

E. H. GOUGE.  
GYRO-EVAPORATOR.

No. 177,827.

Patented May 23, 1876.

Fig. 1.

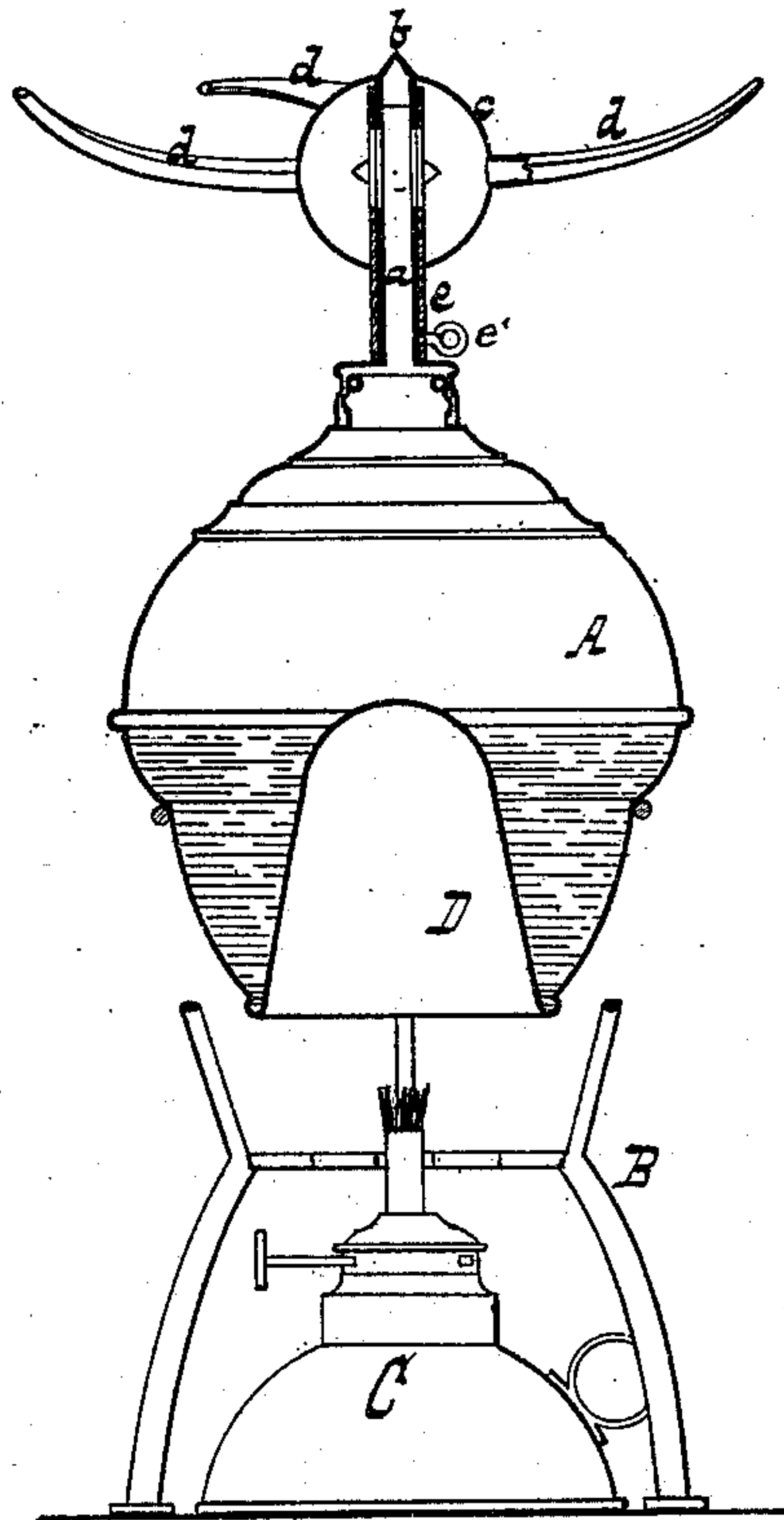
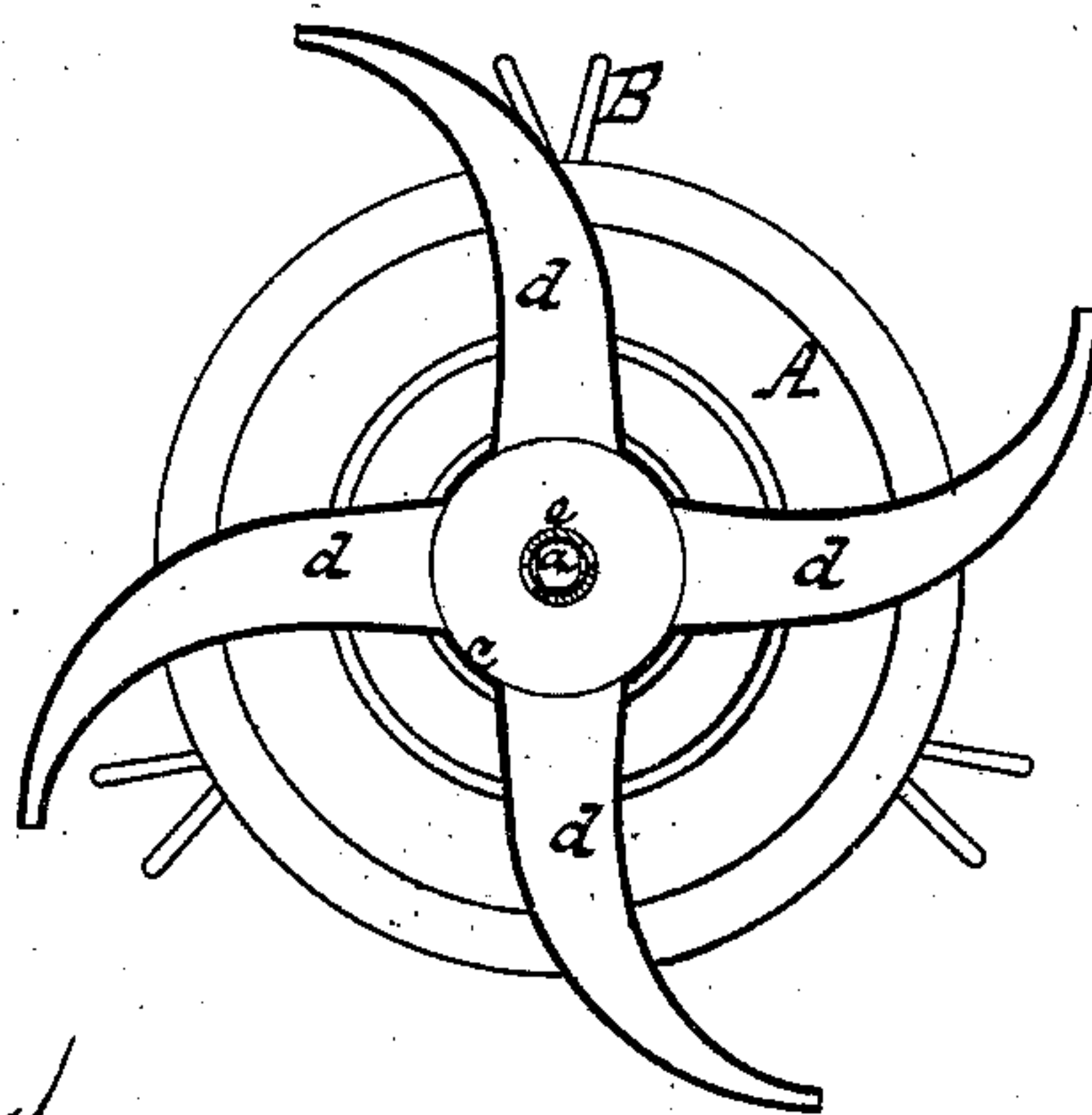


Fig. 2.



Witnesses.  
Frank B. Dey  
Frank B. Ball.

Inventor.

Edward H. Gougé

# UNITED STATES PATENT OFFICE.

EDWARD H. GOUGE, OF NEW YORK, N. Y.

## IMPROVEMENT IN GYRO-EVAPORATORS.

Specification forming part of Letters Patent No. 177,827, dated May 23, 1876; application filed November 2, 1875.

*To all whom it may concern:*

Be it known that I, EDWARD H. GOUGE, of the city, county, and State of New York, have invented a new and Improved Gyro-Evaporator and Atomizer, which invention is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a vertical central section. Fig. 2 is a sectional plan or top view.

Similar letters indicate corresponding parts.

This invention relates to certain improvements in vaporizers or disinfecting apparatus; and consists of a novel construction and arrangement of parts, which will be fully hereinafter described, and specifically pointed out in the claim, a preliminary description being therefore deemed unnecessary.

My invention consists in combining with the boiler and its laterally-perforated tube two or more hollow arms placed in an upwardly-inclined position, so that if any condensation should take place in said arms the liquid resulting from the condensation will be prevented from being thrown out of said hollow arms.

In the drawing, the letter A designates a boiler, which is, by preference, made globe-shaped, but which may be made in any suitable form or shape, and which is so constructed that it can conveniently be set on a stand, B, on the bottom part of which is placed a lamp, C, for the purpose of heating the boiler. From the bottom of said boiler rises a flue, D, which is open below and closed at the top, and the top of which is intended to project somewhat above the mean level of the liquid in the boiler. When the lamp is lighted the top plate of the flue becomes highly heated, and the steam evolved from the liquid in the boiler, by coming in contact with the heated surface of said top plate, is superheated, and thereby the condensation of the steam during the operation of my apparatus can be completely avoided. From the top of the boiler A rises

a tube, *a*, which is perforated at its sides and provided with a closed conical tip, *b*, which fits into a corresponding socket formed in the bulb *c*, from which extend two or more hollow arms, *d*. These hollow arms are inclined upward, so that if any condensation takes place in the same the liquid resulting from such condensation will fall back into the bulb, and the escape of liquid from the mouths of the hollow arms is effectually prevented. Said hollow arms are curved, as shown in Fig. 2, and if the steam from the boiler escapes from the same with a certain force, said arms revolve like a Scotch turbine-wheel, and the steam is diffused in a large space. Over the tube *a* is fitted a sleeve, *e*, with apertures in its sides, which are so situated that by turning or moving said sleeve its apertures can be made to coincide with the apertures in the tube *a*, or that the apertures in this tube can be partly or entirely closed. By means of the sleeve *e*, therefore, the escape of steam from the boiler through the hollow arms *d* can be regulated. The sleeve *e* is provided with a small stud or projection, *e'*, by which it may be operated. The bulb *c* forms a chamber which receives the condensed water from the hollow inclined arms, and, being heated, causes the same to evaporate and pass off in the form of steam.

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

The combination of the perforated sleeve *e* with the tube *a*, perforated in its sides, boiler A, and hollow revolving arms *d*, and projection or stud *e'*, for operating the same, all constructed and operating substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 22d day of October, 1875.

EDWARD H. GOUGE. [L. S.]

Witnesses:

RICH. B. LOCKE,  
W. HAUFF.