No. 648,413. Patented May 1, 1900.

J. B. I. JULHE.

WICK.

(Application filed Nov. 19, 1897.)

(No Model.)

Fig. 2.

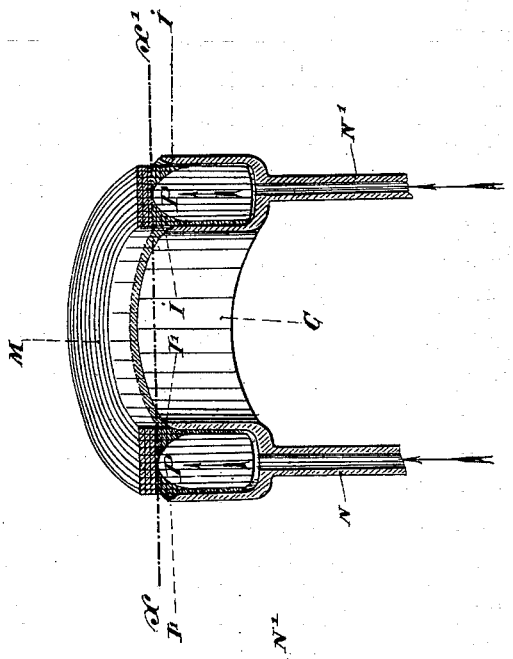
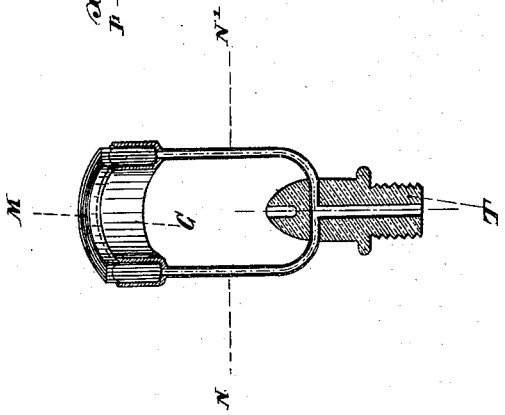


Fig. 1.



Witnesses:
George N. Richards
G. H. Walmsley

Inventor:
Jean Baptiste I. Julhe
by Wm. H. Babcock
Attorney.

UNITED STATES PATENT OFFICE.

JEAN BAPTISTE I. JULHE, OF STE. MANDÉ, FRANCE.

WICK.

SPECIFICATION forming part of Letters Patent No. 648,413, dated May 1, 1900.

Application filed November 19, 1897. Serial No. 659,099. (No model.)

To all whom it may concern:

Be it known that I, JEAN BAPTISTE ISIDORE JULHE, a citizen of the Republic of France, residing at Ste. Mandé, France, have invented certain new and useful Improvements in Apparatus for Supplying and Burning Petroleum, &c., of which the following is a specification.

In the accompanying drawings, Figure 1 is a vertical sectional view of the burner with the usual appliances removed. Fig. 2 is an enlarged sectional view of the upper part of the burner.

Referring to the drawings, T represents the supports serving to secure the burner onto the conduit. (Not shown.)

N N′ are two copper tubes leading from said support to the bottom of an annular cup C, into which a wick M is introduced, said wick being formed of a rolled strip of cotton impregnated with a solution of silicate of potassium applied by means of a small brush after the wick is introduced into the annular cup. Care must be taken to perfectly fill the spaces between the wick M and the walls of the annular cup C, so that the wick is tightly soldered to the latter.

It will be seen that the solution of silicate of potassium does not impregnate the wick throughout, but only the parts above the curved dotted lines P, the inner or lower part of said wick being not impregnated.

After drying the burner by raising it to a temperature of about 150° centigrade the outer part of the wick is raised to red heat, care being taken to heat not farther than the line $x\,x'$, whereby the heated part will become porous, the cotton being carbonized, so that the center of the wick will easily communicate with the upper part thereof. The part below said line $x\,x'$, and especially the joints I I′, remain tight, so that the petroleum is forced to flow upward in the direction of the arrows to the center of the flame and is prevented from passing through the joints I I′, tightly filled with silicate of potassium. The entire value of the burner resides in this method of construction. Indeed, the main objection to be overcome is the leaking of petroleum through the joints, which objection is found in all known constructions where petroleum is used in its natural state without being previously converted into vapor.

In the above-described construction the entire quantity of petroleum passes through the center of the wick to the center of the flame and is burned without any loss.

The wick treated as hereinbefore described has a thin crown formed thereon, which is concave on the under side, the fiber of the wick in its natural state extending, of course, up into the concave recess of the said crown, although the latter is in contact at the sides with the upper edges of the sides of the burner. This construction gives the wick all the advantage of the superior capillary action of the natural fiber nearly to the burning-point, yet effectually protects the upper end from burning.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A wick having its top and sides saturated with silicate of potash forming a thin incombustible crown, the remainder of the wick nearly to the top being of ordinary capillary fiber which extends up to the top of the burner and into the concavity of the said crown, substantially as set forth.

JEAN BAPTISTE I. JULHE.

Witnesses:
T. LIBION,
G. GOTTLIEB.