G. W. GOUDY.

COMBINED EGG TESTER AND MAILING TUBE.

APPLICATION FILED APR. 15, 1915.

**1,156,476.** Patented Oct. 12, 1915.

Fig. 1.

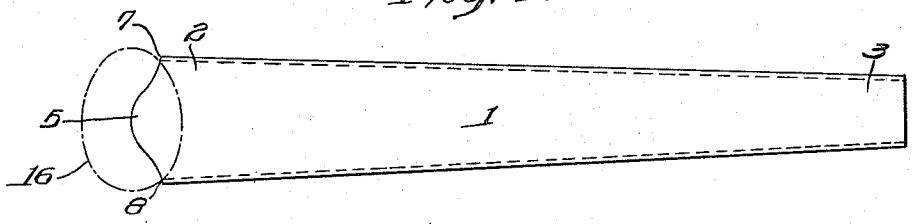



Fig. 2.

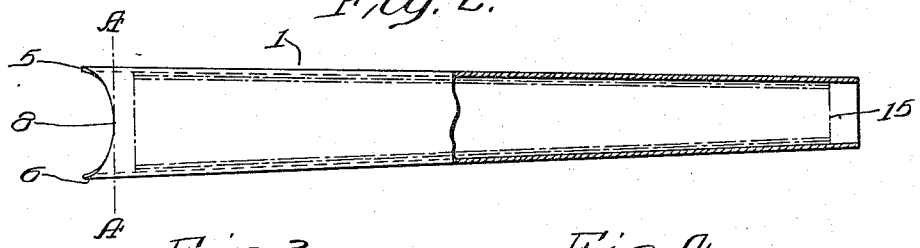



Fig. 3.

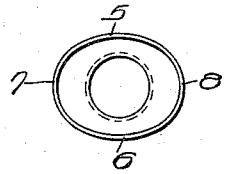



Fig. 4.

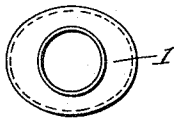
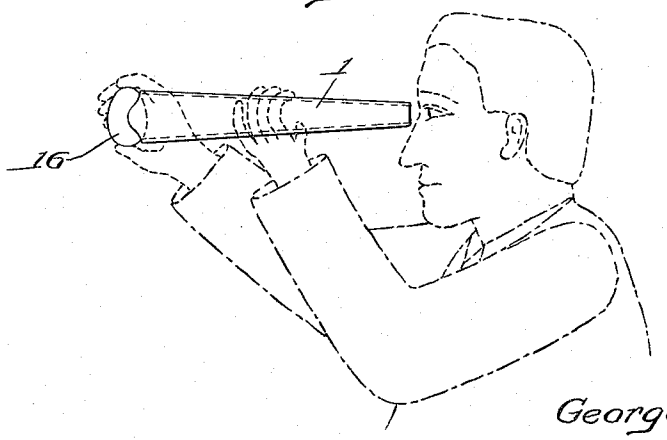



Fig. 5.




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# UNITED STATES PATENT OFFICE.

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## COMBINED EGG-TESTER AND MAILING-TUBE.

1,156,476. Specification of Letters Patent. Patented Oct. 12, 1915.

Application filed April 15, 1915. Serial No. 21,518.

*To all whom it may concern:*

Be it known that I, GEORGE W. GOUDY, a citizen of the United States, and a resident of Highland, in the county of Ulster and State of New York, have invented a certain new and useful Combined Egg-Tester and Mailing-Tube, of which the following is a specification, reference being had to the accompanying drawing.

Among the principal objects of my invention are to provide a device which shall be adapted for testing eggs, and which may also be employed as a mailing tube by means of which suitable printed matter or other circulars may be safely transported through the mails, for example, to persons presumably interested in egg production or the sale of eggs, and which, after its receipt by them and the removal of the contained printed matter, may be utilized for the purpose of testing eggs to ascertain the condition of their contents.

Further objects of my invention are to provide a device of the character described and suitable for the purposes intended which shall be simple in construction and efficient in operation, and which may be constructed at a very low cost, thereby adapting it especially for use as an advertising novelty or the like, suitable for gratuitous distribution, preferably as a container for circulars and other advertising matter, and which, after its receipt by the person to whom it may be sent, will be retained by him and utilized for the purpose of testing eggs, instead of being immediately discarded, as in the case of an ordinary mailing tube.

My invention further includes all of the other various novel features of construction and arrangement hereinafter more definitely specified.

In the accompanying drawing in which is illustrated one embodiment of my invention, Figure 1 is a side elevation thereof in one position, and Fig. 2 is a similar view partially in central vertical section, the device, however, having been rotated about its central longitudinal axis through an arc of 90 degrees. Figs. 3 and 4 are respective end views of the device, and Fig. 5 is a diagrammatic illustration of the method of utilizing the invention in the operation of testing an egg.

That form of the invention illustrated in the drawing consists of a tubular body 1, preferably longitudinally tapered from the larger end 2 toward the smaller end 3, and which may be formed in any suitable and convenient manner and of any desired material. In practice, however, it is frequently convenient to form the body of suitable cardboard, strawboard or the like by cutting the flat sheet of material in a suitable shape, and then rolling the same up into the desired form, the edges being joined by an overlapping seam secured by a suitable adhesive. However, if desired, any other suitable or convenient method of forming the body may be employed, for instance, by drawing or molding the same from metal or other material without the use of any seam whatsoever. Adjacent the smaller end 3, the body may preferably be formed substantially circular in cross section, while adjacent the larger end 2, the body may preferably be substantially elliptical in cross section, as clearly shown in Figs. 3 and 4, the whole of the body merging gradually from the elliptical configuration to the circular, and the smaller end 3 of the body preferably terminating at right angles to the longitudinal axis thereof.

For the purpose of adapting the device for use in testing eggs, the larger end 2 of the body is formed in such manner that it will suitably contact with the surface of an egg when the same is maintained in proper relation with the end, and for this purpose a pair of diametrically opposed peculiarly shaped lips 5 and 6 are provided, formed by outwardly extending the wall of the body above and below points 7 and 8 which lie at the ends of the major axis of the ellipse defined by the intersection of the wall of the body with a plane A A extending at right angles to the longitudinal axis thereof, as indicated in Fig. 2. The edges of the lips from their most outwardly extended extremities, which lie in a plane passing through the minor axis of said defined ellipse and the longitudinal axis of the body, are curved backwardly in reverse curves, as best shown in Figs. 1 and 2, to the points 7 and 8, the curves being adapted to produce an end surface which will contact substantially at every point on its interior periphery with the surface of an egg of average shape when the latter is maintained in contact with the end of the body with its major axis substantially parallel to the major axis of the ellipse defined by plane A A.

It will be evident that the configuration of the reverse curves defining the edges of the lips may be entirely symmetrical as regards the central, longitudinal axis of the body, as shown in the drawing, or if desired the curves upon one side of a plane passing through the minor axis of the ellipse and the longitudinal axis of the body may be slightly steeper than the curves upon the other side of the plane, in order to compensate for the variation of the surface of the average egg due to the fact that the same is not truly elliptical in form. However, in practice it has been found that by forming the device of somewhat flexible and compressible material such as strawboard, the end will readily conform to this slight variation in the surface of the egg to be tested with sufficient closeness for all practical purposes.

In Fig. 2, I have indicated in broken lines a roll of paper 15 in the interior of the device thereby illustrating the method of utilizing the same as a mailing tube for the purpose of transporting circulars or other printed matter, it being understood that such circulars may be readily placed in the device in the usual manner by rolling the same into a tubular form of small diameter, inserting the same within the device, and allowing the sheets to expand therein, which will sufficiently secure them in place for the purposes of transportation, and from which position they may be readily withdrawn without injuring the device in any way.

When it is desired to utilize the device for testing an egg, which operation may best be carried out in a somewhat darkened room provided with a single suitable source of relatively bright light, all contained articles are first removed from the interior of the body. The operator then assumes a position facing the light and holds the egg 16 to be tested in contact with the larger end of the device, directed toward the light, with the major axis of the egg parallel to the longer transverse axis of the end of the tube, as shown in Figs. 1 and 5. In this position, the lips 5 and 6 will extend the requisite distance over the egg, and as the distance between points 7 and 8 is nearly equal to the length of the egg, substantially one-half of its entire surface will be exposed to the view of the operator directed through the small end 3 of the body. Owing to the peculiar configuration of the larger end of the device, substantially every point upon its interior periphery will contact with the surface of the egg, thereby excluding all light from the interior of the body except that coming through the relatively opaque eggshell, whereby the operator is at once able to determine the interior condition of the egg.

It will thus be evident that I have provided a device eminently suitable for the purposes intended, and while I have herein described one form thereof in considerable detail, I do not desire to in any manner limit myself to the precise features of construction and arrangement herein set forth as it will be evident that various slight changes may be made in the details, configuration and size of the device without departing from the spirit and scope of the invention as defined in the appended claims.

Having thus described my invention, I claim and desire to protect by Letters Patent of the United States:

1. A combined egg tester and mailing tube comprising a longitudinally-extending, slightly tapering tubular body having its smaller end circular in cross section and its larger end elliptical in cross section, the wall of the body adjacent the larger end thereof being diametrically oppositely longitudinally extended to form a pair of outwardly projecting lips, the edges of said lips being defined by rearwardly extending reverse curves whereby the interior periphery of said end is adapted to contact with the surface of an egg maintained with its major axis parallel to the longer transverse axis of said body.

2. A combined egg tester and mailing tube comprising a longitudinally-extended body of relatively small taper and elliptical in cross section adjacent its larger extremity, the wall of said body adjacent the ends of the minor axis of its cross-sectional ellipse being horizontally extended to form a pair of diametrically opposed projecting lips having reversely curved profiles, whereby the end of said body is adapted to register with the surface of an egg maintained in contact with said end with its major axis substantially parallel to the major axis of said cross-sectional ellipse.

3. A combined egg tester and mailing tube comprising a longitudinally extended body of relatively small taper circular in cross section adjacent the smaller end and elliptical in cross section adjacent the larger end and having a pair of outwardly extending diametrically opposed lips adjacent said last-mentioned end, the edges of said lips being defined by rearwardly extending reverse curves whereby the interior periphery of said end is adapted to register substantially at all points with the surface of an egg with said lips embracing the egg when the latter is maintained in contact with said end with its major axis parallel to the greatest transverse diameter of the body.

4. A combined egg tester and mailing tube comprising a tubular body having a relatively small taper and elliptical in cross section adjacent the larger end, the wall of said body adjacent said end being outwardly longitudinally extended to form a pair of oppositely disposed lips having curved edges,

whereby said end is adapted to register with the surface of an egg when maintained in contact therewith.

5. A combined egg tester and mailing tube comprising a tubular slightly tapering body having its wall adjacent its larger end longitudinally extended to form a pair of diametrically opposed lips having their edges defined by reverse curves, whereby the periphery of said end is adapted to register with the surface of an egg.

In witness whereof, I have hereunto set my hand this 14th day of April, A. D. 1915.

GEO. W. GOUDY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."