In conclusion, I refer to the learned report of Mr. Langdon, one of the examiners appointed by the Commissioner, on the matter of this case. The views he takes of the nature and principles of the invention are very strong, and not to be refuted. I would desire to notice it particularly for the experimental fact which he states, the truth of which no one dare deny; it is, that the composition produces a cheaper and more healthy article of food. He says: "That it is cheaper, is manifest. Of its effects upon the stomach, I do not pretend to be able to judge; but it is believed that the assertions of the applicants upon this point are not denied; and from some months' use of such an article myself, I am inclined to credit the position." Here, then, is knowledge derived from a practical source, and fully corroborates what I have said on this particular point.

These views have brought me to the conclusion that the decisions of the Commissioner is erroneous, and ought to be reversed.

Everett & Pollok, for the appellants.

IN RE JOHN C. WALSH. APPEAL FROM REFUSAL TO GRANT PATENT.

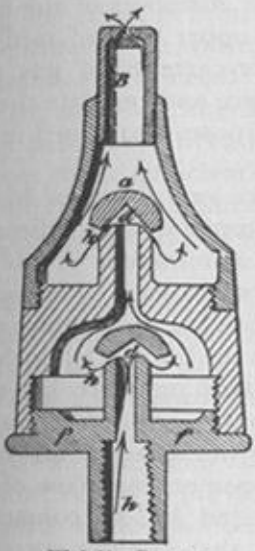
INVENTION—CHANGE—IMPROVED RESULT.—When the change in the construction and mode of operation is slight, but the consequences of that change are considerable, as established by the affidavits of persons who have made actual tests of the devices in question, there is sufficient invention to support a patent.

(Before MORSELL, J., District of Columbia, March, 1857.)

STATEMENT OF THE CASE.

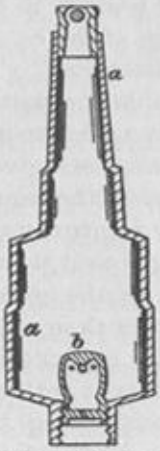
The point decided in this case will be readily understood by

inspection of the subjoined cuts representing the devices in question.



Walsh's Burner.

Fig 1.



Wood's Burner.

In the applicant's burner, which is designed to retard the flow of gas to the jet, the gas passes through two hollow cylinders or pillars *d* and *g*, situated one over the other within the burner. The openings *k k* in the upper part of these pillars are directed obliquely downwards, so as to produce counter-currents of gas as it passes through the burner. In Wood's patented burner, relied upon by the Commissioner as an anticipation of the invention, there is a single cylinder or pillar *b*, with a row of perforations around the top, from which the gas issues horizontally into the body of the burner. Patent issued to Walsh June 9th, 1857, No. 17,530.

MORSELL, J.

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 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 *b b*, 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 checked, 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.

A. B. Stoughton, for the appellant.

IN RE EDWARD MAYNARD. APPEAL FROM REFUSAL TO GRANT PATENT.

INVENTION—CHANGE OF MATERIAL—METALLIC CARTRIDGE.—The mere selection of a superior material, which is so by reason of its well-known qualities—as substituting steel or case-hardened iron for sheet metal in constructing the firing end of a cartridge—is not invention.

SM—SM—BETTER ARTICLE.—Within the range of materials known to possess the proper qualities for the purpose, it is not invention to select that one which exhibits these qualities in a more marked degree, and thereby make a better article than had before been made.

(Before MERRICK, J., District of Columbia, October, 1857.)

MERRICK, J.

The claim of the applicant is for combining with the tubular portion of a metallic gun-cartridge, when that is made of brass or its equivalent of soft and tough metal, a base or bottom of steel or other hard metal, which hard-metal bottom capacitates the cartridge for repeated discharges, and that without injury to the vent-hole perforation in the centre of the bottom. And his claim is further for constructing this said bottom with a flange extending beyond the walls of the cylindrical tube of brass, by means of which flange the cartridge may be more readily handled, withdrawn from the gun after discharge, and also strengthened and guarded against rough handling and other casualties.

The claim has been rejected by the Commissioner as wanting both the grounds of novelty alleged in the specification. A flanged-bottom cartridge is shown to have been previously used in the patent of G. W. Morse (No. 15,996, October 28th, 1856) and in the improvements of Chambers, described in