

H. G. DAYTON.

Still for Whisky and other Spirits.

No. 98,853.

Patented Jan'y 18, 1870.

Fig. 1.

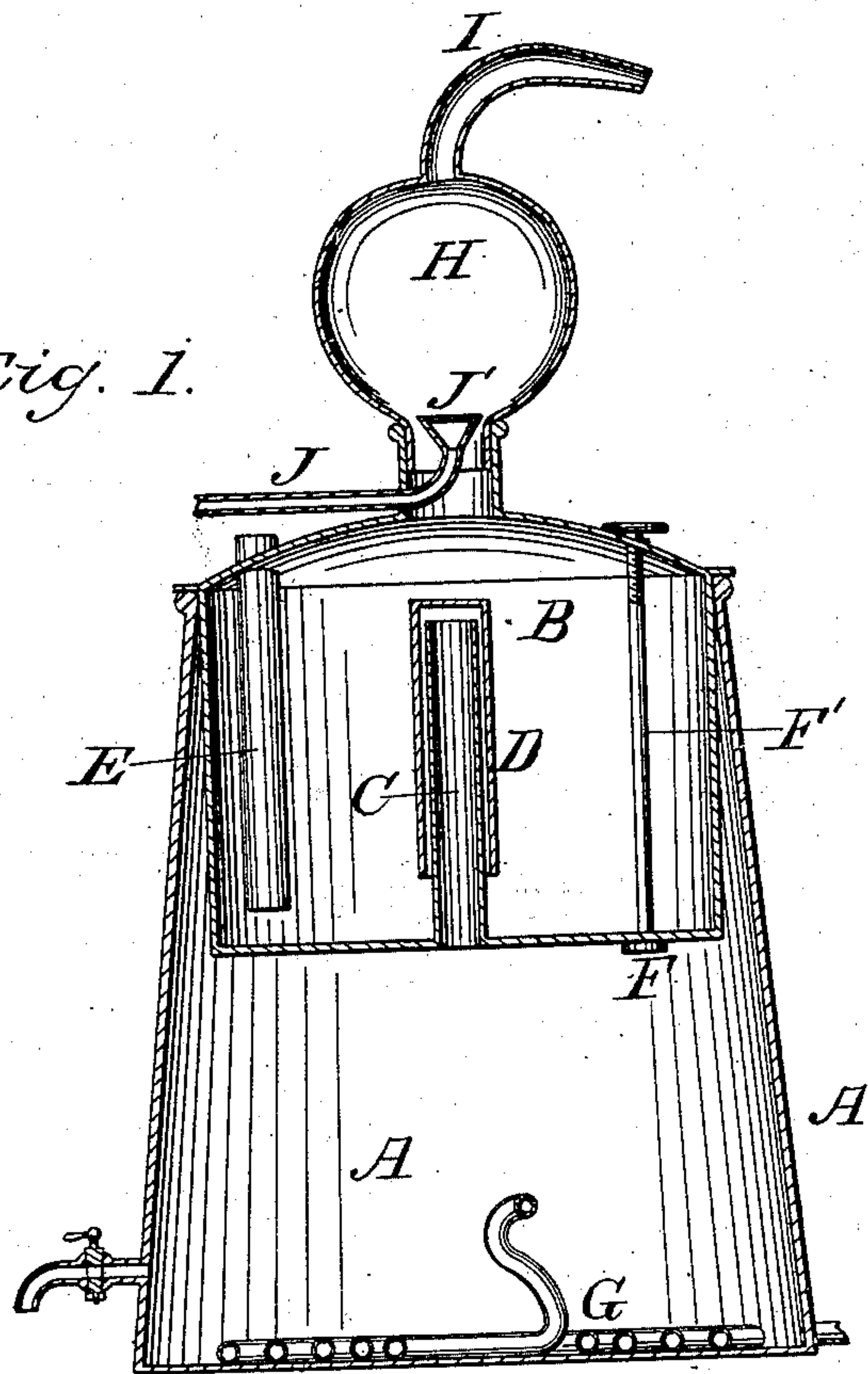


Fig. 2.

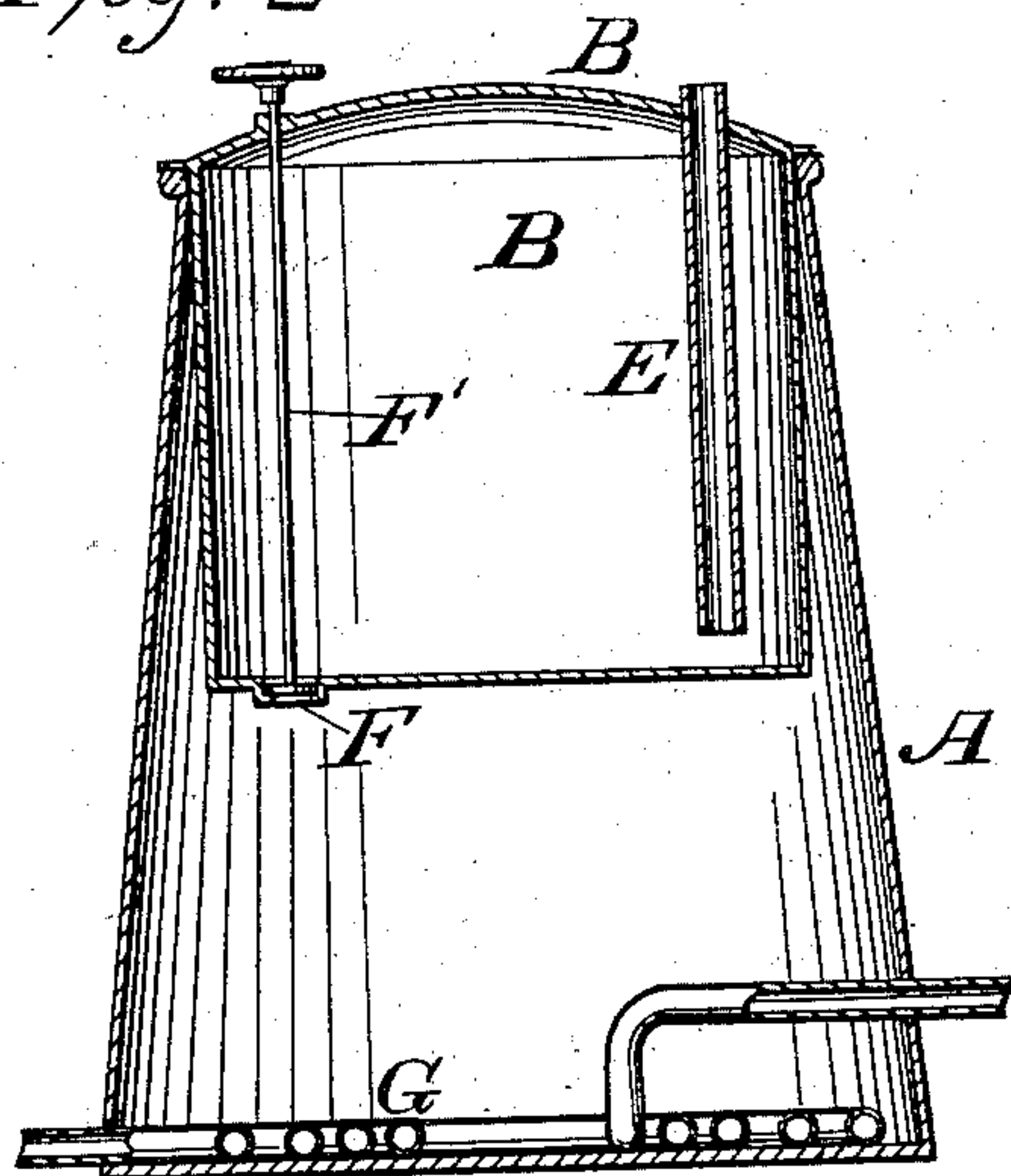
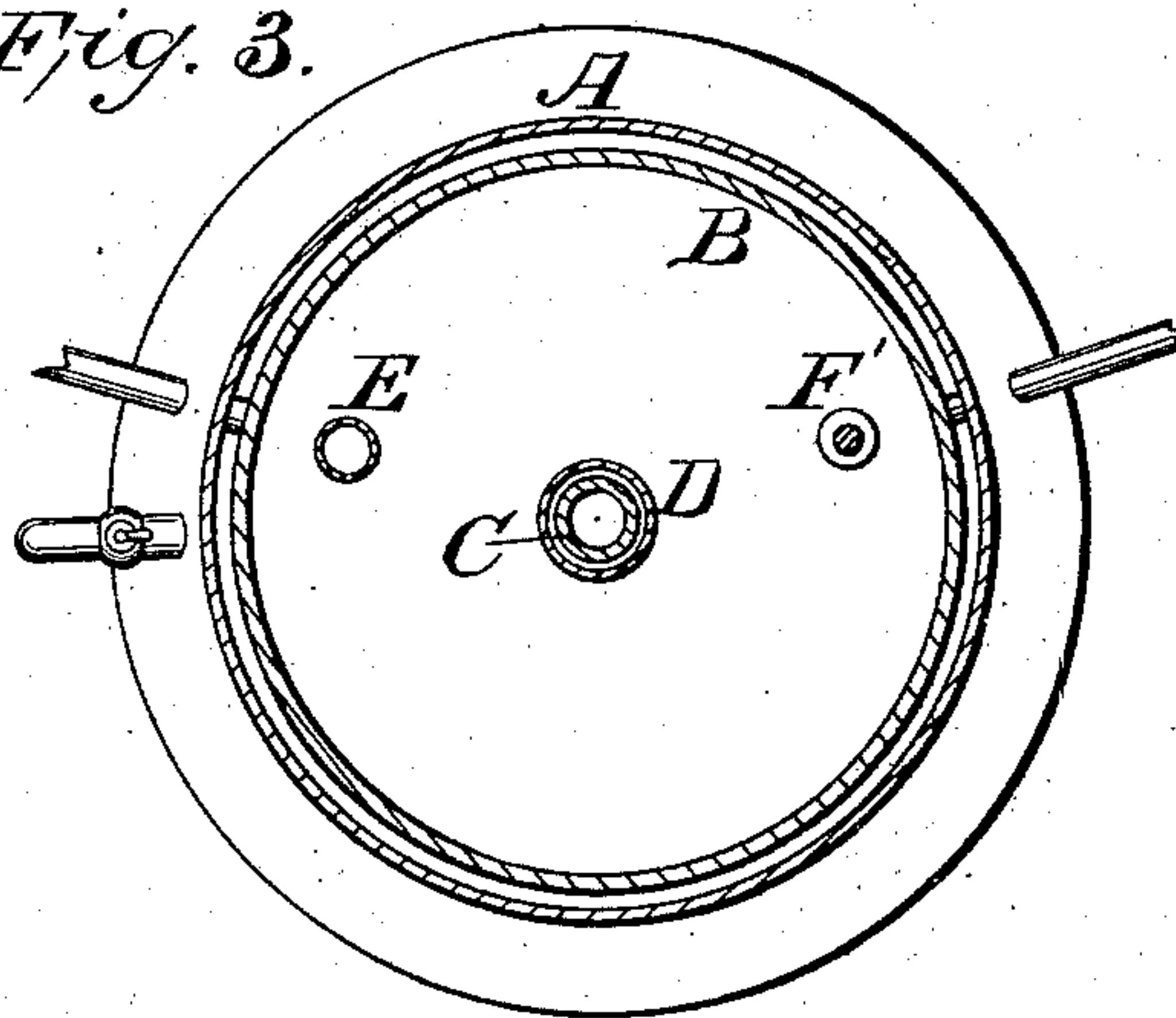


Fig. 3.



Witnesses:

C. D. Smith
T. C. Smith

Inventor:
Henry G. Dayton

United States Patent Office.

HENRY G. DAYTON, OF DAYTON, OHIO.

Letters Patent No. 98,853, dated January 18, 1870.

IMPROVEMENT IN STILLS FOR WHISKEY AND OTHER SPIRITS.

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, HENRY G. DAYTON, of Dayton, in the county of Montgomery, and State of Ohio, have invented a new and useful Improvement in the Manufacture of Whiskey; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, which are made a part of this specification.

In carrying out the process of distillation according to the ordinary method, the product of the first distillation, that is to say, the "singlings" or distillate obtained directly from the beer, is transferred to a second still, termed a "doubler," which distills from the singlings a product known as proof spirits.

During the first stages of distillation in the doubler there is run off or distilled a spirit which contains an excess of alcohol, or, as it is commonly expressed, a spirit which is above proof, whereas the distillate grows weaker, and eventually loses proof, as the process approaches completion. Hence the distillate ultimately obtained by means of the common doubler would lack a sufficiency of essential spirits to constitute the standard desideratum, namely, proof spirits, unless the usual process of destructive distillation were resorted to.

This last-mentioned expedient increases the alcoholic proportion of the distilled spirits to the proper degree, but involves the expulsion from the doubler of matter, which, becoming part of the distillate, greatly impairs the quality and flavor of the same.

In proceeding with my improved process, the singlings are subjected to distillation in such a manner that the desired strength of product is obtained without resorting to destructive distillation; and hence I am enabled to produce a highly improved article of whiskey.

At the commencement of the operation of the doubler, it has been hitherto found necessary to check the excessive heat, and the consequent unduly-rapid exit of the essential spirits, by the direct application of cold water to the vapors. This mode of reducing the temperature is attended with the sudden condensation of the vapors, and has a deleterious effect upon the whiskey produced.

I regulate the temperature of the vapor by the direct application of steam, as presently described, and thus obviate the employment of cold water and its disadvantages.

The drawings represent a doubler constructed according to my improved plan—

Figures 1 and 2 being vertical sections in different planes, and

Figure 3, a horizontal section.

A is the main tank of the doubler, which may be of wood.

B is a vessel, preferably of copper, supported within the upper part of the vessel A, by its flange resting upon the top of vessel A, as shown.

When the two vessels are put together, to form a

doubler, as clearly represented in figs. 1 and 2, communication is afforded between the interiors of the two vessels A B, by way of the stand-pipes C D.

The vessel B is supplied with singlings through pipe E, then the singlings are transferred from B to A, by opening a valve, F, which is done obviously by means of an elevating and depressing-rod, F'. Then the vessel B is again supplied with singlings, and the two chambers of the doubler being thus charged, the distillation may be proceeded with.

The contents of the vessel A, that is to say, of the lower part of the doubler, are boiled by steam, applied by means of the coil G.

The vessel A has the form of the frustum of a cone, and its sides diverge from those of vessel B, so that steam and vapor, in the lower part of the doubler, have access to the sides as well as the bottom of vessel B, and the contents of B are thereby boiled.

The vapors generated in A can only escape therefrom by way of the stand-pipes C D, vessel B, dome or cap H, and neck I. Thus the vapors, which are passing off from A to enter into the composition of the ultimate product, receive and mingle with additional vapors in the vessel B, and then escape to the worm.

In common doublers, the upper chamber being of wood, its contents must, necessarily, be heated through the sole medium of steam or vapor, introduced from the lower apartment, the medium of stand-pipes, such as C D; and hence, the contents of said upper apartment cannot be brought to a boiling-point until after the steam from below has obtained sufficient pressure to force its passage through the stand-pipes and the body of liquid in B.

Thus it will be seen that an important advantage of my doubler arises from the fact of its comprising a copper vessel as well as a wooden vessel.

The heat being more directly concentrated upon the contents of A, the said contents lose their strength more quickly than those of B, and the distillation of essential oils or spirits can be increased by the admission of comparatively strong singlings from B to A, through valve F.

In order to modify or regulate the temperature of the escaping products of distillation, I introduce steam directly thereto, by means of a pipe, J, and perforated cup J', or by the aid of any other suitable appliance.

Having thus described my invention,

I claim—

1. The doubler, consisting of the vessels A B, constructed and combined to operate substantially as explained.

2. The pipe J, and perforated cup J', or any equivalent means for employing steam, in the manner set forth.

HENRY G. DAYTON.

Witnesses:

QUINCY CORWIN,
HENRY MILLER.