Tyler Vs. Boston

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Court : US Supreme Court

Decided On : 1868

Appeal No. : 74 U.S. 327

Appellant : Tyler

Respondent : Boston

Judgement :

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Tyler v. Boston

74 U.S. (7 Wall.) 327

ERROR TO THE CIRCUIT

COURT FOR MASSACHUSETTS

SYLLABUS

1. When a patent is claimed for a discovery of a new substance by means of chemical combinations of known materials, it should state the component parts of the new manufacture claimed with clearness and precision, and not leave the

person attempting to use the discovery to find it out by "experiment."

2. The doctrine of equivalents as applied to chemical inventions explained, and the distinction between mechanical inventions and chemical discoveries, where experiment is required to ascertain the effect of chemical substances, pointed out.

3. Whether one compound of given proportions is substantially the same as another compound varying the proportions is a question for the jury.

Tyler brought suit, in the Circuit Court for Massachusetts against the City of Boston for infringement of a patent, the case being this:

The plaintiff professed to have discovered a new compound substance, being a combination of fusel oil with the mineral and earthy oils, which compound constitutes a burning fluid, "by which term," he says, "I mean a liquid which will burn for the purpose of illumination without material smoke in a lamp with a small solid wick and without a chimney."

The claim of his patent which the defendant was charged

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with infringing, was

"the compound produced by the combination of the mineral or earthy oils with fusel oil in the manner and for the purpose substantially as herein set forth, said compound constituting a new manufacture."

The component parts of this new manufacture were described as "by *measure* crude fusel *oil one part,* kerosene *one part.* " This combination, the patent stated, might be varied by the substitution of naphtha or crude petroleum in place of Kerosene, or a part of the kerosene by an *equal quantity* of naphtha or crude petroleum, "the exact quantity of fusel oil which is necessary to produce the most desirable compound must be determined *by experiment.* "

The defendants used a burning fluid composed of naphtha seventy-two and fusel oil twenty-eight parts, and *experts,* chemists, proved that seventy-two parts *in bulk* of naphtha was the *substantial equivalent* of twenty-eight parts of kerosene.

The court below charged the jury, "that the patentee, in suggesting that naphtha might be substituted for kerosene, intended to describe the same proportion in the combination," and

"that the jury should understand the construction of the suggested substitution, to-wit, naphtha for kerosene, as contemplating the same proportion of the two ingredients -- that is, one and one, or fifty percent of one, and fifty percent of the other."

It charged further that

"whether one compound of given proportions is substantially the same as another compound varying in the proportions -- whether they are substantially the same or substantially different -- is a question of fact, and for the jury."

Under this charge, the jury found for the defendant, and the case was now here on error.

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MR. JUSTICE GRIER delivered the opinion of the Court.

The patent states that "the exact quantity of fusel oil which is necessary to produce the most desirable compound must be determined *by experiment.* "

Now a machine which consists of a combination of devices is the subject of invention, and its effects may be calculated *a priori,* while a discovery of a new substance by means of chemical combinations of known materials is empirical and discovered by experiment. Where a patent is claimed for such a discovery, it should state the component parts of the new manufacture claimed with clearness and precision, and not leave the person attempting to use the discovery to find it

out "by experiment." The law requires the applicant for a patent right to deliver a written description of the manner and process of making and compounding his new-discovered compound. The art is new, and therefore persons cannot be presumed to be skilled in it or to anticipate the result of chemical combinations of elements not in daily use.

The defendants used a burning fluid composed of naphtha seventy-two and fusel oil twenty-eight parts, and expert chemists proved that seventy-two parts *in bulk* of naphtha was the *substantial equivalent* of twenty-eight parts of kerosene.

This term *"equivalent,"* when speaking of machines, has a certain definite meaning; but when used with regard to the chemical action of such fluids as can be discovered only by experiment, it only means *equally good.* But while the specification of the patent suggests the substitution of naphtha for crude petroleum, it prescribes no other proportion than that of equal parts by measure. The explanation that the "kerosene must be replaced by an *equal quantity* of naphtha" does not alter the case.

The charge which the court gave is a clear and intelligible statement of the principles of law which should govern the jury in making up their verdict. It said properly, that

"whether one compound of given proportions is substantially the same as another compound varying in the proportions

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-- whether they are substantially the same or substantially different -- is a question of fact and for the jury."

If the jury in finding for the defendants have erred, the remedy is not in this Court.

Judgment affirmed.