Y. VAN WOERDEN.

EGG TESTING APPARATUS.

APPLICATION FILED MAY 7, 1914.

1,141,593.

Patented June 1, 1915.

2 SHEETS—SHEET 1.

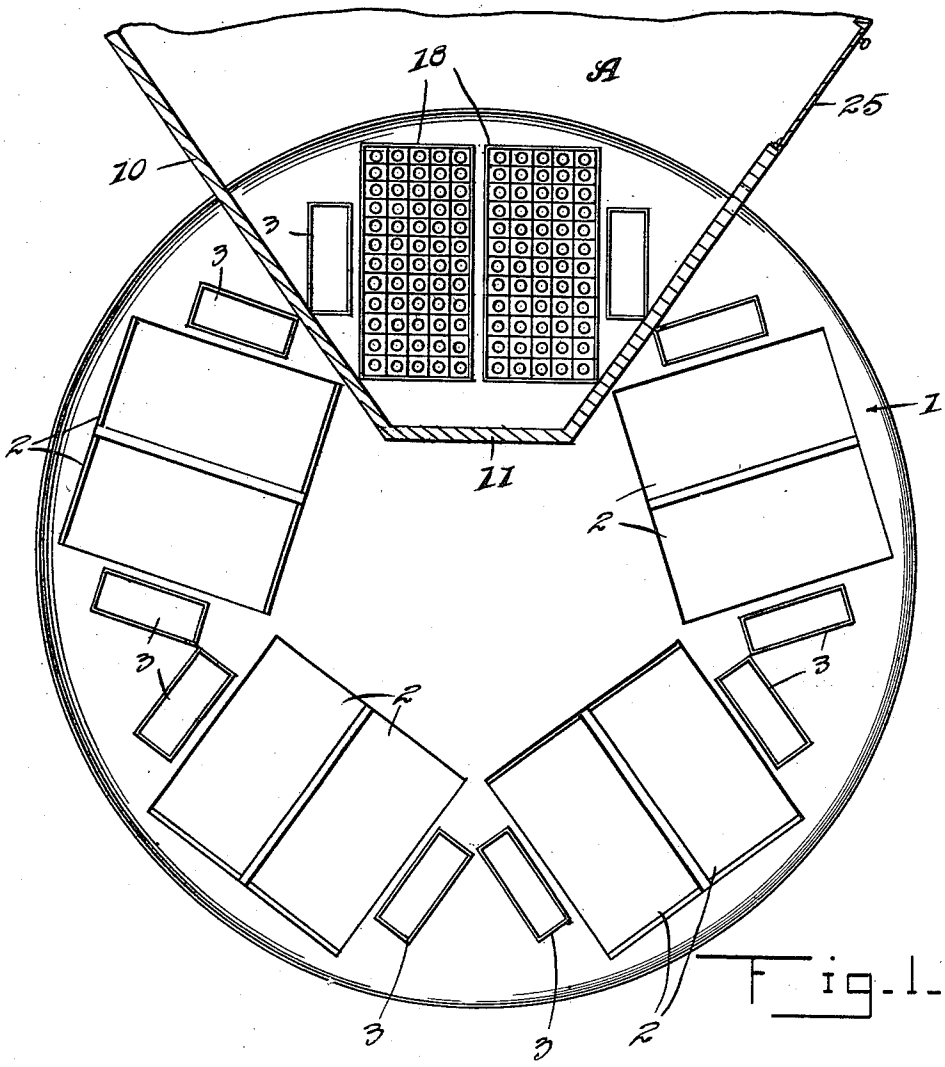


Fig. 1.

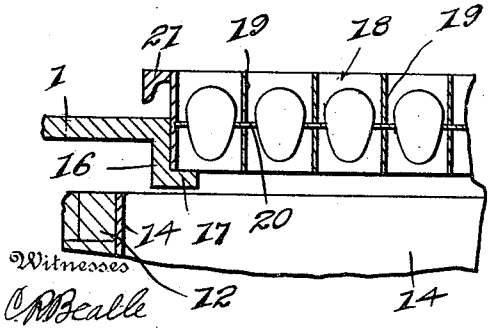


Fig. 4.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 2.

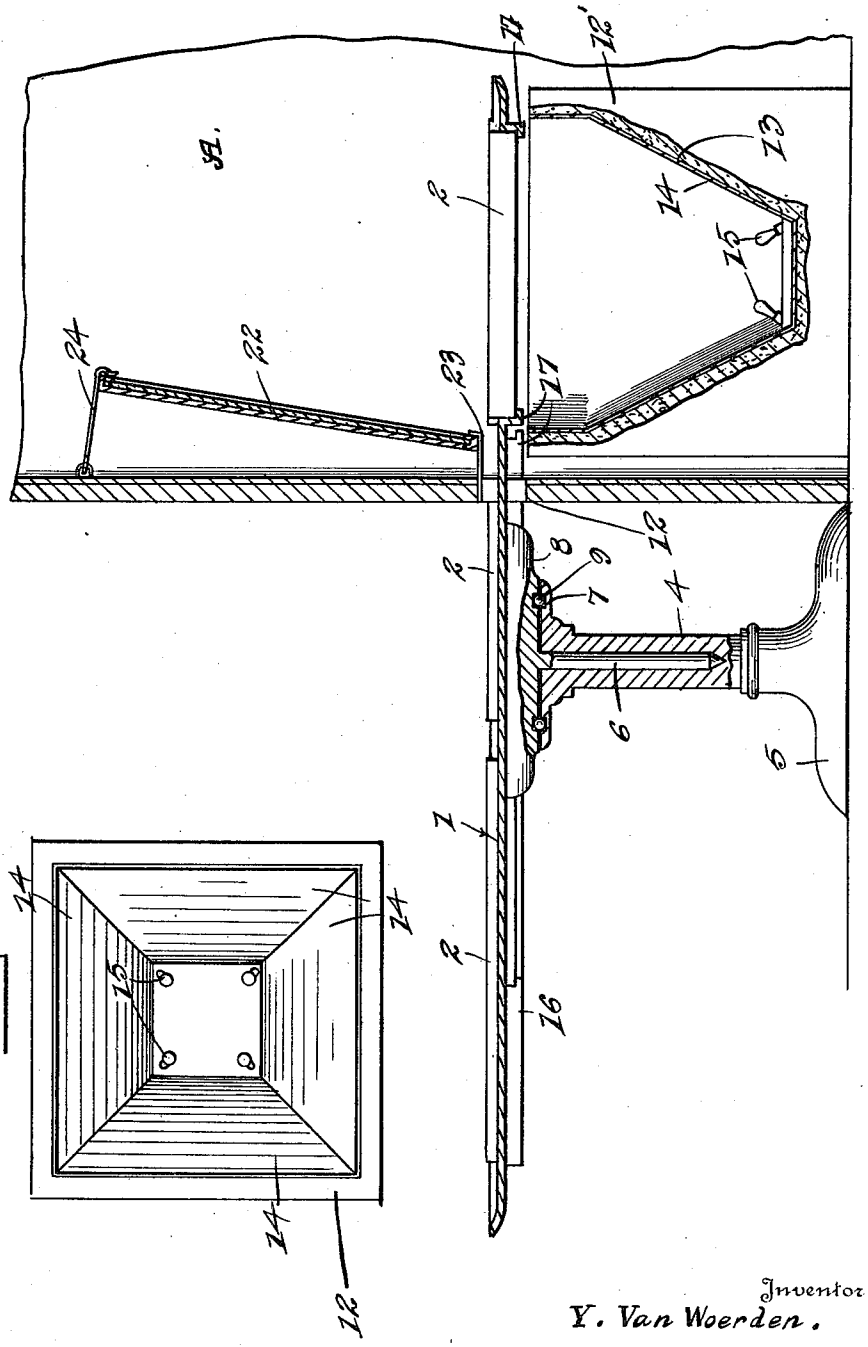


Fig. 3.

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UNITED STATES PATENT OFFICE.

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EGG-TESTING APPARATUS.

1,141,593. Specification of Letters Patent. Patented June 1, 1915.

Application filed May 7, 1914. Serial No. 836,996.

To all whom it may concern:

Be it known that I, YSBRAND VAN WOERDEN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Egg-Testing Apparatus, of which the following is a specification.

My invention relates to new and useful improvements in apparatus for testing eggs and has for its primary object to provide testing apparatus of simple and novel construction by means of which large quantities of eggs may be tested in a most reliable and expeditious manner.

Another important object of my invention is to provide a rotary table to extend into a dark room in which is mounted illuminating means, said table having openings therein to receive trays containing eggs, said illuminating means arranged to shine through the eggs to enable the operator to pick out the spoiled eggs.

Another important object of my invention is to provide a novel arrangement of mirrors arranged within the dark room to act as reflectors and enable the operator to readily and easily determine the condition of the eggs.

Another important object of my invention is to provide apparatus of the character described that is simple as to construction, extremely reliable and efficient in operation and inexpensive to manufacture and install.

The above and additional objects are accomplished by such means as are illustrated in the accompanying drawings, described in the following specification and then more particularly pointed out as claimed.

With reference to the drawings, wherein I have illustrated the preferred embodiment of my invention as it is reduced to practice, and throughout the several views of which similar reference numerals designate corresponding parts, Figure 1 is a top plan view of my improved apparatus showing the dark room in section and that portion of the table extending within the dark room having eggs thereon, Fig. 2 is a longitudinal sectional view of my apparatus showing certain walls of the dark room broken away. Fig. 3 is a detail plan view of a well or pit to contain the illuminating means and mirror reflectors, and Fig. 4 is a detail sectional view showing fragmentary portions of one of the egg supporting trays and the table.

Referring to the drawings by characters of reference, the numeral 1 designates as an entirety, a horizontal circular and rotating table that is provided with pairs of rectangular openings 2 arranged arcuately adjacent the periphery of the table and has mounted on each side of the pair of openings, a receptacle 3 into which the bad eggs are to be placed. A central supporting column or standard 4 having an enlarged base 5 rotatably receives a spindle or shaft 6 carried by the table 1. The upper portion of the standard 4 is provided with a circular and flat bearing portion 7 to coöperate with a similar portion 8 carried by the table 1, said portions 7 and 8 being grooved circumferentially to receive ball bearings 9. The ball bearings 9 permit an easy turning of the table 1.

Arranged to coöperate with the table 1 is a dark room designated A as an entirety and which consists of side walls 10 and a front or end wall 11. The dark room 8 is approximately triangular in cross section as shown in Fig. 1 in the drawings and alined openings 12 are formed in the front and side walls thereof so that a portion of the table 1 extends within the dark room. That portion of the table which extends into the dark room comprises a pair of the openings 2 and receptacles 3 on each side thereof thus enabling a large number of eggs to be tested.

Mounted within the dark room A adjacent the apex portion thereof and beneath the table 1 is a well, pit or receptacle 12′ having upwardly and outwardly inclined inside walls 13 upon which are mounted mirror reflectors 14. The bottom wall of the receptacle is provided with illuminating means comprising a number of powerful electric lamps 15.

Formed about the periphery of each of the openings 2 in the table 1 is a down-

wardly extending flange 16 that is provided at its lower edge with an inwardly and right angularly extending supporting flange 17. The flanges 17 are designed to support egg trays 18. The egg trays 18 comprise frames consisting of a number of cells 19 that are divided by horizontal walls 20, the walls 20 being provided with openings to receive the eggs as shown in Fig. 4 in the drawings. The end walls of the egg trays 18 are provided with beads or molding strips 21 to enable easy handling.

A large mirror 22 is mounted upon a horizontal shelf 23 carried by the inner face of the front wall 11 of the dark room and supported at its upper edge by a hook 24. The mirror 22 enables the operator within the dark room to view the eggs from the rear sides thereof. A door 25 is provided in one of the side walls 10.

In operation the trays 18 after having eggs placed therein as shown in Fig. 4 in the drawings are arranged within the openings 2. The operator within the dark room by rotating the table 1 brings the pairs of trays into position over the well, pit or receptacle 12. The illuminating means within the receptacle reflected by the reflectors 14 shine through the eggs on the trays and enable the operator to quickly sort the spoiled eggs. The spoiled eggs are placed into the receptacles 3 and the good eggs after being tested removed from the table and placed in a crate or receptacle not shown. The mirror 22 enables the operator to examine the eggs carefully.

It will be readily seen with reference to the foregoing description and accompanying drawings that I have provided simple and effective apparatus by means of which large numbers of eggs may be readily tested thus saving a great deal of time and labor as heretofore it has generally been the practice to examine each egg.

In practice, I have found that the form of my invention, illustrated in the drawings and referred to in the above description, as the preferred embodiment, is the most efficient and practical; yet realizing that the conditions concurrent with the adoption of my device will necessarily vary, I desire to emphasize the fact that various minor changes in details of construction, proportion and arrangement of parts may be resorted to, when required, without sacrificing any of the advantages of my invention, as set forth.

What is claimed is:—

1. In egg testing apparatus, the combination with a dark room of a rotary table extending partly within the dark room through openings in the walls thereof, said table being arranged to receive the eggs to be tested and illuminating means within the dark room to shine through the eggs on the table when the table is rotated.

2. In egg testing apparatus, the combination with a rotary table of a dark room having certain walls thereof provided with alined openings to receive a portion of the table, said table being provided with openings arranged in pairs to contain trays of eggs, a receptacle having its upper end open mounted within said dark room beneath the table and illuminating means within the receptacle.

3. In egg testing apparatus the combination with a rotary table of a dark room having certain walls thereof provided with openings to receive a portion of the table, said table provided with openings arranged in pairs to receive trays of eggs, receptacles arranged on opposite sides of each pair of openings and a light arranged within the dark room beneath that portion of the table therein and a receptacle having its upper end open mounted within the dark room under the table and housing the light.

4. In egg testing apparatus the combination with a circular rotatable table to contain eggs of a dark room having a portion of the table extending therein, a receptacle having its upper end open mounted within the dark room beneath the table, illuminating means mounted within the bottom of the receptacle, reflecting means mounted within the receptacle, said illuminating means to shine through the eggs on that portion of the table within the dark room, and a mirror arranged above said table within the dark room to enable the operator to see the backs of the eggs.

5. In egg testing apparatus the combination with a dark room of a rotatable table extending partly within the dark room and having openings arranged in pairs adjacent its periphery, egg trays to be positioned within the openings being open at their tops and bottoms and supporting eggs, receptacles mounted on the table adjacent the openings therein, a receptacle mounted within the dark room and having its upper end open and slightly spaced from the under face of the table, illuminating means mounted within the receptacle and a mirror arranged within the dark room above that portion of the table therein.

6. In egg testing apparatus, a rotatable table having a plurality of rectangular openings therein formed in pairs, downwardly extending flanges formed about the edges thereof, right angularly extending flanges formed on the lower edges of the first named flanges, receptacles mounted on opposite sides of the pairs of openings, removable egg trays mounted within the

openings and having their upper and lower sides open to enable light to shine through the eggs thereon and means to project light rays through the eggs arranged beneath the table.

7. In egg testing apparatus the combination with a dark room of a movable egg supporting table extending into the dark room and illuminating means within the dark room beneath the table to shine through eggs on the table.

In testimony whereof I affix my signature in presence of two witnesses.

YSBRAND VAN WOERDEN.

Witnesses:
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GUY H. POWELL.

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