

No. 628,966.

Patented July 18, 1899.

H. L. TOWER.

EGG TESTER.

(Application filed Oct. 18, 1898.)

(No Model.)

Fig. 1.

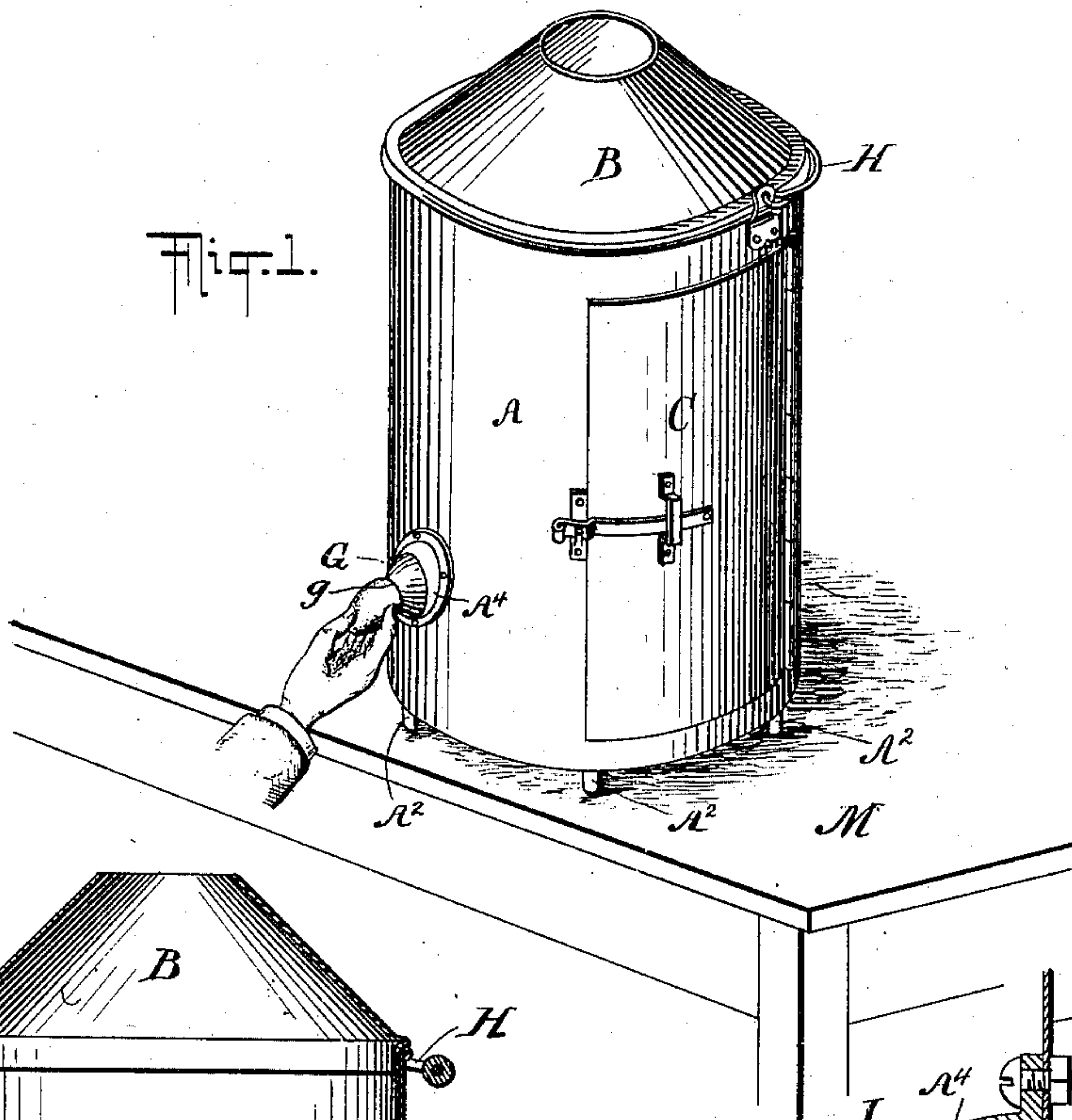


Fig. 2.

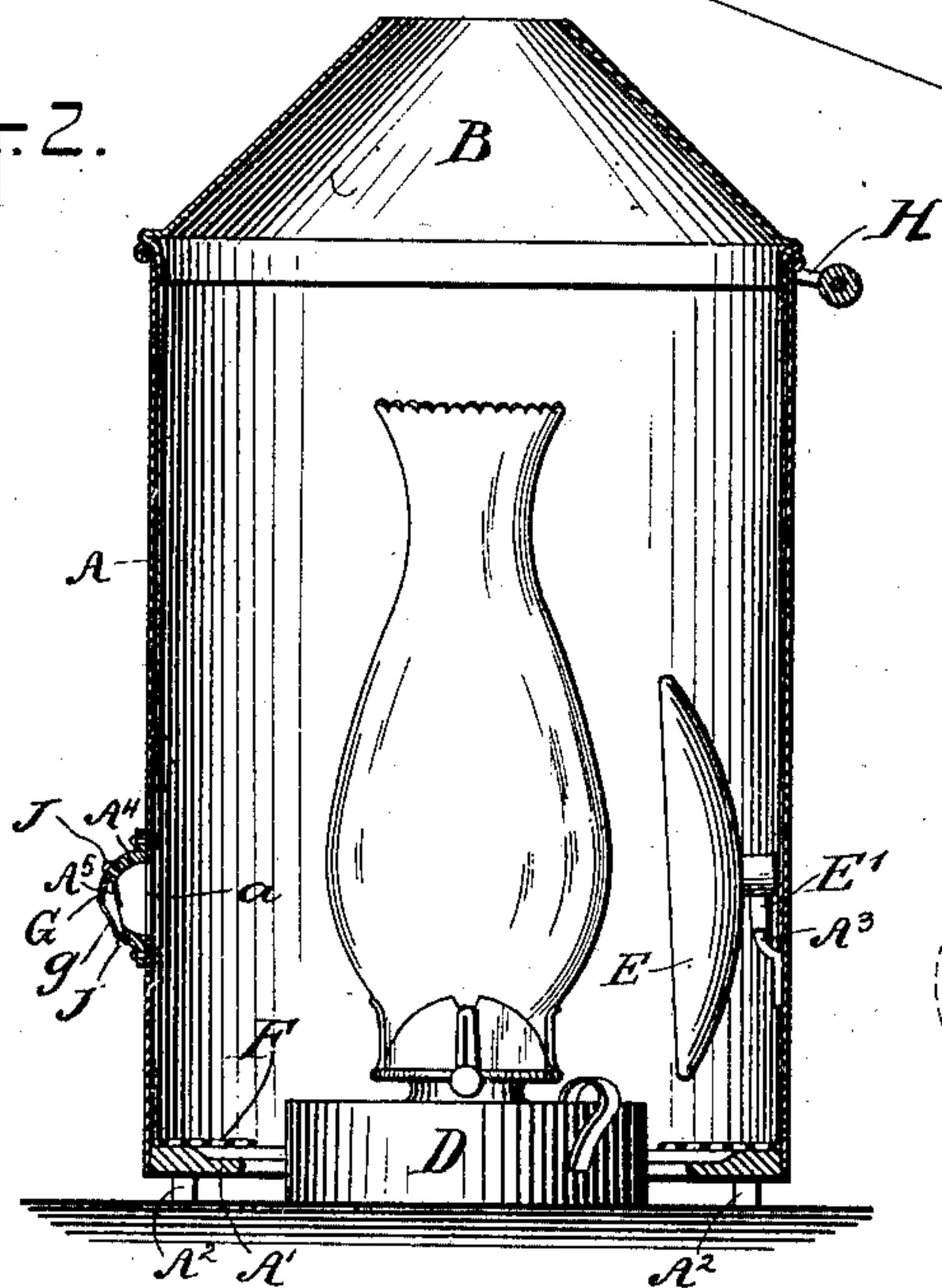
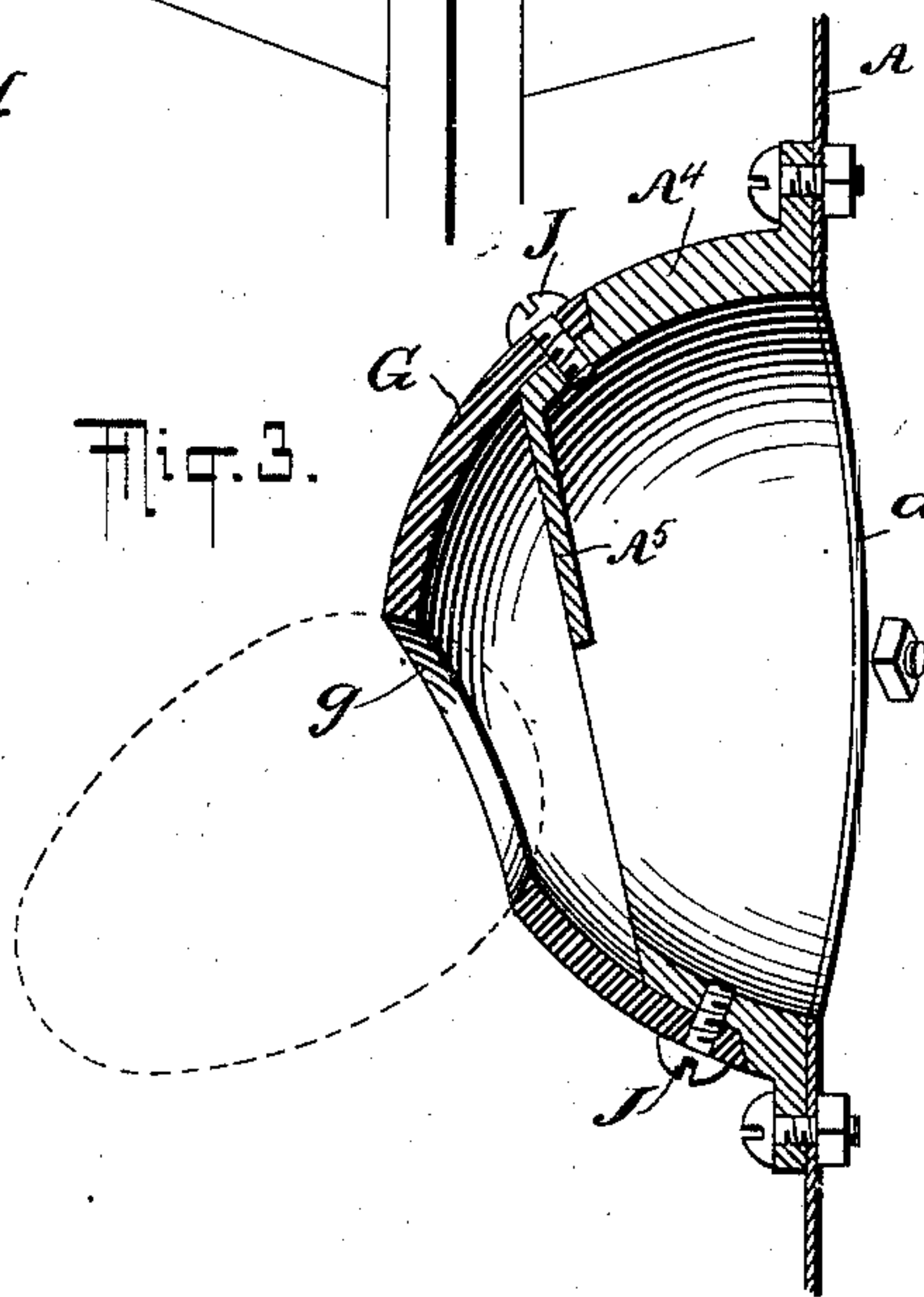


Fig. 3.



WITNESSES:

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EGG-TESTER.

SPECIFICATION forming part of Letters Patent No. 628,966, dated July 18, 1899.

Application filed October 18, 1898. Serial No. 693,902. (No model.)

To all whom it may concern:

Be it known that I, HERBERT L. TOWER, a citizen of the United States, residing at Coventry, in the county of Chenango, in the State of New York, have invented a certain new and useful Improvement in Egg-Testers, of which the following is a specification.

My invention pertains to that class in which artificial light is employed in an opaque casing and the eggs are submitted to the light by being presented at a suitable aperture.

The main advantage of the invention is its adaptability for rapid and accurate testing and its contributing to relieve the eyes from strain.

In practically testing eggs in the large way it is important to be able to determine rapidly not only the eggs that are so stale as to be useless, but also various grades and peculiarities. The air-bubble at the large end of the egg, small and sharply defined in a fresh-laid egg, grows larger as the egg is kept and is plainly visible by the aid of my apparatus. The fact whether or not the eggs have been in cold storage is revealed by my apparatus. My tester will give, even to those of limited experience, facility for accurately and rapidly assorting eggs into several grades. It is important to turn the egg and determine whether there is a cloudiness in any part of the interior. The eggs can be applied to, partially revolved in, and removed from the testing-socket in rapid succession. I provide for presenting the egg to the light and to the eye not exactly endwise, but obliquely, with the large end upward. The eyes are not dazzled either by direct or reflected light.

The accompanying drawings form a part of this specification and represent what I consider the best means of carrying out the invention.

Figure 1 is a general perspective view, and Fig. 2 a central vertical section, showing the entire apparatus. Fig. 3 is on a much larger scale. It is a radial vertical section through the center of the window.

Similar letters of reference indicate corresponding parts in all the figures where they appear.

A is a casing of stout sheet-iron or other absolutely opaque material.

B is a cover matching tightly on the rim and

presenting an aperture at the center, through which the air rising from the lamp will find egress. I have not found any serious inconvenience from allowing the light to shine upward through this aperture. I am treating an average of a thousand dozen eggs per day, dividing them into several grades, in a room sufficiently light to allow general work, as bringing and carrying away or packing the eggs, to be conveniently performed.

The bottom of the casing is provided with an annular rim or internal lip A' and with short legs A². The air to supply the lamp enters through the space thus provided.

C is a door covering a liberal aperture through which the lamp may be inserted. It is fitted to make a tight joint.

D is a lamp of liberal area but little height. It is important in resting the lamp on a table or other support of ordinary height to have the lamp low.

E is a concave mirror provided with a socket E', by which it can be set on a nearly upright arm A³ at one side of the interior. On the opposite side of the casing A and at a low point therein I provide a sufficient aperture or window a, which is surrounded and partially covered by a casting or hood A⁴, constituting a zone of a dome, inclined a little downward and having a curtain A⁵ extending a little downward from the top in its interior. G is a portion of a dome of vulcanized india-rubber, having an aperture g a little below its central line, shaped to match an egg of average form presented obliquely thereto, all as indicated in Fig. 3. It is detachably secured by bolts J, which allow its easy removal when desired.

I can employ a plate of perforated metal or strong wire-gauze, resting loosely on the internal lip A', as partly shown at F, and supporting the lamp.

H is a bail hinged to the top of the casing A and adapted to facilitate the transportation of the device. Ordinarily it will be moved with the lamp extinguished. If the lamp is kept lighted, it should be turned low when the device is to be thus carried.

It will be understood that the eggs are presented in the properly-inclined position against the hole g, the elastic nature of the rubber allowing it to make a tight joint, even

if the eggs vary considerably in size and shape.

M is the bench or table on which the apparatus rests.

5 I attach importance to the low position and the droop of the dome G, because it brings it only a convenient height above the table, and aids to shield the eyes from being ever exposed either to the direct, or to any considerable portion of the reflected, light of the lamp.

10 The curtain A⁵ performs an important function in shading the upper portion of the egg when it is in the act of being moved into or away from its tight-fitting position in the aperture g and avoiding any injurious effect on the eyes which might result from reflected light.

20 I attach importance to the lip A' around the interior of the bottom, because it shades and prevents the escape of light through the small extent to which the bottom rim of the body is lifted above the table M.

25 Modifications may be made without departing from the principle or sacrificing the advantages of the invention. By simply raising and lowering the reflector on the arm A³ it may be adjusted relatively to the flame. It is sufficient that the main strength of the light be thrown out through the aperture a and concentrated on the portion of the egg presented in the aperture g whether the lamp sits on the foraminous floor F or sits at the lower level on the table.

35 Other yielding material, as leather or various compounds, may be used in place of rubber for the soft dome G, against which the egg is pressed. Other forms than a dome may be employed in the construction of that part.

40 The construction of the lamp may be widely varied. The extended area is desirable, because it gives a large capacity for holding kerosene. The small height is of advantage in allowing the window a to be brought lower, 45 so that the successive lifting and lowering of

the eggs one by one can be more easily, rapidly, and safely accomplished.

It will be understood that there may be any ordinary or suitable means for raising and lowering the wick. Other kinds of artificial light may be used. I propose to use any convenient form of electric light.

I claim as my invention—

1. An egg-tester, having a lamp inclosed in an opaque casing provided with air-passages, 55 and having the lateral aperture a, the downwardly-inclined casting or hood A⁴, and convex extension G of opaque yielding material having the aperture g, combined as herein specified. 60

2. An egg-tester, having a lamp inclosed in an opaque casing provided with air-passages and having the lateral aperture a, hood A⁴ with curtain A⁵ in the upper portion and yielding outer face G having the aperture g, 65 all combined and arranged to serve substantially as herein specified.

3. An egg-tester, having a lamp inclosed in an opaque casing A, with an aperture, a casing or hood A⁴, soft outer ring G, the annular lip A' around the interior, and supports A² 70 for allowing a liberal access of air without escape of light at the bottom, all substantially as herein specified.

4. The egg-tester comprising the opaque 75 casing, with cover and air-passages, internal lip A', removable foraminous floor F and bail H, an inclosed lamp D, concave reflector E, the socket E' and arm A³ for adjusting the latter, and the aperture a with its yielding 80 ring or dome G, all combined and arranged for joint operation substantially as herein specified.

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses. 85

HERBERT L. TOWER.

Witnesses:

J. B. CLANTICE,
M. F. BOYLE.