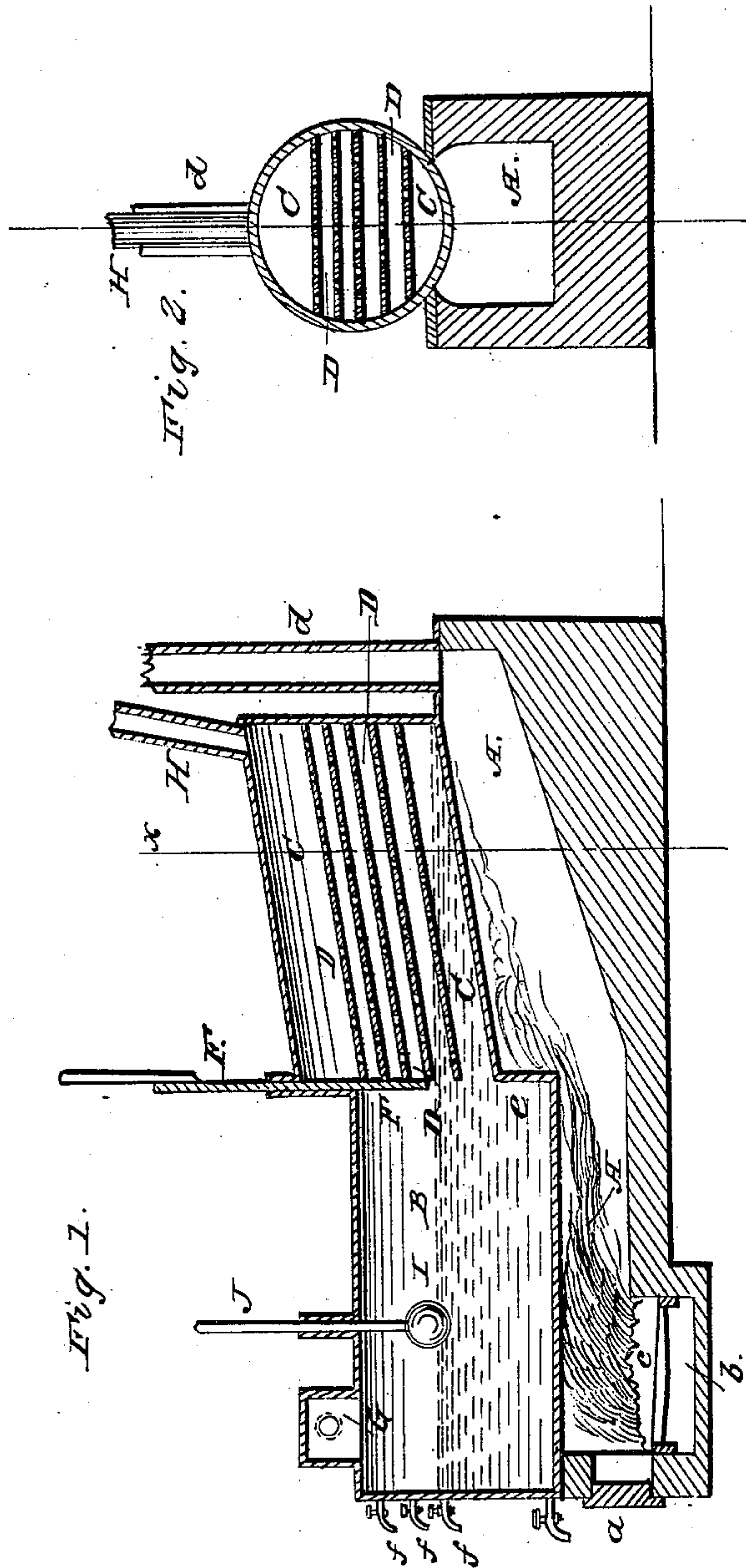


E. G. KELLEY.  
Petroleum Still.

No. 84,195.

Patented Nov. 17, 1868.



Witnesses

Chas. Nida  
Wm. Morgan

Inventor

E. G. Kelley  
per Munn & Co  
Atty

# United States Patent Office.

EDWARD G. KELLEY, OF NEW YORK, N. Y.

Letters Patent No. 84,195, dated November 17, 1868.

## IMPROVED PETROLEUM-STILL.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, EDWARD G. KELLEY, of the city, county, and State of New York, have invented a new and improved Petroleum-Still; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a vertical longitudinal section of my improved petroleum-still.

Figure 2 is a vertical transverse section of the same, taken on the plane of the line *xx*, fig. 1.

Similar letters of reference indicate corresponding parts.

This invention relates to certain improvements on the still for evaporating petroleum or other hydrocarbon-liquids, for which Letters Patent of the United States, dated the 20th day of August, 1867, and numbered 67,988, were granted to me.

The object of the present invention is to overcome certain deficiencies of my aforesaid apparatus, and to regulate the quality of the products of distillation, so that very light gasoline, or naphtha, and heavier illuminating-oil, may be produced.

The invention consists, first, in the application of an adjustable gate between the two vessels for the aforesaid purpose of regulating the gravity of the products of distillation.

The invention also consists in the application of a self-recording gauge, which will indicate the height of the liquid in the main still.

A, in the drawings, represents the furnace;

*a*, its fire-door;

*b*, the ash-box;

*c*, the grate; and

*d*, the chimney.

B is the cylindrical boiler, which is supported above that end of the furnace in which the grate is arranged.

All these parts are substantially as described in the aforesaid Letters Patent.

C is the inclined vessel, which connects with the rear head *e* of the cylinder B, and which I now prefer to make cylindrical, as shown. It is raised a suitable distance above the bottom of the cylinder B, and contains the perforated shelves D, as shown.

F is a gate, interposed between the vessels B and C, as shown. It can be moved up or down at will, so as

to enlarge or diminish the opening which is formed between the said vessels.

The crude petroleum is fed into the upper part of the cylinder C, substantially in the manner described in my aforesaid Letters Patent, so that such liquid will be spread over the plates D, and then flow into the cylinder B, as described.

When starting the process of distillation, the gate may be closed until the gravity of the illuminating-oil, passing off in a vaporous form through the pipe G, is ascertained to be from 62° to 63° Baume. The gate is then raised, and the lighter vapors will pass off, through the cylinder C, into the pipe H. By more or less elevating the gate, the gravity of the two products of distillation can be regulated at will.

I is a float, arranged in the still B, and fitted to a rod, J, which projects through the shell of the cylinder, as shown. This float will, by means of the rod J, on which a graduated scale may be arranged, always indicate the height of the contents of the vessel B.

The rod J should, above the cylinder, be packed with asbestos, to prevent the flame from striking through the crevices.

This indicator I J is used in place of the gauge-cocks *ff*, which are impracticable.

The heat in the cylinder is so great that if the contents are, through the gauge-cocks, poured out, they will at once spontaneously ignite, and consequently endanger the safety of the apparatus.

Having thus described my invention,

I claim as new, and desire to secure by Letters Patent—

1. The gate F, arranged in combination with the two vessels B C, to regulate the gravity of the products of distillation, substantially as and for the purpose herein shown and described.

2. The petroleum-still, consisting of the cylinders B C, the latter having the shelves, D, and the former being provided with the automatic indicator I J, all made and operating substantially as herein shown and described.

The above specification of my invention signed by me, this 26th day of September, 1868.

EDWARD G. KELLEY.

Witnesses:

FRANK BLOCKLEY,

ALEX. F. ROBERTS.