

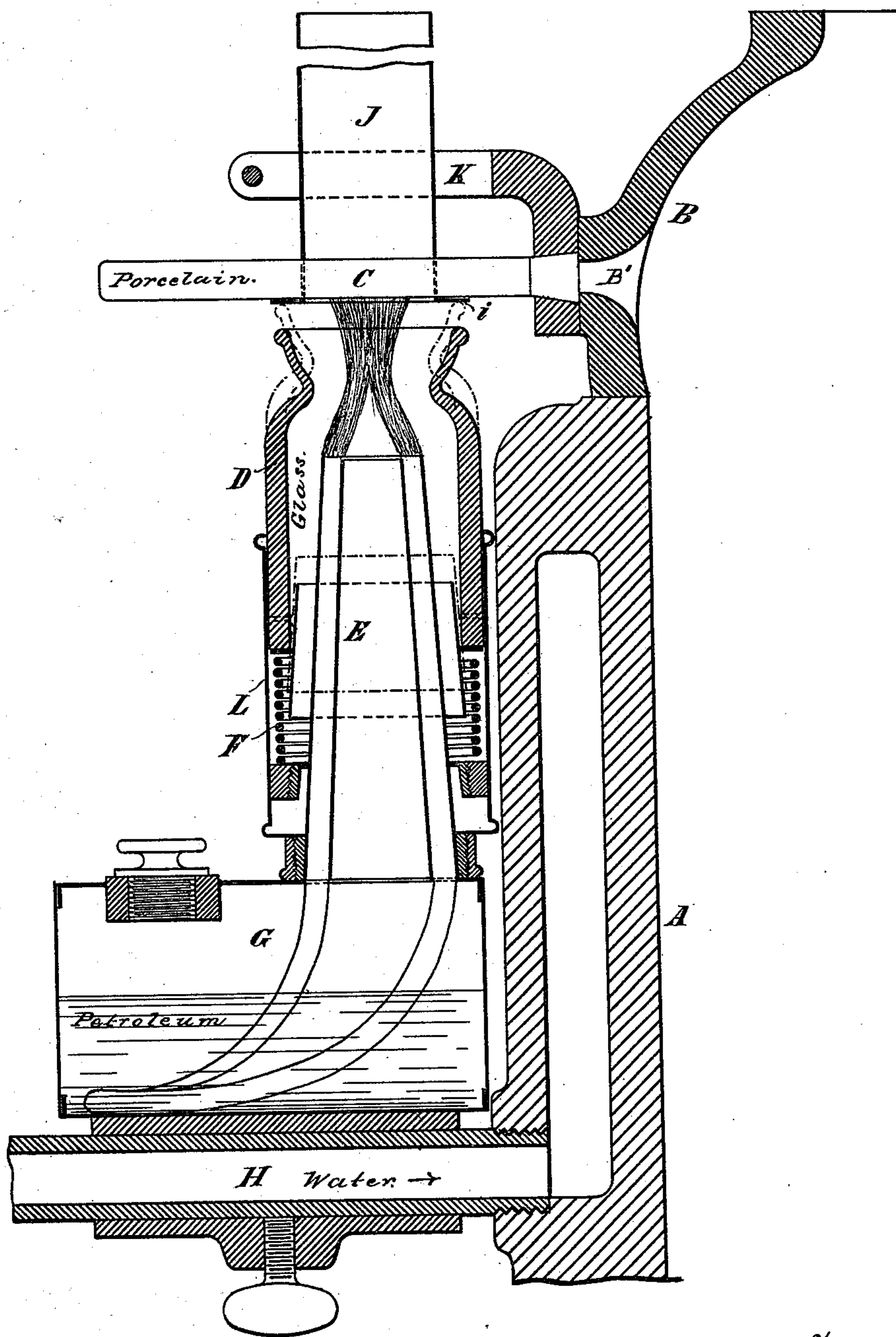
(No Model.)

E. CAPITAINE.

IGNITING DEVICE FOR PETROLEUM GAS ENGINES.

No. 408,459.

Patented Aug. 6, 1889.



Witnesses.
Henry Huber
Carl Karp

Inventor
Emil Capitaine
by *Groves & Paegener*
Attorneys

UNITED STATES PATENT OFFICE.

EMIL CAPITAINÉ, OF BERLIN, GERMANY.

IGNITING DEVICE FOR PETROLEUM-GAS ENGINES.

SPECIFICATION forming part of Letters Patent No. 408,459, dated August 6, 1889.

Application filed November 14, 1888. Serial No. 290,789. (No model.)

To all whom it may concern:

Be it known that I, EMIL CAPITAINÉ, a subject of the German Emperor, and a resident of Berlin, in the Kingdom of Prussia and German Empire, have invented certain new and useful Improvements in Igniting Devices for Petroleum-Gas-Power Machines, of which the following is a specification.

This invention relates to a new and improved igniting device for petroleum or gas engines. Heretofore platinum or other metal igniting-tubes have been used in petroleum and gas engines; but, on account of their being excellent conductors of heat, they require a large and very intense flame to keep them heated to the desired degree.

The object of my invention is to provide a new and improved igniting device in which an ordinary kerosene-burner can be used for heating the igniting-tube.

The invention consists in the combination, with an ordinary kerosene-burner, of a porcelain igniting-tube held above the burner and in communication with the explosion-chamber of the petroleum or gas engine.

The invention also consists in the construction and combination of parts and details, as will be fully described and set forth hereinafter, and finally pointed out in the claims.

In the accompanying drawing a vertical longitudinal sectional view of my improved igniting device for gas and petroleum engines is shown.

Similar letters of reference indicate corresponding parts.

The fount G, which may have any desired shape, is secured on the tube H, that serves for conducting cooling-water in the hollow walls of the cylinder A. The annular burner E is connected with the fount in any suitable way, and is surrounded by the glass chimney D, which is contracted near its upper end and has its lower end guided in a cylindrical cas-

ing L, containing a spiral spring F, which, acting on the bottom edge of the glass chimney D, presses the upper edge of the same against the bottom flange of the draft-tube J, supported by the arm K of the explosion-chamber B. A porcelain tube C, which is in communication with the opening B' of the explosion-chamber, extends through the bottom part of the draft-tube J, and is located such a distance above the top of the burner that only the extreme point of the flame strikes said tube, as otherwise the desired degree of heat could not be obtained and the porcelain tube would become coated with soot. The said porcelain tube, being a poor conductor, is heated to a very high degree at that spot only where the flame strikes it, and at once ignites a mixture of gas and air passing into it through the opening B'. As the glass cylinder has the spring bearing or support, there is no danger of its being broken or shattered by the jolts and jars of the engine.

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

1. In a gas-engine, the combination, with a kerosene-burner, of a glass chimney, a spring bearing on said chimney, and an igniting-tube above the burner, substantially as set forth.

2. In a gas-engine, the combination, with a kerosene-burner, of a glass chimney, a spring acting on said chimney, a draft-tube against one end of which the glass chimney is pressed by the spring, and an igniting-tube held in said draft-tube, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

EMIL CAPITAINÉ.

Witnesses:

CARL BORNGRAEBER,
BERNH. POERSCHMANN.