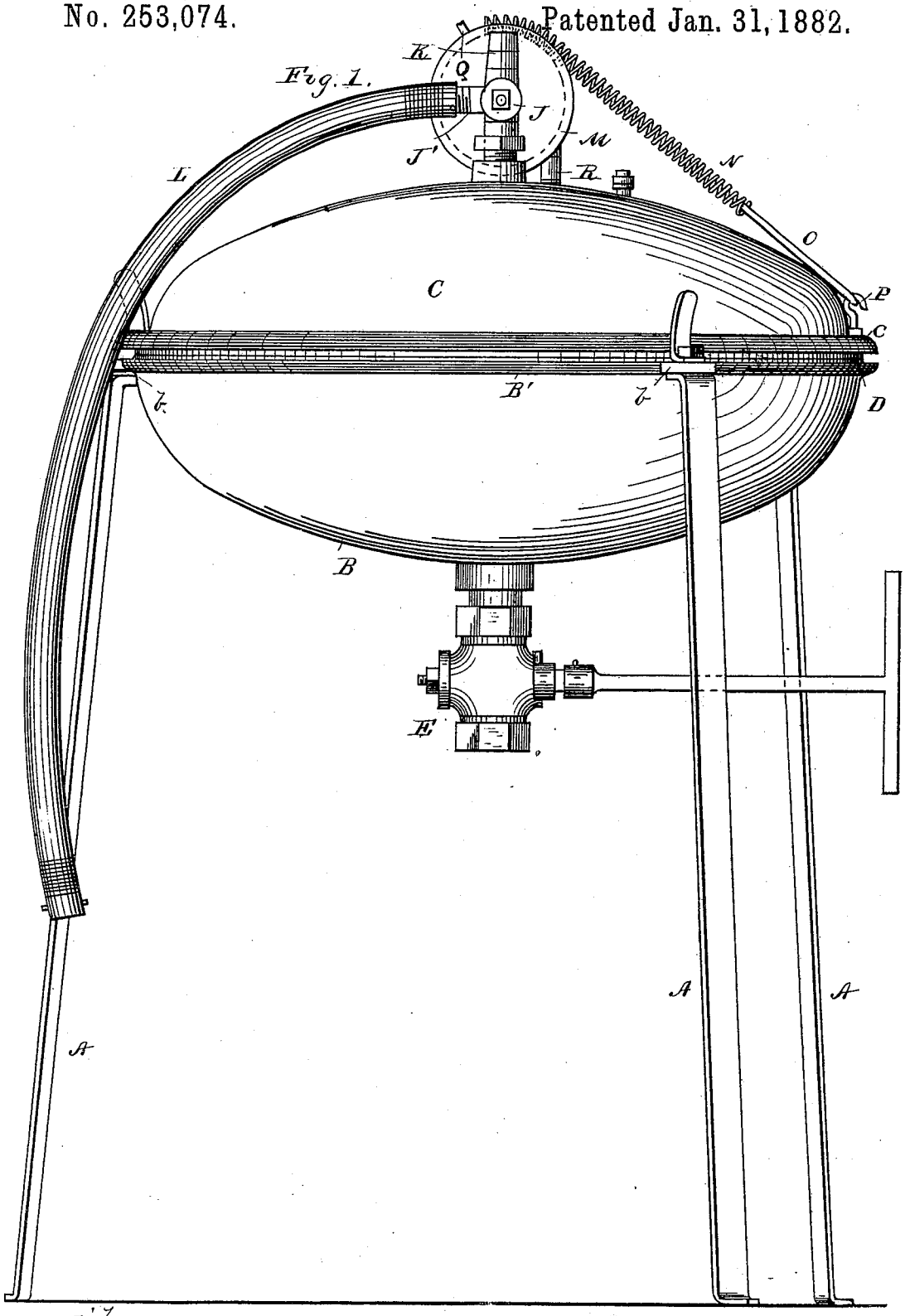
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K. H. LOOMIS.

APPARATUS FOR PRESERVING EGGS.

No. 253,074. Patented Jan. 31, 1882.

Fig. 1.



Witnesses,
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Inventor,
K. H. Loomis,
By C. M. Alexander, his Atty.

N. PETERS, Photo-Lithographer, Washington, D. C.

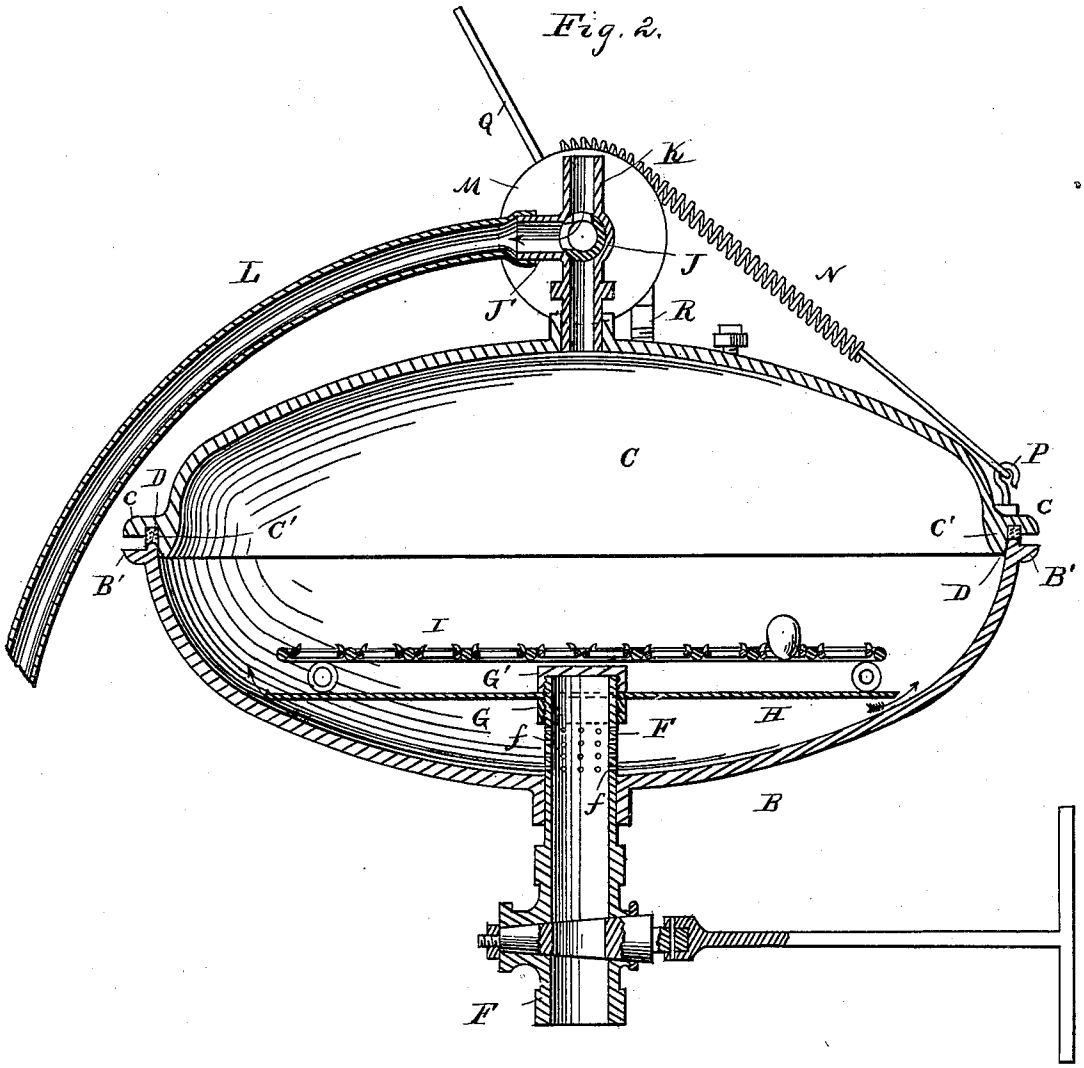
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Fig. 2.



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K. H. LOOMIS.

APPARATUS FOR PRESERVING EGGS.

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Fig. 3.

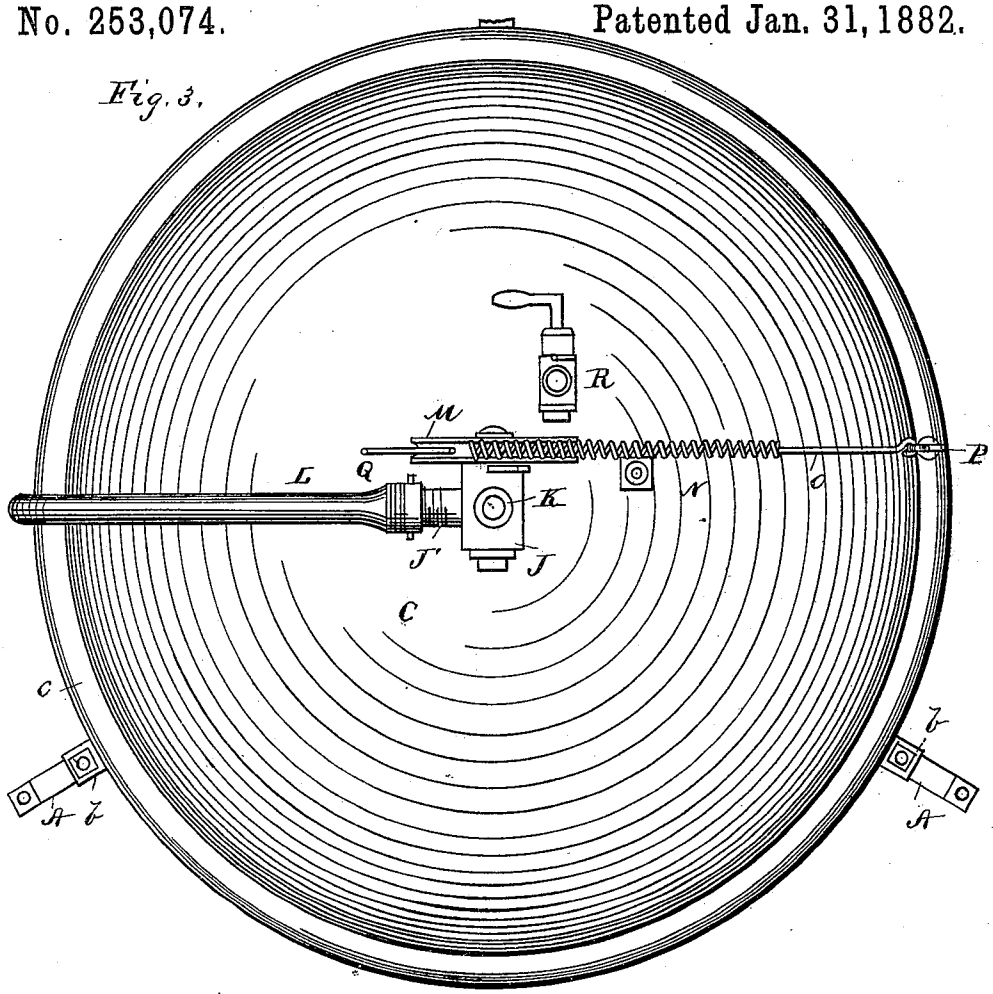
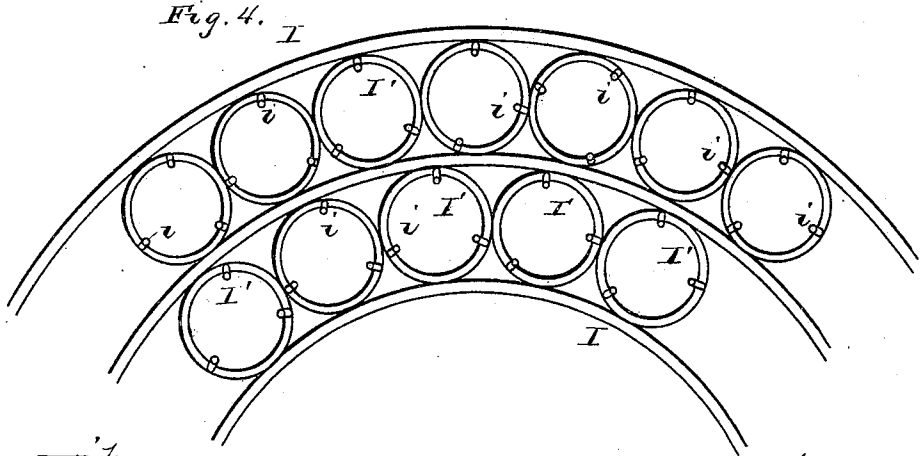


Fig. 4.



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UNITED STATES PATENT OFFICE.

KELLOGG H. LOOMIS, OF NEW YORK, N. Y., ASSIGNOR TO JOHN VAN NEST, OF SAME PLACE.

APPARATUS FOR PRESERVING EGGS.

SPECIFICATION forming part of Letters Patent No. 253,074, dated January 31, 1882.

Application filed September 13, 1881. (No model.)

To all whom it may concern:

Be it known that I, KELLOGG H. LOOMIS, of New York, in the county of New York, and in the State of New York, have invented certain new and useful Improvements in Apparatus for Preserving Eggs; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of an apparatus for preserving eggs, and its object is to provide an economical and practical machine for carrying out this end.

It consists, first, in providing a means for effecting a thorough and equal instantaneous distribution of the preserving fluid or substance employed; secondly, in the construction of a tray or rack for securely supporting the articles under process of preservation, and retaining them in the desired position against the contact of a displacing action caused by the sudden injection of the preserving-fluid into the reservoir; and, thirdly, in a cut-off cock or valve for opening and closing the communication between the reservoir and air or suction pump in a quick and positive manner. These ends I accomplish by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my invention complete. Fig. 2 is a vertical sectional view of the same, showing its internal arrangement. Fig. 3 is a plan view thereof; and Fig. 4 is a detached plan view of a portion of my improved tray or supporter.

The letter A designates the supporting pieces or legs employed for sustaining the body of my apparatus, to which they are suitably secured by bolts and nuts, or in any other convenient manner.

The letter B indicates the lower portion or section of the body or reservoir of my machine, and is constructed of cast metal. It is preferably of circular form, and is hollowed out, after the manner of a bowl. At its upper edge I form an annular ledge or flange, B′, somewhat below the extreme upper surface, which furnishes additional strength thereto, and projecting therefrom are lugs *b*, to which the supporting-legs above referred to are attached. Resting upon this lower section, B, and fitted thereto, is a similar section, C, the bottom edge whereof is provided with two annular flanges, C′ and *c*, the one fitting within the section B, and the other carrying a rubber or other suitable packing-ring, D, located in the channel formed therein, the said packing-ring D being interposed between the two sections and forming an air-tight joint. It will be observed that the upper head on the lower section, B, is slightly rounding in its cross-section, the object of which is that the same may the more readily take into and form a closer joint with the packing-ring D.

At or near the center of the lower section, B, of my reservoir, is secured a stop-cock, F, which is used to open and close communication between the reservoir B C and the tank or vessel containing the preserving-fluid. This cock is provided with an upper extension, F′, which projects upwardly into the section B a short distance, where it is provided with a number of small apertures or perforations, *f*, the function of which latter will presently appear. Above these perforations *f* the said extension F′ is screw-threaded and carries two nuts, G and G′, the upper of which is closed, forming a cap or covering for the extension, thus preventing an upward discharge of the preserving-fluid.

Interposed between the nuts G and G′ and on the extension F′ is a thin disk or circular plate, H, the diameter of which is regulated according to that of the lower section of the reservoir, its periphery extending near the inner wall of such section, forming between the two surfaces a narrow annular way or space for the passage of the preserving-fluid, the function of the said disk H being to prevent the preserving-fluid from forcing its way directly upward into the reservoir, (which, on account of its high speed, would displace and damage the eggs,) and to spread the same in an even manner, allowing it to enter the egg-compartment only in a thin film or stream. Immediately above this disk H is suitably supported a tray or rack, I, for containing the eggs, which is formed of a convenient number of concentric rings or hoops, I, connected together by a series of smaller

rings, I′, located in close succession between each concentric hoop. At the point of contact between each of the smaller rings and the latter with the concentric hoops I make a suitable connection by solder or otherwise. At intervals around each of the smaller rings I attach thereto short pins or posts *i*, inclining inwardly or toward each other as they extend upward, forming rests or supports for the eggs, between which the latter are held, and by which they are prevented from contact with the rings inclosing them, thus allowing substantially their whole external surface to be acted upon by the preserving-fluid during the process of sealing.

At a suitable point, preferably near the center of the section C of the reservoir, I attach a two-way cock, J, the casing of which has two projections or extensions, J′ and K, to one of which, J′, is secured a hose or suction-pipe, L, the other, K, forming a communication between the cock proper and the external air. On one end of this cock I attach rigidly a pulley-wheel, M, having a peripheral groove in which is fitted and secured a spiral spring, N, the other extremity of which spring is connected by means of an interposed link, O, to a post or hook, P, on one side of the section C. To this pulley M is also secured a lever or actuating-arm, Q, by which the cock is put into communication with the reservoir and air-pump, and retained in that position until a vacuum has been formed in the reservoir, when the said lever is freed and the recoil of the spiral spring partially rotates the pulley M, which acts on the cock directly and instantly closes the communication thus established, and forms one between the air-pump attached to hose and the external air, the latter being the normal position of the cock. Near the said cock J is located on the section C a hand-cock, R, which is used for opening up a communication between the reservoir and the external air for the purpose of destroying the vacuum which has been previously formed in the reservoir. At a suitable point on the said section C is also attached a vacuum-gage, which is employed to indicate the moment when the vacuum has been formed in the reservoir B C.

The operation of my machine will be readily understood from the following in connection with the foregoing: The section C being removed, the egg tray or rack is filled with eggs and the former then replaced. The cock J is then put in communication with the reservoir and air-pump attached to one end of the hose L, and the pump put in motion and kept in operation until the air is exhausted from the reservoir. At that moment, as indicated by the vacuum-gage, the lever Q is released and the recoil of the spring N then acts on the pulley M, giving it a partial rotation, which instantly closes the communication last referred to. The lower cock is then opened and a charge of silicate of soda (or other preserving or sealing fluid) is admitted through the perforations in the pipe F′, deflecting against the under side of the disk H, from which it radiates, and then passes upwardly into the reservoir until it is again deflected by the concavity of the section C, from whence it descends in a spray-like form upon the eggs, completely coating them. This occupies but a moment of time. Then the hand-cock is opened and the vacuum destroyed, when the unconsumed sealing-fluid returns by its gravity to its proper receptacle. The section C is then removed and the preserved or sealed eggs are taken out.

It will be observed that while the process of preserving is in progress the air-pump and external air are in communication with each other, owing to the normal position of the two-way cock, thus relieving the exhaustion mechanism of the otherwise prolonged and continued strain.

In some instances I contemplate using a counterbalance-weight for operating the pulley M instead of a spring, as above set forth.

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

1. In an apparatus for preserving or sealing eggs, an air-tight reservoir having a perforated injecting-pipe, a deflecting-disk, and an egg-receptacle, substantially as specified.

2. In an apparatus for preserving or sealing eggs, the combination of a deflecting-disk and an egg rack or tray, the latter consisting of a number of concentric rings or hoops, and a series of smaller rings located between the same, substantially as shown and described.

In testimony whereof I affix my signature, in presence of two witnesses, this 4th day of September, 1881.

KELLOGG H. LOOMIS. [L. S.]

Witnesses:
H. AUBREY TOULMIN,
A. HARRY SEMMES.