

**Sharp Vs. Riessner**

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**Court :** US Supreme Court

**Decided On :** Jan-10-1887

**Appeal No. :** 119 U.S. 631

**Appellant :** Sharp

**Respondent :** Riessner

**Judgement :**

Sharp v. Riessner - 119 U.S. 631 (1887)

U.S. Supreme Court Sharp v. Riessner, 119 U.S. 631 (1887)

**Sharp v. Riessner**

**Argued December 16, 1886**

**Decided January 10, 1887**

**119 U.S. 631**

*APPEAL FROM THE CIRCUIT COURT OF THE UNITED*

*STATES FOR THE SOUTHERN DISTRICT OF NEW YORK*

**SYLLABUS**

The first claim of letters patent No. 177,334, granted to Abner B. Hutchins, May 16th, 1876, for an improvement in hydrocarbon stoves, namely,

"1. The water vessel A, with its perforated top plate A' and hot air 'cylinder' C, hinged at c to plate A', and top perforated plate L, all arranged and connected together substantially as and for the purpose set forth,"

the perforated top plate A' being described in the specification as a plate in which arranged around a central opening is a series of perforations "through which atmospheric air passes down into the top part of the vessel A and thence up through the hot air cylinder and its chimneys," is not infringed by a stove in which, instead of the perforated top plate A', there are three equidistant struts on which the hot air cylinder rests, with an open space between every two of the struts, the struts not performing the office so described as that performed by the perforated top plate A'.

This was a bill in equity for the infringement of letters patent. The case is stated in the opinion of the Court.

MR. JUSTICE BLATCHFORD delivered the opinion of the Court.

This is a suit in equity brought for the alleged infringement of letters patent No. 177,334, granted to Abner B. Hutchins May 16, 1876, for an improvement in hydrocarbon stoves. The specification and drawings are as follows:

"The object of this invention is to produce a stove which can safely and easily be heated by the combustion of hydrocarbon or oil in a similar manner to that in common use in illuminating lamps. The invention consists of the following devices: the vessel or chamber containing the oil or hydrocarbon is submerged

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in water so as to always keep the said oil vessel or chamber cool, and thereby free from explosive or other accident. The water vessel is covered with a perforated metal plate, which forms the base of the hot air cylinder, on the top of which the culinary or other vessels to be heated are placed. Vertical tubes or flues are

placed in the hot air cylinder in such positions as to act as chimneys for the burners. Mica windows "

image:a

"are placed in the sides of these flues or chimneys in such positions as to enable the operator to observe the flame of the burner and to regulate the same as circumstances may require."

"The invention will be readily understood by reference to the accompanying drawings, of which figure 1 is partly an elevation and partly a vertical section of the improved stove. Fig. 2 is partly a plan and partly a section of the same. In this view, the half of the top plate only is removed, so as to disclose the construction of the hot air cylinder, and the flues or chimneys. Fig. 3 is a sectional plan of the stove, taken just below the top plate of the water chamber and showing a part of the top plate of the oil vessel or reservoir broken out."

"The base of the stove consists of a vessel A resting, for "

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image:b

"convenience, on short legs *a* . This vessel is intended to contain water, and has a top plate A', which is preferably made of cast metal and strong enough to support all the parts of the stove which are above it. This plate A' is annular in form, if the stove is of general cylindrical construction (which is preferable to other forms), the central opening in the said

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plate being nearly equal in area to the sectional area of the hot air cylinder C, which rests upon it. Concentrically arranged around this central opening is a series of perforations *a1* , through which atmospheric air passes down into the top part of the vessel, A, and thence up through the hot air cylinder and its chimneys."

"The reservoir or vessel B, in which the oil or hydrocarbon is put for use in this stove, is placed within the vessel A, and the bottom of the vessel A may likewise constitute the support for the bottom of the vessel B, and there will be an intervening chamber B' between the sides of the vessel B and its enclosing vessel A, and the sides of the vessel A will extend up one or two inches (more or less) above the top of the vessel B. While in use, the annular chamber B' will be filled with water, and water will also cover the top of the vessel B, which said vessel and its contained fluid will thereby be always kept at a low temperature, and accident from the ignition or explosion of the oil or hydrocarbon will thus be rendered impossible by this water covering. A tube *b* extends from the vessel B up through one of the perforations or apertures *a1* , and serves as a means of filling the vessel B. A suitable screw cap closes the top end of this tube. A pipe or valve *a2* leads from the chamber B' to the outside of A for the purpose of drawing off the water when it becomes heated or when the occasion requires it. Water may easily be poured into the vessel A through the apertures *a1* ."

"The wick tubes D are attached the top of the vessel B, and the wick used to conduct the oil from B to the flame is operated in the usual manner of illuminating lamps. The rollers for moving the wicks up and down are enclosed in casings or housings E, and are operated by the thumb wheels F, the stems *f* of which pass through tubes E', that are attached tightly to the ends of the housings E and pass through the side of the vessel A. Care must be taken to have all of the parts of D E E' that lie within the waterway of A perfectly water-tight, so as to prevent the leakage of the water either into the vessel B or outside of A."

"The hot air cylinder C is preferably built of sheet metal,

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and is hinged to its base plate A', by the hinge *c* at the back side of the stove, so as to permit the top parts of the stove to be tipped back, out of the way of trimming the wicks or for other purposes. A finely perforated diaphragm G covers the central opening of the base plate A' below the hot air cylinder for the purpose of properly controlling the air currents that pass up from the chamber of A into the hot air

cylinder. A diaphragm H within the hot air cylinder C and near its base is fixed, by riveting or otherwise, to the sides of the said cylinder. Portions of this diaphragm are formed into conical flame caps *h* for controlling and confining the flame within its proper limits in a manner similar to that in common use in illuminating lamps."

"Above the diaphragms H, tubes or chimneys I confine the hot gasses and products of combustion from the flames of the burners within proper limits for the efficient action of the burners. These tubes or chimneys I extend from the diaphragm H to the top of the hot air cylinder, and are preferably made of sheet metal. The shell of the hot air cylinder C forms one side of each of these chimneys, and in this side, which is common to both the cylinder and the chimney, a small mica window K is placed so as to enable the operator, from without, to see and regulate the flame of the burners by turning the thumb wheel F as required. For simplicity of construction, I cut apertures in the side of the hot air cylinder suitable for the windows K, and through these apertures portions of the metal of the chimney plates are extended, which said portions are bent over in the form of grooves *k*, as in Figs. 1 and 2, for the reception of the mica plates that are to form the windows."

"The top of the hot air cylinder is covered with a cast metal plate L that serves as a rest for whatever vessel is to be heated on this stove. The plate L is perforated with apertures over the chimneys, and also over the hot wells of the cylinder C as well as in the portions lying outside of the cylinder, thus permitting all of the heat generated to reach the vessel on top of the plate L and thereby be utilized. The intense heat imparted to the plates of the chimneys I and

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plate L and reflected thence back upon the hot gases passing through and about these parts, will be quite sufficient to consume all of the smoke, and there will, in consequence, be no emission of unpleasant odors from imperfect combustion. The top surface of the plate L is provided with ridges *l* that keep the vessels placed thereon from obstructing the openings in the said plate."

The claims are these:

"1. The water vessel A, with its perforated top plate A' and hot air cylinder C, hinged at c to plate A', and top perforated plate L, all arranged and connected together substantially as and for the purpose set forth."

"2. The chimneys I, having one of their sides formed by the hot air cylinder C, to which they are connected by the groove clips k that also receive the mica windows K, as and for the purpose set forth."

It is contended that the defendants infringe the first claim. The circuit court dismissed the bill, 15 F. 919, holding that there was no infringement. The plaintiff has appealed. One of the elements in the first claim is the "perforated top plate A'," being the top plate to the water vessel A. It is described as annular in form, if the stove is cylindrical, with a central opening. The specification then says:

"Concentrically arranged around this central opening is a series of perforations a', through which atmospheric air passes down into the top part of the vessel A and thence up through the hot air cylinder and its chimneys."

In the defendants' stove, the hot air cylinder rests on three equidistant struts which extend from the base of the cylinder to the wall of the water chamber, and thus the weight of the cylinder, and of the utensils upon it, is thrown against such wall instead of on the bottom of the water chamber. Of course there is an open space between every two of the struts, through which spaces air passes freely. The circuit court held that the arrangement of the three struts was not the plaintiff's perforated top plate A', because the struts did not perform the office which required the plate with perforations, that office being, as described

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in the specification, to cause the air to pass "down into the top part of the vessel A and thence up through the hot air cylinder and its chimneys." We are of opinion that the first claim of the plaintiff's patent must be confined to the use of a perforated top plate to the cylinder having the functions and mode of operation set

forth in the specification, and that as the defendants do not have such a perforated to plate or any equivalent for it, they do not infringe.

*Decree affirmed.*

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