

upward from the reservoir to the atomizing jet by suction, and that an apparatus in which the oil is fed from the reservoir to the atomizing jet by gravity is not within the patent, and therefore cannot infringe it.

In an apparatus where the oil is fed by gravity, the oil pipe must, of necessity, contain some form of valve or regulator, in order to stop the flow of oil when the burner is not in operation. The defendant's apparatus has a stop valve in the oil pipe which opens when the steam reaches a certain pressure, and which closes when that pressure is reduced to a certain point; and the opening of the stop valve permits the oil to flow to the atomizing jet, and the closing of the valve prevents its further flow. In this respect it differs in construction and mode of operation from the Shipman device.

It may be true, as contended by the complainant, that, after the oil has reached the atomizing jet, its discharge, when the apparatus is in operation, is regulated, in part at least, by the steam pressure in the steam pipe, and that to this extent it resembles the Shipman burner, and differs from the Dickerson burner. Admitting this to be so, I do not think this circumstance brings the defendant's burner within any fair or legitimate construction of the Shipman patent.

Bill dismissed.

EDISON ELECTRIC LIGHT CO. et al. v. BOSTON INCANDESCENT
LAMP CO. et al.

(Circuit Court, D. Massachusetts. June 11, 1894.)

No. 3,246.

PATENTS—LIMITATION OF CLAIM — INFRINGEMENT — INCANDESCENT ELECTRIC
LAMPS.

In the Edison incandescent lamp patent, No. 223,898, claim 2, for the combination of carbon filaments with a glass receiver, from which the air is exhausted, and conductors passing through the glass, is not to be limited to the conductors of platinum wire pointed out in the specification, and employed in practice, for the patent covers a pioneer invention, and the elements of the combination other than the carbon filament are subordinate; and therefore the claim is infringed by a lamp, constructed under the Pollard patent of 1892, containing all the elements of the combination, but using conductors of powdered silver, although powdered silver was not a known substitute for platinum in the combination at the date of the Edison patent.

This was a suit by the Edison Electric Light Company and others against the Boston Incandescent Lamp Company and others. Complainants moved for a preliminary injunction.

Fish, Richardson & Storrow, for complainants.

John Lowell and John Lowell, Jr., for defendants.

COLT, Circuit Judge. The second claim of the Edison incandescent lamp patent (No. 223,898) is for "the combination of carbon

filaments with a receiver made entirely of glass and conductors passing through the glass, and from which receiver the air is exhausted, for the purposes set forth."

The defendants' lamp, constructed after the Pollard patent, of November 1, 1892, contains all the elements enumerated in this claim, namely, a carbon filament, all-glass receiver, from which the air is exhausted, and conductors passing through the glass. The only difference between the two lamps is that the defendants use a film of powdered silver for the conductors passing through the glass, in place of platinum wire, which Edison points out in the specification of his patent as the material to be employed, and which is always found in the Edison lamp of commerce. In other respects the lamps are identical. While Edison uses platinum wire, he does not limit himself to this form of conductor in his claim. The language of the claim is "conductors passing through the glass," and therefore, on its face, the claim covers all kinds of material capable of carrying the electric current. If the claim had been limited to conductors of platinum wire, as the filament is limited to carbon, the case might be different.

The invention of Edison resides in the carbon filament; the other elements of the combination were old and subordinate, and represent, so to speak, only the environment of the filament. For this reason, I do not think the court should seek to restrict the plain meaning of the language of the claim. And there is another reason for giving the claim a broad construction. Edison made an important invention; he produced the first practical incandescent electric lamp; the patent is a pioneer in the sense of the patent law; it may be said that his invention created the art of incandescent electric lighting. Where a valuable invention has been made, the court will uphold that which was really invented, and which comes within any fair interpretation of the patentee's claim. *Merrill v. Yeomans*, 94 U. S. 568, 573.

The argument of the defendants is that this claim of the Edison patent must be limited to the use of platinum wire as a conductor, or its known equivalent, and that powdered silver was not a known equivalent at the date of the Edison patent. Looking generally at the state of the electrical art at the date of the Edison patent, and comparing platinum wire and powdered silver simply as elements, apart from any specific combination or invention, it cannot be said that one was not a known equivalent of the other, because powdered metals, including silver, have been recognized since 1860 as conductors of electricity. In asserting that powdered silver was not a known equivalent of platinum wire, the defendants must mean that it was not a known substitute in the combination or invention of the Edison patent, or in the art of incandescent electric lighting, and I think the evidence proves this to be true; but, in dealing with an invention which is broadly new, I am not prepared to accept the proposition that, in order to constitute infringement, an equivalent in a patented combination must always have been known at the date of the patent, or must have been such as would occur to a skilled mechanic exercising only ordinary mechanical skill.

While the language of the supreme court in *Rees v. Gould*, 15 Wall. 187, and other cases, seems to support the defendants' contention on this question, the later decisions by that court are not reconcilable with the broad proposition that in all cases the substitution of an equivalent will avoid infringement, provided it was not known at the date of the patent, using the word "known" in its ordinary sense. *Morley Sewing Mach. Co. v. Lancaster*, 129 U. S. 263, 9 Sup. Ct. 299; *Clough v. Barker*, 106 U. S. 166, 1 Sup. Ct. 188; *Machine Co. v. Murphy*, 97 U. S. 120. In the *Morley Case*, Mr. Justice Blatchford, speaking for the court, says:

"A difference in the particular devices used to accomplish a particular result in such a machine would always enable a defendant to escape the charge of infringement, provided such devices were new with the defendant in such a machine, because, as no machine for accomplishing the result existed before that of the plaintiff, the particular devices alleged to avoid infringement could not have existed or been known in such a machine prior to the plaintiff's invention."

In that case, the patent was for a machine for automatically sewing shank buttons to a fabric, and it was the first machine to accomplish this result. In the defendant's machine, the feeding and sewing mechanisms were new, and had been patented, yet the court held that it infringed the *Morley* patent. The feeding and sewing devices of the *Lancaster* machine, in the art of automatically sewing shank buttons to a fabric, were as unknown at the date of the *Morley* patent as a conductor made of powdered silver, at the date of the *Edison* patent, in the art of incandescent electric lighting.

In dealing with a pioneer invention which creates a new art, it hardly seems logical or reasonable to say that, because in the progress of such art some new substance or device has been discovered, which can act as a substitute for one of the elements of the patented invention, any one can appropriate the invention by the employment of such substitute. And, further, if equivalency signifies equivalency in the particular combination or invention, it is difficult to point out in this class of cases what known equivalents existed at the date of the patent, for the reason that the combination of elements in which the invention is embodied was first made known by the patentee. The doctrine of equivalents, as applied to primary inventions, rests upon a more satisfactory basis by the elimination of the qualification of age or time, and by holding those things to be equivalents which perform the same function in substantially the same way. The fundamental question is whether the alleged infringer makes use of the essence of the patented invention; not whether he has adopted a known equivalent, or made a patentable improvement on the invention.

The motion for preliminary injunction is granted.

EASTMAN CO. v. BLAIR CAMERA CO.

(Circuit Court, D. Massachusetts. June 1, 1894.)

No. 2,883.

1. PATENTS—ANTICIPATION—PHOTOGRAPHIC FILM HOLDERS.

The Houston patent, No. 248,179, for an improvement in photographic apparatus, consisting in connecting with one of the rollers connected with the sensitized slip within the camera a pointer, placed outside the camera, to indicate the revolutions of the roller and the length of the negatives, and attaching to the same roller a pin to perforate the edge of the strip at the spaces between the negatives, so that the division lines could be detected in a dark room, was not anticipated by previous cylindrical cloth-measuring machines, having no such device for marking lengths.

2. SAME.

The Walker and Eastman patent, No. 317,049, for a device to keep the sensitized strip in a photographic camera in proper tension, consisting in the insertion of a spring in the receiving reel to take up the slack of the film, or always draw it against the resistance of the spool, was not anticipated by such prior devices as the map rack described in the Mann patent of 1876.

3. SAME—CONSTRUCTION OF CLAIM.

In the Walker and Eastman patent, No. 317,049, for an improvement in photographic apparatus, claim 3 described the device as "acting to maintain the film in a tense condition during exposure." *Held*, that this meant, not that the tense condition was maintained only during the instant of exposure, but that the film should always be so acted upon that when exposure should take place it would be found in a tense condition.

This was a suit by the Eastman Company against the Blair Camera Company for infringement of a patent.

M. B. Philipp, for complainant.

John L. S. Roberts, for defendant.

COLT, Circuit Judge. The two patents in controversy in this case are for improvements in photographic apparatus. The first patent was granted to David H. Houston, October 11, 1881, and is No. 248,179; the second patent was granted to Walker and Eastman, May 5, 1885, and is No. 317,049.

In the old photographic camera, the plate upon which the image of an object was taken was made of glass covered on one side with a thin film of sensitive material. The film consisted of collodion, sensitized in a bath of nitrate of silver, and exposed in the camera while wet. This was known as the wet process. This form of apparatus was cumbersome and difficult to operate in the field. In 1880, Mr. Eastman, one of the inventors of the Walker and Eastman patent, commenced the manufacture of dry plates. These plates were coated with a film composed of an emulsion of gelatine and bromide of silver, and then dried, but they were open to the objections of all glass plates, namely, they were heavy and liable to break. It was sought to overcome these objections to the use of glass plates by the substitution of strips of sensitized paper supported on rollers.