IN RE WALSH.

Case No. 17,112.
{McA. Pat. Cas. 530.}

Circuit Court, District of Columbia. March, 1857.

PATENTABLE INVENTION—EXTENT OF CHANGE—GAS BURNERS.

{1. When a change from previous devices, and its consequences, taken together and viewed as a sum, are considerable, there must be sufficiency of invention to support a patent.}

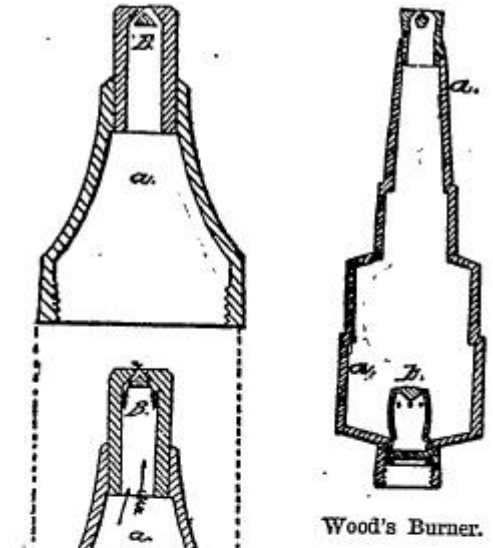
{2. A gas burner in which, in order to retard and equalize the flow, the gas is made to pass successively through two upright cylinders, with holes projecting downward from beneath the cap, so as to create a retarding counter current, *held* to show patentable novelty over a burner in which the gas passed through only one cylinder, and escaped into the body of the burner through horizontal holes around its upper circumferences: it appearing by the proofs that there was a great gain in steadiness of light, combined with a large saving in the amount of gas used.}

{This was an appeal by John C. Walsh from a decision of the commissioner of patents refusing to grant him a patent for an improved gas burner.}

A. B. Stoughton, for appellant.

MORSELL, Circuit Judge. The claim, as set forth in the specification, is made in the following terms: "Having thus fully described the nature of my invention, I would state that I

{Drawings of Patents Nos. 17,530, granted to J. C. Walsh, June 9, 1857, and 9,396, granted to A. H. Wood, November 9, 1852, for gas burners, published from the records of the United States patent office.}



Wood's Burner.

Walsh's Burner.

am aware many devices have been used for retarding the flow of gas through a burner, such as deflectors or circuitous passages. I lay no claim to these things. But what I do claim as my improvement, and desire to secure by letters-patent, is the arrangement within the burner of two or more hollow pillars d and g, extending up in the chambers of the burner with holes k, made obliquely, into the upper end of said pillars, as represented, for producing counter-currents of gas as it flows through the burner, to break its force and regulate the supply of gas to the tip of the burner, for purposes mentioned in the aforegoing specifications."

In order that the particular nature and object of his invention may be fully understood when compared with others, to which references have been given by the commissioner in this case, I will proceed to state the same in his own language. He says: "The object of my improvement is to break the momentum of the current of the gas as it passes through the burner, while the ordinary pressure is on the gasometer, so that no more gas will escape from the burner than will be fully consumed, and at the same time give a steady, unflickering light by the means employed of supplying the burner with a steady, constant, easy flow of gas. The means accomplishing this is effected by so constructing the parts of the body of the burner that counter-currents of the gas will be produced as it passes through the body of the burner to the tip, and thereby break the momentum of the main current, for purposes before mentioned, and is effected by providing the body of the burner with two or more chambers, and the said chambers with hollow pillars projecting up in and near the top of the said chambers; and holes are made obliquely in the top of said pillars, which holes project down for conducting the gas to the bottom of the chamber as it escapes from the pillar; and as the gas rises in each chamber, after leaving the pillar, it meets descending currents coming into the burner from the pillar, and its force is thereby impeded or broken in each chamber as it approaches the tip of the burner by the counter-current of the gas. By the time the gas rises at the tip of the burner the current is so much broken in its force and impeded in its flow that it will all be fully consumed as it escapes from the burner, and at the same time give a steady, unflickering light."

The commissioner, in his decision dated 22d January, 1857, says: "Mr. Walsh's claim is for arranging two or more hollow pillars within the burner, with holes made obliquely in their upper ends, for the purpose of producing counter-currents of gas, to break its force and regulate the supply to the tip of the burner. In rejecting the claim, several references were given to what may be justly considered equivalent devices; one of them, Samuel R. Brick's burner, was rejected and withdrawn in 1852, on the 2d of November, after an interference with A. H. Wood, whose burner was patented November 9th, 1852, No. 9396. Wood's claims appear to me sufficiently broad to foreclose J.

C. Walsh's. The mere duplication of parts not being sufficient to make a patentable improvement, the conclusion is that the patent should be refused."

The appeal is from this decision, and the reasons, in substance, are, that the commissioner erred when he stated that A. H. Wood's claim appears to be sufficiently broad to foreclose J. C. Walsh's, when the record shows that Wood neither describes nor claims nor represents what Walsh claims; that the commissioner erred in deciding that Walsh's invention was but mere duplication of Wood's, the decision being that the mere duplication of parts is not sufficient to make a patentable improvement; and also that he erred in deciding (substantially) that Walsh's burner did not differ from those referred to for its rejection, and did not produce any new or beneficial effect beyond those to which reference was made, when evidence to the contrary existed on the files of the office.

The claim of Wood, referred to by the commissioner, was filed the 2d of April, 1852; patent issued on the 9th of November, 1852, and is in these words: "What I claim as my invention, and desire to have secured to me by letters-patent, is the use in a gas-burner of a distributor, constructed substantially as above described, for the purpose of producing a steady jet or flame, and for preventing the blowing and waste of gas in the burner." In stating his device or arrangement, he says: "My improvements consist in introducing into an ordinary gas-burner a hollow core or chamber fastened to the inside of the burner in any proper manner, and pierced near its top with fine holes; a a in the drawings represents a fish-tail or tulip burner constructed in the ordinary manner, the jet of gas issuing from two holes in the end. In the larger end of this burner is inserted a hollow core or distributor bb, pierced near its top with fine holes, the bottom of the same having only one aperture for the gas to pass through. When the gas is admitted from the supply pipe, instead of rushing directly into the burner and passing through the apertures in the end of the same, it has to pass first through the apertures in the bottom end of the distributor b b, and thence is distributed through the holes of the same into the main burner a a."

I have been particular in giving the description of this reference, because it appears to be the one mainly relied on by the commissioner.

A time and place having been appointed for the hearing of this appeal, and due notice given thereof, the commissioner has laid before me the original papers and evidence in the case, together with the grounds of his decision in writing; at which time and place the appellant, by his attorney, appeared and filed his argument in writing, and the said case was submitted.

If in this case the devices used are mechanical equivalents, and the differences or changes from those given in the references be merely colorable, unquestionably the applicant would not be entitled to a patent. Upon this ground the commissioner seems to rest his decision. But it is contended that in supposing this to be the case as to the applicant's burner the commissioner erred, because there are substantial differences between

the construction of the improved burner and that of Wood's and the others to which the reference has been given; that the construction and arrangement of the parts which mainly operate to produce a more perfect counter-current and checks consists of having a dome or deflector with the drill holes in an oblique, upward direction under the cap or dome, so that the current of gas shall be thrown downward; that in Wood's there is no dome or deflector; that the holes to admit the gas into the body of the burner are horizontal. Again, that a material difference may be perceived between the two in the currents and counter currents that pass through the two burners by blowing with the mouth through the different ends of the two burners; that it will be found on making the experiment that whilst with Walsh's burner a free passage of air from the tip to the inlet end is made, yet from the inlet to the tip it is apparently entirely cheeked, though not so in fact. The argument is that the openings being the same in both cases, there is evidently a strong counter-current in the direction in which the gas flows through the burner, that does not exist if the current is reversed. These facts, as stated, are believed from observation to be true. It is admitted that this effect exists to a degree in Wood's burner, but not to the extent that it does in Walsh's burner. These differences might not be deemed sufficient if the result produced had been slight or inconsiderable; but various affidavits sent up with the original papers, and which it may be supposed passed under the examination of the commissioner, satisfactorily show that by actual experiments made according to the most approved and best modes of comparison, to test the same, of Walsh's burner with the best burners in the city of Cincinnati (and Wood's may be supposed to have been among them), Walsh's burner was invariably found to be very much superior and better than any of them; that it saved in the consumption of gas from twenty-five to thirty per centum; that when lighted up there was no flickering or variation in flame, and no instance noticed of any of them to blow. If this be true, and there is no reason to believe it is not, there is certainly in this invention a very great saving of expense and of economy in the consumption of gas more than by any other. There are affidavits which show expressly that the comparison was made between the burner of Walsh and Wood, and a similar result found in favor of Walsh; but as these affidavits, from what I can observe, did not pass under the inspection of the commissioner, they were not considered as evidence before me in this case.

What, then, are the rules of patent law applicable to this case? The law, as laid down in Webster, is "that whenever the change and its consequences, taken together and viewed as a sum, are considerable, there must be a sufficiency of invention to support a patent. Thus, when the change, however minute, leads to consequences and results of the greatest practical utility, as in the cases of Dudley's, Hall's, and Daniels' patents, the above condition is satisfied; but if the consequence, as in the case of Fussell, be inconsiderable, the change also being inconsiderable, and such as would most readily suggest itself to any one, the condition is not fulfilled, and the invention is not sufficient to support a patent." Webster's Subject-Matter of Letters-Patent, p. 29.

The conclusion, therefore, to which I feel myself obliged to come is that there is error in the decision of the commissioner in rejecting the application of the appellant for a patent for his invention as set forth, and that the said patent ought to have been granted. The decision ought, therefore, to be reversed and annulled.

{Patent No. 17,530 was granted to J. C. Walsh, June 9, 1857, and has not, so far as ascertained, been involved in any other cases.}