim may be the difference. *Great A. & P. Tea Co. v. Supermarket Equipment Corp.*, 340 U.S. 147 (1950).

³² *Anderson's* — *Black Rock, Inc. v. Pavement Salvage Co.*, 396 U.S. 57, 61 (1969). The court brushed off the point by saying further:

It is, however, fervently argued that the combination filled a long felt want and has enjoyed commercial success. But those matters "without invention will not make patentability."

Again, as a caveat to the practitioner, synergism alone may be insufficient, if the synergism is predictable. This is true even if the degree of synergism is not predictable. Unexpected synergism is the test. *In re Diamond*, 360 F.2d 214 (C.C.P.A. 1966). This does not mean to imply that there are only two types of combinations. Another significant type is the true "new combination," where all old elements are combined for the first time. Where the parts are not interrelated, courts tend to label them "aggregations" and invalidate them as such without analysis. Lack of interrelationship may be where one part does not require an adaptation of other parts, or where there is no causal or functional interconnection between the parts. Where there is an interrelationship, the validity may still be open to question where the function performed is not per se "new or different," for example, where the new combination does by machine what was done by hand. While this should be considered a "contribution" probative of validity, it will be interesting to see what the Supreme Court does with such type of combination when the case arises. It is questionable whether the "new or different" function test is adequate in such a case, although it seems certain the Supreme Court would apply it.

Constitution for a contribution to the useful arts. As stated in *Graham*, the contribution must be “[i]nnovation, advancement and things which add to the sum of useful knowledge.”³³ Viewed in the light of this standard of policy set up by our nation’s founders, it would be difficult to assert that the result in *Anderson’s* is totally incorrect.

Thus *Anderson’s* may be viewed as an expression of constitutional policy and case law, the former almost two centuries old, the latter about one-half that age. Within this context the mandate of the Supreme Court becomes clear. The validity of a patent may not be adjudicated without regard to the innovation, advancement and addition to the sum of useful knowledge.

But such regard for a contribution is not to be confused with an expression of the state of the art. A patent expressing the state of the art would not promote the progress of the useful arts within the meaning of the Constitution. As stated in *Picard v. United Aircraft Corp.*:³⁴

Unless we are to mistake for invention the slow but inevitable progress of an industry through trial and error, and confer a monopoly merely upon the exercise of persistent and intelligent search for improvement, there was no invention in this.³⁵

Viewed in this light, perhaps the Supreme Court in *Anderson’s* felt the patent there represented but a step in the inevitable progress of an art, and a step with respect only to an increase in ability to heat the pavement. To achieve this, Pavement Salvage merely made use of an inherently better heater component added to an old combination, which heater was not the patentee’s contribution.

Likewise, regard for the contribution to the art is not to be confused with satisfying a present need with technology at hand. In *Altoona Publix Theatres, Inc. v. American Tri-Ergon Corp.*,³⁶ the Court noted:

When the need arose for a mechanism suitable to move film records with such speed-constancy as to reproduce the sound successfully, it was forthcoming. Only the skill of the art was required to adapt the flywheel device to familiar types of mechanism to secure the desired result.³⁷

Thus, where the industry has the capacity,³⁸ an individual’s willingness and foresight to carry out the project, although laudable,

³³ 383 U.S. 1, 6 (1966).

³⁴ 128 F.2d 632 (2d Cir. 1942).

³⁵ *Id.* at 636.

³⁶ 294 U.S. 477 (1935).

³⁷ *Id.* at 488.

³⁸ The Schwank radiant heater used in *Anderson’s* pre-dated the invention in suit.

may amount to no more than a successful business venture.³⁹ The willingness and foresight will not validate a patent.⁴⁰

FITTING THE PUZZLE TOGETHER

The Court in *Anderson's* on historical authority re-emphasized the need for trial courts to focus on fundamentals of policy. The question remains how the new or different function test of validity of a combination patent relates to the section 103 non-obviousness test as articulated in the other recent cases, and within the context of the constitutional policy of a contribution to the art.

As to the new or different function test, this fits within the second factual inquiry set forth in *Graham* that differences between the prior art and the claims at issue are to be ascertained. For a combination patent the primary difference to be shown is a new or different function. One indicia of this function is whether the presence of the added element in combination with the other elements is critical or essential to the functioning of that element in solving the problem. That means there must be interdependence of the elements in the combination to produce the new or different function. In other words, a critical feedback relationship is required. Another indicia of the function is the presence of that old patent magic; unexpected synergism. However, showing synergism may be a practical impossibility for mechanical and electrical-electronic cases not involving fundamentally new physical or chemical phenomena.⁴¹

The contribution policy requirement is the fabric into which the *Graham* tests are woven as the pattern. As such, *the contribution policy is a prerequisite to the tests*. Some of the indicia for showing a contribution are suggested in *Graham* as the so-called secondary considerations:

Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or non-obviousness [sic], these inquiries may have relevancy.⁴²

In this view, the term "secondary considerations" is a misnomer. As satisfying the constitutional requirement of a contribution, they are a *prerequisite* rather than something to be pushed aside as secondary. Indeed, the implication for the prac-

³⁹ *Anderson's supra*, 396 U.S. at 63: ". . . Use of the radiant burner in this important field marked a successful venture. But as noted, more than that is needed for invention." Reversed.

⁴⁰ *Altoona Publix Theatres, Inc. v. American Tri-Ergon Corp.*, note 36 *supra*.

⁴¹ See note 32 *supra*.

⁴² *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966).

titioner is significant. Summary judgment in patent cases, appropriately rare, may become non-existent, unless the movant is willing to admit existence of a contribution and positive showing of the secondary considerations.⁴³ Likewise, the evidence of the secondary tests may be put in proper perspective as a prerequisite, rather than be brushed aside as mere commercial success. Of course, the secondary tests are not exhaustive of the indicia, and this article must leave to the ingenuity of the practitioner how the required contribution may be demonstrated.

CONCLUSION

Although *Anderson's* is sure to give rise to much dismay,⁴⁴ and surely some proposed revisions in the Patent Statutes,⁴⁵ an analysis of the case shows that in its proper perspective it is neither bad nor a radical advance in the law. In *Graham*, the Supreme Court looked at "the obviousness of the differences" between the prior art and the claims at issue.⁴⁶ That was clearly a "mistake" since 35 U.S.C. §103 calls for a determination of the obviousness or non-obviousness of the "subject matter as a whole." Although the mistake may have been merely a technical inadvertence of opinion writing, it also may have misled lower Courts to consider the "differences" out of context, in contravention of the statute. *Anderson's* in part corrects the "mistake" since it puts the §103 tests of patent validity into context of the constitutional policy of a contribution to the arts, which, in policy terms, is the subject matter as a whole. In so doing, *Anderson's* elevates to primacy the secondary considerations, and may prove a blessing in disguise.

⁴³ *Palmer v. United States*, 155 U.S.P.Q. (Ct. Cl. 1967) motion for summary judgment denied; *aff'd per curiam, sub nom*, *Palmer v. United States*, 156 U.S.P.Q. 689 (U.S. Ct. Cl. 1968).

⁴⁴ See vol. 10 Patent, Trademark, & Copyright Newsletter, No. 4, April 1970.

⁴⁵ See, *e.g.*, §103 of S. 2756, 91st Cong., 1st Sess. (1970).

⁴⁶ *Graham v. John Deere Co.*, note 2 *supra* at 17, 18.